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OUT WEST

Out West

A MAGAZINE OF
The Old Pacific and the New

(FORMERLY THE LAND OF SUNSHINE)

EDITED BY

Chas. F. Lummis

AND

Charles Amadon Moody

STAFF—David Starr Jordan, Joaquin Miller, Theodore H. Hittell, Mary Hallock Foote, Margaret Collier Graham, Charles Warren Stoddard, Grace Ellery Channing, Ina Coolbrith, William Keith, Dr. Washington Matthews, Geo. Parker Winship, Frederick Webb Hodge, Charles F. Holder, Edwin Markham, Geo. Hamlin Fitch, Chas. Howard Shinn, Wm. E. Smythe, T. S. Van Dyke, Chas. A. Keeler, Louise M. Keeler, A. F. Harmer, L. Maynard Dixon, Charlotte Perkins Stetson, Gilman, Constance Goddard DuBois, Batterman Lindsay, Charles Dwight Willard, Elizabeth and Joseph Grinnell, Frederick Starr, Sharlot M. Hall, Ella Higginson, Mary Austin.

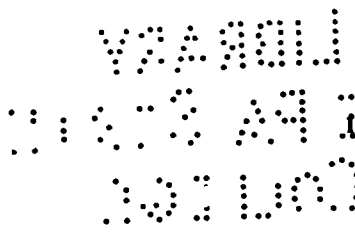
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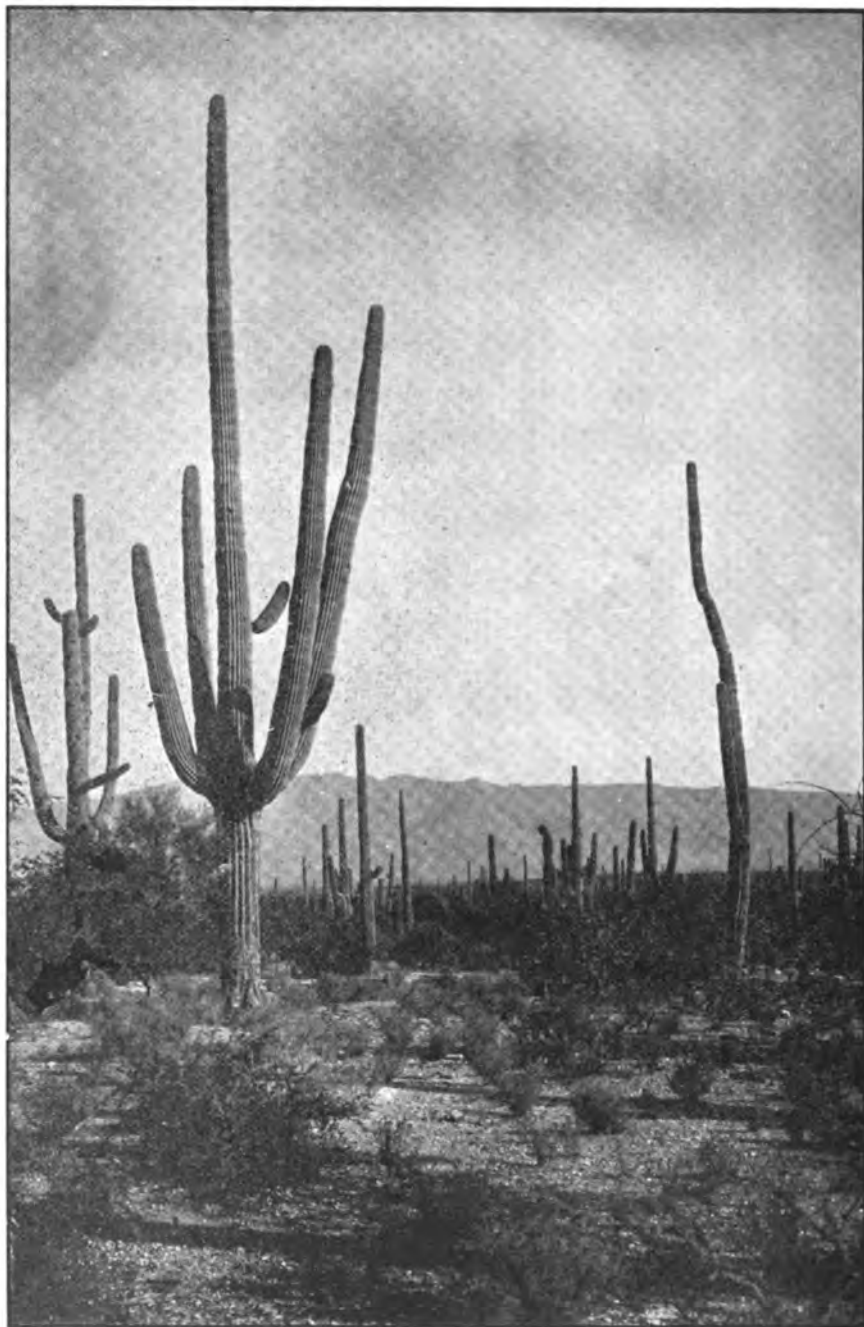
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GROVE OF GIANT CACTUS NEAR THE DESERT LABORATORY

[See Page 35]

Formerly
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THE NATION BACK OF US, THE WORLD IN FRONT.



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THE SALTON SEA MENACE

By EDWIN DURYEA JR., C. E.



ABOUT 135 miles southeast of Los Angeles, just north of Indio, the Southern Pacific Railroad passes below sea level into an immense desert depression commonly known as Salton Sink. The lowest point reached by the railroad is at Salton, 265 feet below sea level, and the lowest point of the Sink is fifteen feet lower, several miles to the southwest. The railroad continues below sea level for about 70 miles, rising above it near Iris.

At the lowest point of the sink, where usually only a few inches of water are found, a large salt industry has gathered and manufactured salt for many years past. The only improvements below sea-level are this salt industry, the main line and the Imperial branch of the Southern Pacific Railroad, the small towns of Indio, Coachella, Thermal, Mecca and Salton, with their surrounding ranches, and the great Imperial Valley region. The Imperial Valley, however, now outweighs in importance all the other improvements in the Sink. From a bare desert, it has grown in the past four years until it now comprises about 110,000 acres of crop-bearing irrigated lands, supporting a population of about 10,000 people. There are also many thousands of acres of land yet reclaimable. It is connected with the main line of the Southern Pacific Railroad by a branch forty miles long, and another Southern Pacific line from the valley direct to Yuma, is projected and ready for construction.



SAND BAGS ALONG SOUTHERN PACIFIC TRACK WEST OF SALTON, JULY 16, 1905

The flourishing towns of Brawley, Imperial, Holtville, Heber, Calexico and Mexicali (in Mexico) are included in the valley and its great industrial importance is evident from its immense freight-shipments. The principal products are hay, alfalfa, grain, cattle, sheep, hogs, poultry, eggs, vegetables and melons, and it is said the shipments from the valley are exceeded in amount by only one other community in Southern California—Los Angeles. Any menace to the general prosperity of this thriving community is of great public importance and of much graver import than if private enterprises only—even such great ones as the Southern Pacific Railroad—are threatened.

The flourishing Imperial Valley owes its very existence and its continuation of life and prosperity to irrigation from the Imperial Canal—but curiously enough this same canal, beyond the control of the Canal Company for nearly a year past, has become a menace to the prosperity of the valley. It has already forced the railroad company to build many miles of new track on



SOUTHERN PACIFIC TRACK NEAR SALTON, OCT. 19, 1905



ALL THAT WAS LEFT OF SALTON, NOV. 21, 1905

higher ground to replace its main line through the lowest portion of the Sink, and the Salt Works are now under twenty feet of water and their mills and buildings are all washed away. The canal still continues to pour its waters into the Sink and the water is still rising, as it has been for a year past. The "Salton Sea" now covers about 400 square miles, averaging about forty miles long by ten miles broad, and is steadily increasing its area.

These conditions have already caused damages to the railroad and to the salt works aggregating several hundred thousands of dollars—and the damages to the railroad will be many times greater unless the canal is again brought under control. The possible damage to the Imperial Valley community is still greater.

The situation is therefore very serious and also very spectacular and has not unnaturally been the subject of much newspaper comment, often very inaccurate. The writer has been urged by *OUR WEST* to present the facts in the case to its readers.

My knowledge of the situation was gained as an engineering representative of some of the interests injured by waters wasted



THE SALT WORKS, NOV. 21, 1905

through the canal. My first visit to the canal to observe conditions there was in February last and several others have been made since for the same purpose. I also made a trip through Imperial Valley and over the south rim of the Sink to Volcano Lake, about thirty miles into Mexico, to study the conditions there.

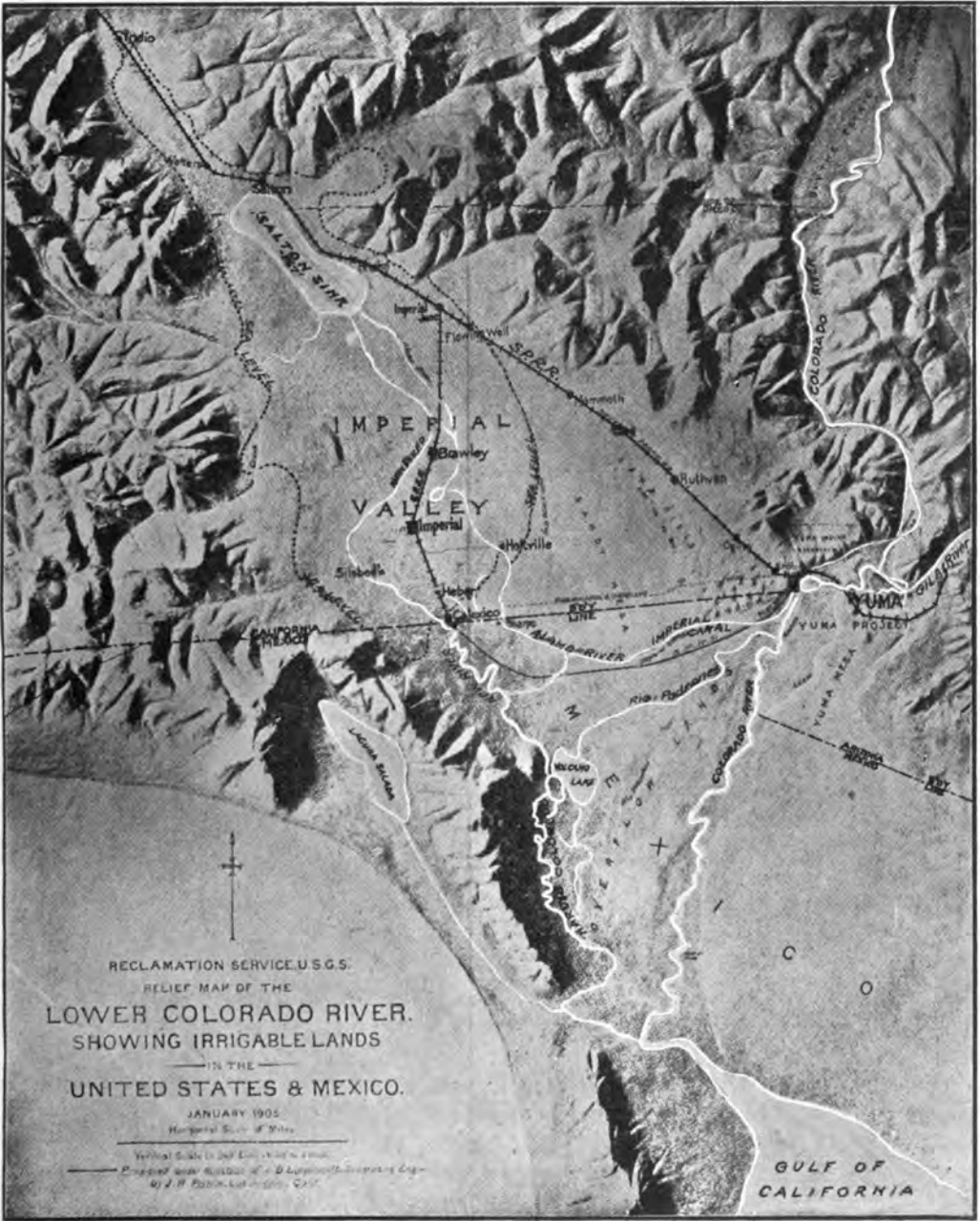
The canal project on which the existence of the Imperial Valley depends can best be understood by reference to the accompanying relief map, photographed from a raised model made by the Government. The canal draws its waters from the west bank of the Colorado River, about ten miles below Yuma, Arizona, and close to the international boundary-line between California and Mexico. It flows westerly through Mexican territory for about



MEXICAN DWELLERS ALONG THE CANAL

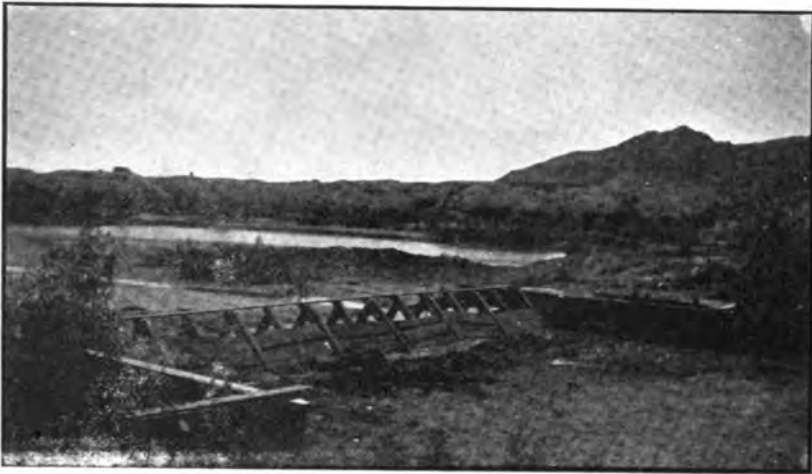
sixty miles, much of the way following winding natural channels which have been made use of with very little excavation, and delivers its water to several main distributing canals near Calexico, California, on the international boundary and near the southern limits of the irrigated lands of the valley.

This irrigation system is a great public benefit and renders possible the existence of a very large and thriving community where there would otherwise be only a bare desert. So long as the amount of water entering the canal from the Colorado River is under control and is restricted to what can be made use of for irrigation, nothing but great public benefit can result from the system. For over a year yast, however, quantities several times the amount used for irrigation—all the water, in fact, that the canal has been able to receive from the river, as there are



no head-works to control or regulate its entrance—has been passing down the canal; and the most of it, the excess above the small portion used for irrigation, has been wasted from the canal and has finally reached the lowest part of the Sink, there forming the Salton Sea and causing the flooding of the salt works and railroad. The canal itself has been injured by the unchecked floods passing down it—and this damage and that to the railroad are steadily increasing. The damage done as yet, however, is small compared to what may result to the railroad and the Imperial Valley community if the floods passing into the canal are not soon brought into control.

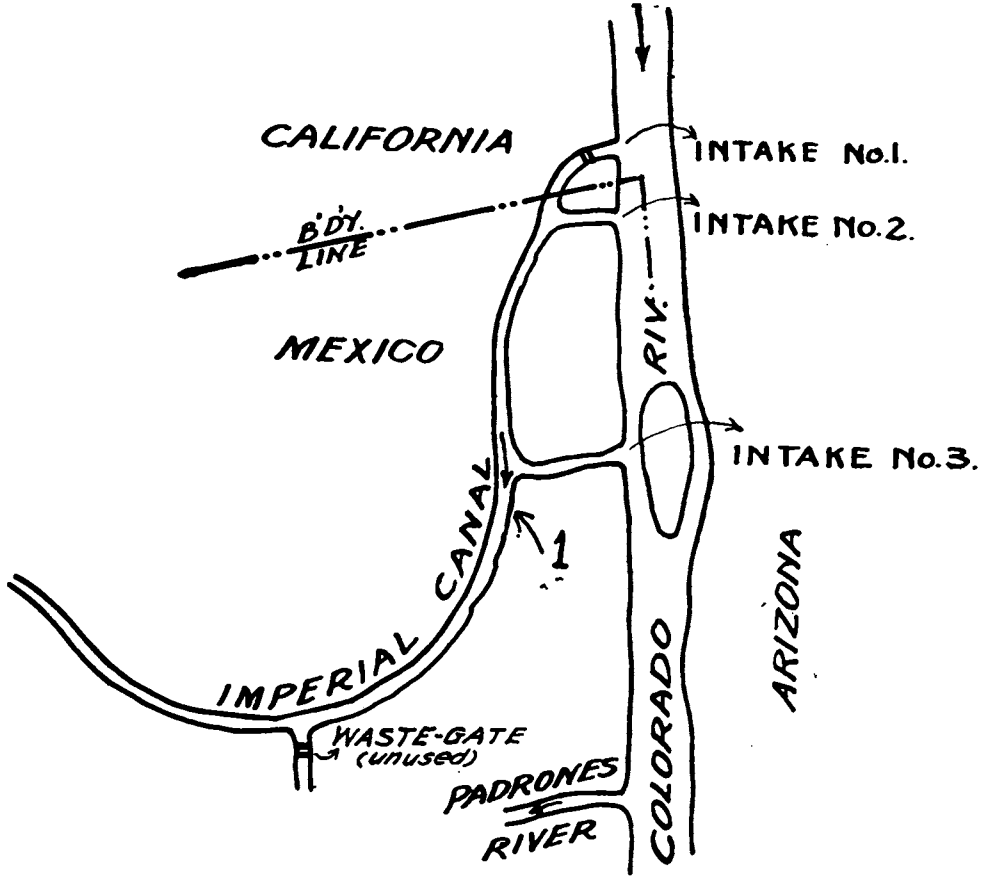
The source of the present trouble lies in a failure to provide any controlling-works or head-works at the head of the canals



UNUSED HEAD-GATE BETWEEN INTAKE NO. 1 AND 2, MAY 29, 1905

so as to limit the waters leaving the Colorado River to the amount which can be used for irrigation, and to keep the floods out of the canal. The necessity of such controlling-works at the heads of canals is universally recognized by engineers. They are necessary to an unusual degree in the case of the Imperial canal, as the light silt of the Colorado River delta, through which the canal runs for its whole length, is very easily affected by the action of water and is liable to dangerous scour and erosion from floods. Their necessity seems originally to have been recognized here, as wooden headworks, said to have cost \$15,000, are still to be seen between Intakes No. 1 and No. 2, just on the California side of the boundary. They are said to be five feet too high for use during low water, however, and have never been used. In the three openings dredged subsequently no controlling-works were constructed.

THE SALTON SEA MENACE

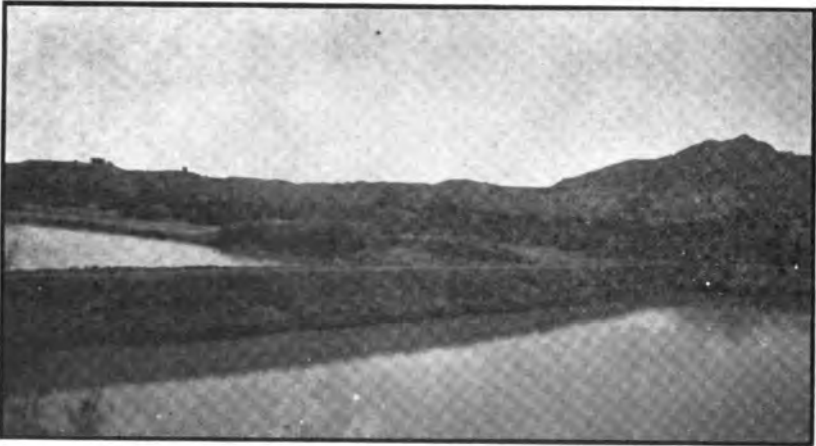


SKETCH OF INTAKES

The relations of the three openings to each other are shown by the sketch of Intakes. The international boundary-line between California and Lower California shown on the sketch is about ten miles below Yuma. The intakes No. 1 and No. 2 are only about one-quarter mile apart, one on each side of the boundary, while intake No. 3 is about three miles further down the river. Intake No. 1 silted up last summer and was afterward closed by a small embankment. Just above intake No. 1, within about a thousand feet of it, is a narrow nose of conglomerate jutting out into the silt. There is no solid ground along the river, except at great depths, between this rocky point and the Gulf of California. This is the only location which should have been considered for controlling-works and they should have been built here precedent to allowing the water to enter the canal. They are at last about to be built—a contract having just been awarded for permanent headgates here, of concrete and steel, and at a probable cost of about \$40,000. It is hoped these head-gates will be

completed by next April. It is rumored now, however, that their location may be changed to a point a short distance down the canal, where a firm foundation is said to have been uncovered by the late flood.

It is about ten years since the inception of this irrigation project, but the construction was begun only about five years ago, when the abandoned headworks were built. At this time Intakes No. 1 and No. 2 and the canal were dredged. Great chances were taken in omitting headworks from these intakes; however, they passed through three low flood-seasons without damage to the canal. In the summer of 1904, at low water, these two intakes and some two or three miles of canal next to them silted up badly, cutting down the flow for irrigation uses to a



EARTH DAM ACROSS INTAKE NO. 1, MAY 29, 1905

dangerously small amount and menacing the crops of the Imperial Valley. This could have been remedied, and a sufficient flow restored to the canal, by dredging out the intakes and the silted up portion of the canal adjoining. Another means, however, was practicable—that of dredging a new intake (Intake No. 3), and a short cross-cut to the canal below the silted portion. The latter method was chosen—perhaps because it would cost less than the former, or more likely because it would sooner afford relief to the threatened water famine in the valley and because failure of the crops could be averted only by immediate relief. As at the other intakes, no controlling-works were even attempted.

No added danger seemed to be incurred by this third intake, as the other two had already passed through three flood-seasons safely. The ground at the first two was slightly better than at

the third, but the difference is slight and nothing better than unstable silt is found at any of the three sites. Though this was seemingly not then recognized, without controlling-works they were all alike a menace to the safety of the canal and to all interests along and below it. At Intake No. 2, still without controlling-works, this menace yet continues—though this fact seems to have been forgotten in the interest excited by the widening and deepening of Intake No. 3 until that carries down it the entire flow of the river.

Intake No. 3 of the canal was dredged in October, 1904, and soon after this waters were first noticed to be rising at Salton. This was first observed by P. L. Sherman, Jr., Ph. D., chemist for the Salt Company, who was at Salton making studies for im-

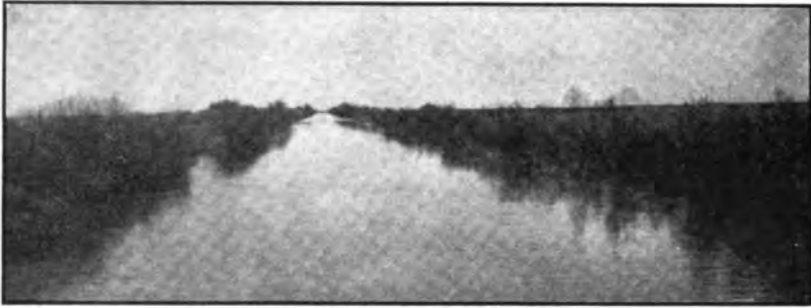


EXPLORING SALTON SEA FOR SOURCE OF WATER, JAN. 13, 1905

provements in the salt plant. It was he also who discovered the source of the water, searching by boat and wading till the muddy waters from New River were encountered. He then traced the water to Calexico and finally to the source of the trouble, the canal intakes below Yuma.

From that time to the present the waters of Salton Sea have continued to rise, the average rate being over one-half inch per day. The flood of November 29th last increased the rate to two inches per day, but this rate will be temporary only. The total rise is already over twenty feet.

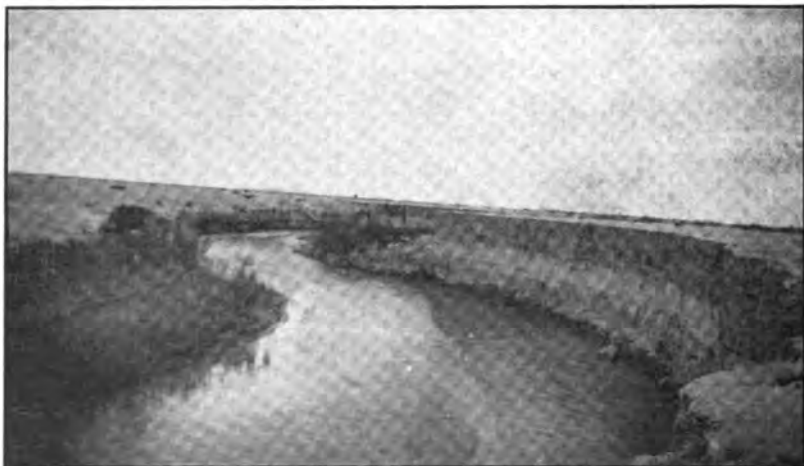
The water which can be used for irrigation on the present reclaimed lands of the Imperial Valley varies according to the season from nothing in rainy weather to perhaps 1000 cubic feet per second at times of maximum use. When all the land is re-



MAIN CANAL EAST OF CALEXICO, DEC. 16, 1904

claimed that is practicable, probably not over 2000 cubic feet per second can be used. On my first visit to the canal, February 14, 1905, with the river-gauge at Yuma reading 122.2 feet above sea, my measurements showed nearly 2500 cubic feet per second passing down the canal. The weather was wet and rainy and none of this flow was then necessary for irrigation. The total flow of the Colorado River at the time was about 30,000 cubic feet per second.

On my next visit, June 5th, about 8000 cubic feet per second were passing down the canal and about 60,000 cubic feet per second down the river to the gulf, the river-gauge at Yuma reading 128.3 feet. On my July visit, the 18th, the approximate quantities were 18,000 cubic feet per second passing down the canal and only 7000 continuing down the river to the gulf. The Yuma gage was then 121.8 feet. On my visit of October 17th, with the Yuma gage 118.8 feet, no water was passing down the river and the whole flow, perhaps 7000 cubic feet per second, was



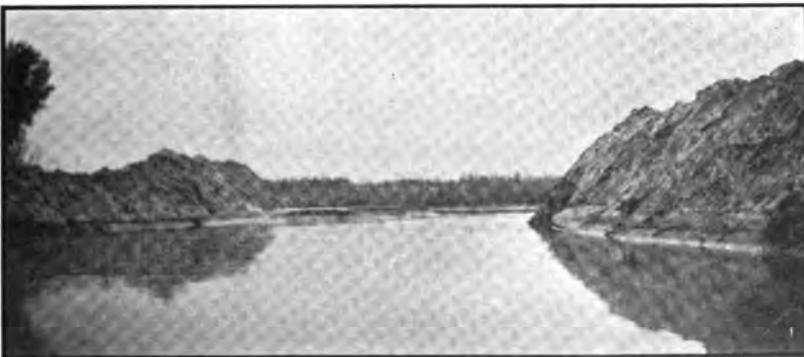
NEW RIVER BELOW ROCKWOOD, JAN. 16, 1904



INTAKE NO. 1 FROM NORTH BANK, JAN. 22, 1905

going down the canal. In November, on the 20th, my measurements showed 128 cubic feet per second passing down the river to the gulf, with perhaps 6000 cubic feet per second passing down the canal. The Yuma gage was at 119 feet. On December 13th the entire flow of the Colorado River was again passing down the canal, the flow being 10,300 cubic feet per second. The maximum rate carried by the canal previous to the great flood of November 29th was probably as much as 25,000 cubic feet per second. During this flood, with the Yuma gage over 131 feet, the flow of the Colorado River at Yuma is said to have reached 110,000 cubic feet per second, of which probably at least half passed down the canal.

The quantities will be better understood when it is known that a flow of 1000 cubic feet per second is equal in twenty-four hours to 646,000,000 gallons, or to enough water to supply the city of San Francisco for over eighteen days—while a flood of



INTAKE NO. 3, LOOKING TOWARD RIVER, FEB. 15, 1905



LOOKING ACROSS INTAKE NO. 3, MAY 29, 1905

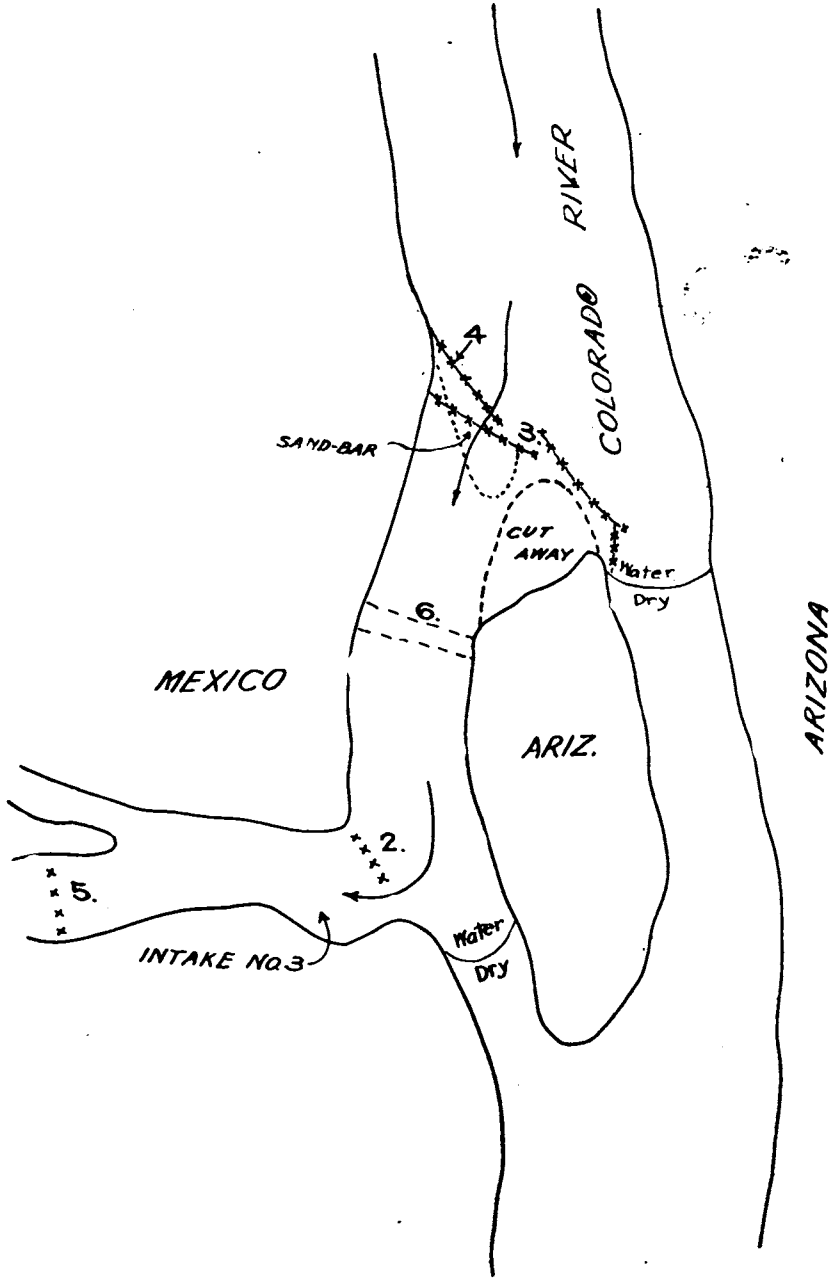
10,000 cubic feet per second for twenty-four hours will equal San Francisco's supply for half a year.

Immediately following my first visit to the canal, in February, the Canal Company was urged to build head-gates at the intakes. They would not acknowledge the necessity of this, however, and wished to put their controlling-works several miles down the canal and shunt the water off to the south to the Padrones River. I am told they did make an attempt to control the flood in March by a pile and timber construction near "1" (see sketch of intakes), and that the structure washed out just before it was closed. Five other attempts have been made since, the sixth failing in the flood of November 29th.

All these attempts to dam the river were by constructions of piles and brush, in which one or more rows of piles were driven and then filled in or banked up with brush. The only change in



LOOKING SOUTH ACROSS INTAKE NO. 3, JULY 18, 1905. THE REMAINS OF SECOND ATTEMPT ARE VISIBLE



SKETCH OF INTAKE NO. 3.



VIEW FROM ISLAND IN RIVER, LOOKING NORTH

method was during the last trial, the one which has just failed, in which the brush was applied in the form of mats. This last trial, also, is the only one in which the work was prosecuted with vigor and with sufficient materials and men to drive the work.

The second attempt at controlling the flow into the canal was at "2" on sketch of Intake No. 3, in June. The next, in July, was at point "3" on the same sketch and this was followed by one, not carried very far, at point marked "4." The fifth effort was at "5." The sixth, the only one prosecuted with energy and the one which failed during the great flood of November 29th, was at point marked "6." This flood covered the work entirely before it was completed, the rise having been about thirteen feet in a day. The head of the island was washed away by it, making the difficulties of renewing work at this point very great.

Newspaper reports say that the menace to the Imperial Valley is to be met by another trial, this being the construction of the permanent concrete and steel head-gates which were to have been located near Intake No. 1, at a changed location two or three miles down the canal where a hard spur is said to have been uncovered by the late flood. It is proposed to pass a large proportion of the waters out of the canal through a channel being dredged to the Padrones River, thus perhaps keeping them out of the Imperial Valley and the Salton Sink, until such time as the completion of the head-gates above this point of diversion



TOWARD THIRD ATTEMPT, JULY 18, 1905

will allow the gates to be closed and all the water to be forced down the original bed of the river to the gulf.

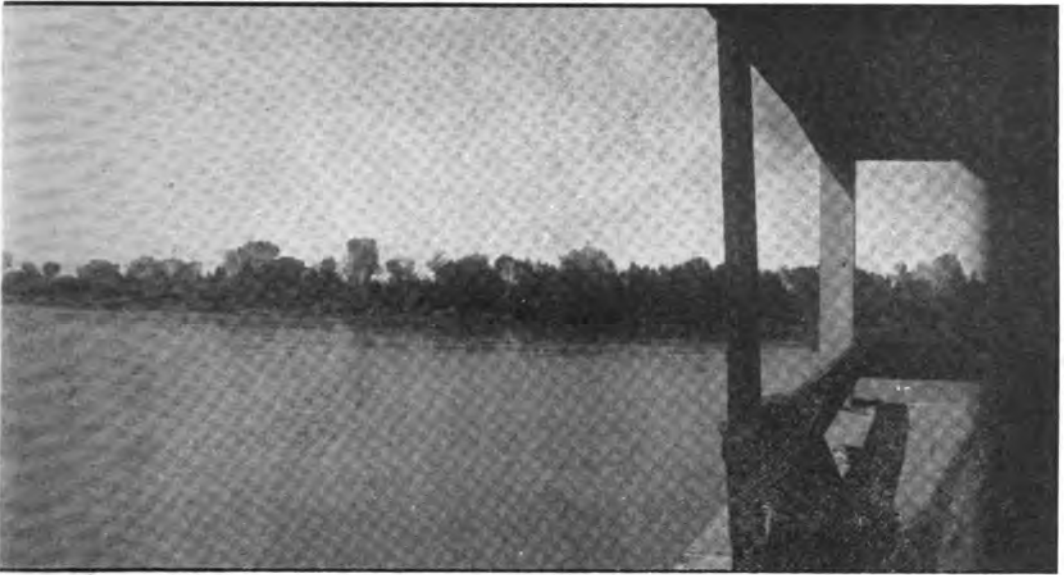
The responsibility for the present disastrous condition of affairs is too plain to need discussion. It lies entirely with the Canal Company, in its failure to provide controlling-works of any kind at the intakes of the canal. From common report, the canal project was not well financed and work was started before sufficient funds had been secured for proper development. It is probable that for this reason the company made their funds cover too much of the work and took the risk of omitting head-works. If sufficient funds could not be secured for head-works as well as for other parts of the canal, the canal should not have been begun. The fact that it passed safely through three seasons of ordinary high water without head-gates is no justification whatever for their omission. Past experience has many times taught that structures to control the forces of nature must be designed to meet the worst probable conditions and not the best, or even the average. This principle is well recognized among engineers and can never be disregarded without great risk, and seldom without disaster. No company has the right to take such risks as were taken in the construction of the Imperial Canal, where the results which may follow will be disastrous not only to itself, but also to other interests and to the public at large.



VIEW DOWN WEST CHANNEL OF COLORADO

My first visit to the intakes, last February, was made for the purpose of judging whether it were still practicable to construct controlling-works in them for a reasonable cost. At that time, while some high floods had passed down them, they had not yet begun to enlarge and I reported that a small sum—much less than \$10,000—expended in the right place and in the right way would bring the flow in the canal under control. I still believe this could have been done—and that a few thousand dollars rightly expended then would have prevented the half million dollars of damages which have already resulted. The Canal Company, however, wished to restrict their efforts to points some distance down the canal and it was not until June, when the Southern Pacific Railroad Company secured control of the Canal Company, that the first effort was made at the intakes.

Since June all efforts to control the flow have been made in fact—though not in form—by the Southern Pacific Railroad Company. Their property has already suffered greater damage than any other and they have had the strongest incentive to strenuous effort. Their efforts seem to have been misdirected, however, as they have allowed four months of low water to pass and another flood-season to arrive without having achieved any results whatever toward keeping floods out of the canal. Whatever their success in future efforts, it is now probably too late to stop the rise of water in the Salton Sea in time to save the



RIVER, SHOWING SITE OF SIXTH ATTEMPT TO CONTROL FLOOD, OCT. 17, 1905

abandonment of their present tracks and the building of a complete new line of railroad along the base of the foothills.

The damage to the Southern Pacific tracks through the Salton Sink was not unforeseen. After my first visit to the intakes I informed their chief engineer, Mr. Wm. Hood, of the bad conditions I had found there and that, if not abated, they might easily lead to the whole Colorado River leaving its bed and turning down the canal. My warning was not regarded seriously,



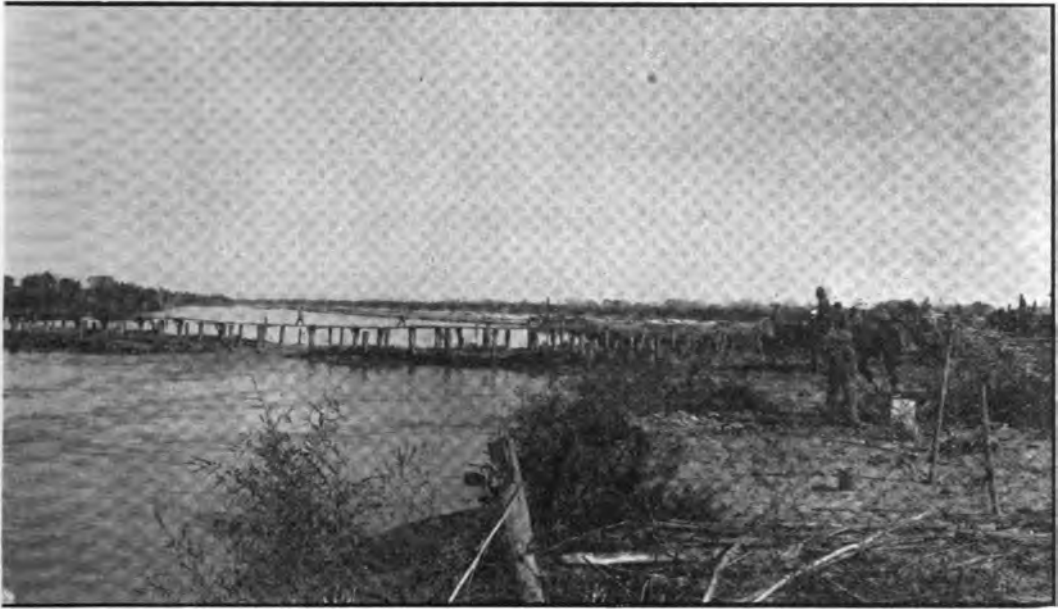
INTAKE NO. 2, LOOKING TOWARD RIVER, OCT. 17, 1905



VIEW OF SIXTH ATTEMPT, LOOKING

While great damage has already been done by floods through the canal, the principal interest of the public relates to the future, and to the nature and extent of the additional losses which may result from the continuance of these floods. The railroad company and the salt company have already suffered about all the damage that can be done to their properties. The remaining interests which may be injured are the several small towns along the main line of the railroad within the Sink, the Imperial Valley, the canal itself, and the Mexican interests along the Colorado River between the intakes of the canal and the Gulf of California.

The first danger which suggests itself is a continued rise of the Salton Sea until some of the lands already reclaimed are flooded. Such a rise, however, could occur only very slowly, as the large water-surface which would be formed before the water can rise sufficiently to reach the reclaimed lands should furnish enough evaporation to offset to some degree the rise of water from the floods. While computations on this subject can be only the roughest approximations, as no exact data are available, still they indicate in a rough way the relation between the probable flow of the canal and the loss by evaporation, and show—though only very inaccurately—when the two may become equal. The minimum flow of water in the Colorado is, I believe, as low as 3000 cubic feet per second and the maximum over 100,000



NORTH FROM ISLAND, NOV. 20, 1905

cubic feet. It is probable that the average flow during the year is about 15,000 cubic feet per second, which is equivalent to 1,296,000,000 cubic feet per twenty-four hours, or to a depth per day of about five and one-half inches over 100 square miles. The evaporation in the past, when no lake existed, was probably about eight feet or ninety-six inches per year. This is at an average rate of about one-quarter inch per day. It is therefore evident that at the assumed rates the average evaporation on 2200 square miles of water-surface will about equal the entire average of the canal. However, as the water-surface increases the evaporation will be decreased from an increase in the humidity of the air and may perhaps go as low as sixty inches, which would then require the evaporation from a water-surface of 3500 square miles to equal the flow of the canal. Should the average flow of the river be only 10,000 cubic feet per second, the areas of water-surface necessary to offset this flow by evaporation would be only two-thirds as great.

From the Relief Map, the entire area of the Sink below sea level is about 1700 square miles and the area below Brawley (presumably about the lowest reclaimed lands) perhaps 700 square miles. It is therefore evident that, allowing for all inaccuracies, the computations show that unless the canal is brought under control the evaporation can hardly offset the rise of the water-surface before many of the reclaimed lands are flooded by the rise.

The waters can find no exit from the Sink to the gulf until they reach an elevation of twenty or thirty feet above sea level, when they would flow over the south rim of the Sink into Volcano Lake, and thence into the gulf. The old beach line shows the water to have once reached this height in the past.

The probable lengths of time before the rising water would reach the reclaimed land and sea-level are of great interest, though any results from the scanty data possessed must be still more inaccurate than the areas just computed. They will serve to give a more concrete idea of the time which must elapse, however, than can be had otherwise. The present water-surface is supposed to be about 400 square miles. The area at which the evaporation would equal the rise will be assumed as 3500 square miles and the average rate of flow from the canal into the Sink 15,000 cubic feet per second. The average of the present and



DETAILS OF SIXTH ATTEMPT, NOV. 20, 1905

final water-surface would then be 1950 square miles and the average evaporation, should the rate remain unchanged during the rise, would be about 20-35th of the 15,000 cubic feet per second, or about 8600 cubic feet. The average net rise would then be that due to an average rate of 6400 cubic feet per second, which in twenty-four hours equals about 2.3 inches over 100 square miles, or nearly one-eighth of an inch over 1950 square miles. With all these assumptions, then, the average rate of rise would be about one inch in eight days, one foot in three months, or about four feet per year. The present rate of rise is about half an inch per day or fifteen feet per year. As the area of the Sink at sea-level is only 1700 square miles, the waters would overflow its south rim and find an outlet to the gulf long before attaining the 3500 square miles of surface necessary to make the probable evaporation equal the probable flow of the river. The water surface of Salton Sea is at the present time about 260 feet below

sea-level. The lowest reclaimed lands are probably more than a hundred feet higher and could not be reached by the rise of the sea for some years to come. If the average rise for some years to come should be so great even as ten feet per year, it would be ten years before these lands are reached by the rising waters. It therefore appears that while all the Imperial Valley will be inundated if the canal is not brought under control, this could happen only after such a long period that it is practically certain the canal will be successfully controlled before even the lowest reclaimed lands are reached by the rising sea.

As to the Mexican interests along the river below the canal, they consist, I believe, only of one or two mines dependent on the river for water and supplies, and of the right to navigate the



LAUNCHING BRUSH MAT, SIXTH ATTEMPT, NOV. 20, 1905

river. While important, these interests are few, and their losses will no doubt be justly considered by the Mexican government in its dealing with the Mexican branch of the Canal Company. As to the river, but little use has been made of it for navigation for several years past. Should any boundary-line complications arise between the United States and Mexico because of its diversion, they will no doubt be amicably settled.

Danger to the Imperial Valley from the continued rise of the Salton Sea is remote and unlikely to materialize. The valley and the canal itself are menaced by another danger, however, which is very real and near, and which will continue to exist as long as floods are allowed to pass into the canal unchecked. The continued passage of floods down the canal may cause a deep scouring of its silt bed—so deep that its waters may sink too

far below the level of the surrounding country to allow of their practicable use for irrigation. Some damage has already occurred from the overflow of lands by floods through the canal, but the serious and general danger is that the waters may sink.

It is therefore of vital importance to the settlers in the Imperial Valley that the flow in the canal be brought under complete control as soon as possible, so that floods may be excluded from the canal and forced down the river to the gulf. The land through which the canal flows is the lightest of silts and has a grade or fall toward the Sink much steeper than along the river toward the gulf. Even a single added flood-season of unchecked flow down the canal may change what is yet only a menace to an accomplished fact—and leave the Imperial Valley with a



DETAILS OF SIXTH ATTEMPT, NOV. 20, 1905

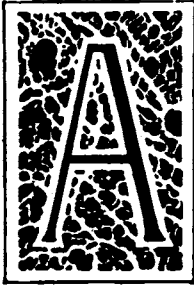
canal flowing through it so far below the surface that its water is unavailable for irrigation. This may happen—or it may not—but the event should not be left to chance.

The only certain and effective means—now as ever before—by which floods can be kept out of the canal and the flow into it fully controlled are head-works near the river in all intakes not completely closed by embankments. While past efforts to close the intakes have been unsuccessful, there seems no good reason why a proper combination of location, plan, method and execution cannot be made which will bring the waters of the canal under early control. This can be done—and the settlers of the Imperial Valley have a right to demand that it be done without further delay.

San Francisco

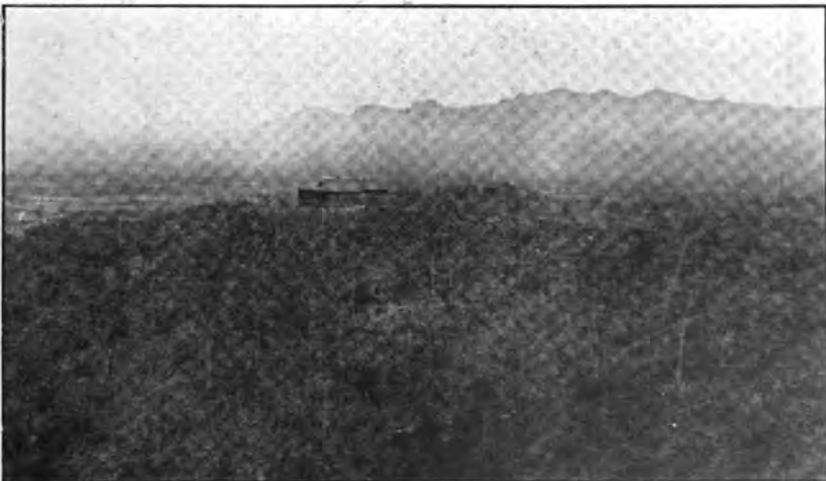
THE DESERT BOTANICAL LABORATORY OF THE CARNEGIE INSTITUTION OF WASHINGTON

By *W. A. CANNON, RESIDENT INVESTIGATOR*

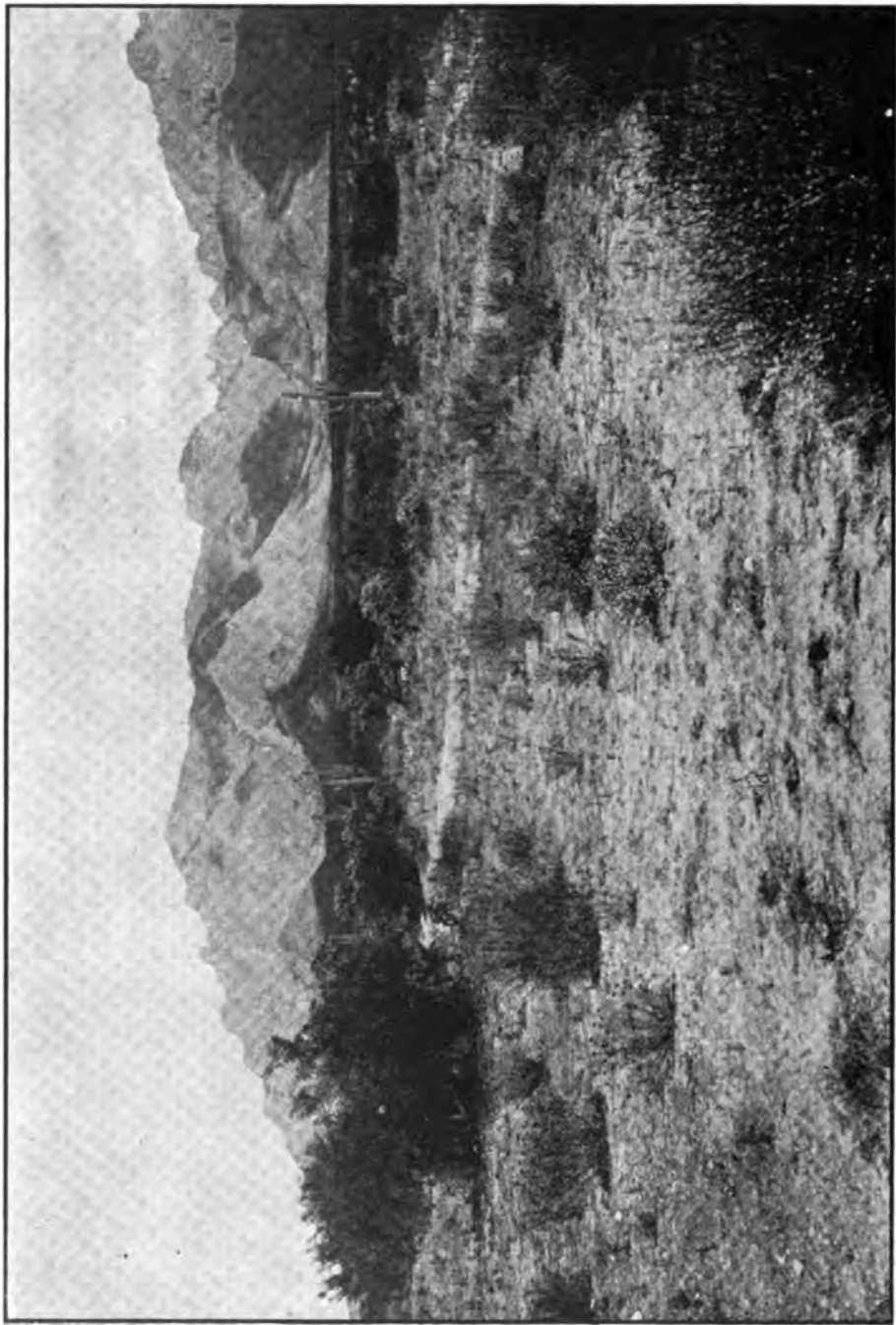


ABOUT a decade and a half ago two well known botanists went on exploring expeditions to the then comparatively little known Southwest to study the plants and the plant-life of the deserts. The interesting plants which they observed and the novel information which they acquired gave them a conception of the scientific possibilities which lay practically untouched in our very midst. Very possibly these experiences—and subsequent experiences also, for both have traveled extensively in our deserts—gave the hope as well that the time would come when botanical explorers and students coming to the desert would find a laboratory to work in, with books and apparatus at hand by means of which they might more comfortably and more successfully develop the new prospects. At any rate it happened, when the Carnegie Institution of Washington was founded in 1902, that a grant was given these gentlemen, Mr. Frederick V. Coville, of Washington, and Dr. D. T. MacDougal, of New York, for the purpose of establishing a botanical laboratory in the desert.

Messrs. Coville and MacDougal were requested to go to the arid lands of the West and make examinations of localities suitable for such a laboratory and to select such as appeared to them



DESERT BOTANICAL LABORATORY, LOOKING NORTH. CATALINA MOUNTAINS, 15 MILES
DISTANT, IN THE BACKGROUND



WEST END OF THE CATALINA MOUNTAINS, 12 MILES NORTH OF THE LABORATORY
The tree-like cactus in the middle ground is the Cholla (*Opuntia fulgida*), across which the Apaches are said to have tied their prisoners—one of their most aggravated methods of torture.

most desirable. After considerable search in Arizona, California, New Mexico and Sonora, they decided to locate the laboratory near Tucson, Arizona.

The reasons for establishing the Desert Laboratory at Tucson are fully set forth in their report, entitled "The Desert Botanical Laboratory," which was published by the Carnegie Institution as Publication No. 6. These were partly that the city of Tucson is of sufficient size to constitute a base of supplies; partly because the University of Arizona, with its library, herbarium and the territorial Experiment Station, is located in the city; and partly because the desert around Tucson is the home of many species of typical desert plants.



A CORNER OF THE LABORATORY, LOOKING SOUTHWEST

The grounds which were selected as the laboratory tract are about two miles west of the city and comprise 860 acres of wild mesa and mountain land. This tract, together with the road to the building, the telephone, electric light and the water, was given by the Chamber of Commerce of Tucson, which has always shown a lively interest in the workings of the laboratory.

The laboratory building is picturesquely situated on a shoulder of Laboratory Mountain which projects on the northern face and about half way to the summit. The mountain is about 500 feet higher than the city and has an altitude of 2850 feet. The laboratory is constructed of black volcanic rock gathered in its vi-

cinity and is an L-shaped structure with the long side facing the north. It is visible from the Southern Pacific R. R. west of Tucson as a low black building about two miles south of the tracks.

Laboratory Mountain is of considerable interest to the ethnologist as being a *trinchera*, or fortified place of refuge from predatory savages. It was the home of the Papagos, who were peaceable village Indians. The remains of many houses which may still be seen on the flat top of the mountains, and pieces of pottery, perhaps ollas for carrying water and utensils for cooking, as well as grinding holes in the rocks, all evidence the domesticity of the tribal life. These remains of prehistoric occu-



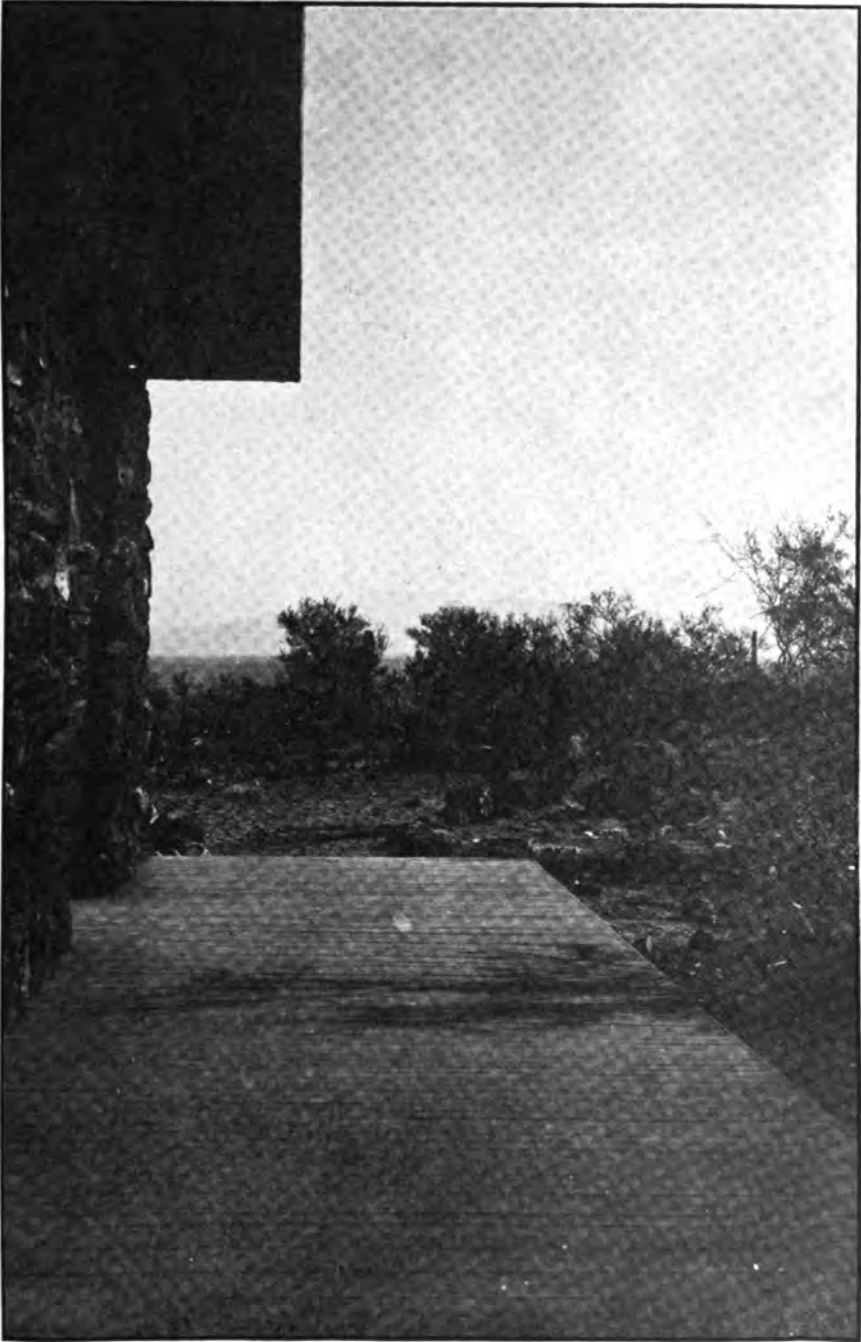
THE SOUTH SIDE OF THE LABORATORY

The plants shown are a small giant cactus to the right of the chimney, a palo verde to the left of the cactus, and below, in the foreground, an ocotillo and a tree cactus. This photograph was taken at a time of drought; contrast the barren appearing ground with pictures below which show the character of the ground at the time of the summer rains.

pation are now a portion of the grounds of the Desert Laboratory and will be kept unchanged and uninjured as long as the laboratory retains possession.

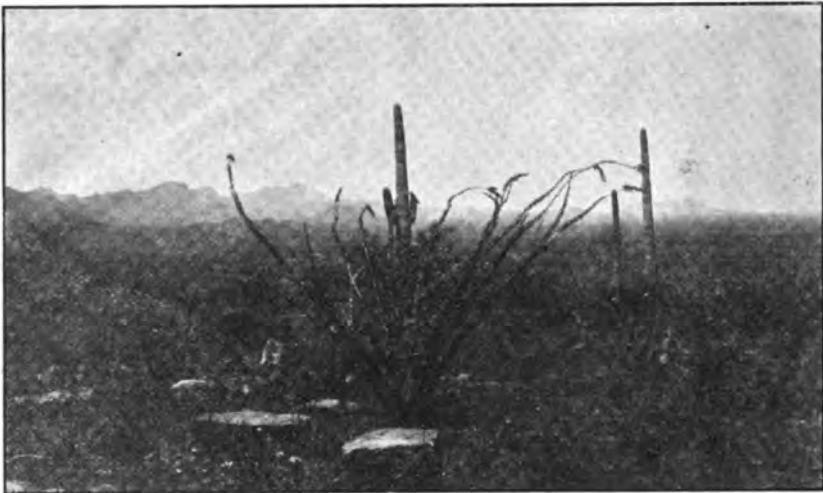
From the laboratory, or better from the summit of the mountain, charming and comprehensive views of the surrounding country can be had. Immediately to the west are the low Tucson Mountains, of which Laboratory Mountains is the most eastern. To the north, east and south the mesa stretches from ten to fifty miles to where it rolls up into various mountain ranges that rear their summits from 8000 to 11,000 feet above the sea.

Since the autumn of 1903, when the doors of the laboratory were opened, work upon various biological problems has been continuously carried on. Among the investigators who have



LABORATORY, LOOKING EAST, SHOWING VOLCANIC ROCK USED FOR BUILDING. THE RINCON MOUNTAINS, 20 MILES DISTANT, APPEAR DIMLY IN BACKGROUND

taken advantage of the opportunities offered by the laboratory are Dr. B. E. Livingston, of the University of Chicago; Prof. F. E. Lloyd, of Columbia University, and Dr. and Mrs. V. M. Spalding, of the University of Michigan. In addition to these the Resident Investigator has been engaged on various lines of work. Although remote from scientific centers and away from the usual or most frequented routes of travel, many scientists have shown their interest in the laboratory by visiting it. It is hardly necessary to give a list of even the most prominent among these, but of them the laboratory is proud to have entertained Prof. Hugo deVries, of Holland, who won the admiration of



LOOKING WEST FROM LABORATORY MOUNTAIN. THE TUCSON MOUNTAINS
IN THE DISTANCE

The picture was taken in early summer and shows the ground to be well covered with annuals and an ocotillo, in the foreground, in leaf and flower. The leaves of the ocotillo are caused to appear as a result of rains, but the flowers, which are at the tips of the branches, are formed in early summer and spring only. They seem thus to be formed quite independent of the influence of the rains,

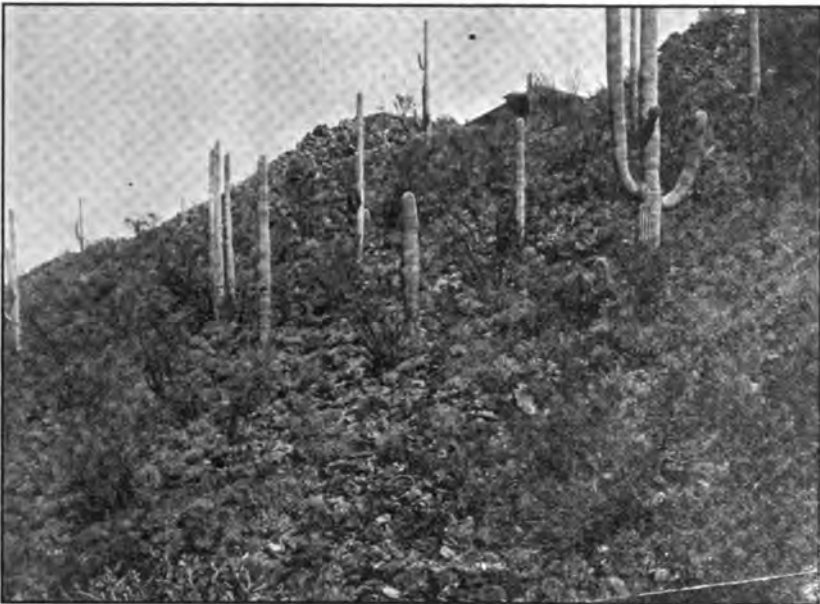
American botanists quite as much by the sweet simplicity of his character as by his profound learning.

In many regards the Desert Botanical Laboratory is a unique institution. It is the only botanical laboratory in the world which exists for the sole purpose of investigating the plant life and the conditions of plant life of the desert. Moreover, the laboratory is eminently modern in the spirit which pervades its work. All studies are carried on as far as possible upon plants growing out doors and under strictly natural conditions. Briefly, the studies reach out in two directions: they endeavor to record as fully as possible the environmental factors which surround and which influence every day the plants of the desert, and they endeavor to note and to measure as fully and as accurately as

possible the reactions of the plants to these stimuli. With improved methods of recording both classes of phenomena, and with the addition of other facilities now under contemplation, a flood of light should be thrown on many of the problems affecting plant life in the desert.

The diversity of the topography in the vicinity of the Desert Laboratory brings with it variety of vegetation.

On Laboratory Mountain, and on the neighboring mesa, are typical desert plants, such for instance, as the creosote bush (*Covillea tridentata*), the palo verde (*Parkinsonia microphylla*



DETAIL OF THE PERENNIAL VEGETATION IMMEDIATELY BELOW THE LABORATORY

The giant cactus with its fluted columns here grows to the size of trees. Between these cacti are seen spreading ocotillos, and the still lower forms, *Franseria* sp., divide with them the ground.

and *P. torreyana*), the mesquite (*Prosopis velutina*) and a large number of characteristic forms, among which may be included the world-famous giant cactus (*Cereus giganteus*). But in the high mountains one finds oaks, birches, maples, pines and spruces and a multitude of other plants typical of the more northern and more humid portions of our country. In addition to these types, desertic and humid, there is another on the desert proper which can be classed with neither of these and which is coincident with the rains. That is, after the rains, especially those of midsummer, the barren places in the desert are covered thickly with transitory annuals which appear in so great abundance that the gay

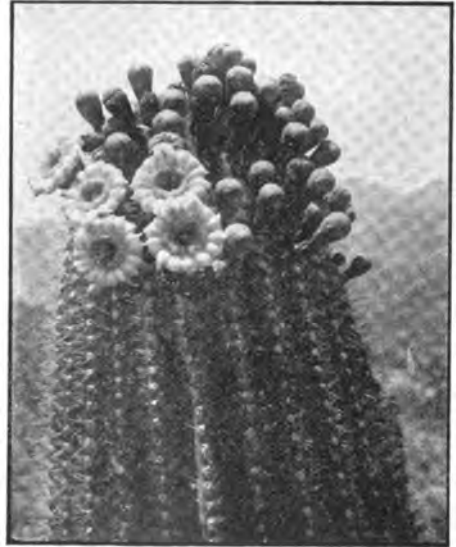


SOMETHING OF THE WEALTH OF THE SUMMER LOW VEGETATION IS INDICATED BY THIS PICTURE

It shows also the apparatus by which the amount of water evaporated from the surface of the desert plants may be determined without removing the plant from its habitat or injuring it in any way. This method of estimating the transpiration of plants was devised at the Laboratory and is chiefly applicable to desert regions.

tinted giant flower beds which they form in Nature's garden may be seen and distinguished without the use of field glasses at a distance of twenty-five miles. Under such circumstances the desert runs riot with color and, indeed, blossoms as the rose.

On the desert, therefore, two general classes of plants are to be distinguished; namely, that class which appears only under favoring conditions and which vanishes when they no longer obtain, and that class which persists through unfriendly conditions as well as friendly ones. We are thus brought face to face with certain of the problems which confront the biologist. What are the conditions of plant life in the desert and in what particulars are they different from those in the humid regions?



THE GIANT CACTUS IN FLOWER (MAY 25) AND IN FRUIT (JULY 2)

The fruit of the giant cactus, which is shown in greater detail below, has a sweetish and very palatable pulp which is eagerly sought after by Mexicans, Indians and birds as well.

How do the endemic plants react to these conditions? Where did the plants of the desert proper come from? How, in what manner, and when, did they become "adapted" to the desert? It is to work toward the solutions of such problems as these that the Carnegie Institution established a laboratory in the desert.

One of the most pressing needs in the study of desert plants is an accurate record of the conditions under which they grow, because the plants are either directly moulded by them, or so regulate their activities and are so constructed that they can endure them successfully.

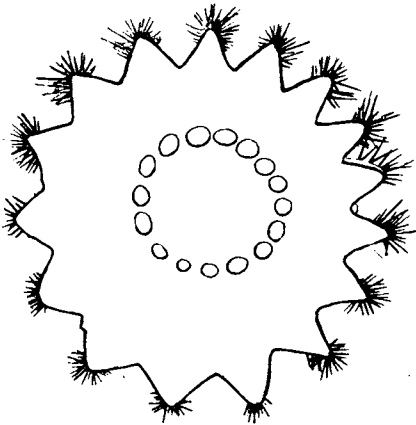
Without entering into a discussion of the meteorological or other factors which constitute the environment of the plants of the desert, it can be said that they are characterized by their variability and their intensity. The light on the desert is a daz-



FRUIT OF THE GIANT CACTUS

zling glare, from which there seems to be no escape; the variations of the temperature of the air and of the soil are alike great, both for the year and for each day; and the rains, upon which directly or indirectly many atmospheric conditions depend, are irregular in occurrence and torrential. Of these and other factors not enumerated, the rainfall, as will be shown below, exerts the most marked influence on the behavior of desert plants.

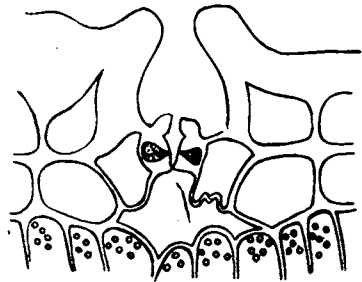
Another factor, quite different from any of the foregoing, must always be considered in the studies of the plants of the desert. We are told that in former geologic ages the deserts now in the West did not exist as such and that the climate of those remote times was not arid but humid. The flora also was unlike the present day desert flora and was characteristic of humid



CROSS SECTION OF STEM OF GIANT CACTUS

The water storage tissue lies between the inner ring and the channelled margin. The thick cuticle is represented by the heavy line which bounds the figure.

—After E. S. Spalding.



BREATHING PORE OF A TYPICAL DESERT PERENNIAL

The section was made at right angles to the leaf; much enlarged. Note the heavy outer epidermal wall, the cuticle, and observe how deeply the valve of the pore is placed.

—After Tschirch.

regions. But the desert plants are the lineal descendants of those ancient plants—whether they lived in the region now desert or in regions more or less remote, does not matter—and certain peculiarities in the activities and in the structure of desert plants indicate that the influence of the ancient stock still lingers.

As the formation of deserts is due to the circumstance that the rainfall is small, or, to be more exact, is less than the annual evaporation, so one would expect to find that the most striking responses of the desert plants to any environmental factor would be those touching the variation in the amount of water available for their use. That in fact there is an intimate relation between the two is shown in many ways. For instance, in regions where the entire yearly rainfall occurs in a single season,



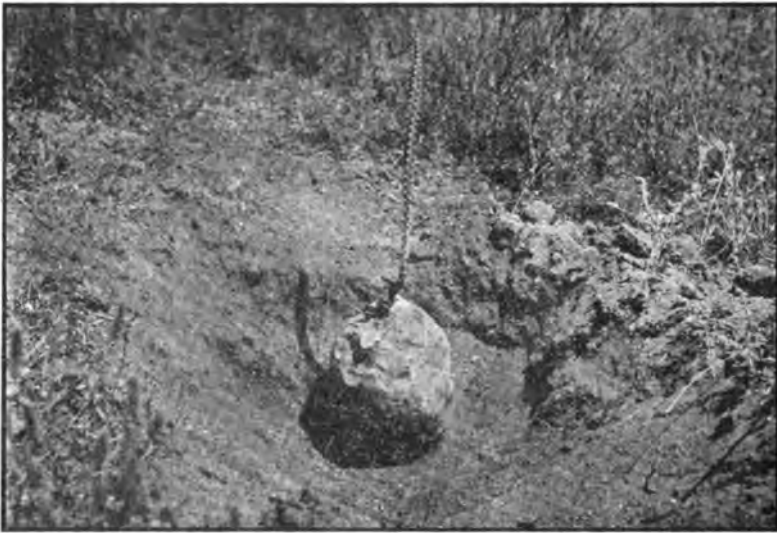
THE INDUCTION OF LEAF FORMATION IN OCOTILLO BY INCREASING THE AMOUNT OF AVAILABLE WATER

The picture to the left shows the condition of the plant March 26; the picture to the right was made April 4, six days after the plant was watered.

and the balance of the year is dry, many of the perennials are provided with means of storing up enough water at this one time to last them during the succeeding long period of drought. The accompanying illustrations show types of such plants, the night-blooming cereus (*Cereus Greggii*), and the giant cactus (*Cereus giganteus*). The giant cactus is especially well adapted to live successfully under such climatological conditions. It has a fleshy stem which is sometimes fifty feet high and which often bears numerous fleshy branches. Roots penetrate the soil in such fashion that both the superficial water and the water more deeply placed can be reached by them. The giant cactus contains over 90 per cent. water by weight, or a cactus weighing 1000 pounds would contain nearly 125 gallons of water.

The giant cactus also has a very perfect mechanism by which it accommodates itself to varying amounts of stored water. Unlike the trees most familiar to us which possess a thickened bark that is continuously formed and continuously shed and which in this wise adapts itself to the increased diameter of the trunk, the giant cactus has a skin, or cuticle, relatively heavy, which exists during the entire life of the plant and provides for its growth by a process of stretching or intercalary growth. It

will appear at once that the absorption of water in large amounts and its evaporation must materially alter the bulk of the cactus in a manner quite independent of a permanent increase in size, as in growth; and that, unless the skin or cuticle is elastic or can otherwise accommodate itself to the annual fluctuation in size, the result of the plant's absorbing water would be to rupture the cuticle by the swelling or to lacerate the tissues of the plant when the water content reaches a low amount. The plant has solved the problem very neatly by providing a fluted or ribbed condition of its exterior over which the cuticle is stretched. When water is taken into the tissues of the plant, these longitudinal furrows become shallow, and when water is given off, the furrows become deeper—the action of the cuticle being quite like that of an accordeon. The arrangement of the water-storage tissue and its relation to the epidermis will be



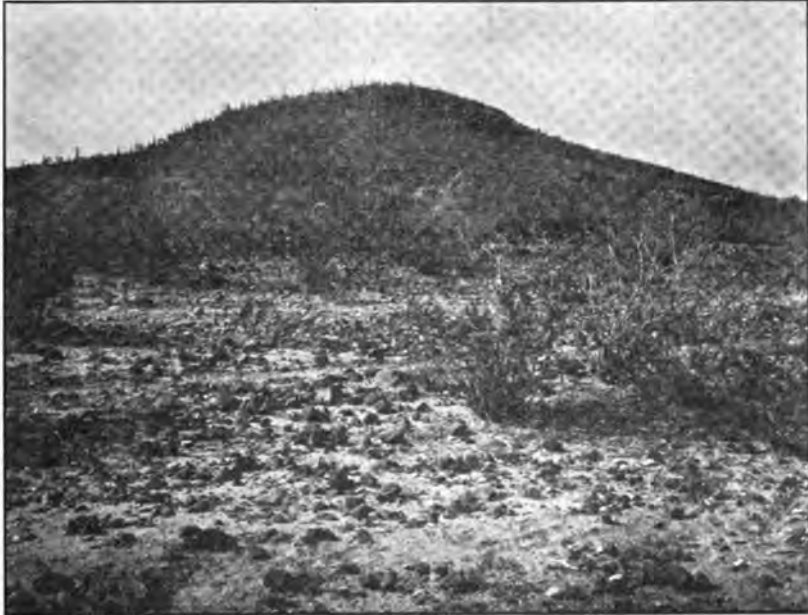
NIGHT-BLOOMING CEREUS (*Cereus Greggii*) TO SHOW THE LARGE ROOT WHICH IS PARTLY EXPOSED. THIS IS THE WATER-STORING ORGAN OF THE PLANT

better appreciated perhaps by reference to the accompanying sketch.

It is quite as important in the economy of desert plants that they absorb water quickly when the opportunity comes, that that they conserve it well. That they do both may be well illustrated by examining some features of the reaction of the single species, the ocotillo or candle bush (*Fouquieria splendens*), to a variation of its water supply. The subjoined illustration of a small ocotillo before, and one week after, it was given water shows how quick it was to absorb it and to put out new foliage as a consequence. That the absorption of water greatly increases other vital activities also is shown by the amounts of watery vapor transpired by another ocotillo of about the same age and size as the one shown in the cut. Before a certain heavy rain in May the ocotillo in question was practically de-

foliated and it gave off only 13.7 milligrams of water in one hour. Two days after the rain young leaves were observed, which by the afternoon of the third day were nearly of mature size. The following figures give the total amount of water transpired by the plant in one hour on the second, third and the fifth days respectively after the rain: 345, 956.2 and 1876.6 milligrams. Directly after this storm of May a long period of drought ensued, during which the leaves of the ocotillo fell away, and the rate of transpiration was again reduced to the small amount observed previously.

By what structural or other means the plant can thus absorb



ONE OF THE PUZZLING PROBLEMS TOUCHING THE DISTRIBUTION OF THE DESERT PLANTS IS SHOWN IN THIS PICTURE

The giant cactus prefers not to grow on the northern slopes of the mountain, even when the mountain is a low one as in the present instance, but is found abundantly on the other sides. The right slope of the mountain, which is to the north, is thus seen to be practically devoid of these cacti.

water quickly, store it carefully and use it conservatively I cannot stop to describe. It must suffice to point out two peculiarities of structure out of a great number common to all desert plants, by which they guard their treasure well. These are shown in the accompanying illustration. It will be noticed that the outer wall of the epidermis, the cuticle, is very thick and that the breathing pore which reaches through it is deeply sunken. By these means the two factors essential in the outer covering of plants exposed to arid conditions are acquired. These are, in brief, that the cuticle be water-proof when it is desirable to avoid excessive transpiration; and that the breathing pores, without which the plants would suffocate, be so placed that they permit the interchange of gases between the atmosphere outside

the plant and the air-chambers in its body, while at the same time they prevent a ruinous waste of water.

It is by such studies as those sketched in the preceding paragraphs, in addition to others quite as essential but which are not presented, that we hope to acquire ultimately a sufficient mass of data by which certain problems which press for solution may be satisfactorily worked out. Attention may be called to two of these which have already been hinted above. They refer to the significance of the ephemeral summer flora, and to that of certain responses of the perennials of the desert.

When the rains of summer come, annuals of great variety spring up everywhere. They run their course before the season of adversity cuts them down. They thus live at a time when water is abundant and other physical factors are favorable to their germination and development, and only then. Consequently as would be expected they have a structure similar to plants of really humid regions. They are in this regard, therefore, as different as can be imagined from the perennials that grow by their sides. Whence came they? Why have they a structure, and why activities, so opposed to those of the "typical" desert forms? For answers to these questions we must without doubt evoke the aid of the geologist as well as the botanist. Meantime many things relating to the biology of these plants point to but one conclusion; namely, that their ancestors were accustomed to a humid climate. This harmonizes with the geological history as given above, that in former times the portions of the Southwest now desert were not arid but humid, so that it may well be that the ancestors of the desert annuals have never been subjected to other than humid conditions. These conditions probably formerly obtained all of the year; they now recur only when they are brought about by the relatively infrequent rains. Thus the appearance of these plants on the desert as well as the peculiarities of their structure and the activities which characterize them may perhaps be accounted for.

The reactions of the perennials to the rains, or to an optimum water supply, point to the probability that their remote ancestors also lived under humid conditions. The perennials take on renewed growth, forming new leaves and new shoots in a very vigorous fashion, as a result of the summer rains. In some instances the new parts are clearly ephemeral and not calculated to withstand arid conditions; in others they exist but a short time after the dry weather sets in. Certain of these new parts might very likely be considered reversionary in character and as indications of a time long past when such evanescent organs were adequate to endure all conditions of those times.

The perennial parts of the perennial plants have without doubt widely departed in structure and in habits from the geologic forms. By what steps these departures have been brought about, by what modifications of existing habits or structures or by what additions of new structures or habits the adaptations were accomplished, constitute, in short, the puzzle which the scientists working at the Desert Laboratory would like very much to solve.

Tucson, Arizona

IN PURSUIT OF A GRAVEYARD,

Being the Trail of an Archaeological Wedding Journey

By *THERESA RUSSELL*

—“But each, for the joy of the working,
and each, in his separate star
Shall draw the Thing as he sees It,
for the God of Things, as They Are.”

IN MEMORIAM

To the One who Went On

*Somewhere, dear heart, thy buoyant spirit is still a-questing.
And if there be, beyond the Veil, any shadows, thou art smiling up at them
blithely. If there be any obstacles, thou art making thy way through them
patiently. If there be companions, thou art to them an inspiration for thy
tenderness, thy merriment, thy dauntless resolution. And if there be remem-
brance—thy thought turns often, as does mine always, to that illumined
path we trod together in the summertime of joy.
Then quaff with me this silver Cup of Memory, in the tremulous hope that
it may be an earnest of the golden Cup of Fulfilment.*

CHAPTER I OVER THE HILLS

“The path by which we twain did go
Which led by tracts that pleased us well.”



“LIVE in Gallup?” inquired the porter.

“Oh, no. Our home is in the East.”

“Lawd! Must have a grudge agin yerselves,
then, stoppin’ here!”

But he consented to put us off at the forlorn little station, in the darkness of three A. M., and volunteered solicitous instructions to the heavy-eyed deputy from the only hotel in town to “give us the very best they had.”

“The “very best” held no hint of enervating luxury, nor yet did its simplicity spell discomfort. The chief distinction was a front exposure. The first thing exposed was a landscape of freight cars, with the squat, white Harvey eating-house of plastered adobe enlivening the foreground, a stretch of Santa Fé track defining the middle distance, and a row of mountains standing aloof in remote perspective.

En route to breakfast—for our highly differentiated accommodations supplied bed only, under the caption of “Lodging,” and required the “transient” to browse for board—we discovered the remainder of the metropolis. It was seen to be no radical,

this town, but a strict conformist to the accepted plan of frontier architecture. The Plan flanks its one Main Street with the paraphernalia of transportation on one side and a line of saloons, punctuated by an "Emporium" or two, on the other. Celestial restaurants will be tucked in here and there, and the postoffice shoved around the corner. For we must drink first and most, if you please, consider grub next, acquire raiment on what remains, and relinquish foreign correspondence to the tenderfoot.

A view from the hilltop revealed our city in relation and proportion, a small plebeian intruder into a vast patrician domain, tolerated of necessity, but with inflexible reserve and hauteur. Let vulgar engines scream, if they must, machine-devils snort



"THE ACCEPTED TYPE"

and throb and whirr, pistols crack and raucous voices shout. Let the deafening sum of the man-made tumult hurl itself into the Infinite Silence. It is as impotent as the ancient slingshot of the child Crusader against the Holy Walls. The projectile recoils feebly, and the Immense Thing remains.

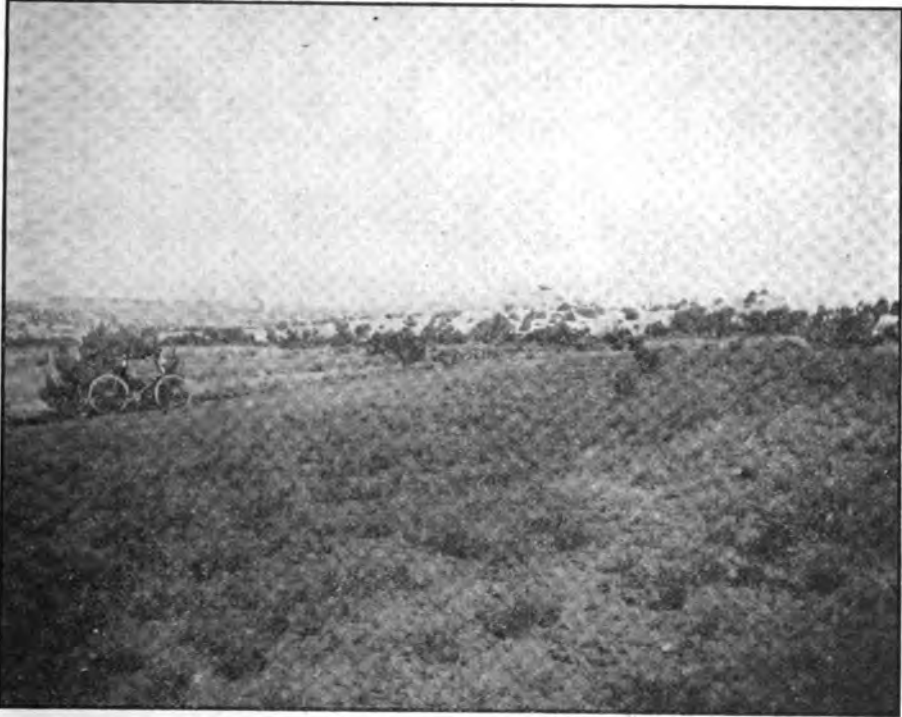
"I am a little afraid of that wheel of yours" said the Anthropologist. "It is too wobbly to put confidence in for so long a trip. Perhaps you'd better wait in town for the wagon, and let me go on."

A glance forward at the trail winding on forever over the ridges and up the gradual but inexorable slope caused my intentions to waver. A glance backward toward the one populated spot in sight took cowering hesitation by the neck and shook it into erect determination.

"I'll ride as long as the wheel will stand up. Then I can walk."

We pedaled on vigorously, eyes shining back into the pure light of the morning sun, pulses bounding with the wine in the air. Coasting down the first grade, my left pedal, righteously endeavoring to live up to its reputation, fell off, and my heart to the ground with it. But the Man of Science put them both in repair, and the procession made an assault on the next hill.

At the summit, after having pushed our wheels a good part of



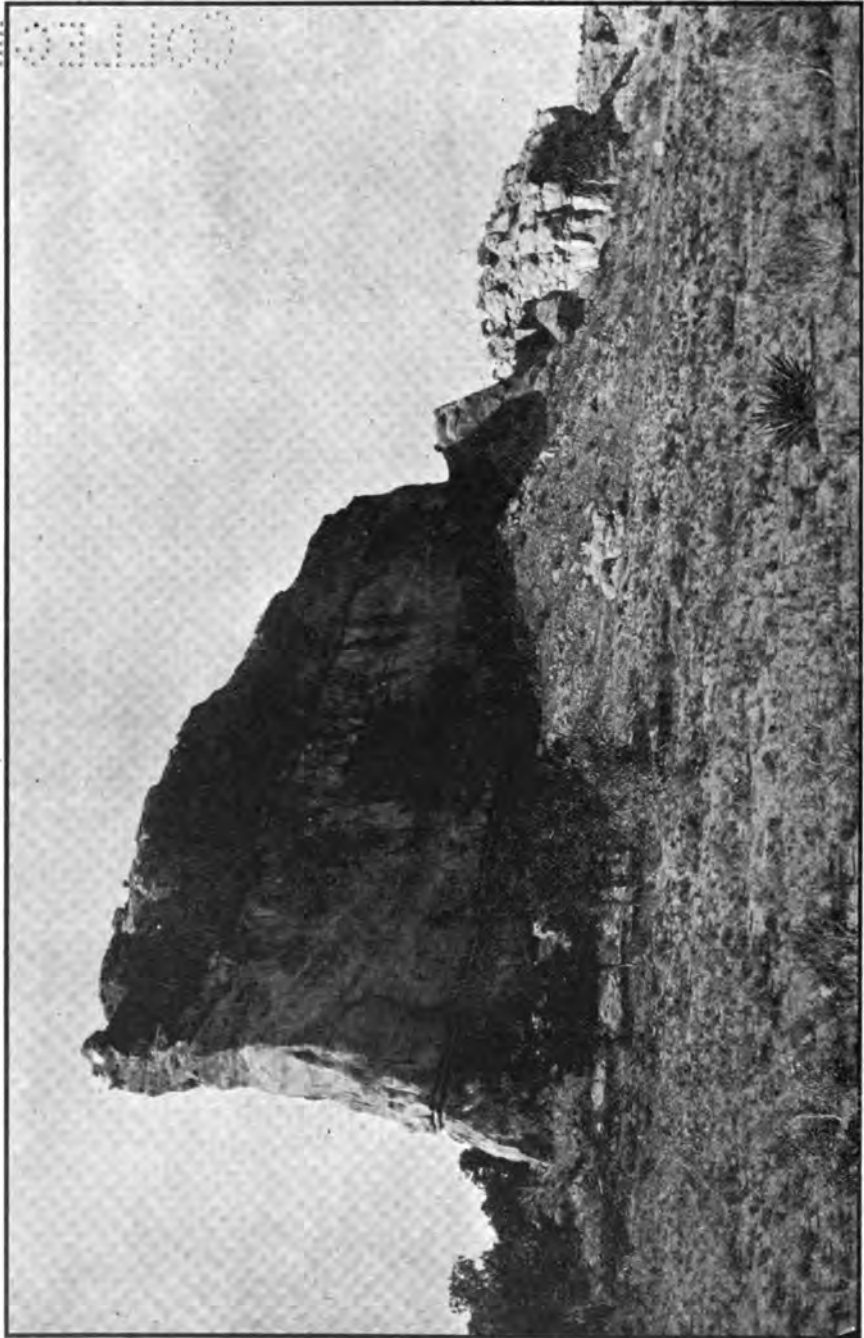
"SPRAINED ITS ANKLE IN THE SAME PLACE"

the six-mile ascent, we were rewarded by a breath-taking panorama, and a dislocated joint. The former was open to the public, but the latter was held in monopoly, not by my own impaired but persevering little steed, but by the trusted pet of the Man Himself—his own reliable, safe-and-sane chainless.

We decided to sit down and eat awhile.

What a joyful companion is a canteen, and what an incomparable flavor its presence imparts to ham sandwiches and ginger cakes! From it, indeed, one may imbibe a fresh endowment of resource and enthusiasm, may even transfer a portion thereof to a disabled wheel and thereby persuade it to continue

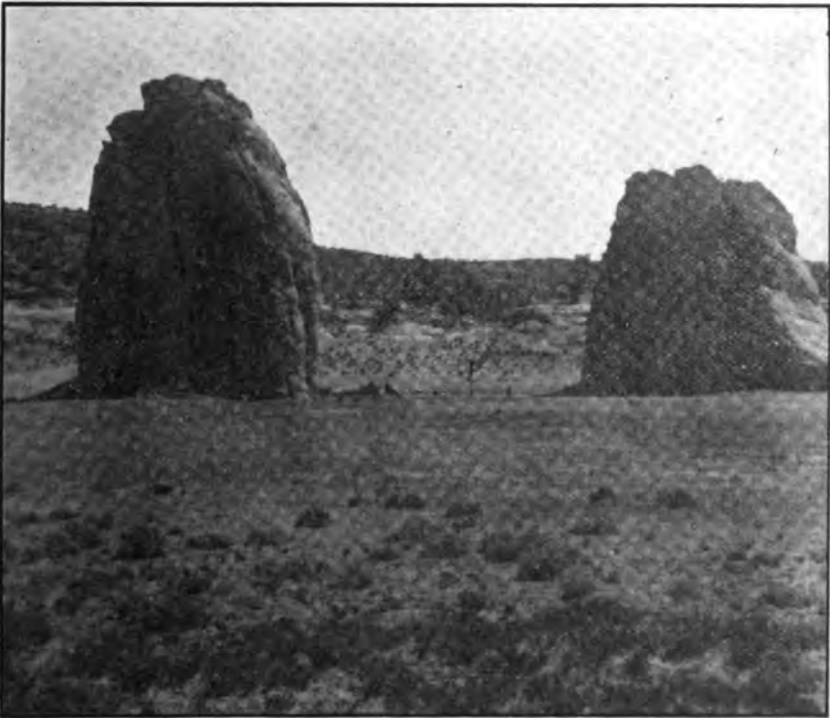
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THE PLAYGROUND OF TITANS

in service, if only to carry passenger on down grades and levels smooth.

Most of the levels ahead were not smooth, but the descent came first, and gayly away started Jack and Jill. Only it was Jill this time who fell down and scraped her crown and rolled over and just managed to pull her spinning merry-go-round out of the way before Jack came, not tumbling after, but gliding imperturbably by, leaving her ruefully to shake her head at the Manes of Virgil and mutter as she dug the sand out of her

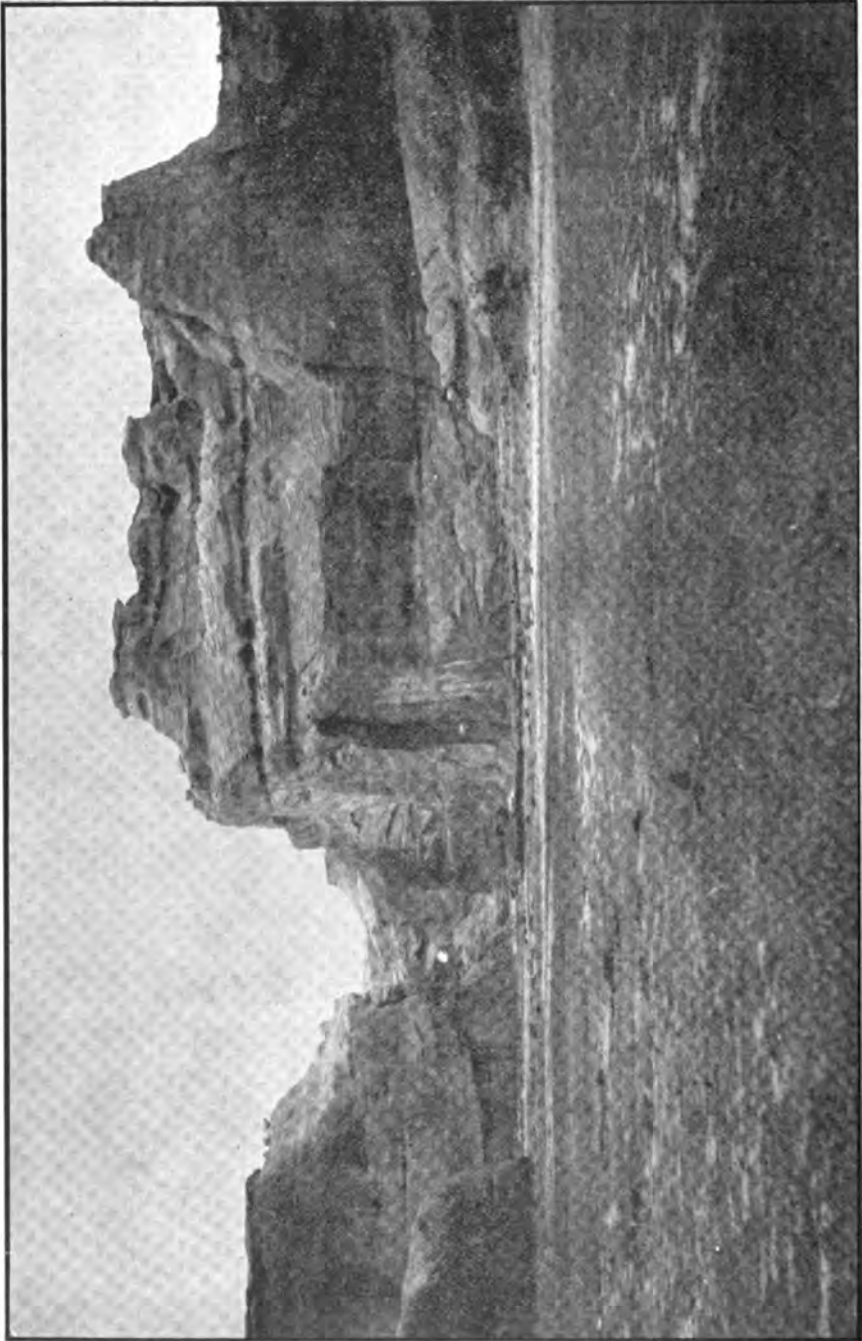


ROCKS, BOULDERS AND CLIFFS

features, "Descensus Averni non semper facile est—it depends on the method of locomotion!"

Thence down by less violent stages to the sand-floored valley, and we found ourselves on a plain that came near being without any boundaries at all, and yet could not quite escape them, those ever-circling, never-approaching hills. In its spacious midst were the hugest of rocks, boulders and cliffs, just put down anywhere; the playground of Titans, where human pigmies had no business to go.

And yet, there they were. For at last, ten hours and thirty miles from morning, we saw some houses and hailed the sight as kin in a far country. The haven we had gained was an em-



"JUST PUT DOWN ANYWHERE."



"A LAND OF ANCIENT RUINS"

bryonic mission school for the Indians. Three Catholic monks, it seemed, had spent many years here in lonely labors, and were now become the nucleus of a rapidly developing enterprise, founded by the Church.

So now the placid surface of their cloistered life was being churned into a gentle froth of excitement. Stone-masons, freighters, cooks and carpenters were pouring a rushing stream of activity into their whilom peace-locked, tranquil bay. We had come to a land of ancient ruins, but the first incomplete walls and empty belfries we encountered spoke not mournfully of the past, but hopefully of the future. And to a scenery-sated Jill, there was also a cheerful note for the present.



"MOURNFULLY OF THE PAST"

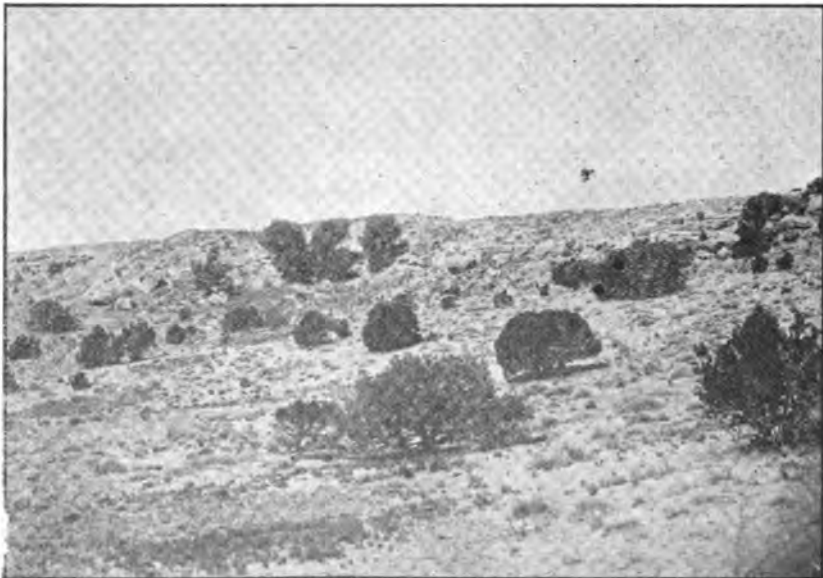


"FROM CREOSOTE AND SAGEBRUSH"

"Come right in," said the landlady. "You don't mean to say you've come all the way from Gallup today. Mercy on us! Ain't you awful tired? Here," whisking a pile of fashion plates and some sewing out of a chair, "sit down."

without stopping to think about it, the sense of being surrounded

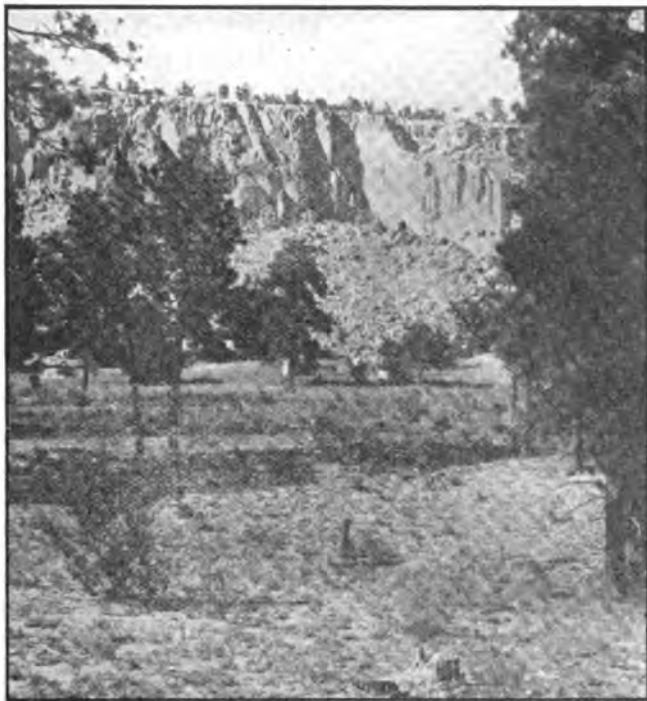
Jill sat down, without stopping to argue about it, and enjoyed, by something nearer her own size. The restfully minute room—it was a ten-by-twelve tent, with floor, frame and wainscoting



"TO MESQUITE, CEDAR AND SCRUB OAK"

of pine—was as small as its dooryard was great, as crowded as that was bare. Nearly half of its space was occupied by the bed, a double-decked, curtained arrangement, like a Pullman section, officiating as a reduced synthesis of four sleeping apartments for the landlady and her three daughters.

“No, we don’t live here,” they explained; “we’ve just taken this boarding contract while the school is being built. No, we don’t get lonesome. Too busy, feeding such a hungry crowd. Then we go over to Fort Defiance every once in a while to a party or



PROMOTED TO PINES

picnic. Ever been there? No? Better stay and drive over with us next Sunday. Mighty nice people at the Fort.”

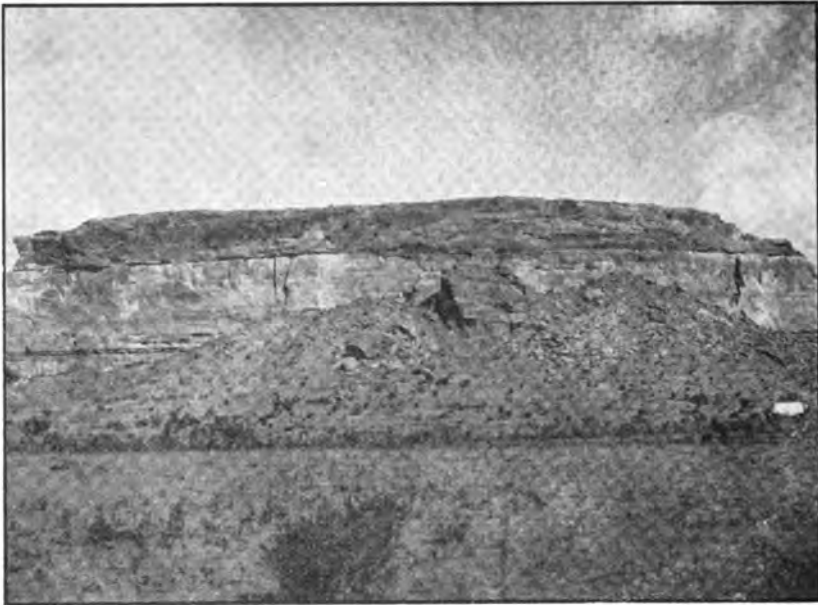
It was our privilege, later in the summer, to verify this kindly saying, but now we were obliged to hold it in indefinite anticipation.

After supper, Father John, of the Brotherhood, solved the problem of a place for the wayfarers to sleep. One of the old buildings, just then used as a storeroom for the accumulating invoice of new furniture, was unlocked; a vacant nook found in the midst of ceiling-high stacks of desks and washstands, cots and Navajo blankets were brought in, and the bicyclers slept like a top—at least I should suppose a top slept by ceasing from

a rotary motion and cultivating an attitude of repose, shouldn't you?

Then in the morn, what doth our cassocked friend, Captain of Emergency? He trotteth out a wheel of his own and proclaimeth himself delighted to have it used in place of the one now laid up for repairs. So with this welcome fresh relay, the Pursuers once more fare forth.

In length and landscape the day's journey was a duplicate of yesterday's. It proved a duplicate also in accidents. For again at the end of a six-mile climb, the borrowed "bike," with weak conservatism, followed the established precedent and sprained its ankle in the same place. In her sleeve of sleeves must Jill



"A DROP OF HUMANITY"

confess to a wee smile at the not uncompensated trick, for the crippled steed could yet nearly equal her own in speed, and she was spared from playing tortoise and trundling along twenty minutes behind.

Yesterday we ascended from creosote and sagebrush to mesquite, cedar and scrub-oak. Today we are promoted to pines.

Pines! The aromatic breath of them, the noble park-like sweep of them, the alluring vistas through their sun-flecked aisles, the soft, yielding, lovable brown beneath, the hard, immaculate, Pharisaical blue above. And the sharp silhouette of pointed green tops against the brilliant azure, so insistent, so assertive, so uncompromising. Yet in those very tops trembles an appeal from the too illuminating glare, a requiem to perished

illusions, a sigh for the merciful sweetness of shadows, a plea for the vague winsomeness of dreams, a Memnonic refrain.

Out of the Halls of Enchantment we rode reluctantly, and over the ups and downs of foothills to another valley. Once more we encounter a drop of humanity in the great gulping ocean of wilderness—a freighting outfit, bound for the trading post that was also our destination. The black eyes of the Mexican bulged with incredulous amazement at the unwonted spectacle of a petticoat-ridden bicycle in those forbidden regions.

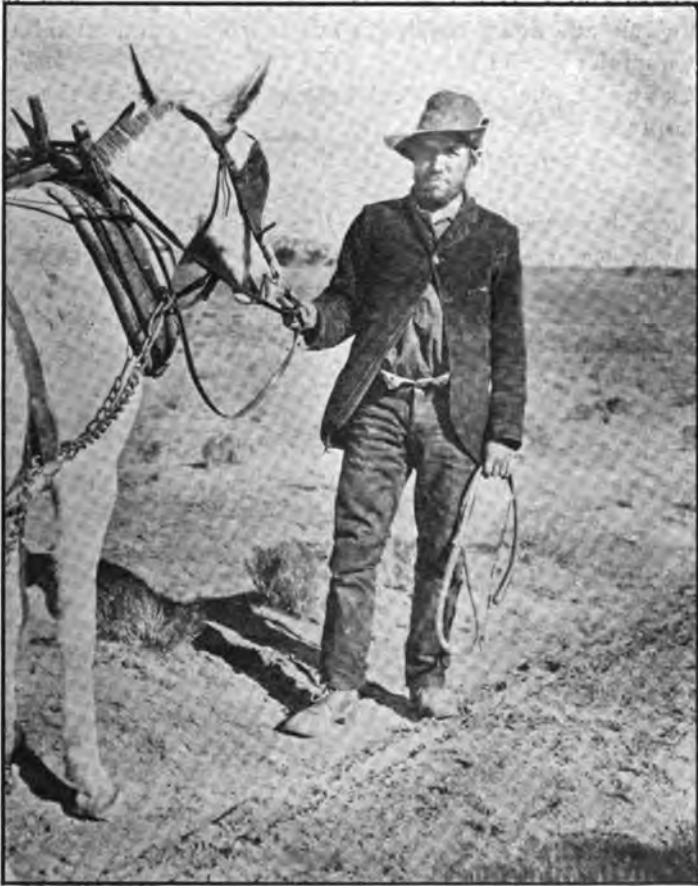
"Where you goin'?" he demanded.

"All same place as you," we reply.

"Oh, no, you never make it. Too mucho arena!" with an emphatic, disapproving shake of sombreroed head.

As we rode out of the hills the outlook widened and the horizon was far away when darkness fell. But near at hand was the little light in the window, that winked indulgently at a naughty world, and twinkled a merry welcome to its home in the desert.

(To be continued.)



" 'WHERE YOU GOIN'?' HE DEMANDED "

THE ROCKING CHAIR IN SOUTH PASS

By SHARLOT M. HALL



HE wagon waited under the maple trees by the door, its stout cover of unbleached "factory" bulging over the high curved hickory bows. It was a "plains wagon," a later follower of the old Conestoga, loaded from seat to end-gate with household goods—"chists" of clothing and boxes of food, rolls of feather-beds and patchwork quilts, dishes and cooking utensils; and even little bags and bundles of herbs tied neatly and swung to the bows out of reach of bobbing heads.

The eight strong oxen stood facing the west, waiting patiently till the crack of the long whip and the "Gee! Haw! Get up there!" should give the signal to bend great, hairy necks against the yokes and start the wheels turning westward. The driver tramped up and down beside his beasts, coiling and uncoiling the whip impatiently in his hands.

"Ready? Come on! We'll be the tail wagon in the train," he shouted.

Three children ran down the path from the barn, laughing and pushing each other in their haste. "We was telling White-foot good-bye; we'll wait at the strawberry corner," they called as they trotted past.

A youngish woman with red-rimmed eyes came out on the porch. Behind her a woman with white hair smoothed softly under a black sunbonnet pushed a big, low rocking chair through the door into the path. If there were tears in her eyes, they did not dim the look of determination.

The younger woman came close to her husband. "Mother's so set on that chair, William," she whispered. "It'll 'most kill her if you don't take it. We can find room some way."

The old woman dragged the chair down the path, and its rockers, catching in the clump of tansy at the end, sent up the pungent, homely odor of the crushed herb. "William," she said, before he could speak, "I won't leave that chair. If you're bound to drag me and Matty and the children into the wilderness whether or no, you've got to take that chair, too!" Your father made it with his own hands and cut my name on the back, 'Felicity Grame'—we'd been married just a month." And she ran her fingers tenderly over the carven wood where the letters were worn smooth and dim by the pressure of many heads.

Here hers had rested while she crooned the babies to sleep or soothed them through nights of sickness; here his had waited

after the day's work till she "dished up" their evening meal. Here they had counseled together when the present was hard and the future dark. And here she had found him one dusk, with his cheek pressed against the worn letters and his hands idle in his lap—done forever with work and planning.

Perhaps it was this in her face that made the tall driver drop his coiled whip and stow the old chair carefully away in the far end of the wagon. "Why, mother," he laughed as he climbed down and lifted her gently over the wheel into the seat, "you'll be rocking your great-grandchildren to sleep in that chair under the rose trees in California. I'm going to clean up a stake in the mines and then we'll hunt the prettiest spot in the Sacramento and go to farming. And it's not all wilderness that we cross. I tell you every foot of the plains will be God's country some day."

From the "strawberry corner" in the angle of the worm fence where the sweet, wild berries grew, they took a last look back at the old home under the maple trees. By night they had hailed other wagons drawn by slow-plodding oxen, with now and then a milch cow leading behind, and childish faces peeping out under the covers for a furtive glimpse of the new-comers.

Tomorrow and tomorrow added more wagons, all heading for Council Grove, where the wilderness began in earnest and the hap-hazard company of emigrants would fall into an orderly caravan, with captain and guards and mounted scouts like a marching army.

William, by right of having traveled the long trail before, was chosen captain and selected his scouts from the men who knew the plains best. Every man in the caravan had to take his turn at standing guard and all night long the muffled tramp of those told-off for duty circled the camp like an unspoken "All's well."

The next morning the wagons broke camp, not lazily one by one as before. At the captain's shout of "Catch up! Catch up!" the oxen were yoked and swung to their places and the wagons strung out into two long lines, the leaders driving abreast some twenty yards apart. Ahead rode the scouts, with keen eyes alert for signs of Indian trails and watchful for grass and water for the coming night's camp.

An hour before sunset the lead wagons halted fifty feet apart and those behind drew up to form a compact circle, the wagon-tongues turned out toward the prairie and the inner front wheel of each wagon lashed with log chains to the inner hind wheel of the wagon ahead. Within this strong enclosure, the bedding and food were unloaded and supper cooked over fires of dry wood and buffalo chips.

The children played together among the wagons and rolls of bedding; the women exchanged neighborly courtesies, and the men told-off for guard took their places, while those left behind pushed up the dying fires and talked of the gold of California, of oxen stampeded at night, and of swift Indian raids that had left some unlucky caravan a smoldering circle of ashes with warped wagon tires strewn in and out like the coils of a sinister snake.

By one fire an old woman rocked in a rude, low chair and watched the stars that from their far height looked down on the house under the maple trees.

The days ran on, each as like its fellow as the red wheel-ox was like his yoke-mate. The children played at Indian raids behind the stockaded wagons; the women forgot to shudder at the camp-fire tales and gathered more and more where the gentle creak of an old rocking chair on the short grass made a soft echo to their homely gossip of hopes ahead and loved ones left behind.

They were far out where Pike's Peak hangs like a blue cloud in the distance when the foremost scout rode back and the caravan halted while the captain went on alone. When he came back they swung to the south, never again camping where the cold ashes marked the fires of an earlier party.

Only the captain and the scouts knew that they had turned aside because the trail ahead was marked as by milestones with new-made graves, singly and in groups, and that a greater fear than stolen oxen and midnight raids hung like a dark shadow over the caravan. They alone knew what it meant when one of the drivers, with his team half unyoked at a night camp, dropped on the grass and lay still, his gray face overspread with terror.

They broke camp late the next day and a half-grown boy tramped beside the oxen, while the women lingered to lay a handful of wild pea-blossoms on a hasty mound whose raw earth stared out of the buffalo grass.

Thereafter their trail was marked by those raw heaps of earth and they moved on with feverish haste. The children, gathering in frightened groups under the wagons when the camp-fires were lighted, whispered: "Cholera—they call it cholera. It will stop when we reach the desert."

The old chair no longer rocked by the fire and the swinging bundles of herbs were gone from the wagon bows. From wagon to wagon Grandmother Grame went with hot, strong-smelling teas and quick, sharp words of courage worth all the bitter tonics.

Some would have stopped or turned back. "For what?" she

asked. "To die in camp, sick with fear and waiting? To count the graves back like a sick buffalo with a pack of gray wolves snarling at his heels? No! Keep on; the desert is ahead, and the desert wind is our best hope. While we travel, we have less time to think."

So they traveled on, more than one woman walking beside the oxen and swinging the long whip while her heart ached over some hurried heap of earth behind, till from the rough hills of South Pass they looked down on the desert with a great hope.

They made camp on a sand-dune blown into rippling waves and water lines by the wind—the wind they had prayed for—and before the fires were lighted, the captain fell with his face gray and drawn on the gray sand between the stockaded wagons.

Like a knife the fear struck home; at midnight they counted the well on one hand. Men were cowed into silence, or whispered of that awful year when, from the swamps of the Wabash to the prairies of Illinois, every house counted its dead before the living.

Then Grandmother Grame dared the hard last resort in dire extremity that had saved life or hastened death in many a stricken camp along the old Trail. With set lips and unshaking hands she measured the calomel twice to each one and followed it with hot vinegar and water.

Noon, and night, and noon again—and mow mounds in the wind-marked sand. All were out of danger but one—the smallest of the three who had raced down the barn path with White-foot's good-bye caress on their fingers.

"Oh, Bram-ma!" he fretted, "I'm so tired, an' this old wagon's so hard. It bumps an' bumps. Put me to bed, Bram-ma, in my own trundle bed with Felissy."

"Grammar's got you, darlin'," she whispered, "right here in her old rockin' chair. Shut your eyes and we'll play 'rockity-rock' like we used to under the maple trees."

The chair stood in the shade of the wagon. Back and forth, back and forth, slow and swaying it moved, through dusk and twilight and midnight, and the shrill little cry, "Put me to bed; put me in my own bed, Bram-ma," hushed itself out on her shoulder at daybreak.

"It's coming, Matty! The wind's coming!" she said, pointing through the Pass, as they took him out of her arms.

Far out across the drifted dunes a low cloud was moving, now dim and gray, now red and strange as the sun rose higher. Such wraith and ghost of all the storms of other lands as they had never seen! The very earth rose up to meet it; thin jets of sand and whirling dust-devils ran out ahead like scouts and

skirmishers. It flung its gathered might through the Pass and shook the great wagons till they rocked. The cattle, penned in the stockade, bellowed with fear as the sand and pebbles beat over them. Left to themselves they would have raced in mad stampede before it till they fell and were buried in its relentless drift.

Throughout the night it snarled and tore across the hills like a hundred-fanged wolf. Long drifts of sand lay heaped half-way up the wagon wheels, and the bunches of pale greasewood were buried to their tips. But the morning that dawned might have been June under the maple trees, so soft was the air, so full of faint fragrance, as if a breath from far gardens of rosemary and tansy and "old man" had blown through it—and she who had loved the sweet old herbs slept with the child, unheeding.

The double grave was fenced with rough poles out from the mesquite thicket in the cañon below. It was heaped and piled with stones, that the heedless sand might not blot out its memory. The oxen were yoked, the wagons swung into line. Only the chair stood alone and empty by the dead campfire.


Then the captain staggered out from his place at the head of the caravan, and, lifting it, set it down inside the fence at the foot of the grave. He motioned with his hand, and the wagons moved on, out through the Pass, where the road lay dim between the sand dunes.

Looking back they saw the old chair caught by the desert wind, rocking, still rocking.

Dewey, Arizona.

BY THE SUPERSTITION MOUNTAIN

By *NELLIE SUYDAM*

 E cursed the sun, that day we rode
From Desert Wells to gray Pinal —
The sun, the cactus, the mesquite,
The long, long road, the mountain wall.

Now o'er the terrace rose-leaves drift,
The dim, sweet garden lies below,
And on the hill-clasped valley's slopes,
The peach and plum and almond below.

And yet we see—a naked plain
That fades to distances of gray,
Tall cactus pillars, sparse mesquite,
Rough mountains and a lonely way.

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Archæological Institute of America.

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JONATHAN SAYRE SLAUSON, president of the Southwest Society in its first and second years, and at the second annual meeting elected president emeritus, died December 27, 1905. No one has thought to dispute the title given him as the foremost citizen of Los Angeles; and his funeral was an unprecedented tribute from the community which had so long known and loved him. For the first time, perhaps, in the history of Los Angeles, public business was suspended in memory of a private citizen, and his body lay in state in the City Hall.

The following resolutions, unanimously passed by the executive committee of the Southwest Society, speak for themselves:

With all the city and state he served so long and so well, (not as a paid official, but as a true citizen and large lover of his kind), the Southwest Society of the Archæological Institute of America mourns the death of Jonathan Sayre Slauson, its first president and president emeritus. Any community is happy which has one such man; any community is rich which has had one such—for usefulness like his does not end with the passing of the physical presence. His memory remains an inspiration and a standard.

To the family bereft of such a head, this Society extends its heartfelt sympathy. To have had a man like this in the intimate relations of home is riches which "neither moth nor rust can corrupt," nor even time steal from them.

The Southwest Society will carry forever in the head of its roster the honored name of its president emeritus; and in its enduring work for this community, will always keep his memory in loving remembrance.

The Southwest Society has gone ahead with its large plans

By their consent, and subscribed by the Southwest Society.

slowly and safely. The foundation for such a superstructure must be laid broad and deep; and one reason for the unparalleled success of the society is that—knowing what it wanted, and how to get it—it has had patience as well as zeal. One of the necessary preliminaries has been the creation of a large membership. This has already been achieved—such a membership as is entirely without comparison in the history of the Institute, and probably without equal among scientific societies anywhere in the world, time and dues considered. This membership will continue to grow; but the affiliation already of very nearly 400 of the foremost citizens is assurance of the large success of the ultimate plan.

Nor is the success of the scientific work more assured than the Art Gallery which will be an equal partner in the great plan. This movement of the women to represent the esthetic side of this community in conjunction with the historical and scientific, is in the right hands and on the right lines. There will be no trouble about securing ample funds to establish an enduring monument in this department. The financial ice was first broken by Mrs. Henry Wilson Hart, a life member of the Southwest Society, who contributed \$1000 as a beginning of a fund for the art building. Later, Madame Ida Hancock has contributed \$10,000, with a promise of as much more if needed, for the foundation of an art hall. The matter will become epidemic as soon as the plans are fully formulated; and not only the rich will unite, but thousands of women, in proportion to their means, will do their share toward this modern Parthenon.

The work of the Society progresses unwaveringly. In a few days, tentative plans for the museum building will be in hand; and the investigation of sites is in progress. Mr. Henry E. Huntington has offered the Society its choice of four magnificent hills free for a museum location; and there are other proffers of excellent sites.

Official authority has been received from Washington for the prosecution of scientific exploration and excavation by this Society on the Indian and Forest Reservations of the Southwest—the first time that such papers ever issued from the government for a scientific body not under government control. A reconnoissance was made in Arizona last month by Dr. Palmer, Curator of the Society; but the severe winter of that high altitude had already set in, and work was impossible. With the opening of spring, active and expert work will begin in this incomparably rich field of research. Meantime, the collections already made are being catalogued and arranged.

At an executive session of the executive committee December 15, the Secretary having been excluded, the following resolutions were adopted:

In view of the zealous and heroic unselfishness of the devoted and invaluable services rendered in multiplied ways to the Southwest Society, A. I. A., by our Secretary, Mr. Chas. F. Lummis, resolved that he be, and hereby is, declared to be a Life Member of the said Southwest Society; the sum of one hundred dollars having been freely subscribed and paid into the treasury for this purpose. And it is further resolved that not only shall the minutes of this Executive Session of the fifteenth day of December, 1905, be placed on the records of this Society, but that a copy of the same, suitably engrossed, shall be presented to our said Secretary as a slight memorial token of our grateful and affectionate appreciation of the man, and of his work in behalf of this Society.

The signatures are: J. O. Koepfli, Prest.; Henry W. O'Melveny, Vice-Prest.; Dr. Norman Bridge, Vice-Prest.; W. C. Patterson, Treas.; E. W. Jones, (chairman); Dr. J. H. Martindale, Theo. B. Comstock, J. A. Foshay, Mary E. Foy, Mrs. W. H. Housh, Joseph Scott, Dr. F. M. Palmer, Wm. H. Burnham, C. J. K. Jones, Wayland H. Smith, Executive Committee.

The Third Illustrated Bulletin of the Society, containing the roster up to January 1, 1906, is expected to be published this month. It will be sent to all members, and also throughout the other affiliated Societies of the Institute.

Since the December number the following new members have been added: Life:

Ella P. Hubbard, Azusa, Cal.; Chas. F. Lummis, Los Angeles.

Annual:—

E. P. Clark, Prest. and Mgr. L. A. Pacific R. R., Los Angeles.

Mrs. J. Torrey Connor, San Francisco.

E. F. Marshall, Prest. Chino Land and Water Co.

Frank A. Salmons, County Clerk, San Diego.

Mrs. Mary Wood Swift, Prest. National Council of Women, 824 Valencia St., San Francisco.

Robert Bruce Gibb, 4922 S. Main St., Los Angeles.

Prof. R. H. Tripp, 343 W. Ocean Ave., Long Beach.





GOOD

GOSPEL
ANYWHERE.

Some of the best preachers are not in the pulpit—and perhaps the most useful. Just now we need more reminder of the homely old truths and principles which are the foundations of life than we do hair-splitting theologies. And the need is evidently realized; for a good many that are not of the cloth are giving us sound sermons adapted to the times. There is no other who has so large a congregation as that all-round person who Does Things in and from the White House; and his preachments of horse-sense and every-day decency put no one to sleep.

A little sermon of the same homely sort, preached to the freshmen of Stanford University not long ago, by Dr. Branner, the vice-president, is so full of meat that we need, and so applicable to every other class of people above and below college undergraduates, that a sample of it is worth reproduction, even in a place which seldom reprints. It is good gospel for any one:

"See to it that your mind runs your body. During the Spanish-American war I stumbled upon an out-of-the-way newspaper containing a letter written home by a country boy who had enlisted in the navy, and who was under fire for the first time in the battle of Santiago. He naively stated that he found great difficulty in making his feet go where his head meant to have them go. Now many of you will have this same kind of a difficulty here in college. This is not a place where you can hide from temptation. The same old sins will beset you here, and the chances are that many new temptations will find you. If you come to college disposed to let your wayward feet go where and when they please, they will soon lead you off the campus to stay. For this reason, and for other reasons, I beg you to have your minds made up that your heads shall direct your feet and your body and your lives."

"Do not spend much time looking for the way of least resistance. There is no concealing the fact that there is a lot of hard work, even of drudgery, in the life of every student who forms the habit of staying in the university. If any of you come here with the idea that the university is somehow going to enable you to dodge the hard work of life, you are making a big mistake. The university is not here to educate you above your work, or below your work, or around your work, but it is here to educate you squarely into the midst of it, whatever and wherever it may be. As early as possible then reconcile yourselves to work and to drudgery, for that is the common lot of all successful men and women. Your work must seem dull to you at times, even the most interesting of it; and unless you accustom yourselves to standing up to it and doing it whether it be agreeable or not, you cannot expect to get through with your college work successfully, and you certainly will not get through with the other work of life successfully."

"Young ladies and young gentlemen, the lives that many of you are leading, are, in my opinion, altogether too strenuous. I am putting it very mildly. Such devotion to pleasure-seeking is not in keeping with the spirit or purposes of university education in this country, and it is not good for you either as organizations or as individuals."

"Perhaps some of you think that so long as you are spending your own money, these matters are no affair of ours. With that view I cannot agree.

I believe in regard to your manner of living that whatever offends the self-respect of men and women of slender means is unwholesome, undemocratic and lacking in that generosity that belongs naturally to youth. Aside from the demoralizing effects of extravagant living among students, habits of extravagance carried from college into after-life are almost sure to lead to defeat. Modern business is carried on with a view to economy of management, and many of our largest and most remunerative enterprises are made so only through the practice of the strictest economy.

"Young women and young men, extravagance is vulgar; it is bad form, bad policy, bad manners and bad morals. It is demoralizing to you personally, unjust to your parents, offensive to your fellow students, and it hardens against you and against young people generally the hearts of men and women who would otherwise be benefactors of mankind."

"Of course I know quite well that you are not altogether responsible for all these things; you are simply following the fashion. Customs spring up here and there and spread over the country like high collars or baggy trousers. When these matters are as harmless as the cut of your clothes we shall not concern ourselves about them, but when they threaten to compromise or in any way endanger the future of the young people entrusted to us, it behooves us to look at them more seriously."

"Don't believe all the rumors that float about; and when you want information go to headquarters for it."

"Cultivate a willingness to do without that which you cannot pay for."

"Never go to a place that requires you to explain why you were there."

The anonymous letter writer takes his—sty—in hand to remark that "if the Lion had only been over in New Mexico and Arizona, he would know more about the sentiment of the territories as to joint statehood."

WHAT GOD
HATH PUT
ASUNDER

The Lion has known the two territories rather intimately for more than 20 years. He knows their people of all sorts, and their history. He knows a few excellent individuals who are willing to get statehood at any cost. But this does not in the least affect the truth of the statement that the people of reason are practically a unit against this proposed prostitution of history, of justice, and of common sense. In New Mexico the feeling is not quite so unanimous, because one certain town there would reap selfish advantage; but the best and most prominent people of New Mexico are also unalterably against the stupid outrage which is proposed to be enacted by Congress at the behest of the senatorial sophomore from Indiana.

On one side are history, justice, business common-sense and the overwhelming will of the two American communities concerned; on the other side there has never been a truthful argument advanced openly. The real argument (which is kept in hiding) is that Eastern politicians are afraid to give the West more influence in the senate.

It cannot be denied that the West has sent some poor sticks to Washington. But it can afford comparison with the East. It has had no Depews, Tilmans or Beveridges. It would be a dangerous precedent to set, if an American commonwealth were to be deprived of representation because its congressmen or senators failed of perfection. The Old Bay State, and the Empire State, and the Hoop-Pole State, and various others, would have cause to lament any such standard. It is the privilege of the States of this Union to send corrupt senators or fool congressmen, if that is their fine American pleasure; but as a matter of fact, the West is quite as likely to secure fit representation in Congress as any part of the East is.

CHAS. F. LUMMIS.



THE Club has drilled through the nine-foot stone walls of the sacristy at San Juan Capistrano, and put in the iron rod and turnbuckle to hold these massive masonries from further falling apart on account of the damage wrought by the great earthquake of 1812. Further repairs have also been undertaken there.

The good work of saving the historical place-names of California goes on. The Post Office Department has decided that the bob-tailed "San Juan" in San Benito county, shall be restored to its historical designation of San Juan Bautista. This makes about twenty similar returnings to the old name, granted by the Post Office Department on the petition of Californians who care. A State like this is so much better than all other States, that everybody who knows about it wishes to come; and it is naturally peopled mostly by the new. Many of them have not been here long enough to know what was what, or care seriously beyond their own increase of comfort. But most of them are people of uncommon intelligence; and most of them are glad to join with those who came earlier, in the attempt, not only to get what they can out of God's Country, but to give what they can to it.

The worst historic barbarism now left in the State is that of calling San Buenaventura by the bob-tailed name of Ventura. No doubt the citizens of this beautiful little city will wake up to join the general procession. Their nearest important neighbor, Santa Barbara, has greatly outgrown them; and one reason is that Santa Barbara has had the cold business sense to cherish the old names. They are a distinct asset. They are worth money. The Santa Barbara people for some reason have understood this fact. Anybody who should propose to call that ideally beautiful spot by the name of "Barbara," would be in danger of more or less polite mobbing. The chances are that the Americans twenty miles down the coast will use as much business shrewdness, and that San Buenaventura will insist that its post office and railway station shall take back the name the town has always officially borne, and that was changed on the schedules only because of a few stupid clerks somewhere.

CONTRIBUTIONS TO THE WORK.

Previously acknowledged, \$8247.00.

New contributions—Ella P. Hubbard, Azusa, Cal., \$5; C. Hart Merriam, Washington, D. C., \$2; Gen. Chas. Foreman (for repair of wall of Campo Santo at Pala) \$50; Mrs. Edwin Greble, Pasadena, \$25 (life membership); Henry Augustus Wilhelm, Pasadena, \$25 (life membership); Allan Salz Klauber, Los Angeles, \$25 (life membership); Chapter Esch, Daughters of the American Revolution, \$20.

\$1 each—Knight W. Wheeler, Montclair, N. J.



Se-quo-ya, "the American Cadmus" (born 1771, died 1842), was the only Indian that ever invented a written language. The League takes its title from this great Cherokee, for whom, also, science has named ("Sequoias") the hugest trees in the world, the giant Redwoods of California.

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AS A result of the opening activity of the Woman's Parliament on behalf of the Indians, thoughtful people in Pasadena sent a generous consignment of clothing, Christmas presents, etc., to Pachanga; a fine Christmas box to Pala; a box of clothing, etc., to Escondido to be distributed by the missionary; another to Banning; another to the Indians near Phoenix, Arizona; and two boxes of clothing, groceries and toys to the Campo Reservations. Some money has also been forwarded to Campo and other points.

The marketing of their baskets for the benefit of the destitute Mission Indians continues and grows. The supply scarcely equals the demand. Orders come from Arizona, Northern California, New York, and even from Maine. It is gratifying to note the steady improvement of the workmanship in these baskets. The League insists on the old shapes, dyes and patterns in the baskets; and the weavers seem glad to comply.

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Previously acknowledged, \$1529.00
 Robt. J. Burdette, Pasadena, Cal., \$4.
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"Even one who has tampered with the buzz-saw when it moveth itself aright might still count upon his remaining fingers the books of the last five years which can reasonably be compared with W. E. Smythe's *Conquest of Arid America* as a popular yet expert study of any economic problem in the United States. Few books are so 'well put'—the style is vital and vivid, and yet sound. Still fewer have anything like the sane, broad insight and structural mastery. There are men who write more learnedly about the toy-questions of academic minds; men who can be wise with a pen, but could not find their way across Brooklyn Bridge if there were no policemen to guide them. It is a striking commentary on our times that so much of our intellectuality is frittered away on trifles, and so little of it bent to the things that really count.

"But Mr. Smythe, with his uncommon gift of diagrammatic speech, has the broad and outdoor vision. He is no closet fiddler on some one nervous string of theoretical theory. Somehow he has stubbed his toe upon what is probably the largest and longest material problem left unsolved in America; and when he goes to the blackboard he makes the solution so clear that the dullest can see through it. All the book is not on the same plane; but it is all true, and in large part masterly. For its style and for its grasp—an incomparably rarer faculty—its author will come to be classed not merely as an indomitable worker in a great plan of material progress, but as a man who has written one of the few really best books on the West; a book every American should read, and every American can learn from."

So it was written in these pages a little more than five years ago when Mr. Smythe's superb economic study and forecast first appeared; and so it may stand today without any retraction for the revised edition just published. Not only without retraction, but with such a splendid justification in the event as rarely comes so swiftly to the economic prophet. For some, at least, of the solutions which Mr. Smythe set upon the blackboard in 1899—and those not the most obvious or probable ones—can be found in 1905 transferred to the face of the imperishable earth, and the Q. E. D.'s of his syllogisms have been tested and proved by the sterner logic of the actual happening. The Nation has committed itself beyond withdrawal to that path toward which *The Conquest of Arid America* pointed the unmistakable way—and perhaps the most interesting of the added chapters in the new edition are those which detail the steps already taken along that path. Meantime, be it said by way of parenthesis, Mr. Smythe, being ordained an incorrigible dreamer, has not been content to stand at the cross-roads and watch the procession move along the road down which his prophetic finger had been pointing, nor even to fall in and keep step with its ranks. He has raced on again with the foremost skirmishers, seeking new points at which to erect guideposts. In his *Constructive Democracy*, of which I had something

to say last October, he is still the forerunner, beckoning and calling and pointing to broader and higher outlets for, and applications of, the national energy.

This by way of appreciation. For a description of *The Conquest of Arid America*, I cannot improve on that given in its Foreword. Mr. Smythe says:

I have endeavored to show the relation between the earliest settlers in America and the new army which is now moving toward our Western lands; the peculiar environment of the arid region and the influence which it will exert on its civilization; the lessons to be learned from the more notable of the early pioneer settlements in Colorado, Utah and California; the natural advantages and present development of the great States and Territories between the Missouri River and the Pacific Ocean; the beginning, progress and triumph of the national irrigation movement; the work of the remarkable corps of young men organized in the United States Reclamation Service; and finally the spirit of what is being done by the partnership of God and mankind in finishing one important corner of the world.

I cannot say too emphatically that no intelligent American can afford to be ignorant of this book, or to miss the inspiration of its splendid, sane, practical optimism. The Macmillan Co., New York. \$1.50 net.

New Creations in Plant Life, by W. S. Harwood, deals fully, reliably and readably with the life and work of Luther Burbank, so far as they have been developed. Few living men can match Mr. Burbank in world-repute. And very properly so, for few men have ever lived who have single-handed so much helped God—I speak in utter reverence—about His plans for improving and beautifying this material world. At his chosen work, he is without a peer, living or dead. And lest any might take this assertion for mere incautious over-statement, here are the words of a man trained to exact observation and precise statement—David Starr Jordan:

In his field of the application of our knowledge of heredity, selection and crossing to the development of plants, he stands unique in the world. No one else, whatever his appliances, has done as much as Burbank, or disclosed as much of the laws governing these phenomena. His work is already an inspiration to botanists as well as horticulturists, opening a new line of research in heredity, as well as a new field for economic advance.

Interesting as is the record of Mr. Burbank's achievements, the man himself is more interesting. To the far-seeing vision of the poet, he adds the method of the scientist, the deftness of the craftsman, the technique of the artist and the untiring patience of the devotee. Fuse these qualities with the rare flame of genius—and you have Burbank the Worker. Then add a certain fine simplicity and directness, an unselfish concentration upon the work for the work's sake recking little of personal gain, a sweetness of thought and life which neither adversity nor unbounded praise have had power to taint—and you have Burbank the Man. The Macmillan Co., New York. \$1.75 net.

Orr Kenyon believes that the position of "the great Methodist Church and other churches" on the divorce question is not in accord with Scripture, nor with the weight of opinion and authority of the Fathers, and has written a novel, *What God Hath (Not) Joined*, to enforce and explain that position. In the closing chapter a Methodist minister who has secured a divorce from the wife who had borne him three children on the ground of desertion—she having refused to change her home when he thought it was necessary for him to move—marries a woman who had obtained a divorce,

alleging desertion and non-support, and who had subsequently promised to marry another Methodist minister. Two bishops and several other reverend gentlemen are quoted by the publishers in praise of the book. I believe its tendency positively mischievous—not on account of the author's views about divorce, but because the book is trashy, and, on the whole, sensual in its point of view. The Dodge Publishing Co. New York. \$1.50.

The discussions in Dr. Washington Gladden's *The New Idolatry* center upon "the problems raised by the rapid accumulation of wealth in this country, and by the manner in which its use and distribution affect the characters of men, and the institutions of religion, education and government." Dr. Gladden is firmly persuaded that "the whole trouble with the world today is the lack of faith in God. The church itself has been so overawed by the pomp and power of Mammon that its faith in God has become dim and wavering." But he is equally confident that there is no law of life but Christ's law, and that this law shall surely prevail. It is a powerful and pregnant volume. Many devoted and sincere men are unable to see eye to eye with Dr. Gladden in the matter of "Tainted Money," but with most of his argument and conclusions every right-minded person will agree. McClure, Phillips & Co., New York. \$1.25 net.

Even the most conscientious reviewer will be pardoned for failing to read through—or even to skim—a volume of more than 2000 pages, "containing the most recent and authentic information respecting the countries, cities, towns, resorts, islands, mountains, seas, lakes, etc., in every portion of the globe." But *Lippincott's Gazetteer* has been, in various editions, the standard for half a century—and needs no reviewing. It now appears in something more than a new edition, being in new type throughout, and brought as nearly as possible right down to date. It is edited by Angelo and Louis Heilprin. J. B. Lippincott Co., New York. \$10 net.

The Boys' Life of Christ, by William Byron Forbush, is an "endeavor to show the manly, heroic, chivalrous, intensely real and vigorously active qualities of Jesus in a way to appeal to boys." I much prefer the stately English of the King James Version to any attempt at modernizing and amplifying the narrative which puts such a phrase as "Says he to him" into the mouth of the Master. Yet the author is entirely sincere and reverent, and is better qualified to judge of the necessity for, and usefulness of, such a book than am I. The illustrations are from paintings. Funk & Wagnalls Co., New York. \$1.25 net.

Of the *Peter Newell Mother Goose*, the publishers say: "A little girl visits Gooseland and encounters the well-known Mother Goose Characters, who say the old rhymes in the old familiar form under adventuresome circumstances which will delight children." *The Wizards of Ryetown* they describe as, "A fairy story with a touch of drollery and some clever nonsense verses." These descriptions are accurate and sufficient, if one adds that each volume is appropriately illustrated. Henry Holt & Co., New York. \$1.50 each.

In *Only a Grain of Sand*, Charles Maus Taylor allows a grain of sand to tell its experiences on the seashore, in the glass-furnace, and elsewhere. It is attractively decorated, and a good gift-book for a fanciful child. John C. Winston Co., Philadelphia.

The Dairy of a Bride is offered as "the real diary of a real woman, written in a real way." If that be true, it is assuredly the record of a very happy bridal year. It is a daintily printed little volume. Thomas V. Crowell & Co., New York. \$1 net.

CHARLES AMADON MOODY.

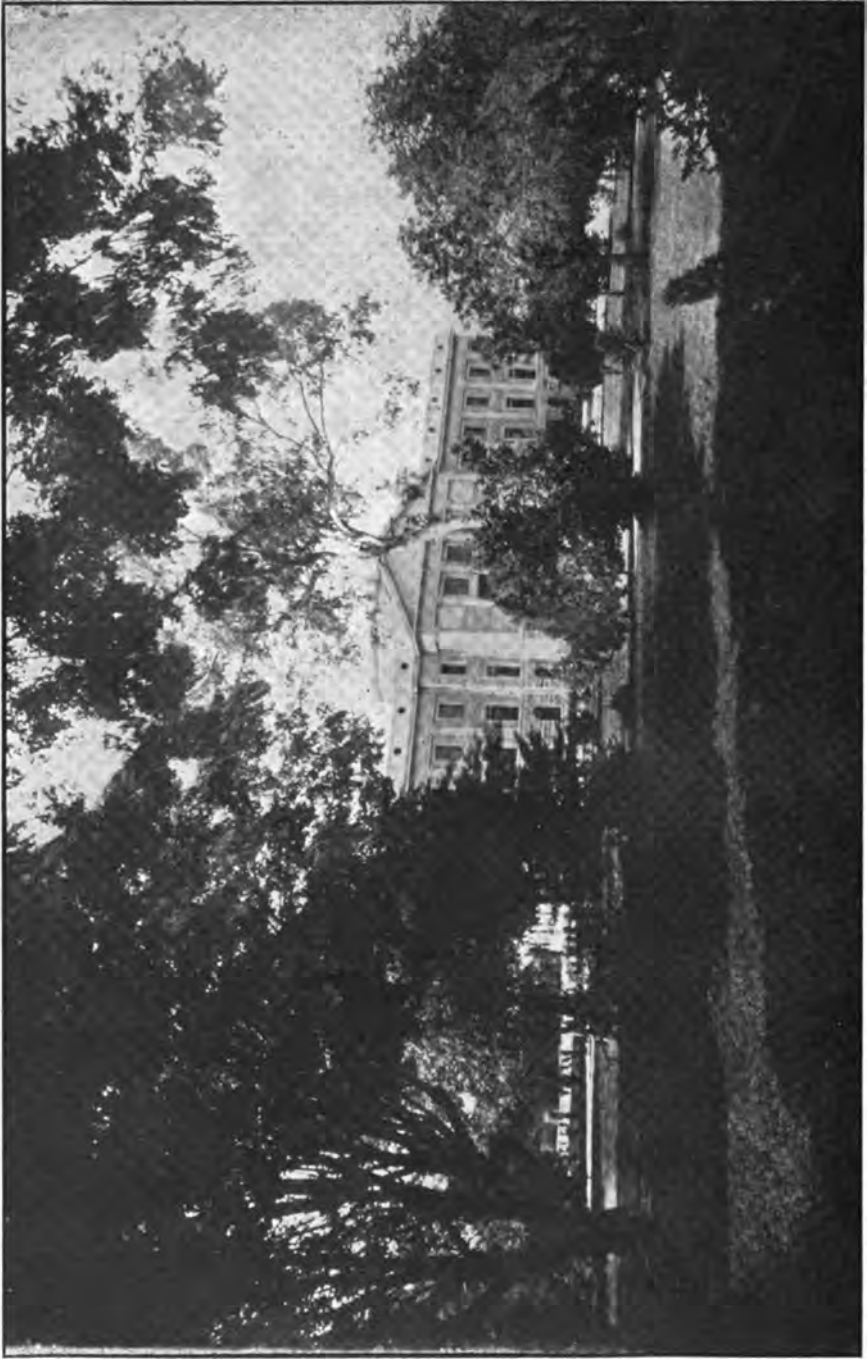


Photo by T. H. Bate

THE TERRITORIAL CAPITOL, PRGENIX

Formerly
The Land of Sunshine



THE NATION BACK OF US, THE WORLD IN FRONT.



Vol. XXIV, No. 2.

FEBRUARY, 1906.

ARIZONA

By SHARLOT M. HALL

NO BEGGAR she in the mighty hall where her bay-crowned
sisters wait,

No empty-handed pleader for the right of a free-born state,
No child, with a child's insistence, demanding a gilded toy,
But a fair-browed, queenly woman, strong to create or destroy—
Wise for the need of the sons she has bred in the school where
weaklings fail,

Where cunning is less than manhood, and deeds, not words,
avail—

With the high, unswerving purpose that measures and overcomes,
And the faith in the Farthest Vision that builded her hard-won
homes.

Link her, in her clean-proved fitness, in her right to stand alone—
Secure for whatever future in the strength that her past has
won—

Link her, in her morning beauty, with another, however fair?
And open your jealous portal and bid her enter there
With shackles on wrist and ankle, and dust on her stately head,
And her proud eyes dim with weeping? No! Bar your doors
instead

And seal them fast forever! but let her go her way—
Uncrowned if you will, but unshackled, to wait for a larger day.

Ay! Let her go bare-handed, bound with no grudging gift,
Back to her own free spaces where her rock-ribbed mountains lift

Their walls like a sheltering fortress—back to her-house and
blood.

And we of her blood will go our way and reckon your judgment
good.

We will wait outside your sullen door till the stars you wear grow
dim

As the pale dawn-stars that swim and fade o'er our mighty
Cañon's rim.

We will lift no hand for the bays ye wear, nor covet your robes
of state—

But ah! by the skies above us all, we will shame ye while we wait!

We will make ye the mold of an empire here in the land ye scorn,
While ye drowse and dream in your well-housed ease that States
at your nod are born.

Ye have blotted your own beginnings, and taught your sons to
forget

That ye did not spring fat-fed and old from the powers that bear
and beget.

But the while ye follow your smooth-made roads to a fireside
safe of fears,

Shall come a voice from a land still young, to sing in your age-
dulled ears

The hero song of a strife as fine as your fathers' fathers knew,
When they dared the rivers of unmapped wilds at the will of a
bark canoe—

The song of the deed in the doing, of the work still hot from the
hand;

Of the yoke of man laid friendly-wise on the neck of a tameless
land.

While your merchandise is weighing, we will bit and bridle and
rein

The floods of the storm-rocked mountains and lead them down to
the plain;

And the foam-ribbed, dark-hued waters, tired from that mighty
race,

Shall lie at the feet of palm and vine and know their appointed
place;

And out of that subtle union, desert and mountain-flood,
Shall be homes for a nation's choosing, where no home else had
stood.

We will match the gold of your minting, with its mint-stamp
dulled and marred

By the tears and blood that have stained it and the hands that
have clutched too hard,

With the gold that no man has lied for—the gold no woman has
made

The price of her truth and honor, plying a shameless trade—
 The clean, pure, gold of the mountains, straight from the strong,
 dark earth,
 With no tang or taint upon it from the hour of its primal birth.
 The trick of the money-changer, shifting his coins as he wills,
 Ye may keep—no Christ was bartered for the wealth of our
 lavish hills.

“Yet we are a little people—too weak for the cares of state!”
 Let us go our way! When ye look again, ye shall find us, may-
 hap, too great.

Cities we lack—and gutters where children snatch for bread;
 Numbers—and hordes of starvelings, toiling but never fed.
 Spare pains that would make us greater in the pattern that ye
 have set;

We hold to the larger measure of the men that ye forget—
 The men who, from trackless forests and prairies lone and far,
 Hewed out the land where ye sit at ease and grudge us our fair-
 won star.

“There yet be men, my masters,” though the net that the trickster
 flings

Lies wide on the land to its bitter shame, and his cunning
 parleyings

Have deafened the ears of Justice, that was blind and slow of old.
 Yet time, the last Great Judge, is not bought, or bribed, or sold;
 And Time and the Race shall judge us—not a league of traffick-
 ing men,

Selling the trust of the people, to barter it back again;
 Palming the lives of millions as a handful of easy coin,
 With a single heart to the narrow verge where craft and state-
 craft join.

Dewey, Arizona



THE FIRST CAPITOL OF ARIZONA, PRESCOTT

Photo by T. H. Bates



AN ARIZONA IRRIGATING CANAL

ARIZONA

By *SHARLOT M. HALL*

THE most significant fact in the internal development of the United States today is the attitude of the whole people toward the West. The great area which Webster and his associates regarded with indifference or contempt now engages the serious attention of our most enlightened statesmen.

It is not easy to realize that but for a few men this great storehouse of wealth, which has already paid back its cost a hundred times over, might have been lost to the United States forever. There is poetic justice, as well as keen business sense, in the consideration which this once-despised section is now receiving.

When the claims of Arizona to separate territorial organization were first pressed at Washington, Senator Ben Wade said that, from all he could learn, Arizona was just like Hell—all it lacked was water and good society. And Senator Wade voiced the general opinion of his day.

Now, after scant forty years, this same land, with its kindred areas, commands the respectful attention of law makers, investors and home seekers alike. In it are being worked out some of the most interesting problems of science and material improvement that have ever presented themselves to our government, and for it the most important piece of legislation of recent years has been enacted. The National Irrigation Act, of June 17, 1902, was a formal and convincing recognition of the place which the West now holds in the life of the nation, and a forecast, faint but sure, of the inevitable greatness and importance of this portion of the Republic.

From the first Arizona has faced such a combination of unusual and difficult circumstances as has attended the growth of few, if any, other parts of the West. For twenty-five years her mountains, plains and cañons were prospected, and her mines located, in the face of constant danger from the most relentless Indians with whom the Government has had to deal.

Nearly every great mine, especially in the south, was located at the risk of the lives of the locators, and the development work was hampered and frequently suspended because of Indian depredations. Men were killed by Apache raiders in what are now the streets of some of the richest and most beautiful towns in the Territory; and the very mines which today produce the largest wealth lay idle and unworked for years because of the danger attending any attempt to develop them.

The great grazing regions of the Territory, which have been as valuable as any in the West, were subject to the same danger

and restriction. A man never knew when his ranches would be raided, his stock swept away into the mountains, and his family and employees killed or forced to retreat to some military post for protection.

So too the men who were attracted to the rich valleys lying along the rivers and streams, and who planted the first farms and orchards and demonstrated the fact that agriculture could be and would yet be one of the great industries of the new land, did so at the risk of their own lives and the lives of those dear to them. They had to meet not only the isolation and hardships common to frontier life, but the greatest anxiety for personal



BEFORE THE RAILWAY CAME

Photo by T. H. Bate

safety during all the years when the Apaches were at large in Arizona.

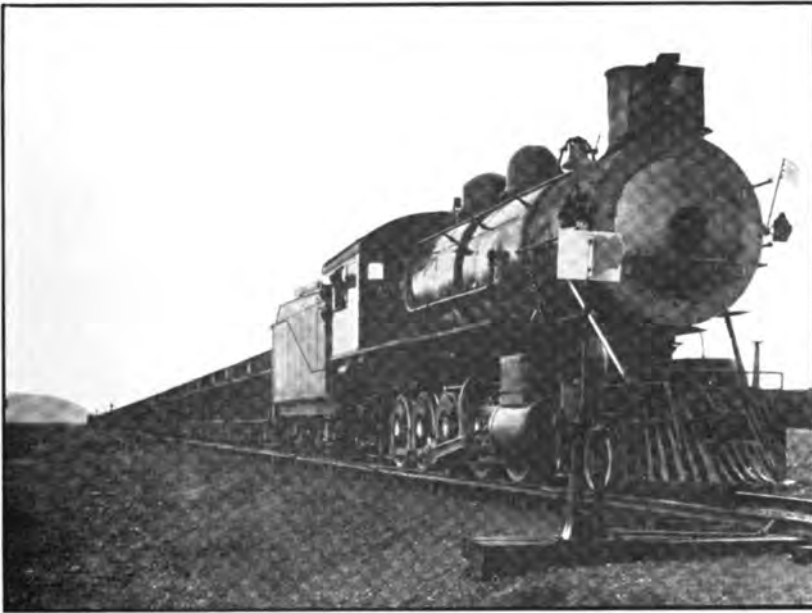
The character of the country itself presented its full share of obstacles to exploration and settlement. Large areas, in some of which are now rich and prosperous mining regions, were so poorly supplied with water that any party penetrating them had to carry water with them or run the risk of the thirst-death.

The broken and mountainous surface of much of the country made road-building a difficult and expensive task--prohibitive, indeed, in its cost to frontier communities. This was illustrated, recently, when a wagon road built into the heart of the old Apache stronghold cost as much per mile, for its more difficult sections, as would have built a mile of railroad elsewhere.

The rapidity with which a country develops depends much on the ease with which all parts can be made accessible and can join on equal terms in the give-and-take of the world. The mountains

and cañons of Arizona for a long while set a barrier against the development of some of her richest resources.

But if her isolation, her transportation difficulties, and her years of strenuous Indian warfare have been to some extent obstacles in the path of Arizona's advancement, she has been more than repaid by the character they have bred in her people. They have given her a race of "stayers;" the congenital "quitters" came and saw and went on in search of easier lands. The men and women who had the grit to stay were of the sort that are race-makers, and it is perhaps the most significant fact in the whole wonderful story of Arizona's later growth that the men who have had deepest



ORE TRAIN FROM HISBER MINES TO DOUGLAS SMELTERS

faith in her final greatness are the men who have known her best and longest. It is not the stranger who has made Arizona what she is today, but the "Hassayamper"—the man who came in his youth and lost none of his faith and enthusiasm with the graying of his hair.

In its earlier period the development of the entire West was at the mercy of the difficulties that so hampered Arizona—the isolation, the hostile natives, and the long distances of unknown or little known country, across which communication must be made over trails and roads insufficient and difficult. The question of continued growth came to be a question of transportation.

If a fair and adequate history of the railroads west of the Missouri River should be written, one could not desire a better history

of the growth of the West and the conquest of the Great American Desert, which mile by mile has fallen back before transit and level till it has no longer a place left on the map.

When Arizona became a territory of the United States, in 1863, her quickest connection with the East and with the government at Washington was by stage across to the cities of Texas and thence eastward. A letter required from four to five weeks to make the trip—or three, if of sufficient importance to be pushed on by special courier. Settlers wishing to reach the Territory, or business and mining men seeking investments, had to come in "overland" with their own conveyances, or by stage over routes that were expensive and tiresome. Men going out had to allow weeks, rather than days, before they could hear from business left behind. The first mining machinery came by wagon from St. Louis and Leavenworth. The first shipments of ore were made in the same slow and expensive way, or by the still slower route down the Colorado River by boat to the Gulf of California and thence by sailing vessel around the Horn to the famous smelters of Swansea, in Wales.

Something of what the first great linking of West and East by a transcontinental railroad meant to California was repeated in the hopes of Arizona as she watched the two later lines approach her borders.

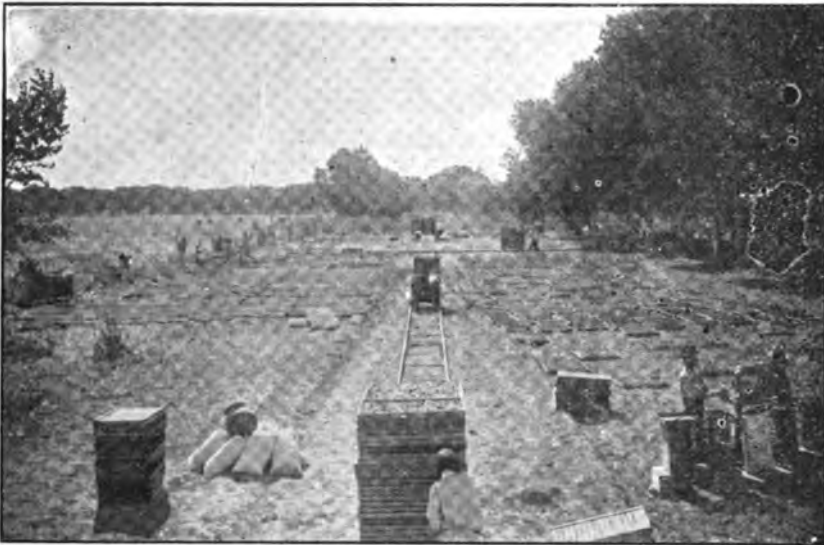
In 1878, the Southern Pacific, building east through Southern California, reached the Colorado river at Yuma, and by 1880 had reached Tucson, still pushing eastward. In the north the Atlantic and Pacific (now the Atchison, Topeka & Santa Fé) came by slow steps westward through New Mexico, till, in 1883, it had reached the Colorado river at The Needles

The completion of these roads, though they merely crossed the Territory and had at first no special interest in it, was of supreme importance. Connecting and feeding lines were inevitable and for the past twenty years the development of Arizona has gone hand in hand with the extension of railroad interests within her boundaries. Year by year remote and inaccessible sections have been opened to the world, till the transportation question, as a problem, has been almost eliminated and need scarcely enter at all into consideration of the future.

In the eyes of the world, the fame of Arizona has always rested upon her mineral wealth. Before her very name was chosen, men were turning to her hills and mountains with the faith which time has so richly justified; and the men who moved the will of Congress and made her a recognized division of the United States backed their plea by argument in which the most convincing facts were tons and ounces

To most people the greatness of Arizona, present and to be, is still measured by the many million dollars a year that roll out from the shafts and tunnels in her hills. But in truth she has always been more, and will for the future be tremendously more, than a great mining country—though she now stands the second copper-producer in the United States and numbers two of the richest copper mines of the world as her own.

Arizona has the largest and most valuable forest in the United States—probably the largest unbroken forest area in the world, covering ten thousand square miles. She has the largest tract of agricultural land west of Kansas, and, with the completion of the Tonto reservoir, (the largest artificial lake in the world) will have under cultivation, with ample water, as much land as is farmed in all Southern California from the Tehachepi to San Diego.



FRUIT DRYING IN ARIZONA

The investigations of the Government Reclamation Service have shown that, in spite of the tradition of her impenetrable mountains and barren deserts, nearly one half the land in Arizona is capable of cultivation, and with water would be immensely productive.

Various water storage projects will, in time, create rich and valuable farming districts in regions now given over almost wholly to grazing or mining; but the utmost now projected will leave great areas still unreclaimed—and to be reclaimed only by some means now unforeseen, as, in the beautiful valley below the town of Naco on the El Paso & Southwestern Railroad, a constantly enlarging tract is irrigated with the water that is pumped from

a mine some miles distant, and the resulting farm is one of the finest in the Territory.

The underflow water of Arizona is practically unknown and undeveloped, and, it may be hoped, will play no small part in the agricultural development of the future.

AGRICULTURE

The beginnings of agriculture in Arizona were small, and dependent, as was stock-growing in its infancy, on the mines and mining. The miners came first, following the lure of gold; the military came to protect the miners from Indian depredations; and miners and military offered a tempting market for live stock and ranch products.

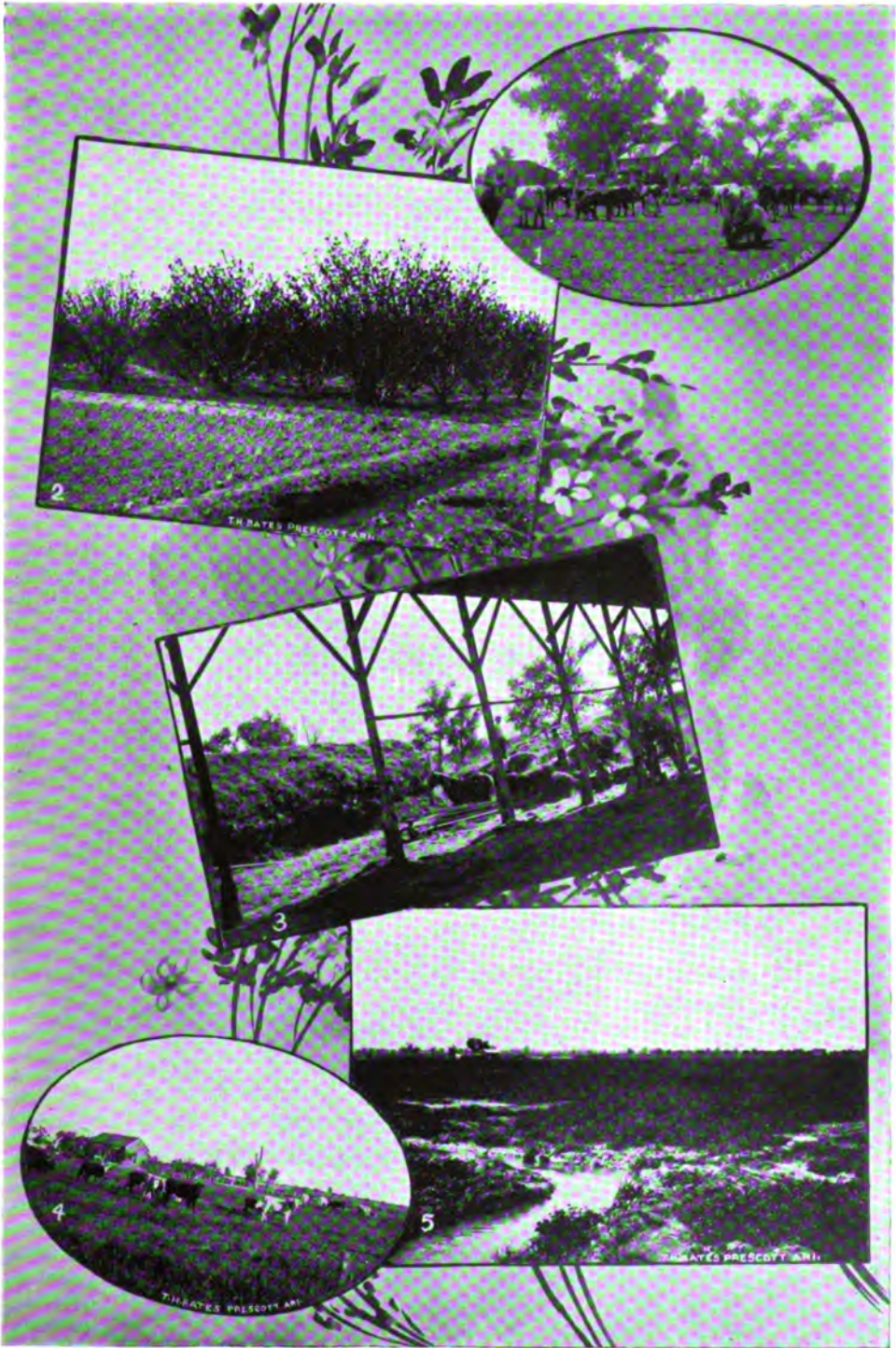
The first cattle were driven in to fill beef contracts; but soon the contractor saw that he could raise beef at greater profit in the well-grassed valleys near at hand. Men who had been farmers before they became miners saw that grain and vegetables could be grown along the lowlands bordering the streams, and that one good crop would bring a man larger and surer returns than many a mine.

The first lessons in irrigation were taken from the Pima and Papago Indians and from the Mexican farmers of the South, and, when enlarged and applied with Yankee ingenuity, proved how independent a man might be of climatic conditions and still be a successful farmer.

From valley to valley, as the Indians retreated and the mines developed and markets increased, the farms were extended, till today 250,000 acres are cultivated by irrigation, and this acreage will be increased as the work of the Reclamation Service illustrates better methods of storing and more economical systems of distributing and using the water obtainable.

The largest irrigated area in Arizona lies in the south-central part, in the valley of the Salt River. Here about 125,000 acres have been brought into a high state of cultivation—watered by an intricate system of canals and ditches distributing the flow of the Salt and the Gila rivers.

The first canal in the valley was built in 1867 by farmers owning land near the present city of Phoenix. Other canals have been constructed and the agricultural resources of the valley have steadily developed till further expansion depends upon the systematic storage of the flood waters of adjacent mountain regions. Of this more is said later. The marvelous productiveness of the soil, which may be farmed year after year without exhaustion—indeed is only the richer after years of flood irrigation—combined with the almost unlimited range of products has made this great valley famous in agricultural circles. Nowhere else in the United



1. AN OLD-FASHIONED DAIRY RANCH

2. APRICOT ORCHARD, MESA, ARIZONA

3. MAKING HAY IN THE SALT RIVER VALLEY

4. A MODERN DAIRY RANCH

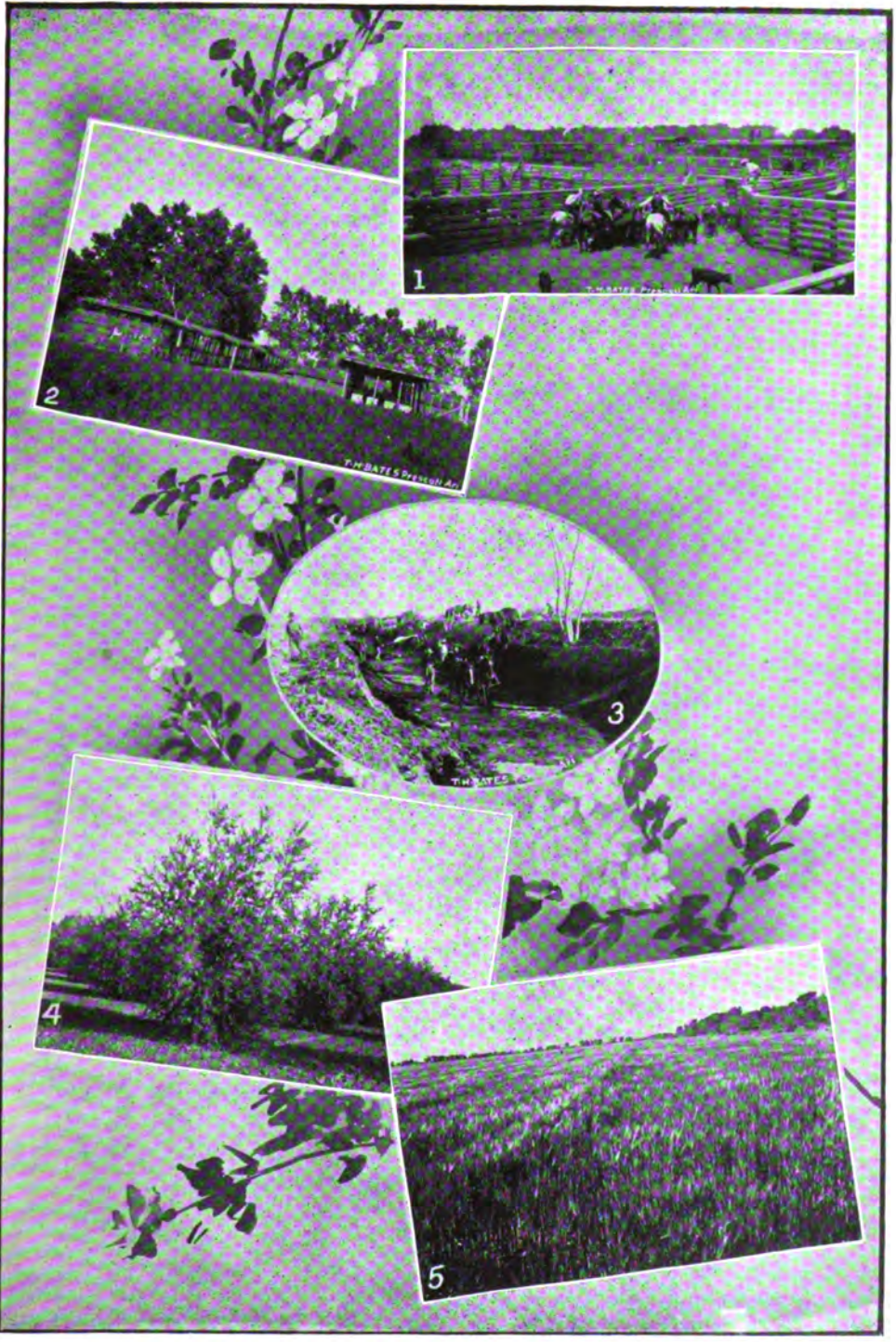
5. ALFALFA IN ARIZONA

States is there such a wide range in crop possibilities. Here fields of alfalfa and of Indian corn grow side by side; barley and wheat ripen in sight of Egyptian cotton; and the fruits of temperate and tropic zones may be indiscriminately mingled on one farm. Dates of superior quality and commercial value grow thriftily alongside of as fine strawberries as reach any early market; olives, oranges, grape-fruit, apples, and pears may touch branches within the limits of one orchard, and sweet potatoes, pea-nuts, Irish potatoes and cabbages may elbow each other comfortably in one garden spot.

The oranges of this section are of exceptional quality and reach the market several weeks in advance of the California or Florida product. The grape-fruit, or pomelo, as grown in Southern Arizona, takes rank for size and quality above those of any other part of the world. This is due in part to certain peculiarities of the soil of the citrus belt, but as much, perhaps, to the careful and persistent selection of types and varieties by the growers who have devoted much attention to the industry. The bitterness which elsewhere characterizes the grape-fruit has been so wholly lost that a stranger might mistake it for an enormous sour orange of finest flavor. The Arizona grape-fruit exhibit at St. Louis won first prize and special mention, and the demand is so great that little of it ever reaches open market.

Along the ditch-banks in the southern valleys a stranger will be surprised to see olive trees growing as thriftily and as uncared for as the mountain ash, which has been transplanted from higher altitudes to add beauty to the lowland farms and cities. No scale ever touches these olive trees, and through the summers they seem as indifferent to the drouth as the giant cactus just beyond the fences. In season they bear loads of fruit that drop in purple winrows along the ditches; though now most of it is gathered and made into oil. The Arizona olive oil won the first gold medal at St. Louis and was pronounced by the Japanese government experts to be the purest and finest oil on exhibition there. The time will come when the olive orchards of the lower valleys will be famous and will yield large returns.

The mountains of northern Arizona are threaded with numerous small valleys in which all the fruits, grains, and vegetables of a temperate climate grow to perfection, the apples being equal in size, coloring, and quality to those of the Ozark mountains, and the pears and peaches especially fine. The large percentage of iron in the soil gives the fruit the most brilliant coloring, and the gravel under-drainage insures the richest flavor.



1. SHIPPING CATTLE 2. A BEE RANCH IN THE VERDE VALLEY 3. CLEANING AN IRRIGATING CANAL
 4. OLIVES IN ARIZONA 5. AN ARIZONA BARLEY FIELD

Here many small bodies of land have been reclaimed by ditches and storage reservoirs of limited size built by individual farmers. There are yet many of these small tracts of land that will be profitable orchards and farms when the best and cheapest methods of storing the flood waters are more generally understood. Many storage reservoirs of local importance have been swept out or damaged because of insufficient provision for the escape of surplus flood-water.

At the present time the cultivated lands of Arizona are valued at nearly six million dollars, and the improvements at a million and a half more. The area of cultivation will not be much ex-



A COUNTRY RANCH

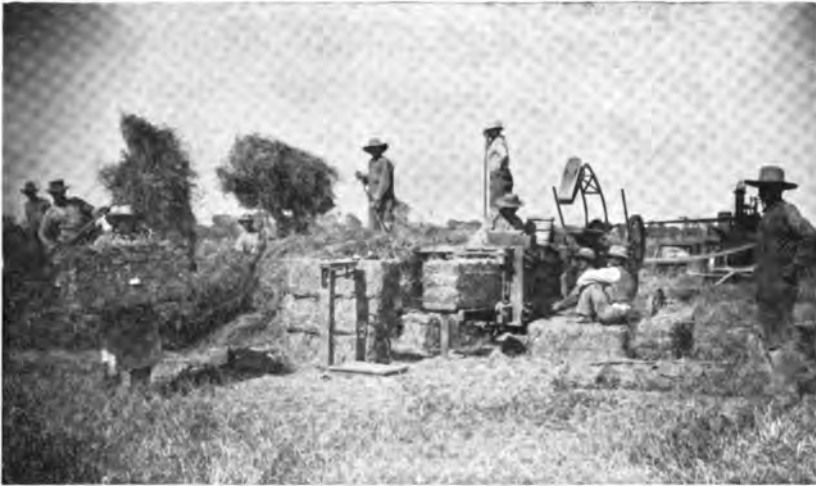
tended till the plans of the Reclamation Service are realized; but with the present system of intensified farming the percentage and value of products will be steadily increased.

Nothing of a public nature since the building of the first trans-continental railroad has attracted such general attention and interest as the work of the Government Reclamation Service within the arid areas of the West. Nothing indeed has been of deeper importance, and it is entirely reasonable to assert that the public gain from the ultimate development of the irrigation plans and possibilities will be scarcely less than followed the solution of the transportation problem that beset the older West.

It seems an eminently logical idea, though it was so slow of acceptance, that the adding of large tracts of rich land to that al-

ready available for home-making is a matter of national importance; and perhaps no more harmonious expense-plan could have been devised than that the money from the sale of public lands should be used in making other lands habitable.

After serious consideration, two of the largest pieces of reclamation work within the immediate plans of the Service have been undertaken in Arizona, or rather in Arizona and California, for the latter State shares largely in the so-called Yuma project on the Colorado River. Together these great projects will require nearly seven millions of dollars for their completion, and will reclaim more than 300,000 acres of the richest land in the Southwest



BALING HAY IN THE SALT RIVER VALLEY

Photo by Hartwell & Hamaker

—land where alfalfa produces seven crops of hay in a year and the range of products is limited practically only by the caprice of the planter.

The Tonto Basin dam is directly tributary to the Salt River valley and is designed rather to assure abundant water in all seasons for the land already under cultivation than to encourage the settlement of any large new area; though the pumping system to be developed after the dam is completed will bring some fine bodies of virgin land within reach of water.

The work at both places is well under way, though at both it has been hampered by the severe floods of two unusually wet seasons. At Tonto the service has literally created on the spot the power and the materials for building the highest dam in the world, to hold back the largest body of water ever enclosed in an artificial reservoir.

The Tonto reservoir site lies seventy miles east and north of the city of Phoenix, in the very heart of the old Apache stronghold—a deep and long-winged basin in the arms of as rugged and inaccessible a mountain chain as may be found in the Southwest. When the engineers surveyed the site, they rode in on horseback over a trail that had been roughly marked by Apache raiders in their swift retreats from the country below—a trail so rough that no one dreamed that in two years they would be driving over it in Concord coaches, and hauling over it the supplies for the big dam in mule wagons.

The dam site proper lies just within the six-hundred-foot jaws of a great sandstone cañon, a short distance below the junction of Tonto Creek with the Salt river. On either side of the dam, two huge wasteways are to be cut into the living rock of the mountain-side; and the firm, fine-grained sandstone that comes out will be laid in Portland cement to make the dam, which will be 270 feet high from bed rock, and 165 feet wide on the bottom, with a top width of 16 feet. The dam will be 200 feet long at the bottom and 653 feet long at the top, and the water it will hold back will reach in a narrow, but deep lake for twenty-five miles up the meeting stream-beds.

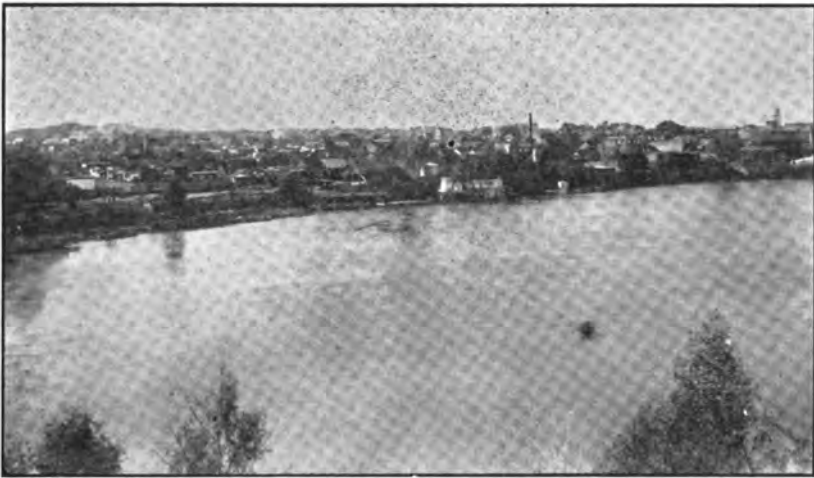
The hills along the two streams come near together and the lake will not be more than two miles wide, but if its great body of water were let down at once over level land it would cover 1,300,000 acres to a depth of one foot. Sent as it is needed down through the rock-walled cañon of the Salt river, where nothing will be lost, it will permanently guard the farms of the great valley below from drouth, even though the rain should be delayed for a year at a time.

The power for the construction of the dam comes from a hydraulic power canal, nearly twenty miles long, by which a volume of water sufficient to develop 4,400 gross horsepower is delivered just below the dam site, passing just before its discharge through 550 feet of tunnel cut through living rock and lined with tubular steel sections of tremendous strength—the first tunnel of the sort in the world.

The lumber for the work is cut by the government saw mill in the Sierra Ancha mountains, twenty miles away, and an excellent quality of cement is made in the government cement-mill only a short distance above the dam. Superior sand for the liquid cement-mixture used between the great sandstone slabs is made from a ledge of limestone just beyond the cement-mill. It is as if Nature had long ago decided on this spot, and had put all the necessary materials as near together as possible.

The reclamation work along the Colorado includes five or more possible projects which would result in the irrigation of more than 300,000 acres of land between the end of the Grand Cañon and Mexico. The present work, however, is all in the vicinity of Yuma, where close to 90,000 acres of choice land (partly in California and partly in Arizona) will be watered, and protected from damaging overflows in the yearly floods of the river.

High dams at this point have not been found desirable, and the work will consist of weirs, on the plan of those used successfully on the Nile and elsewhere, and of canals, levees, and a drainage system to insure the land against becoming water-logged.



YUMA FROM THE COLORADO RIVER

There are many other points in Arizona where dams and storage reservoirs of smaller size and cost will reclaim lesser bodies of valuable land.

Something has been done by private enterprise along the little Colorado and the San Pedro rivers and on the Gila river, at Florence, where one of the richest tracts of land in the Territory only waits a more certain water supply to yield large returns.

In the San Pedro valley, a true artesian belt has been known for the past twenty years and many farms are successfully irrigated from flowing wells, varying in depth from three to five hundred feet. A strong underflow has been found in the Sulphur Spring valley, in the vicinity of the town of Douglas, the great smelters at that place depending for their water on wells, the deepest of which is less than 300 feet. The land in this vicinity is rich and level, and the markets offered by the mines at Bisbee and the

smelters at Douglas will doubtless induce farmers to sink wells for irrigation.

The climate of nearly all of arid Arizona joins with the peculiar richness of the soil to make swift return for the expense of irrigation. The winter months are like mild spring elsewhere and spring vegetables are ready for shipment to city markets long before those of Florida or Southern California. The summers foster the rank growth of alfalfa and other forage crops; and with sufficient water from five to seven crops of alfalfa are cut in a year. Citrus fruits are ready for shipment weeks in advance of other sections and vegetable gardens are planted in September for mid-winter trade.

The work of the Reclamation Service is greater than the mere watering of certain acres of land. It deals directly with the problems of water storage and distribution that have baffled private enterprise, and brings trained experience and expert knowledge to the solving of questions which the settlers and farmers could not in the nature of things solve except in the most limited way. It is the great inspiration without which agriculture in the West would have remained indefinitely of secondary importance, but with which it takes immediate place as the keystone upon which all other prosperity will rest. Stock-growing has never formed the permanent basis of any large development; mines may reasonably be expected to be exhausted at some more or less remote period; and a mining population is at the best an unsettled and unstable foundation on which to build a state. The ultimate full greatness of the West lies in the soil, and its realization is too near and too large for prophesy. Most of us will live to see it and to have our later years tinged with the wonder of it.

MINING.

When Congress after much cutting and trimming decided to pay ten million dollars for that part of Arizona lying south of the Gila river, a goodly number of its own members and the bulk of the people of the East rose up and denounced it as a sinful waste of money—a high-handed and unwarranted exchange of sound dollars for a desert of sand and cactus over which a few conscienceless schemers wanted right of way for a railroad, and which, railroad and all, would never return one per cent of the gold bestowed like a gift on Mexico, for territory it was well rid of.

The men who retold the old traditions of the "Planchas de Plata" got, at first, scant and impatient hearing—and yet the imperfect records show that in the decade following 1859 Arizona paid back her purchase price and had something to the good. Between that time and 1887, she had poured \$65,000,000 into the strong boxes of the world, and in that year her governor wrote of her min-

ing resources: "The skin has not been scratched as yet. Arizona has never been prospected below the grass roots."

Yet this era of "grass-root bonanzas" was enough to turn the brains of the wildest dreamers. It was as if Aladdin's lamp had been rubbed against every hilltop and the rocks turned to gold and silver. At Antelope Peak a party of prospectors dug out \$1,800 in nuggets, in one day, with their pocket knives, and half a million dollars passed into various hands before the strange cache was gutted.

Lynx Creek and the Weaver districts yielded a million each in a few years following their discovery; and in ten years the famous



VULTURE GOLD MINE
This mine produced \$1,000,000 a year for 16 years

"Vulture" mine had turned out ten million dollars, in ore so rich that the Mexican workmen smuggled out hundreds of dollars every month in bits of quartz concealed in their clothing and shoes. Later, when many pack trains of ore had been smuggled out, it was customary to make the miners strip and be searched before they left the mine. For a long time the miners and other workmen were paid, not in coin, which was scarce enough in all parts of Arizona, but in ingots weighed out according to the wage due each man. Small gold bars bearing the Vulture stamp were current exchange in Arizona for years. In all, this great mine is said to have yielded \$16,000,000.

From 1870 to 1875, while the gold fever was still at its height, the wonderful silver bonanzas were uncovered. If they were less than those of Nevada, they were still great enough to bewilder the men who found themselves taking ore that ran beyond ten thousand dollars a ton out of deposits practically on top of the ground.

In six years the "McCracken" and "Signal" mines had yielded a million dollars—this in a day when ore milling less than \$100 a ton was sorted out and left on the dumps as waste—the cost of handling being so great. Before 1881 Castle Dome district had produced \$2,000,000, and in 1875 the wonderful "Silver King"



OLD-TIME PLACER MINING IN ARIZONA

Photo by T. H. Bate

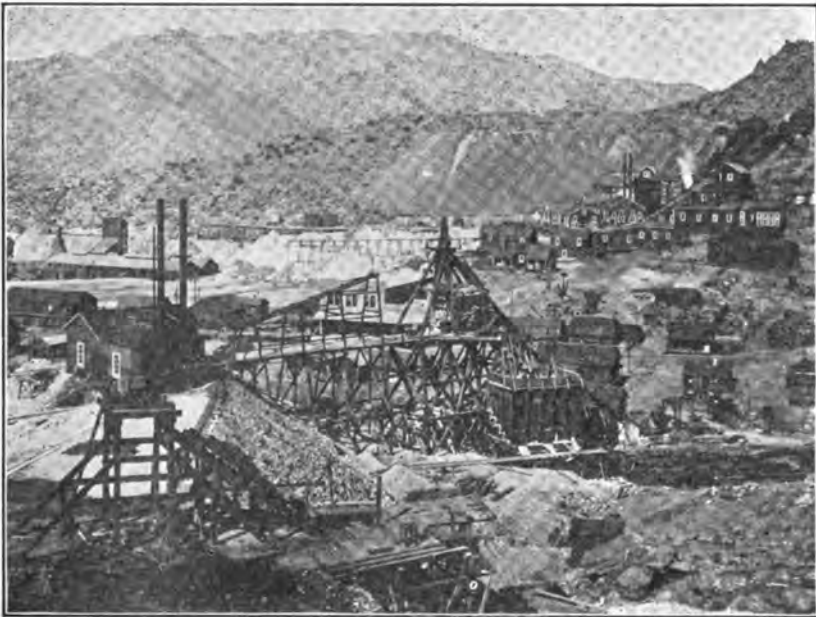
was discovered and yielded ten million dollars in a few years. "Tip Top" gave up in all \$11,000,000 before its day was done.

The man who discovered the "Peck" had stopped to rest on a great boulder and idly scratched a piece of float detached from the hillside. He thought it lead. In three years the ledge had yielded \$1,200,000 in silver, yet, with the strange fate of many a bonanza, had brought its discoverers little but trouble. Tombstone, the greatest of the great silver leads, gave up in all more than \$30,000,000, and is yet rich.

Almost before the day of silver had begun to wane, the day of copper was at hand. And quietly, and a long while unrecognized, came with it the beginning of Arizona's permanent greatness as a mining region. The old bonanzas had worked ill as well as good; the men who had seen fortunes taken literally from the grass roots

resented the suggestion that Nature might have locked still richer treasures deep in the earth. No one wanted to "go down" after what had been so long and so abundantly found on top, and so there grew a swift and dangerous tradition that Arizona was a land of "surface leads," and that it was sheer waste of good hope and good money to follow them into the earth.

The persistency of a few men disproved this baseless tradition and with deep mining came the permanent development of the mineral resources of a vast region still scarcely "prospected." Many of the old bonanzas, abandoned for years by the men who scorned to "sink" after they had gutted the surface riches, are



THE CONGRESS MINE. ONE OF THE GREAT GOLD-PRODUCERS

again yielding good returns at increasing depths; and the best paying mines in the Territory are those that burrow farther into the earth each year.

The "Congress," probably the largest continuous gold producer, with a record of 3,600 ounces a month for a good part of its life, is now on the 3,000 foot level and going deeper. The "Octave," near the wonderful old "Rich Hill" which yielded nearly half a million in dust and nuggets before its day was over, ranges from 1,500 to 2,000 feet in depth and has produced more than \$2,000,000 in its five years of active operation.

The day of the "grass-roots prospector" is done, and men now sink hundreds of feet on the trail of indications that would have



A PART OF BISBEE

Photo by Humphries

meant nothing in the past, but which have led to some of the best paying properties in the Territory.

The development of copper-mining in Arizona has been so quiet, so free from anything like a boom, that few realize its magnitude. In the Governor's report for the year ending in June 1904 it was stated that, estimating the value at the exceedingly low price of ten cents a pound, Arizona had in the past twenty-five years produced \$158,000,000 worth of copper; and this included only the output of the larger mines, since no accurate record is kept of the smaller properties.

Copper distribution in Arizona has not been confined to any one locality. Ore assaying ninety per cent pure copper has been



COPPER QUEEN HOTEL, BISBEE.

Photo by Humphries

found in the Grand Cañon and rich copper indications are known to exist in that part of Arizona lying beyond the Cañon to the north. The "United Verde" at Jerome, one of the very great mines of the world, lies well to the north, in the Black Hills some twenty miles north-east of Prescott; and in the extreme south-east is yet another mine with a world record—the "Copper Queen" at Bisbee, only a few miles from the Mexican line.

Around each of these mines have grown up cities of permanent importance, for it is a peculiarity of copper mining that it is not usually the thing of a day or a year, as the great gold strikes may be. A copper "camp" is a city, and the typical copper-camps of Arizona are among her most thriving towns. Indeed the city

which has grown up around the mines at Bisbee is probably first in population in the Territory, numbering more than fifteen thousand inhabitants.

These "copper towns" are in many ways unique. Nature seldom locates a great mine with reference to human convenience. There is a saying still current with prospectors that "it is no use wasting time to break rock on a ledge that is handy to wood, water, grass, or level ground."

The "Copper-Queen" lead lies under a great, uptilted, ragged mountain, facing another mountain as rough and barren, with only a narrow, rock-walled cañon between. Such scant brush and trees as may once have found footing among the rocks have



RESIDENCE OF WALTER DOUGLAS, BISBEE

long since gone into firewood, and thickets of sabre-leaved yuccas cover the slopes, intermingled with cactus and desert grass.

The town is flung, as if by a careless hand, over the steep slopes down to the cañon bed that forms the main street—scarcely wide enough for two wagons to pass. The roads are graded out like narrow gashes along the hillsides and the railroad grades climb one above the other up to the busy shaft-houses with their black smoke-stacks and hurrying machinery. The city is a veritable defiance to nature—even the water is piped in across the valley from Naco ten miles away—and yet it has handsome business blocks as if there were level land to spare and building space on Main Street were not valued at \$700 the front foot.

Indeed the very lack of level land has given much of its picture-like charm, for the comfortable dwellings (there are more than five thousand men employed by the two great mines at Bisbee, and two-thirds of them are married and most of them own their own homes) range tier on tier up the hillsides to the very top, and down again into every little nook and corner of the cañon.

The city has schools in which nearly 1,500 children are enrolled and in which manual training is part of the regular course. It has four churches, and the only Woman's Club in the Territory that owns its club house—a beautiful building high up on the



GROCERY DEPARTMENT COPPER QUEEN STORE, DOUGLAS

Photo by Humphries

hillside in the residence section, a center in the social life of the place and a leveller upward in many ways.

In the days of the "Grass-roots prospector," it was said that "Arizona mines have no roots," but for twenty-six years the workings at Bisbee have gone deeper and farther into the earth till there are miles of tunnels and shafts and the prosperous city above is literally rooted down among the copper-bearing veins and richly-tinted malachite caves that underlie the rugged mountain. It is said that since smelting began in 1880, the "Copper Queen" has produced a quarter of a million tons of ingot copper, valued at more than \$50,000,000.



MORENCI

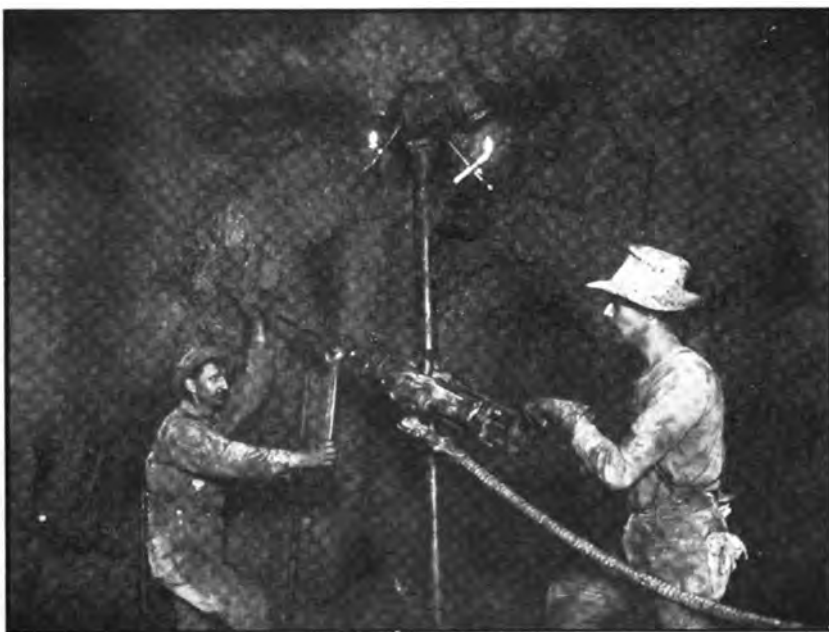
Photo by C. W. Marks

Five of the richest and most business-filled cities of Arizona have their roots deep in the earth with the great copper leads that are famous the world over.

Each one has a a line of railroad built primarily for its own use—water works, electric lights and business blocks that would be a creditable any where. The only hint of old-time mining camp is the ore-filled cars and dumps along the mountain sides.

Clifton and Morenci are usually named in one breath because they are only a few miles apart, but each has its separate history and interest.

The Clifton district is the largest in Arizona, covering forty-two square miles that lie like a wedge between the San Francisco and



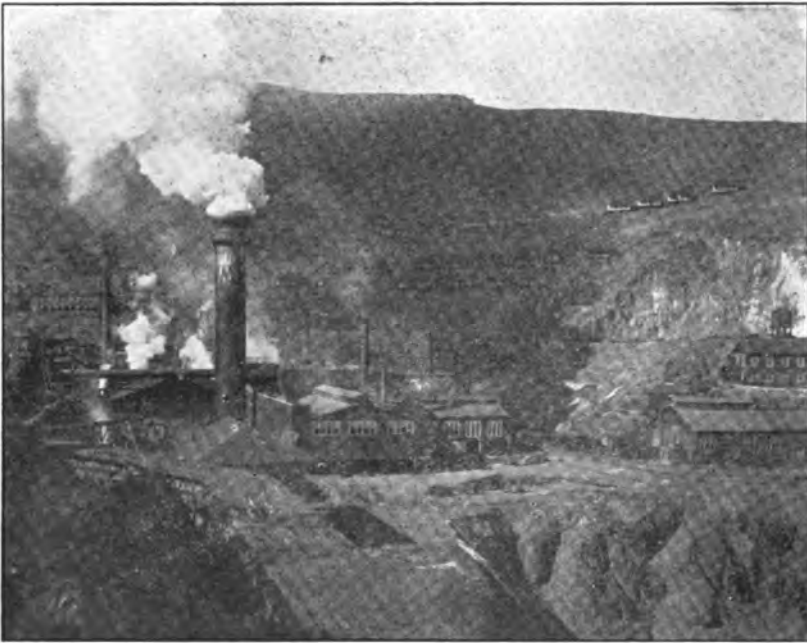
MACHINE DRILLING IN THE M'CAVE MINE

Eagle rivers. It is the district which made Arizona a copper producer, the oldest continuously worked district in the Territory. Here the first smelting was done and the copper shipped 600 miles by bull-team to Las Cruces, New Mexico, the nearest railroad connection.

More than once the Apaches raided the Clifton ore-teams and many a shipment was never heard from. Mule-teams were captured and their drivers killed in the four miles between the mine and the town, and as much for safety's sake as for speed, the owners hauled in steel rails and a small engine from Las Cruces and built the first mining railway in Arizona, running between Clifton

and the "Longfellow" mine. The Clifton of today is a city of 5,000 inhabitants and growing rapidly, with some of the handsomest business buildings in the southwest.

Morenci has passed through her own strenuous times. In 1882, when Geronimo let loose his raiders to plunder and murder in southern Arizona, Morenci was the first to suffer. The renegades divided into four bands and swooped down on the miners and teamsters at that place, and many men were killed before help came. The Morenci of today is a beautiful and prosperous town with smelters of peculiar interest from the fact that one of them has the largest furnace for the reduction of copper ores in the United States.



UNITED VERDE WORKS, JEROME

Globe, the fourth of the "copper towns" of the south, has had a romantic and varied history. Through it flowed much of the wealth from the silver bonanzas and the silver leads of the section are still rich. Only ten years ago a silver nugget weighing thirty-one pounds was found in a sand-wash near Globe.

The copper mines are among the oldest in the Territory and have produced in all 120,000,000 pounds of copper, though they are still considered in the development stage and the smelting plant and works are being greatly enlarged to meet the increased output.

Jerome, the great copper camp of the north, created and kept growing by the "United Verde" mine, has a character all its own, as it had its own peculiar difficulties to meet in development. The men who found it should have considered this mine predestined to greatness by reason of the inaccessible and unpromising location. The camp sits high on a rough and rugged mountain side above the Verde valley, overlooking the Red Rock country—a magnificent sweep of richly-colored, massive cliffs and cañons and castellated buttes only surpassed by the Grand Cañon itself. The smelter, pouring out its stream of slag night and day for years, has built up a huge bench along the mountain side on which the



HOTEL BUILT BY UNITED VERDE CO. FOR ITS EMPLOYEES, JEROME

later works stand. Below the mine and the smelter the town has made its way along the hillside, the "Company buildings" looming big and city-like against the sheer slope of the mountain rising hundreds of feet above.

In every copper camp in the Territory, the companies in operation maintain a fine hotel, hospital, reading-rooms or public library, gymnasium, and other conveniences for their employees. In the south these are handsome buildings of Mission design, in harmony with the character and traditions of the country. At Jerome, they are massive buildings of red brick, dignified and classic enough with their white-columned fronts to be mistaken for a college, but for the roar of the smelter beyond and the sulphur-fumed smoke

blown down from the great smoke-stack running like the body of some huge black serpent up to the mountain top.

Since 1887 the workings of the United Verde have been extending farther and farther into the great deposit (for there is no true vein), but it is probable that its extent is still in a measure unknown. The output for the year ending June 1904 is given as 30,000,000 pounds of copper matte, and, in spite of the fairy tales so freely told, that is probably an average yearly yield.

In the earliest days of mining in Arizona the little smelting attempted within the Territory was done in the crude Mexican adobe



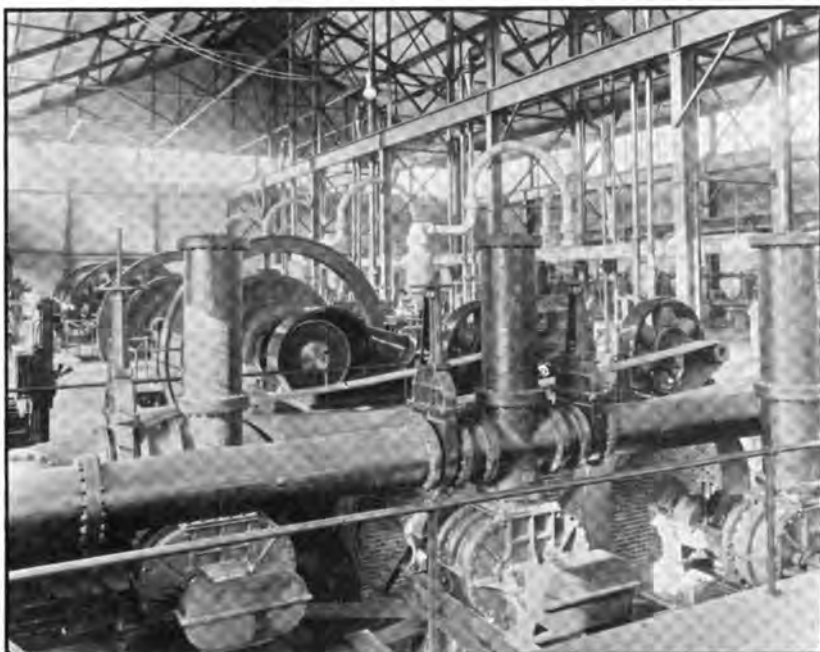
ROASTING ORE AT JEROME

smelters. At the famous "Patagonia," or "Mowry," mine, lead bars were made in this way and enough silver extracted from them in Mexican *vasos* to meet current expenses, the bullion being cast into bars, worth from two dollars up to three hundred, which passed as money all along the Sonoran border. But most of these lead bars went by ox or mule team to the Colorado river, thence by water to San Francisco, and again by sailing vessels to England for extraction. The marvellously rich copper ore from the "Ajo," famous as the first great copper mine of the Southwest, went the same road, and by the same way the "Planet" sent a fortune to the smelters of Swansea.

The discovery of the rich black-oxide ores, in the Clifton district, led to the first copper-smelting in Arizona. They were so

rich and so free that copper ingots were made in a crude adobe furnace, with a blacksmith's bellows to furnish the blast. Later a copper water-jacket was used, the jacket being roughly cast from the copper already extracted.

The ore from this mine was hauled six hundred miles to the railroad in wagons for shipment, and even after railroads came nearer it was felt to be cheaper to ship ores to other points than to build and operate smelters in Arizona. The cost of fuel and difficulty of getting it (the Clifton ores were smelted for years



THE ENGINE ROOM OF THE COPPER QUEEN SMELTER, BISBEE

with charcoal burned in the Burro Mountains, the nearest coke being six hundred miles away), and the high price for labor and for transportation, seemed to prohibit local smelting and many a good mine lay idle because its ores, though fairly rich, would not bear the combined expense.

Within the decade following 1890, two things of almost equal importance combined to revolutionize mining in Arizona—the successful development of various processes by which low grade ores could be worked to a profit, and the extension of the railroads, reducing the cost of fuel and transportation. They were, indeed, inextricably interwoven. The mines could be worked because of the railroads, and the railroads found it profitable to extend their lines into sections where there were known to be mines awaiting development.

Better methods of smelting and otherwise treating ores have been constantly developed and applied with special reference to individual needs. The Bessemerizing of copper, which has worked such great good to the low-grade copper mines, was first adopted at the "Copper Queen" and then at Jerome, Clifton, and Globe.

Where once much of this ore and all the concentrates went out of Arizona for final treatment, there are now smelters in nearly every district, besides the great plants at the large copper mines, and at Douglas, near Bisbee, where a city with a population of more than five thousand people has grown up in four years around



DUMPING SLAG AT NIGHT, DOUGLAS

the huge plants of the "Copper Queen" and "Calumet & Arizona" companies. These two smelters have each a capacity of 2,500 tons a day and treat ores from Bisbee, Clifton, Globe, and the Nacozari mines in Mexico.

At Humboldt, near Prescott, a 600-ton smelter, entirely for custom ores, is being constructed, and will be the largest custom plant in the Territory.

The result of this local treatment of ores has been to increase the number of working mines in every district and to stimulate constant prospecting and development of new leads.

TRANSPORTATION

If the history of the later West can be found in the history of western railroads, this is doubly true of Arizona. Since the passing of the old bonanza days, mining, smelting, and railroading have gone forward together. Mule-team and pack-train trans-

portation meant that only the richest ores could be handled, and fortunes were sorted out and thrown over the dumps as waste.

When the first railroad crossed Arizona the mines worked successfully could have been counted on the fingers of a man's hands—on one hand probably. Many of the districts now prosperous were wholly undeveloped and known only to a few prospectors. Some of the largest mines were mere prospect-holes, reached by rough pack trails over the mountains. Powder, steel, tools, and food were sold at prices that forbade the development of any but the richest leads.

The few big mining camps were reached by wagon-roads that



IN THE TOMBSTONE MINES

Photo by Humphries

cost almost as much to build as a later-day railroad; and freighters still recall with reminiscent regret the big eighteen-and twenty-mule teams and the huge-wheeled wagons, loaded, "lead wagon" and "trail," with six or eight tons, or more if there were "double trailers," of merchandise or ore, for every pound of which, in the palmiest days, they were paid from six to ten cents on delivery. When freight fell to two cents, and to one, the glory of the freighter (brass-belled and red-tasseled harness and mules roached and with tails clipped in fanciful designs) departed and the triumph of the railroad was at hand.

From the day when her purchase price was paid to Mexico, southern Arizona looked hopefully for the promised railroad which

was to cross her length on its way to link ocean with ocean. After twenty-five years of waiting, the first train crossed her border at Yuma, in 1878, the Southern Pacific pushing eastward from California. Two years later, on March 20, 1880, the first train rolled into Tucson, and the old pueblo and the long-deferred hope of Arizona touched hands with the outer world.

A great crowd gathered from all the mining camps and cattle ranges to welcome "the black horse cavalry, the great civilizer of the world," as a local orator termed the railroad, and the last rail was spiked with a silver spike made from the first bullion taken out of the famous "Tough-nut" lead at Tombstone. A ban-



CYANIDE PLANT AT THE CONGRESS MINE

Photo by Hamaker

quet was held, reaching from the largest hotel in Tucson, where covers were laid for three hundred guests, to the Papago villages outside the town, where the original Arizonians feasted on the joyful bounty of the later comers.

The road went on eastward, connecting a year later with the Atchison, Topeka & Santa Fé at Deming, and the dream of a quarter of a century was realized. It was realized again in 1883, when the Atlantic & Pacific line entering from New Mexico crossed westward to Needles and on to California. But, with two trans-continental lines measuring her northern and southern width, Arizona was for some years little better off than before.

These roads were themselves still incomplete and more concerned with their own construction than in developing the resources of the territory crossed. The true growth of the country

began with the building of connecting roads, linking north and south and penetrating some of the richest mining and farming sections.

The first branch, completed in 1882, was an arm reached out from Benson to Guaymas, to gather in the wealth of Sonora and the trade of the Gulf of California. The next was the Arizona & New Mexico, a narrow-gauge road forty-one miles long, connecting the rich copper mines of Clifton with the just-completed Southern Pacific at Lordsburg. This road cost \$1,400,000; but the supplies for these mines had been brought from six to seven hundred miles with mule-teams and the new expense seemed small



AN ARIZONA ONYX MINE

Photo by E. M. Jennings

beside the old freights. The road was put in operation in 1883, and the Apaches, who had for years fattened by raiding the Clifton freight teams and capturing mules and provisions, tried to hold up some of the early trains and drag the engine off the track by lassoing the smoke stack with their raw-hide riatas. Several Indians were made permanently "good" before they decided to let the "devil-wagon" go on its way unmolested.

In a little less than fifteen years after the completion of the two transcontinental lines there were twelve railroads operating in Arizona, with a total mileage of nearly 1,300 miles. Excluding the two main lines, most of these were built with direct reference to mining development, and many of them were owned by mining companies.

Tucson and Yuma were the only towns of any importance reached by the main lines. The Southern Pacific left Phoenix and the rich Salt River Valley to the north of its line, as the Atlantic &

Pacific left Prescott and the mines to the south. In 1887, the Maricopa & Phoenix road connected the largest farming section in Arizona with the outer world and gave the great copper mines of the south a new source of supplies.

In the north, the building of the Santa Fé, Prescott & Phoenix road, in 1893, marked the beginning of a new period of mining and business activity. Extending 197 miles through central Arizona from north to south, this road reaches both the mining and the farming sections and brings the two nearer than was possible in the old days of freighting by mule teams. It leaves the Santa



WORK LIKE THIS IS GOING ON AT MANY POINTS IN ARIZONA

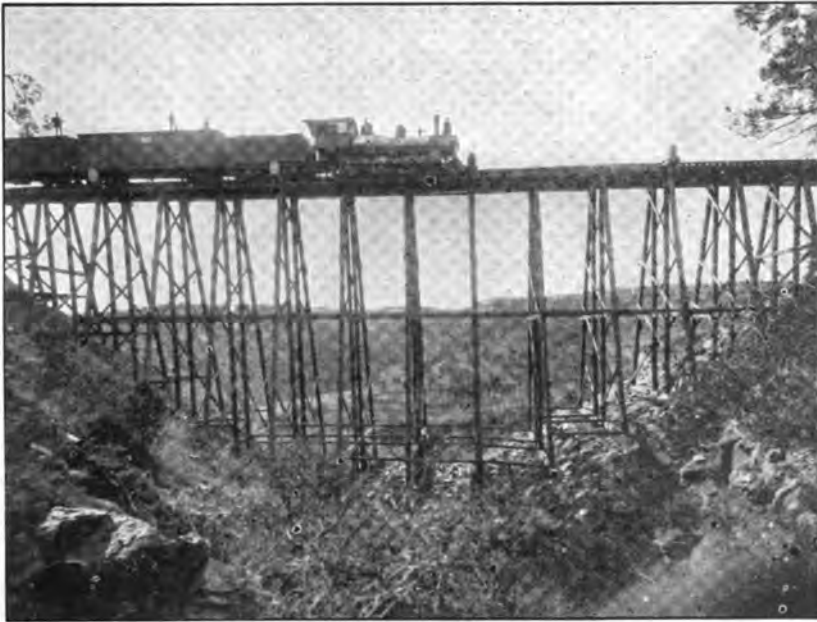
Fé main line at Ash Fork, passing through Prescott, the mining center of the north, and on to Phoenix by way of the great Congress gold mine.

Since it was completed, other rich mines have been opened up along the way, and farm products of the Salt River country have found steady market in the mining camps of the north. Continuing its initial policy of developing the resources of the country, this road has extended three strong arms, two to the east and one to the west; and in each case a marked increase of mining and other activity in the tributary sections has followed.

If the railroads of Arizona were not so deeply identified with the business life of the country, they would be reckoned with the most beautiful scenic lines of the West, penetrating, as they do,

the mountains once reached only by pack trails, and crossing the most wonderful parts of the ever-narrowing deserts of the Southwest.

The Southern Pacific, for a good part of its way in Arizona, follows the old southern emigrant trail and passes many places of historic interest—the Picacho, a huge, splintered, battle-ax-shaped peak of red sandstone, that was a landmark from Tucson to the Sonoran border; Dragoon Pass and Oatman's Flat, scenes of tragedy in the early days and Cochise's Stronghold, the rugged ring of granite peaks in which the Apache chief of that name took refuge in his last bloody campaign.



ON THE SANTA FÉ, PRESCOTT & PHOENIX

The new line of the road, as projected from Bowie to Phoenix and Yuma, will cross one of the most beautiful cactus-covered areas in the south, where the giant zahuaros mingle with an endless variety of typical desert plants. But it will reach, as well, a great and fertile farming region and a rich and rapidly developing mining country.

Three of the Arizona railroads which base their existence on mines would be crowded with tourists in any land where there was less grand and beautiful scenery going to waste. The Arizona & New Mexico, skirting the foothills of the Peloncillo Mountains and following the course of the San Francisco river to Clifton, is a narrow-gauge road because the cliffs and cañons along its way prohibited a wider track; and it hauls the copper and ore out

and supplies for the mining camps in, with few passengers, because, in counting up the tons of copper, no one remembers to speak of the beauty of the country traversed.

The narrow-gauge road which, by twists and turns as sinuous as the curves of a snake, climbs over the shoulders of the Black Hills and drops down beside the huge, busy smelting plant at Jerome is a piece of engineering worth going far to see; but the wonder of the road is forgotten in the wild, magnificent sweep of country that unfolds below as the train climbs higher and higher along the mountain. The upper Verde valley, the rich-tinted cliffs and walls of the Red Rocks, Hell's Cañon, and the San Fran-



IN THE HEART OF THE BRADSHAW. THE CROWN KING MINE

cisco peaks, with the Mogollon mountains to the south, stretch out in a picture scarcely to be surpassed from the brink of the Grand Cañon itself.

The Bradshaw Mountain Railway, a continuation of the Prescott & Eastern, climbs by a series of ten switch-backs up to the very crest of the Bradshaw range, and so down into the heart of Bradshaw Basin, one of the oldest and richest and most inaccessible mining districts in Arizona. For thirty years this great, rugged, granite-ribbed tangle of mountains and cañons has attracted and defied the prospector. In the old days it was reached by trail, and the possibility of a railroad climbing the granite cliffs would have been beyond the wildest dream. But the mines were there and the railroad went to meet them, climbing the mountain by such a zig-zag stairway of grades blasted out of the gray granite cliffs as is not to be seen elsewhere in the United States. since the switch-back is no longer used on the Northern Pacific,

Looking back from high against the pine-covered mountain top, seven tracks may be counted below and the cañons drop down in rocky dips and waves till the earth seems slipping away from the advancing train.

Scarcely less beautiful is the branch of this same road which follows the deep, narrow cañon of Big Bug Creek up to the "Poland" mine at the very crest of the mountain divide between that stream and Lynx Creek. In the twenty years following 1864 these two streams yielded more than a million dollars in placer gold, and the later yield from the quartz mines of the district has been as much. At the "Poland" a tunnel a mile and a half long cuts through the divide and uncovers hidden ore veins at great depth; furnishing, beside, a roadway through which the ores of the opposite side reach the railroad and the mills and smelters below.

In northern Arizona, the Santa Fé Pacific crosses one of the most beautiful mountain and forest regions in the West, climbing up through the tall yellow pines to the base of the San Francisco peaks at Flagstaff, a great, triple-peaked volcanic cone 14,000 feet high; on past the lower, cliff-walled mountain named for Frémont's old scout, Bill Williams, to the wide, cedar-covered mesas and broad, beautiful valleys between Ash Fork and Kingman, where another rich mining section begins. This bit of road is a special disappointment to the tourist to whom Arizona has been for a lifetime synonymous with desert. He whirls along for hours through the beautiful upland, suggestive of homes at every mile, and is only comforted when he crosses the Colorado river and plunges into the sand-wastes beyond; where, though he has left Arizona behind, he finds his long-cherished ideal

The one avowedly scenic line of railroad in the Territory leaves the Santa Fé Pacific at Williams and reaches the Grand Cañon at Bright Angel Trail, where a little town is growing up for the accomodation of travellers. It passes through a wonderful stretch of forest and mountain, and touches the great cañon at its most beautiful and accessible point.

The past two years have seen continuous activity on the part of nearly all the roads in the Territory; lines have been shortened, grades lessened, tracks relaid, and many new bridges built, some of them massive steel structures of great cost. In the south, where the wide and sandy river beds present exceptional difficulty in the way of finding solid footing for bridge piers, a great steel bridge has been built across the Salt river and a similar one is to be built at the Southern Pacific crossing of the Gila.

The swift and tremendous floods common to all Arizona streams present special problems to builders of railroads, and for the two

years past much labor has been expended in repairing flood damage and wash-outs, beside that required for the extension of lines in construction.

The Phoenix & Eastern has pushed out through the rich farming valleys along the Salt and Gila rivers and on through the Kelvin and Silver King mining districts, still eastward with the ultimate purpose of forming a main line with lesser grades than the northern Santa Fé route. Westward, the Arizona & California has made its way across one of the most beautiful deserts in Arizona—desert only till water is supplied, and a rich and rapidly developing mining country—toward the Colorado river and a coast terminus in California.

Altogether Arizona has more than 1800 miles of railroad in active operation, and other lines under consideration for such time as the growth of the country demands.

STOCK RAISING

The first immigrants to cross Arizona found it a thickly grassed country in which they were glad to stop and recruit their stock. They found too in San Pedro valley a few bands of wild cattle, the stragglers remnant of the great herds which had ranged through the San Pedro and Santa Cruz valleys in the brief era of Spanish settlement and prosperity.

Later, as the military posts were established, beef cattle were driven in from California and from Texas, and almost immediately attempts were made to graze cattle near the settlements. These first attempts all failed because of the persistent raiding of the Apache Indians, who killed the herders and drove off the stock. The cattle were shifted from place to place, some of the largest herds finding temporary refuge in the country of the friendly Papagos, till the hostile Indians were slowly driven within reservation bounds.

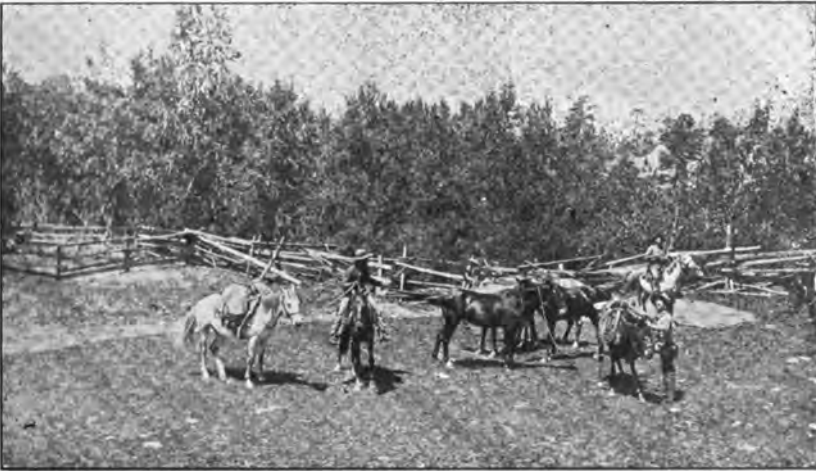
With the coming of the two transcontinental lines of railroad, Arizona became one of the great grazing sections of the West. Cattle were shipped in till there was scarcely a spring or running stream in the Territory that was not the site of a ranch or ranches, and the increase was so rapid and so sure that great fortunes were made in a few years.

In 1891, it was estimated that there were 1,500,000 head of cattle in the country, beside a large number of horses running wild on the ranges. The next year and the next came the great drouth. Water failed in streams never before known to be affected, the grass on the over-stocked ranges was eaten and trampled off, and in those two summers fifty per cent of the cattle in southern Arizona died—and three years later the same story was repeated in the north.

Since that time, the stock-growing has gone forward on a different basis; the large ranches are fewer, and cattle are kept in smaller numbers and better cared for. Many cattle are fattened on the alfalfa fields of the Salt river valley and elsewhere, and Arizona beef commands first price in the markets, East and West.

In the north, cattlemen have pushed out into the well-grassed but unwatered region lying along the Grand Cañon, and, by building artificial reservoirs and constructing dams across cañons to hold the flood-water from summer rains and melting snows, have established profitable ranches.

That part of Arizona lying north of the Grand Cañon is one of the best grazing sections of the Territory and is fairly well stocked



A COWBOY "OUTFIT"

Photo by T. H. Bates

with cattle and horses owned principally by Mormon settlers. There are still many bands of semi-wild horses in northern Arizona, but the growing of horses on the open range is no longer a profitable industry.

In the south, there are left a few of the old-time large ranches where cattle are grown by the thousands; but it is no longer the Texas and Mexican "long horns." The cattle are well graded, and the horses thoroughbred of famous strains. On one ranch the cow-ponies all show the rich sorrel coat of the great "Gold Dust" strain, and on another, the beautiful Sierra Bonita ranch, the horses are of world-famous blood.

The unusual rainfall of the past eighteen months has again covered the country with grass, and cattle are being shipped in to establish new ranches. Stock-growing in general has not been so prosperous since the first great drouth and as the alfalfa belts widen will increase in importance. In 1904, the official report

stated that \$1,500,000 worth of fat cattle and alfalfa hay had been shipped from the Salt river valley alone, and under the new irrigation systems the amount will be doubled.

The first sheep in Arizona were owned by the Navajo and Moqui Indians, stolen, perhaps, by the former from Mexican settlers of Sonora. Later, the Mormon colonists brought bands of sheep into the Little Colorado valley, and, in the years of drouth on the coast, the Basque sheep owners of California drove their herds by the thousands into the deserts along the Colorado river.

Sheep raising has become, perhaps, the most important branch of the live-stock industry in Arizona. In many ways the cli-



SHEEP SHEARING BY MACHINERY

Photo by Humphries

mate and conditions are peculiarly favorable. Being able to go without water for much longer periods than is possible with cattle, the sheep are driven all over the unwatered ranges and during the winter months are herded in large numbers in the deserts of the south. Here winter rains frequently bring a heavy growth of weeds and grass, and the sheep, feeding on the watery herbage, will go for weeks without water and fatten to perfection. As spring advances, they are driven slowly up to the mountains of the north, where artificial reservoirs and lakes, made of recent years, supply water.

Many of the old cattle ranges are now given over to sheep and the industry has proven a particularly profitable one, though here, as elsewhere in the grazing countries, there has been more or less

friction between sheep and cattle owners. The present provisions of the forest reserves limit the number of stock on the mountain ranges and in some measure adjust the trouble.

For the future, stock-raising in Arizona will be more and more of the farm and less of the range. The range-grown stock already come to the alfalfa pastures for fattening and farmers raise an increasing number of cattle on their own land. Along with these changes, dairying has come to be one of the important industries of the farming sections. It was a standing joke of the old days that milk, butter, and beef were never to be found on a cattle ranch, and it happened to be one of the jokes with truth as a basis.



SHORN!

Photo by Humphries

When the cattle on her hills numbered beyond the million Arizona imported her butter and it was sold at "six bits" a pound; now, though the history of scientific dairying would fall within the past ten years, Arizona butter and cream supply the largest markets of the Southwest from El Paso to northern Mexico. More than 5,000 high-grade dairy cows are kept in the Salt River and Gila valleys, and the large creameries show an output of more than half a million pounds of butter for the past year, with nearly as much cheese, besides the local sale of milk and the large quantity of cream shipped to the mining camps and towns outside the dairying region.

Arizona has one "live stock" industry that is not likely to be largely duplicated elsewhere, though it has proven so profitable in the section in which it was first introduced. The largest ostrich-farm in the United States is situated about nine miles from Phoenix in one for the rich alfalfa belts of the valley. Here nearly 2,000

birds are kept on a 1,200 acre farm, and the success of the initial venture has led to the starting of three other farms in the vicinity. Ostriches thrive to perfection in the climate of southern Arizona, and the feathers grown on the Arizona birds are rated in the London market as more beautiful and perfect than those of the Nubian birds which have for centuries been considered to produce the finest plumes known to commerce. About two-thirds of the ostriches in the United States are on these farms, and an official report estimates that in five years there will be 10,000 birds in Arizona, with an annual feather crop valued at \$350,000.

TIMBER

The treeless areas of the Southwest are so vast that it is difficult to realize that in Arizona, the heart of the "Great American Desert." lies the largest unbroken forest in the United States, probably the largest in the world. The forest of yellow pine, flung like a kingly mantle over the rough, mountain-ribbed Mogollon plateau, has given northern Arizona a character and development peculiarly its own.

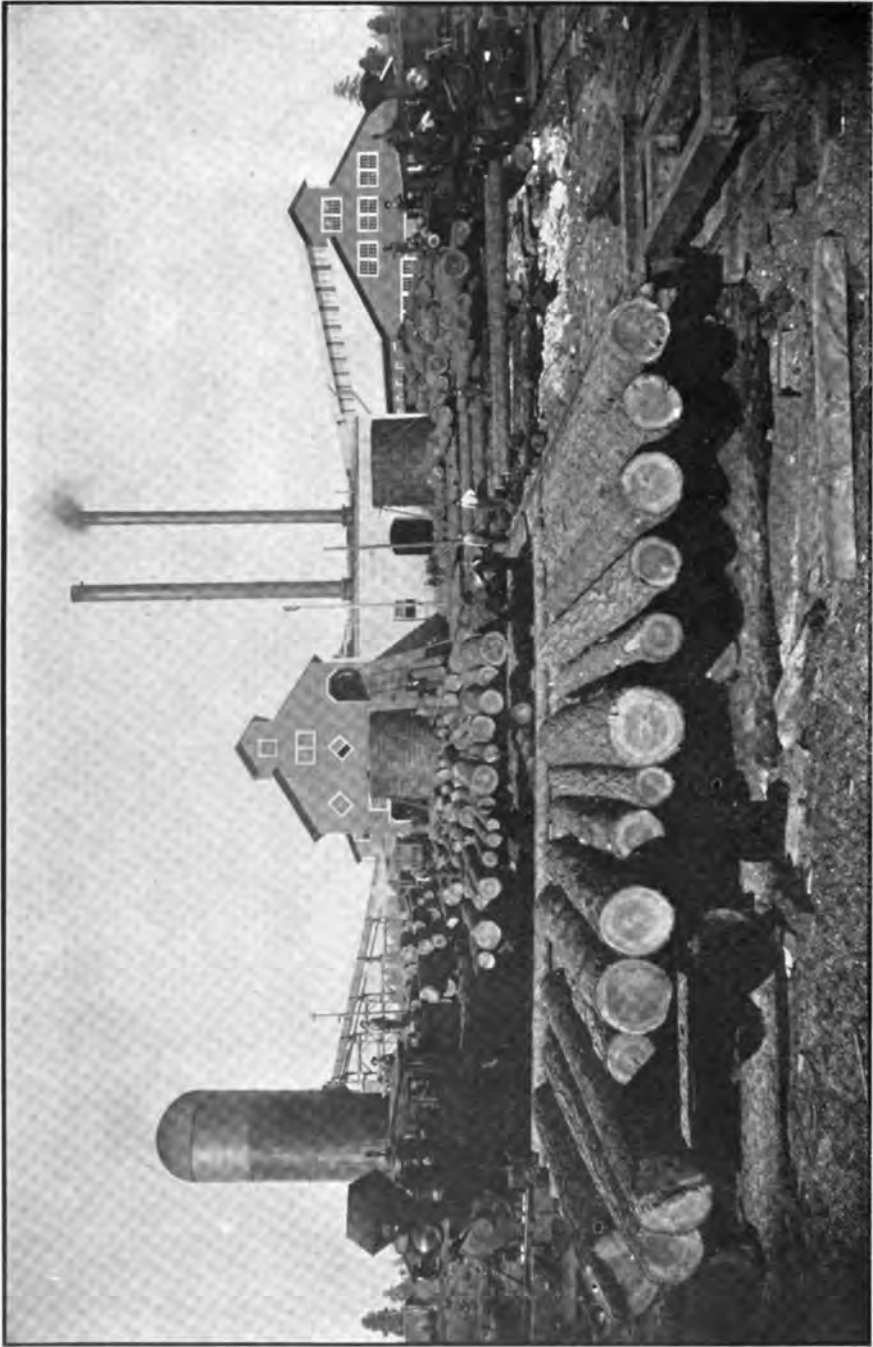
This great forest covers nearly 10,000 square miles, and stretches, with more or less extended interruptions, from beyond the Grand Cañon on the north and Bill Williams mountain on the west, southward to the great rim where the Colorado Plateau breaks down to the southern plains. It lies at an altitude of from five to seven thousand feet, with fir and spruce and beautiful groves of quaking asp intermingled at the higher levels, and a far-reaching fringe of cedar-covered mesas and hills dropping down to the lower plains and valleys. These cedar forests give much of the picturesque charm and beauty which characterizes the uplands of northern Arizona, and though they have no lumber value. are a comfortable wood yard from which the Southwest may draw for generations.

The first lumber made in Arizona was whip-sawed in the Santa Rita mountains in 1856 to make doors and furniture for the old adobe presidio of Tubac, the long-abandoned Spanish fortress in which Charles D. Poston held his brief but royal reign as alcalde while the "Heintzelman" mine was sending its silver bullion, seven thousand dollars to the ton of ore, by way of Guaymas and San Francisco to the markets of Asia.

Lumber was also whip-sawed at Prescott and later small saw mills were brought in to furnish lumber for Fort Whipple and the town and near-by mining camps; but lumbering in earnest began at Flagstaff in 1882, when Edward Ayer, of Chicago, bought a large tract of forest land and brought in the machinery for a well-equipped saw mill. At this time the railroad had only reached Winslow and the mill came on from that point on ox wagons. Late



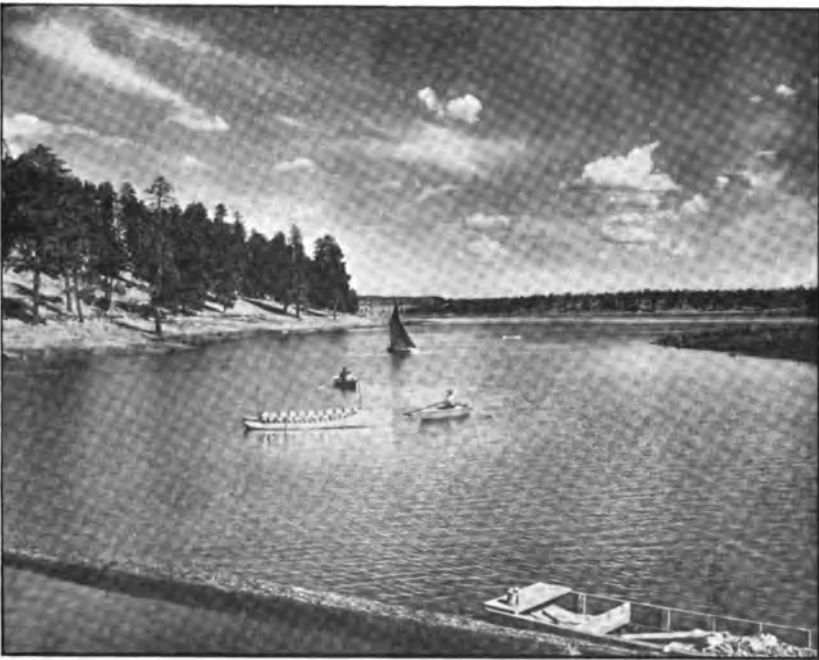
IN THE LUMBER BELT



PART OF THE PLANT OF THE ARIZONA LUMBER AND TIMBER CO.

in the year it was ready for operation and the first product was ties for the Mexican Central Railway.

Mr. Ayer presently sold the mill and timber tract and the fuller development of the business has been in the hands of the Arizona Lumber & Timber Company. Twice the mill has been burned and each time it has been rebuilt better than before. After the last fire the mill was made as nearly fire-proof as possible and has been constantly equipped with the best and latest machinery, till it is now the finest mill in Arizona and probably in the Southwest. The logs which were formerly cut near the town now come



LOGGING LAKE NEAR FLAGSTAFF

in over a railroad extending about twenty miles through the forest to the southward, and owned and operated by the Company. The timber is yellow pine, and where once the market was wholly local the demand now comes from all parts of the country. In the East the beautifully-grained wood is more and more in demand for interior finishing

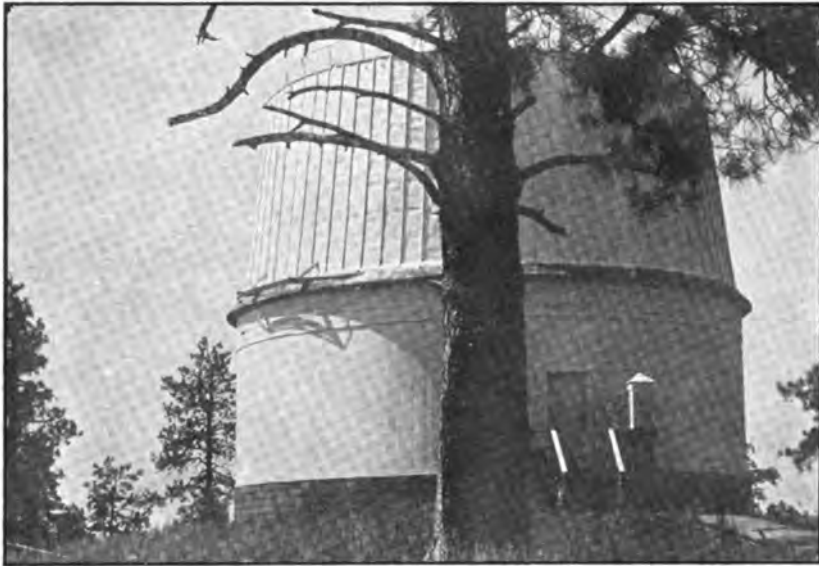
The annual output of this mill is about 40,000,000 feet, varying with the season; for deep snows sometimes shorten the active working time.

Adjoining the saw mill is a perfectly equipped box factory, the largest in the Southwest, where the short boards are turned into boxes of all sorts and sizes. Here, in a printing machine that

almost outwits human hands, each box is printed with its own label—orange boxes for California, musk-melon crates for Colorado, celery crates for Washington, honey boxes, dried-fruit boxes, apple boxes by the thousand—boxes for all parts of the United States. And one of the heavy label-stamps which fit into the printing machine reads "Cecil Rhodes' Fruit Farm, South Africa."

Over 3,000,000 boxes have been shipped in a year from this factory and the demand grows with the increasing use of the box-package for fruits and vegetables.

The thriving city of Flagstaff has grown up around this lumbering plant and is the larger of Arizona's two "lumber towns."



THE LOWELL OBSERVATORY NEAR FLAGSTAFF

It lies scattered across a beautiful little park-like valley overgrown with pines and encircled by great forest-covered mountains, with the noble bulk of triple-peaked San Francisco to the north. In the summer it is the resort of many tourists, drawn by the beauty of the mountains and forests, and by the hunting and fishing at Oak Creek and other places near.

Professor Lemmon, the authority on cone-bearing trees of the West, has called this region the wonderland of the cone-seeker, and the late spring of high altitudes brings to all this mountain plateau such lavish and varied floral beauty as bewilders botanist and flower lover.

On a pine-covered hill beyond and above the town stands a high white dome of keenest interest—the astronomical observatory



QUAKING ASPENS ON SAN FRANCISCO MOUNTAINS

Photo by T. F. Este

from which Professor Percival Lowell has made his extended and rarely successful studies of the planet Mars.

He chose this spot because, after many experiments and trials, he found here the clearest atmosphere and most favorable location in the United States. He is able to follow with a much smaller lens heavenly processes which are veiled mysteries to observers at other places, because atmospheric conditions are peculiarly favorable for star study.

Though Flagstaff grew out of the saw-milling industry, it has developed other resources—notably a fire-brick made of tufa stone and possessing wonderful heat resistance, and the great quarries,



IN THE WILLIAMS LUMBER YARDS

seemingly limitless, of brown sandstone from which many of the handsomest buildings in the west have been erected, among others the Brown Pa'ace Hotel, of Denver, and the Los Angeles County Court House.

In the western edge of the great pine belt, at the base of Bill Williams mountain, the town of Williams has grown up around the Saginaw & Manistee Lumber Company's mills as Flagstaff grew around the plant of the Arizona Company. A railroad is being built north and east toward San Francisco peaks, and a very large new timber area will be opened.

Williams is the center of the sheep-growing section of northern Arizona and great quantities of wool are shipped from there each

year, but its chief importance is and will be in connection with the lumber trade.

The native woods of Arizona are capable of great development in a decorative way. The yellow pine has a distinct and beautiful grain, not affected by stains or other finishing treatments, which makes it of recognized and growing importance as a wood for interior use. The quaking asp, which grows to large size in the higher mountains, finishes with an exquisite satin lustre and pearly tones in its pure white wood. The mesquite and ironwood of the south grow to good size in many sections, and take a deep polish and dark, richly-mingled tones which in the latter nearly approaches



NORMAL SCHOOL AT TEMPE

Photo by T. H. Fate

the beauty of onyx or jasper. The mesquite is now used for wagon making, but its value for finer uses will presently be appreciated.

EDUCATION

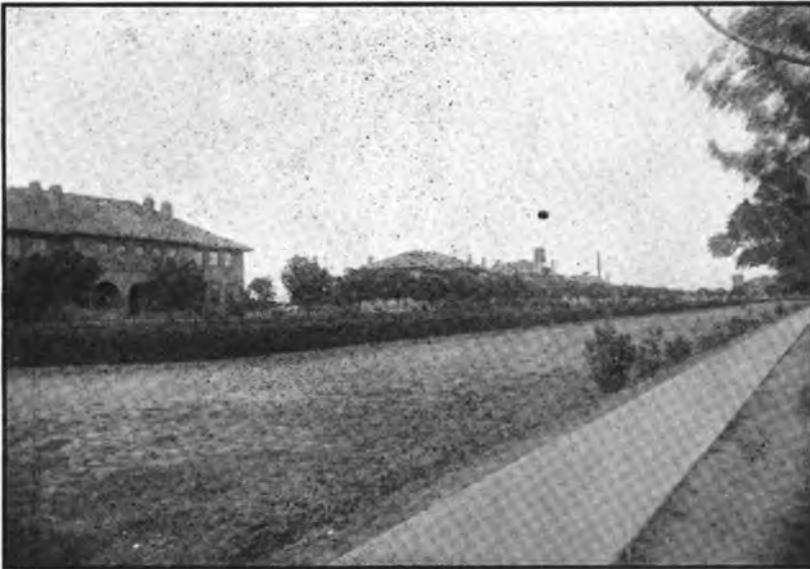
With her very beginning, Arizona provided for the education of her future citizens. The first legislature, in 1864, appropriated funds for the support of the one school within her borders, the Catholic Mission school at Bac, and for the establishment of public schools where needed.

Prescott was the first town to take advantage of this appropriation, but in 1871 when the number of school children had grown to nearly 2000, public schools were established in all the towns and larger settlements.

The schools of Arizona have kept pace with her growth and are

perhaps the best index to it. In May 1905 there were nearly 30,000 children of school age in the Territory and about \$500,000 was available for school purposes. Beside a constantly growing number of district-schools in every mining camp and neighborhood where half a dozen children can be brought together in regular attendance, there are now three high schools, two normal schools, a Territorial Industrial School, and the University of Arizona, which, in addition to the courses offered by the universities of other states, offers a special and particularly valuable course in mining.

The public school buildings throughout the Territory will com-



THE INDIAN SCHOOL, PHOENIX

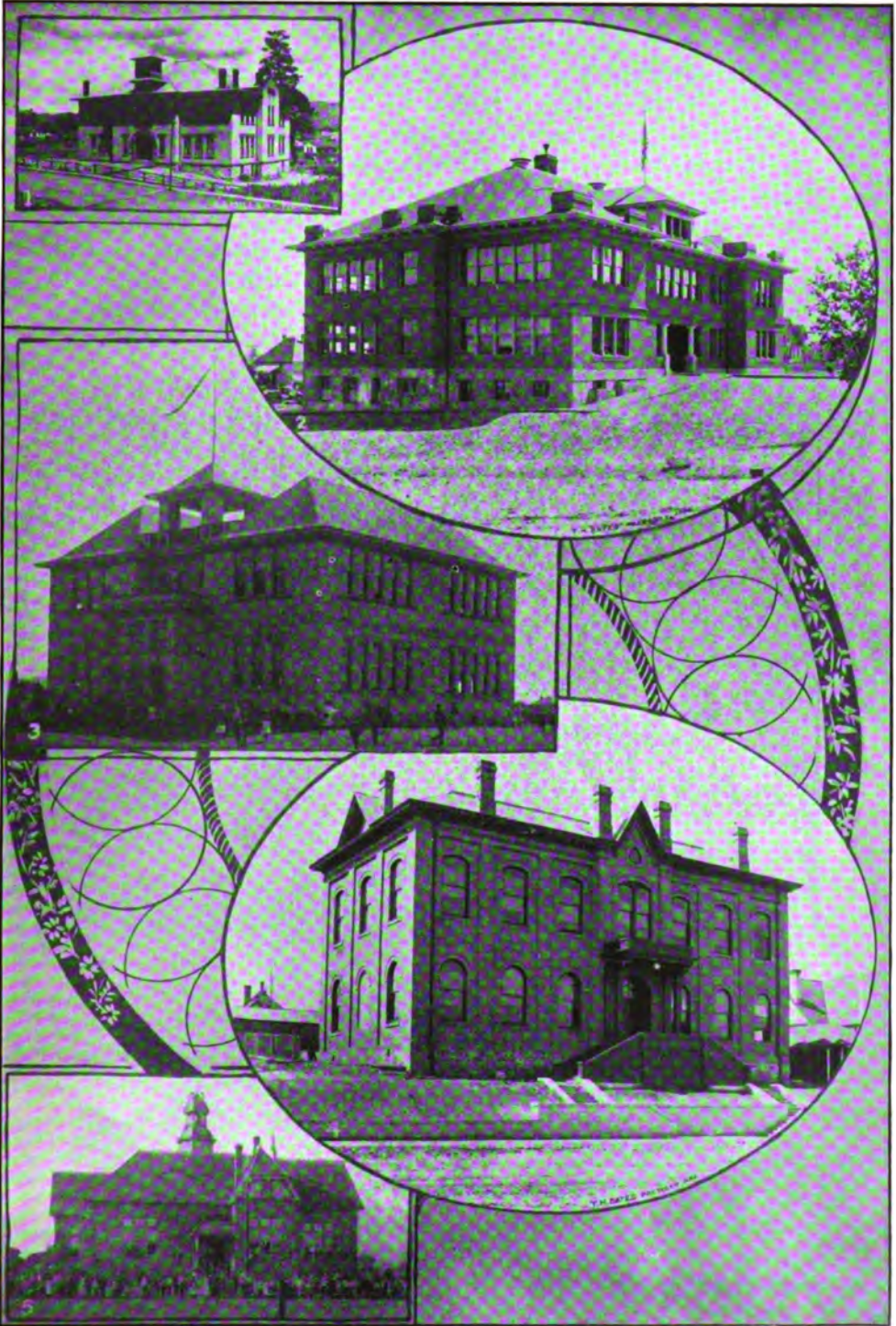
Photo by T. H. Bate

pare favorably with those of older states and in the larger schools manual training is part of the regular course.

In connection with the University at Tucson, and under its management, are the School of Mines and Engineering, the Agricultural College, and the Agricultural Experiment Station. These varying interests have brought the University in touch with the whole people of the Territory to a very exceptional degree.

Some of its buildings and their equipments have been given by persons interested in the up-building of Arizona and her people, and the valuable and extensive collections housed in the museum are nearly all private donations.

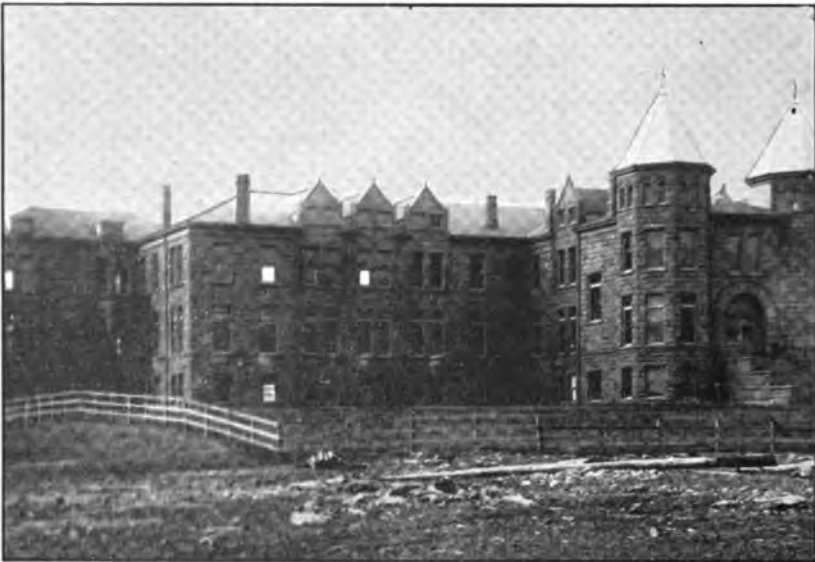
In the grounds may be seen an excellent collection of plants and shrubs native to Arizona, and the plant study is ably forwarded by the Carnegie Botanical Laboratory, a short distance away, where special attention is directed to desert vegetation.



1. PUBLIC SCHOOL AT FLAGSTAFF 2. A PRESCOTT GRAMMAR SCHOOL 3. PUBLIC SCHOOL AT DOUGLAS
 4. PRESCOTT HIGH SCHOOL 5. ONE OF THE PHOENIX SCHOOLS

Many of the teachers now in Arizona are graduates of the two normal schools, which are located at Tempe, near Phoenix and at Flagstaff. Both are well-equipped and growing, schools with enviable record for high standards and efficiency.

The three high schools are located at Prescott, Phoenix, and Mesa; and the Territorial Industrial school, designed for the restraint and education of child criminals, was established at Benson in 1903. Beside the public schools of the Territory, there are eight private schools maintained by the Catholic church—of which the beautiful St. Joseph's Academy, at Prescott, is the most important.



NORTHERN ARIZONA NORMAL SCHOOL, FLAGSTAFF *Photo by E. S. Miller*

The Government Indian School just outside the city of Phoenix is a point of particular interest to visitors, especially if they chance to come from the East. Beginning with rooms in a hotel, it has grown to be a village in itself, with thirty well-finished houses, wind mills, electric lights, extensive and beautiful grounds, and an enrollment of nearly nine hundred pupils representing about twenty-five tribes. Other Indian schools, both Government and private, are located on the various Indian reservations in the Territory and have a large local attendance.

There are now about 30,000 Indians in Arizona, but there is no longer an "Indian problem" in the old sense. The sons and daughters of the Apaches who followed Geronimo and Cochise on their bloody raids farm little patches of land on the reservations, or work as section hands on the railroads, or take places

as house servants. Some of the old leaders themselves live out harmless and idle days and are pointed out as objects of curiosity, but no longer of fear.

Altogether the Indians of Arizona have made all the progress toward civilization that could be expected. The Pimas, Maricopas, and Papagos, always farmers and peaceful, require only land and water to solve their future for themselves. The Havasupai, in their wild, cañon-walled home, ask only to be let alone; the Moquis in their strange, pueblo towns wring existence from the desert as of old; and, for the future, the Indian question is one of help and guidance rather than restraint.



THE RIORDAN RESIDENCES, FLAGSTAFF

TOWNS

Beside her many mining camps, some of which are cities in themselves and one of which has the largest population of any place in the Territory, Arizona has three cities that are especially typical and interesting, each having a character and originality of its own—Prescott in the mountains of the north, Phoenix in the great central valley, and Tucson far to the south, looking out toward the Mexican border.

Tucson, the oldest city of Arizona, still retains with its Indian name something of the romance of its distant past. Something, but not much—all trace of the little mud-walled presidio over which the American flag first floated briefly in 1846 is gone. Al-

most as remote is the adobe town, Spanish in character, which grew up after the nearness of United States troops brought comparative safety to the Apache-harried valley.

The very outline of the old wall is lost—the narrow streets down which the gay-decked riders dashed from the cock-pulling on San Juan's day, and in which two wagons could not pass, are widened and lined with modern business blocks. Only here and there in the outskirts of the city is there a typical flat-roofed adobe to be found, draped with festoons of red peppers drying in the sun.

The most beautiful library building in Arizona, the official depository for documents concerning the Territory, faces the old



PRESCOTT

military plaza on which halted in turn the Spanish troops from Mexico, sent to garrison the little presidio and protect the missions, and the later-come soldiers of the United States.

Where these same troops of Mexico built their little lookout of volcanic boulders up on the shelf-like shoulder of the rugged, brown mountain west of the town, the Carnegie Desert Laboratory now stands, its office and work-rooms built of the very stones that once felt the ping of Apache arrows. Although but three years old the work of this laboratory is of particular interest. It was established for the study of purely desert vegetation and of the effect of desert conditions on plant life, and its richly illustrated report is the best hand book of desert flora obtainable. The

Laboratory and its work were described at some length in the last number of *OUR WEST*, by Dr. W. A. Cannon, the Resident Investigator.

Across on the low mesa, a mile beyond the city toward the beautiful Santa Catalina mountains, stands the University of Arizona, a group of handsome buildings in brick and gray stone that would do credit to an older State. Here in their desert setting they seem a very monument to the progress and intelligence of the Territory.

Back from the University steps the city lies like a panorama—its well-built residence sections reaching out from the busy cen-



THE PLAZA, PRESCOTT

Photo by T. H. Bates

tral streets and business blocks, like a fringe, into the Santa Cruz valley—and far down the valley on a clear day may be seen the two great towers of the mission San Xavier del Bac, the noblest relic of the Spanish occupation.

In the early days Tucson was the supply center for Southern Arizona and northern Sonora; with the fuller development of both sections, she has been no less so, and her later prosperity is builded solidly on the prosperity of an area so large and so rich that there is no question of the future. Tucson, long the largest city in Arizona, has about 14,000 inhabitants, and is now second only to Bisbee, the wonderful "copper town" farther east.

Prescott, the "Mountain city" of Arizona, in the heart of the richest mining region of the north, has the unique distinction of having been a capital from its beginning. From before its beginning in fact, for when the first governor of Arizona marched with

military escort and wagon train of supplies into the wilderness to formally organize the Territory he was to govern, it was left to him to locate his capital where he chose.

Doubtless the gold of the newly-discovered placer fields had much to do with his choice, as it had with the coming of the troops and the establishment of the military post of Fort Whipple, under whose shadow the new capital found grateful shelter. The capital was deliberately located in a beautiful basin on Granite Creek at the foot of the Sierra Prieta mountains in a virgin forest destined to furnish building material for the new city and the fort. Broad and ample plans were made and the Prescott of today owes much of its peculiar charm to the wise foresight or inspiration of those state-builders in the wilderness.



YAVAPAI CLUB, CARNEGIE LIBRARY AND ELKS' BUILDING, PRESCOTT *Photo by T. H. Bate*

The first capital was a double house of rough-hewn logs which served as much for a social as for a judicial center for the new community. It is said to have cost \$1,200 to line the "best room" and put in a board floor, and, as it was too small for dancing and other gatherings, a large canvas was spread under the pine trees in the front yard, and there, with armed soldiers on guard to keep prowling Indians at a safe distance, many a pleasant evening was spent.

In the earlier years the gold of the old bonanzas flowed through Prescott and gold dust was the accepted medium of exchange. A "pinch" of dust, such as a man would take up between thumb and fore-finger, was the price of a drink, a cigar, a loaf of bread, or a cup of coffee.

Prescott was from the first a "white town" settled largely by immigrants from the East who abandoned the California trail for the new land of gold. They were for the most part men and women of the best pioneer type—home-seekers and home-builders, not unsettled adventurers. With such a beginning, the prog-

ress and prosperity of the new city was assured, even though in later years, after much shifting, the capitol was permanently located elsewhere.

When General Crook on his trip through the Territory before his Apache campaign in 1871 first saw Prescott, he said that it might have been some prosperous Eastern town set down in the heart of the mountains. The thrift, the neatness, the well-built homes and schools, the absence of Mexicans and Indians in the population, and the spirit of progress everywhere were as noticeable then as they are today.

Of all the cities of Arizona Prescott is the most "Eastern" in its character; it never had an era of the "bad man." never a time



ST. JOSEPH'S ACADEMY, PRESCOTT

when it was customary to serve "a man for breakfast," or when it was a safe and popular pastime to "shoot up the town." It has been from the start the center of a prosperous, law-abiding community bent upon personal and general improvement.

Since the great fire which, four years ago, wiped out most of its business houses in a single night, it has grown with a rapidity and a substantial character and beauty seldom equalled. Before the smoke had cleared away, men who had seen great stocks of merchandise go up in flame were doing business in tents set up along the plaza, and before the ruins were cool, the debris was being cleared away and material for new buildings unloaded on the ground. There was a spirit of rivalry as to who should put up the handsomest buildings, and the city rose out of her ashes with new and larger beauty and went on her way as the business and mining center of the north.

But beyond her mines and business resources the homes and schools and churches of Prescott have always been her pride. A home town from the very beginning, it is still a city of homes.

Mining men operating near have their homes in the city, and, though in no sense seeking prominence as a resort for invalids, the climate has drawn many to permanent residence in the city and pine forest surrounding it. Prescott has now a population of about 7,000 and is the largest city in northern Arizona.

Phoenix, is the younger sister in the trio of Arizona cities, and like most younger sisters she has had less of romance and more of sheltered prosperity in her life. She was not born of religious zeal, like Tucson for whom the priestly missionaries of Spain stood sponsor; nor with a nugget of gold, if not a golden spoon, in her mouth, as was Prescott.



A BUSINESS STREET IN PHOENIX *Photo by Hartwell & Hamaker*

Long before Arizona was a name the brown men of a forgotten race saw the wide, beautiful valley, knew the fertility of its soil and led the waters of the river out in ditches and canals to the fields in which they grew their corn and squashes. Their homes were still there, irregular mounds of earth and scattered heaps of stones, when the first white men came.

These men, too, saw visions of waving grain fields, of orchards and gardens and homes; and they too led out the water from the river, using, to spare themselves labor, part of the old canals dug untold years before. One of them, an Englishman who had known Oxford and the classics before he knew the desert, remembered the old tale of the Phoenix and the new city, rising on the ashes of cities forgotten, had its predestined name.

Like Prescott, Phoenix, grew on no hap-hazard plan. The broad, beautiful streets and avenues were part of the first survey and the harmonious growth of the city was made sure in its be-

ginning. Systematic tree planting and care, with perhaps the best road-building methods in the Territory, have made it a city good to approach from any direction—a veritable Western Damascus in the desert.

Phoenix is the most cosmopolitan of Arizona cities. For its basis it has the stable prosperity of the largest and richest agricultural section in the Territory, and its general atmosphere owes much to the quiet stability of a population rooted in the soil. There is a sense of permanency and unforced development always lacking in the ever-shifting mining communities.

But much of the mining life flows through Phoenix; it is des-



METHODIST CHURCH, PHOENIX

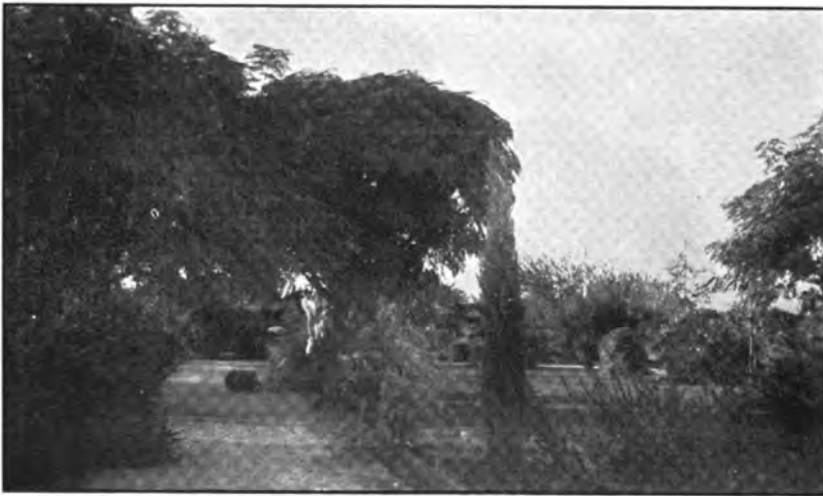
tined to be more and more a railroad center; and for many years its fame as a winter health-resort has brought great numbers of people from all parts of the United States. It is a winter city, in which the smallness of the world is forcibly illustrated; for in the stream of tourists one may touch hands with people from all countries.

After shifting back and forth between Prescott and Tucson the Territorial capitol was permanently located at Phoenix where a beautiful "state-house" has been built of Arizona tufa, the gray volcanic stone to which many of the finest buildings in the Territory owe their attractiveness. When freshly quarried, this stone is soft enough to be carved with ease into elaborate designs, but later it hardens till it rings like iron under the hammer.

Phoenix has now a population above 10,000 and with the fur-

ther development of the farming possibilities in the Salt River valley her continued growth is assured.

Arizona has, beside her greater cities, three lesser towns not builded upon her mines and yet of present and future interest and importance. Winslow, in the east, came into existence with the Atlantic & Pacific railway, and for a time held the red record of a road-end town of the old days. It is still a division town the Santa Fé, important for the good quality of water there obtainable for the engines. It was and still is one of the leading "cattle towns" of Arizona, a shipping point for the largest open ranges left in the Territory. With the realization of the plans



A "YARD" IN PHOENIX

Photo by Hartwell

for reclamation work along the Little Colorado river, Winslow will be the center of a rich farming district. Already something has been done locally; largely by the prosperous Mormon colonists at St. John's and elsewhere. The climate and soil are well adapted to growing alfalfa and all the grains, fruits, and vegetables of a temperate climate, and ultimately many thousand acres will be added to the productive area.

Kingman, in northwestern Arizona, on the line of the Santa Fé Pacific, also began life as a railroad town and had its own era as a shipping point for cattle, when all the great valleys and far-reaching mesas around it were heavily stocked. The years of drouth crippled the cattle business in the northwest, but Kingman has taken on a later importance as the center of a mining region rich not only in gold, silver, and copper, but in several of the less common metals. It has, among others, the only mine in the United States producing molybdenum in shipping quantities.

Next to Tucson, Yuma may claim place as the oldest town in Arizona. The original deed to the town site bears the date of 1858, and the man who located it as part of a joke had still some forecast of its future. In her earliest years, Yuma was the gateway by which thousands of gold-seekers entered California and later was the port of entry for nearly all the supplies that came to Arizona. Steamers from San Francisco came up the Gulf of California, laden with food and merchandise and mining machinery for all the inland towns. This freight was reloaded at Yuma into river steamers that carried it on up the Colorado river to the landings famous in old days, Ehrenburg and Aubrey and others,



COURT HOUSE, PHOENIX *Photo by Hartwell & Hamaker*

where bull-teams and pack-trains waited to take it into the mountains and desert.

Much of the ore shipped out of the Territory went the same road, and Yuma was the doorway of Arizona for a brief but brilliant period. Today Yuma is the center of one of the greatest pieces of reclamation work contemplated by the government. Already the dams are being built that will make fruitful thousands of acres of the richest soil in the West. Eventually Yuma will sit in the midst of a semi-tropic garden larger than half a dozen Eastern states and productive with a lavish variety not to be found elsewhere in the United States.

Yuma has about 2,000 inhabitants and the Territorial prison is located there. The town is alert and progressive and its schools are particularly creditable. Many landmarks of the early activity are to be found along the river, and the faint, vague foundation of a church or mission dating back to Spanish times is pointed out

CLIMATE

Of all the misapprehensions current about Arizona there is none more absolute or more difficult than that concerning her climate. The prevailing idea seems to have been taken from the much-quoted old poem which describes how

“The Devil was given permission one day
To make him a land of his own special sway;

* * * * *

He heated it seven times hotter than Hell
And then declared it would do very well.”

In the average opinion Arizona is hot—all of it and all the time. There are no mitigating spots or seasons in which to cool off



GRANITE DELLS LAKE, NEAR PRESCOTT

In truth the climate of Arizona is so varied that a man may, by a few miles travel, choose what he likes as much as if it were made to order. The northern half of Arizona is a great plateau, ranging from 3500 to 7500 feet in altitude, crossed and re-crossed by ranges of mountains reaching up to the culminating peak of San Francisco, 14,000 feet above the sea

Throughout this region the climate is cool in summer and cold in winter, varying with locality and altitude. Figs and apricots may ripen in the deep, sheltered valleys, while in the mountain parks, twenty or fifty miles away, potatoes will scarcely mature between the frosts of spring and fall.

All of this region is subject to snows in winter, varying from the winter-long crown on the high mountains to the light fall that barely whitens the ground in the lower valleys and melts in an hour.

The seasons, as concerning vegetation and farm products, are very like those of the middle-western states; "corn planting time" begins about the tenth of May and frost may occur beyond that time.

The autumn months are warmer and usually the most beautiful part of the year. Once in many years there is a "white Thanksgiving," more often a "white Christmas," and with the New Year winter will usually have asserted its claim. Yet a zero temperature is seldom reached and never sustained for more than a day or two, and correspondingly the summer heat seldom rises to a hundred or above.



CASTLE CREEK HOT SPRINGS
One of Arizona's health and pleasure resorts

Photo by T. H. Bate

About midway of Arizona, north and south, the mountain plateau breaks down abruptly to broad valleys and broken plains, crossed and bordered by many ranges of hills and mountains and declining in altitude toward the south, where it is only a few hundred feet above sea-level. This is the Arizona of the average imagination; of the health-seeker who would turn winter into summer; the Arizona of semi-tropic products and deserts covered with strange cactus and unfamiliar plants.

Yet here, as in the north, the climate varies much with location and altitude, and there is a wide range of selection for the home-seeker. While the winters are everywhere mild and delightful,

the summers are nowhere as hot as popular fancy and the stories of John Phoenix would paint them. The dryness of the atmosphere makes a temperature of 100 less oppressive than 90 would be in a moister land, and general health is never better than in the summer season.

Unlike her next door neighbor, California, where rain in summer is an almost unheard-of thing, Arizona has a distinct summer "rainy season," which usually begins about the first of July and may extend to the middle of September or later. The rain is not continuous nor unpleasant but merely a series of heavy showers that in a few days transform the country into a great green gar-



▲ RESIDENCE AT DOUGLAS

den, so that Arizona has really two springs in her year and the most beautiful one follows the summer rain

Arizona has at the present time, according to the official report of the governor, more than 170,000 people. The growth of the schools is an excellent index to the growth of population and in the past five years there has been a gain of over 40 per cent in the school census of the Territory.

The new citizens have come for the most part from the middle-western states and many from Colorado. From July 1, 1904, to June 30th, 1905, only 854 foreigners entered the Territory. and, though Arizona has a foreign-born population of about 40,000, the character of the Territory is distinctly American and in line with the best and most progressive spirit of the country.

It has been said that nearly 30 per cent of Arizona's people are illiterates and it is interesting to quote from the report of Governor



THE PATIO IN A HOME AT DOUGLAS

Kibbey this significant refutation. The list of illiterates, 27,302, included all the Indians of the old type and all the Mexicans and Chinese who could not read and write, 16,659 in all, leaving 10,648 white illiterates, of whom 7,552 were foreign-born adults.

Of the remaining 3,096 illiterates, 1,830 were of foreign parentage, and of the 1,260 white illiterates remaining nearly all were of Mexican descent. The Governor says "I do not believe that there are fifty illiterate Americans in all Arizona." There is in fact, probably a much larger percentage of college-trained men and women in Arizona than would be found in the average Eastern state. It is a fact worth considering that the requirements of the Territorial examining board for school teachers have always been so high that many applicants from elsewhere have failed to secure certificates.

Arizona is one of the largest sub-divisions of the United States, containing 113,020 square miles, or nearly 75,000,000 acres. Of



CITY PARK, DOUGLAS

this about one half could be made productive agricultural land with the application of water, and 40,000,000 acres are classed as valuable mineral-bearing land, much of it scarcely prospected. All of the area is of greater or less value for grazing and stock raising.

The mineral wealth of the Territory can be only roughly estimated, for no full yearly records of the output have ever been kept. In copper, silver, and gold, the output for 1905 reached about \$40,000,000, the copper alone being estimated at 202,298,772 pounds. The copper production of Arizona from 1880, when copper mining first assumed importance, to 1904 stands on the record as 1,587,697,560 pounds. It was certainly much more, for no record was kept of the smaller mines



STREET SCENE IN DOUGLAS

Photo by Humphries

Arizona had a newspaper, the "Arizonian," some years before she became a Territory, and the first paper established after that event the "Arizona Miner," later the "Journal-Miner," has been published continuously ever since. There are now 53 papers published in the Territory, most of which compare favorably with the local papers of other sections.

Nineteen religious denominations are represented in Arizona, owning in all 165 well-built and prosperous churches, valued with other church property at \$1,000,000. All of the lodges and secret societies are strongly represented and many of them own beautiful halls, some of the handsomest buildings in the Territory being the lodge meeting-places.

Perhaps nothing more indicates the spirit of Arizona than the constant activity in the development of new industries. Experiments conducted through several years past have demonstrated the fact that beets of high sugar value can be grown in all the Arizona valleys. The present year 4,000 acres have been planted between Mesa and Glendale, in the Salt River valley, and a factory with a capacity of 800 tons a day will be ready for operation as soon as the crop is matured.

The development of Arizona has been general and harmonious. It can scarcely be said that any one section has greatly out-stripped the rest, though each has grown along the lines which its own resources made natural and necessary. The people have a pride and patriotism which is more than local and includes the ambition to make their own land as great and worthy and progressive as any division of the United States, East or West.

Like a climber whose earlier efforts have won him firm footing, Arizona is ready to enter upon an era of stable and enlarging prosperity, and if left unhindered will work out her own problems to ultimate greatness, and the best good of her people.



JOINT STATEHOOD OR JUSTICE?

IT HAS seemed to the editors of *OUR WEST* that no better use could be made of its pages for one month than to surrender them almost entirely to a sober and deliberate presentation of the facts concerning that lusty and vigorous next-door neighbor of California, which has not yet been admitted to the sisterhood of States. When the plans for this number were formulated, some months ago, we had slight suspicion that the attempt, which failed signally at the last session of Congress, to wrest from Arizona her individuality and independence and force her into an unwilling union with a neighbor, would be renewed. Still less did we suspect that all the power of the Administration, and every ingenuity of party machinery would be relentlessly used to force through a measure so clearly unreasonable and unrighteous. We did believe—and do still believe—that if the people of the United States generally understood the precise conditions existing in Arizona today, the extent and permanence of her resources, the patient and law-abiding industry of her citizens, and the high order of civilization developed within her borders, they would not much longer permit a few partisan legislators, for purely partisan reasons, to withhold from their fellow-countrymen in Arizona the well-earned right to administer their own affairs and share in the national councils. To set forth these facts convincingly, and to correct the amazing misconceptions popularly current, this number of *OUR WEST* was planned.

For the Arizona of Eastern fancy is a blend of sheer ignorance, of misunderstanding, and of the grotesque misinformation purveyed by the common, or garden, variety of short-story-writer. It is a land of the train-robber and the desperado—a land of the side-winder, the Gila monster, the scorpion and the centipede—a land of the cowboy and the prospector, strange of garb, weird of speech and dangerously quick on the trigger—a land of the gambler and the prostitute—a land like that “somewheres east of Suez, where the best is like the worst, Where there ain’t no Ten Commandments, and a man can raise a thirst.” How remotely unlike this fervid imagination is the real Arizona of today—a land of thriving, prosperous, busy communities, where people surprisingly like you and me are making their livings and raising their families after fashions surprisingly like yours and mine—will be realized by all who read Miss Hall’s balanced, moderate and comprehensive study of the Territory to which we give so much space this month.

I do not now propose to discuss Arizona’s entitlement to present separate Statehood. This was brilliantly and conclusively

done by Mr. Lummis in successive numbers of *OUR WEST* two years ago, and since that time; and the preceding pages of this number, if rightly read, should clinch that argument. Nor shall I even enumerate the reasons which cause not only all Arizona but practically every one who knows Arizona to oppose the proposition to unite her with New Mexico as a single State, though the reasons are numerous and sufficient. The case against Joint Statehood is proved to the hilt by just two facts—the pledge of the people of the United States, made by Congress in their behalf, and the all but unanimous will of the people of Arizona. Here is the pledge, as it appears in the Act establishing the territorial government of Arizona:

That said government shall be maintained and continued until such time as the people residing in said Territory shall, with the consent of Congress, form a State government, republican in form, as prescribed in the constitution of the United States, and apply for and obtain admission into the Union as a State, on an equal footing with the original States.

Surely no hint here that a later Congress, at the will of a Rough Rider President, would undertake to rope and hog-tie "said Territory," and drag it into the corral of a neighboring Territory, there to be branded with Statehood of such device as suited the neighbor.

As to what the will of the people of Arizona really is in this matter, no man seriously doubts. I spent the larger part of November in the Territory, travelling through it from one corner to the other and talking with hundreds of men of all classes. I did not find one man who did not declare against Joint Statehood. If Arizona were now offered the alternative of accepting Joint Statehood or remaining a Territory for ten years more—or twenty—the majority against Joint Statehood would be overwhelming. It has indeed been feebly suggested that the mining and railroad corporations are opposed to Joint Statehood. That happens to be true, but since it is also true that at least ninety-five per cent of Arizonians are on the same side, it does not seem to be a very weighty argument against that side. It may, however, be a good enough Johnson to assist such senators as, say, Platt and Depew and Allison and Dryden in rebuking sternly the efforts of great corporations to dictate—in Arizona.

There is another fact even more impressive than the attitude of Arizona herself towards Joint Statehood—for this might conceivably be the unreasoned result of local pride—and that is the attitude of her nearest neighbors. There are five States which share boundary-lines with Arizona or New Mexico—California,

Nevada, Utah, Colorado and Texas. These five have twenty-nine representatives in the Lower House of Congress, and of the twenty-nine every vote save one was cast against this union by force. In this instance, at least, the Representatives truly represented the opinion of their constituents.

It would be bad enough if this attempt at a monstrous injustice were the result of the deliberate judgment of Congress. The shame of it is aggravated by the fact that the will of Congress itself is confessedly ignored. There is not even a pretence that a majority of the House of Representatives is in favor of the Joint Statehood Bill as it stands, on its merits. It is cynically acknowledged—nay, it is boastfully proclaimed—that the vote in the House the other day did not represent the will of the majority of the House, perhaps not even of the Republicans in the House, but that it was a personal triumph for two men—the President of the United States and the Speaker of the House. If either the shadow of the Big Stick or the crack of the Party Lash had been withdrawn, there is not the smallest doubt that the pleading of Arizona for simple justice would have been effective. Blind partisan zeal is not particularly surprising from Speaker Cannon, but it is out of place in any President—most of all in one who is a professed exponent of the Square Deal.

A Pyrrhic victory this will prove for both President and Speaker—and I believe an utterly useless one besides. For the Senate still has its word to say, and neither Big Stick nor Party Lash are quite so intimidating, or so effective, there as in the House.

I never thought to be so thankful for the Senate—for this Senate, at least—as I now expect to be.

CHARLES AMADON MOODY.

IN PURSUIT OF A GRAVEYARD,

Being the Trail of an Archaeological Wedding Journey

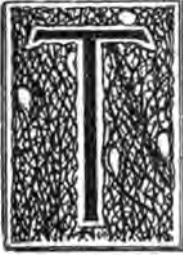
By *THERESA RUSSELL*

CHAPTER II

THE TRADING POST

“ And I shall thereupon
Take rest ere I be gone

Once more on my adventure strange and new.”



THE floor of our room was carpeted in Brussels, so that even in the desert we trod upon roses, with tacks for thorns, each strip being thus fastened to the bare, uneven boards, for a saving of needle-and-thread labor. The low ceiling was canopied in muslin, spiked on by the same forcible method. Between them, near the middle of the apartment, flourished a supporting pillar, festooned full length in prismatic bunting.

An expansive square table was loaded to the groaning (never mind whose groaning) with a collection of objects. Sainted images were satellites to the central sun—a marvellous pincushion containing no pins, eloquent testimony of the thrifty state of the family æsthetics with its corresponding disregard for the trifling points of utility.

Back of the toilet-stand the white-washed wall was protected by a pinned-up newspaper, whereon you might peruse words of editorial wisdom while you washed. These, however, were not of so engaging a nature as to defer your appearance at the breakfast table.

Here you find assembled the family *in toto*—the first time, indeed, that it has been in such complete toto for many moons. The four children are just home for a vacation from their various schools: an aunt from Albuquerque is a newly arrived guest, and the Señor himself has recently returned from a trip East. A picturesque assortment of nephews and cousins completes the family circle, or rectangle, to be accurate, for you discover them arranged in rollicking rows along the festive board—why, yes, I should think “festive” a fitting term to apply to a red tablecloth decorated with newspaper doilies in black and white, shouldn’t you?

At the head of this happy arrangement sat the Señor, a man of some fifty interesting and prosperous years, whose seasons had brought portliness to his form, just verging comfortably towards corpulence, and shrewd benignity to his face. From his Saxon father came the gift commercial; from his Spanish mother, the inimitable Latin courtesy. The one faculty had enabled him to accumulate a fortune; the other, with its twin trait of generosity,

had prevented him from keeping it. One had made him successful in business; the other had won him the reward of many friends.

"May I have the pleasure, Madam?" is his gracious inquiry as he fills my plate with a substantial breakfast and goes on without pause to address in their respective languages his Spanish relatives and Navajo servants. Equally fluent in all three tongues, his utterances flow as smooth and swift as cream from the jug.

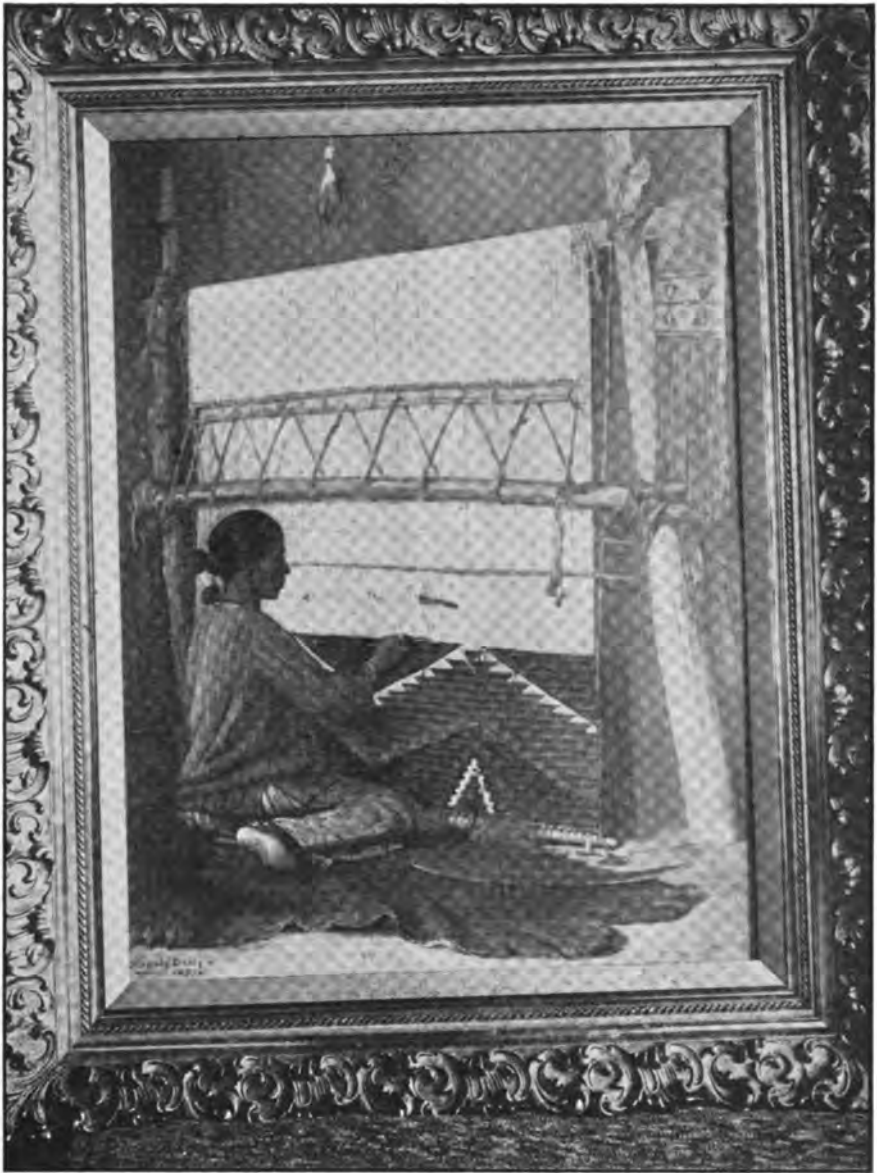
It wasn't a jug, however, that held our coffee trimmings that morning. The evaporated fluid was brought on in the original package, and as it was my first set-to with this ubiquitous denizen of the desert, I looked askance at the little round tin with the two little round holes punched in the top. As I now view in retrospective vision the multitude of these cans punctured and emptied by my own hand, memory wades through a veritable Milky Way, unstintedly strewn with shining tin stars. But every intimate familiarity was once an untried novelty, and at the sight of this one I was fain to whisper surreptitiously to the Man of Science, "How do you get it out?" but that Mine Host anticipated and explained, "Just tip it almost upside down and shake it. No, don't wiggle it that way! Shake it in strokes."

But this accomplishment was no sooner mine than another problem was passed up for solution. It consisted of a large platter heaped with tortillas. I was as embarrassed as I knew how to be. I did crave a sample—but a whole tortilla! Again our host to the rescue. "Why, you just hold the top one down with your knife, so, and tear off with your fingers as big a piece as you want."

A favorite dish was the capacious tureen of chili—not capacious enough, however, for it was soon emptied and sent kitchenward for replenishment. The Anthropologist fell in love at first taste, but as for me, I still prefer ice cream.

After breakfast we all went over to the store. I found the term demanded a liberal interpretation. The "store" proper, occupying the middle of the long stone building, was flanked on one side by a big ware-room, and on the other by a sleeping room and a room-of-all-work.

In this last, ranged along the walls at a respectful distance from the center table, stood furniture of infinite variety. An Æolian was there, a sewing machine, a grate and chimney, guarded on either side by shelves of unbound magazines. Opposite, a wooden bench supported a bucket of water, and the cup that stood by it. Near by, a wash-stand lifted up its little bowl, and lived on neighborly terms with the wide bed in the corner. The next corner was inhabited by the Post Office and Place of Business, where the type-writer clicked busily.



"ON THE WALL HUNG A PAINTING."

In the well-filled book-case one came upon autographed copies of the stories of a distinguished writer who had been a guest, and on the wall hung a painting presented by another guest, a well-known artist. This picture enjoyed the mural companionship of a Swiss clock, a portrait of the family, grouped with painful but praiseworthy precision, an ornately framed diploma or two, and a genuine, priceless Correggio, heirloom brought, generations before, from the land of religion, warfare and romance.

After a morning spent in revelling over the treasure trove of the Navajo silversmith and blanket-weaver, until we were ashamed to look another spoon or rug in the face without adopting it by purchase, I was committed to the merry mercies of the Señorita, and we went off to play. She conducted me straightway to a room full of old trunks, opened up one after another, and displayed, to my delight, her own pride, and our mutual entertainment, all her pretty possessions, inherited and acquired. The former were more interesting, particularly the quaintly beautiful gowns with accessories, which her mother had worn in a day gone by.

"Let's dress up and be kodaked," I suggested.

"Bueno!" she agreed.

After a delightful, and not too brief, session of prinking, charming Miss Butterfly was ushered into her father's presence and presented as "Señorita Rubelino," the maternal name. He threw a quick, quizzical glance at the demurely resplendent figure, decked out in pink-and-white silk of a much beflowered and beruffled fashion, of a dainty lace and gleaming jet trimming, adorned with jewels and provided, as behooved a maiden of Castile, with coquetish fan and teasing mantilla.

"Humph!" was the paternal verdict. "She's not half so handsome as her mother was at her age."

La Señora herself blinked affectionately at the bright vision of her vanished youth, but preserved her accustomed jellified silence—all plump and shiny and quivery, prone upon being gently shaken by enjoyment to cleave into slow, sweet fissures of smiles. Presently she asked a question in her husky, difficult utterance. On hearing the reply, she aspirated another remark, the evidently joyful nature of which sent her frolicsome auditors into spasms of mirth. One observed these anti-lugubrious attacks to be of a cheerful frequency in the household. The kettle of fun seemed to be perpetually simmering over a fire of good-natured raillery, ready to boil over if stirred up by the flimsiest splinter of a joke.

As soon as she was able, the Señorita hastened to interpret to us, for her mother's knowledge of English was about as limited as our own of Spanish.



" A GENUINE, PRICELESS CORREGIO "

"She says, 'How much you weigh, child?' I tell her. Then she counts up and says, 'I weigh seventeen pounds more than twice as much as you!'"

"Santa Maria!" the girl went on, "and must I some time be as fat as you?"

"Si, si, querida mia," breathed the buxom dame, with complacent confidence.

"But never!" in vehement denial. "I shall be a slim saint, a poor Sister of Charity, and walk leagues every day to give away alms and lose flesh."

Whereupon she pirouetted out of the room, whistling the tune of a very worldly and unsanctified waltz.

Back of the Post, across the arroyo, rises a large butte. To ascend this, what time the evening shadows are also climbing wearily up its ragged slope and from its cactus-crowned summit, to watch for that "certain moment" that "cuts the deed off, calls the glory from the grey," is to exult in the blessing of eyesight as Heaven's choicest gift to man.

"Well, what do you think of it?" asked the Man of Science.

"What the Amœba doubtless thought of the Megatherium. How can there be so much of anything?"

"Already? Well, you'll just carry that little problem of Immensity around with you as long as you run about in the desert. You'll never be able to leave it behind. You may shut your eyes, but you cannot help knowing—"

"That the miles are long and your thirst is growing?"

"Amen. And your spirits are bluer than the sky—"

"When there's never the ghost of a trail hard by."

"And a trustworthy guide is ever more rare than a day in June. The truth do you never get for the asking, and knowledge you buy with a whole soul's tasking."

"An it please you, kind sir, I am thirsting for information right now. Could you be persuaded to hand out a cold fact or two?"

"Gladly, if I could first be persuaded that that is what you really want. But it's been my observation that cold facts are so many wet blankets to you, tolerated for medicinal purposes only. I'll wager you an Indian bracelet that what you have in mind is that I shall contribute some opinion or theory or postulate or hypothesis for you to work over in that syllogistic gymnasium you keep up there under your chapeau—now isn't it?"

"I never did like bracelets, anyhow! They're barbaric. And besides, there really is a fact connected with it. Even if the Admonition of Science be to 'touch not, taste not, handle not a theory,' I thought perhaps it might be allowable for you just to look at one, being properly chaperoned by a dignified Datum."



"SEÑORITA RUBELINO"

"Bring on your plunder, then, and we can pool our ideas, anyway."

"Well, then, there are two regions in which to live seems to reduce a man to his lowest terms."

"Necessity being the Greatest Common Divisor?"

"Precisely. And those, of course, are the extremities of heat and cold, the Arctic and the Desert. Now you have an intimate, personal knowledge of both of them, while my acquaintance is second hand. And by this hand-me-down method, at least, you get one uniform impression."

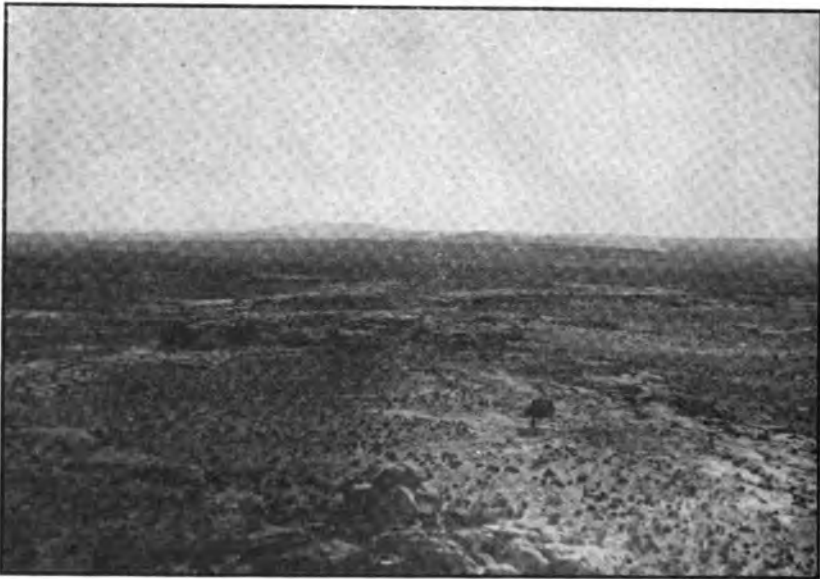
"And that is?"

"And that is that while in the very last extremity the effect is the same, ultimately benumbing, the antepenultimate cry, so to speak, rings different."

"In what way?"

"The freezing man flings a last robust curse in the teeth of the raging Enemy that is beating, pounding, buffeting the life out of him. But the heat-smothered, thirst-tortured victim clutches waveringly at the remnants of the reason sucked remorselessly from him by a serene, smiling Siren, and whispers for mercy. Is that true? And why should it be so?"

"Your first question I shall be obliged to answer in the words of the moriturus Mr. Wiggs, 'Land sakes, Nancy, how c'n I tell? I ain't never died yet!'—although there were times when it was no one's fault but my own that I did not—but there is a measure of truth in the distinction, and perhaps you have hit upon the explana-



" THAT LITTLE PROBLEM OF IMMENSITY "

tion in that word 'siren.' If we must personify them, the North, of course, typifies the masculine in nature, and the South the feminine."

"Sure. I see. The Snow King is rough, frantic, frankly cruel. The Sun Queen is suave, alluring, treacherously cruel."

"Neither is cruel at all. The trouble with this whole interpretation is that we insist upon reading ourselves into these places, when we do not belong there. If we could only take them impersonally, without projecting our own alien needs into them and entering complaints, besides, if our environment—which did not choose us, but we it—does not happen to be able to supply what we want and failed to bring along. If we could learn to consider dispassionately, we should be better able to grasp the real meaning and beauty of them both."

"But even so, in this difference between them, does the balance fall in favor of the North? Is it true, as the books, unconsciously perhaps, lead us to believe, that the Arctic clarifies the vision, hardens the muscles, stimulates the nerves? And that the Desert deludes the sight, exhausts the system, and makes morbid the senses? Is it fascination only that the passionate Desert arouses, while our glowing admiration is reserved for the virile Arctic?"

"Can't prove it by me. I am neither advocate nor judge. Because I have suffered in them both, I love them both, and love does not analyze."



" UP ITS RAGGED SLOPE "

"Well, if the Desert is *'das ewige Weiblich,'* it is with excuse that she *'zieht uns hinan.'* It is her right to be beautiful, her prerogative to be mysterious, her privilege to beguile."

"Granted. And she has oases."

"Mirages, too."

"Both are feminine."

From far below came through the dusk sounds of a violin and liquid Spanish melodies, bursting into ebullient bubbles of laughter.

"It appears," I remark, "that we are missing either some of the fun all of the time, or all of the fun some of the time. Let's go down and see what's up."

Stanford University.

(To be continued.)

A MATRIMONIAL MISADVENTURE

Fitz Rupert's First Essay in Wedlock

By FRANK ROBBINS

THAT client of mine (said the Judge one evening after dinner) has always been a center of adventurous activity. Adventures come to most of us—to some more than to others—but Fitzgerald Rupert seems to have created them naturally. I suppose it was, or is, his peculiar, hereditary tendency. Given the most trivial and commonplace incident, he can unconsciously involve himself in a series of situations which, taken with his active method of dealing with them, can only be considered in the light of adventures.

In the early '80s, finding himself penniless in New Orleans (as the result of one of his characteristic acts) his old friend, the Chief of Police, giving him a hint, he shipped before the mast upon a small brigantine, with auxiliary steam power, bound upon a voyage—he knew not where. Seventy-five dollars per month is unusual pay for sailors, and to one of Fitz's wit it was evident that there would be some unusual work done to earn it. Once clear of the South Pass and bound down the Gulf, the number of the crew, the cut-throat, hybrid class to which the majority belonged, the small, but strong and heavy, cases of which the cargo consisted, the presence of a number of passengers—little, dark men much given to the display of begilt military uniforms and an easy assumption of authority—all these, to one who was not blind, nor foolish—and Fitz was neither—placed the fact that the expedition was a revolutionary, or filibustering, one plainly in evidence. It was not long before its objects and plans were known to everyone on board.

The cases of arms and ammunition were to be landed at various points along the coast of Honduras, through the surf, or in the estuaries of the small rivers which could be entered by the light, draft craft. This was all safely accomplished. The brigantine then lay off and on at night among the Bay Islands; retiring, by day, to inconspicuous bays, or creeks, as other vessels had often done in the days of long ago—as, say, those of an adventurous great-grandfather of Fitz's might have done, he being engaged in a lucrative, private adventure of the war-play.

The vessel now waited for her consort, a large passenger-steamer which was to leave New York upon a certain day with a similar crew. The two were to attack Puerto Cortez. Simultaneously with this, the revolutionists were to rise—armed with the material already distributed by the brigantine. It was one of

those commonplace incidents from which Fitz always evolved adventures.

The matter went quietly enough and was just growing monotonous when the consort hove in sight. Volumes of black smoke were pouring from her funnels—she was under forced draft and evidently in a hurry. The cause of this was immediately in evidence in the shape of a big, black, United States gunboat, belching forth smoke, and with a fine, white “bone in her teeth.” The brigantine literally took to the woods; and, in the course of an hour, was snugly ensconced among the mangrove trees in a narrow creek with her topmasts and hamper down upon the deck.

The air was blue with *caraccas* and *carambas* and damns and other excitement. The vessel was safe for the time being, but it could only be a matter of a day or two when she would be ferreted out by a sharp-snouted steam-launch filled with blue-jackets, a machine-gun in her bow and the gridiron of Uncle Sam floating at her stern. It was only another “lost cause;” but the little dark men did not seem readily reconciled. In fact, they were frenzied and raved of “betrayal” and also of “revenge,” and were downright nasty about it; however, out of the talk and anger something was crystallized at last. The little, dark men and many of the cut-throat hybrids, Fitz and five other decent enough American lads were landed, well-armed and not reluctant; while the brigantine with her officers and normal crew, trying to look as nearly like respectable merchant mariners as possible, put to sea.

The landing-party marched back into the country for a full day and found themselves out of the low-lands and among pretty rolling hills with signs of cultivation in the shape of small banana plantations scattered here and there. The natives were not frightened—not even much disturbed. They were so poor that they felt their security in having nothing to lose.

The following day the party marched during the morning; at noon they went into camp. There was evidently something doing; for, that afternoon, men were detailed to reconnoiter. Fitz was one of these. They crawled through the chaparral and came upon an opening in a hill upon which was placed a large adobe country-house; evidently a seat of importance, for people were bustling about—apparently domestics—and upon the verandas there were several ladies engaged in reading and sewing, entirely oblivious to the scouting party.

The little dark men chattered among themselves and it came out that this was the country place of Don Luis Bogran, the *presidente*; that it was to be attacked and destroyed that night;

that there were probably jewels and money to be found and that there was revenge anyway; that there was no possible danger to the attacking party, as there were only the ladies and children and the servants—maids and *mozos*. It was very easy, in fact, When it was all over, they would all creep over the border into Balize or Guatemala, divide the loot and separate.

The profit of this incident did not, somehow, appeal to Fitz, who turned to the other five decent American lads—with whom he had grown more or less chummy—and asked, "How about those ladies, boys?"

The situation, as far as the half dozen were concerned, developed rapidly; they deserted to the enemy, carrying their rifles, pistols and ammunition with them.

This blood and thunder sort of thing is not pleasant (said the Judge), so I will skip as much of it as possible. The household was frightened at the appearance of the deserters, but explanations were made, the house was barricaded, and when the attack followed—after Fitz had quite quixotically stepped out to warn his ex-comrades to go away, getting a slight bullet wound for his trouble—a sharp shower of lead flew back and forth. It was hot enough for a half an hour; then, to the surprise of everybody, Gen Bogan with a troop of his guards rode up. The war was over and the attacking party scattered and disappeared—absorbed by the country, or going into exile, it matters not, such things being quite in the ordinary down there.

Fitz was good looking—he was also slightly wounded; hence was of the finest material of which to make a hero. In consequence he now found himself one. Gratitude, sympathy and admiration all fell to his share. He found himself well fed, well clothed and petted—the guest of the political and military leader of the little republic.

Before his slight wound had healed, he was a colonel in the Honduranian army. That his regiment only existed upon paper was not of the slightest consequence. His pay was large, but, unfortunately, that, too, was not tangible. However, when one is in his tempestuous twenties, anticipation is as good a thing to go upon as any. He was well fed and well clothed and had as much credit as the others; then, too, there were cock-fighting, billiards, monte and the lotteries—and his luck and skill were as good as the best; so he always had a few *pesos* to jingle in his pockets and *medios* and *cuartillas* in plenty to be lavish with *mozos*, *mozas* and the children. Nevertheless the situation would soon have become unbearably dull had it not been for the ladies. Special among these was a lovely widow. She was not a native.

What her nationality was it would have been hard to determine—she spoke half a dozen languages without an accent and was witty in all of them. She was called Madame Diamant. Her age was—well, that was about as uncertain as her nationality. She was not a child; she was just a brilliant and beautiful woman. Of course, Fitz fell in love with her—that was nothing. They were all in love with her from the *presidente* down. But singing, sighing, jealous love, such as the others made, was not of Fitz's sort. He was essentially a creature of action—his eyes met hers boldly and looked straight in, his words were direct, his arms reached for her.

It is hardly polite to say that the widow met him half way; let it suffice that he won her by direct assault.

There was not much delay. They were married while the others were still singing and sighing. It was a grand wedding and there were great doings.

The wedding gifts were grants of land, concessions and promises—as before, paper and *mañana*. But Fitz himself received one present which was real, and pleased him highly. Strangely enough it was from the bride. It consisted of a pair of splendid pistols. The stocks were of ivory and the metal was damaskeened with both gold and silver—they were no toys, but great, serviceable things of enormous bore, and were accompanied by a belt of cartridges, the belt itself being an exquisite bit of leather carving. The whole was a fitting present to a soldier from a soldier's bride. The only other useful present, strange to say, was also paper; it was a draft upon a responsible German commercial house for a considerable hum of gold, sent anonymously. The result of this last gift was that the happy couple determined to go to California for their wedding trip.

By easy stages they crossed the mountains on saddle mules and embarked upon a mail steamer for the north.

Ah! That was a honeymoon, if you like. A fine, roomy ship; the bridal chamber; the great, still Pacific; the star-lit nights under the mild tropic skies—but, alas! we are no dreamers and at our time of life (I did not like this unnecessary, personal digression) one's sentiments are more in tune with the prattle of children than they are stirred by sympathy with early adult passion. It is enough for us to know that Fitz had no eyes as yet save for his bride's beauty and had not thought of a dozen questions concerning her which were inevitable when he got down to his normal bearings.

The Golden Gate came only too soon and the great ship entered the bay. Out came the quarantine launch and then the customs' boat.

Colonel Fitzgerald Rupert descended to the saloon and made out his declaration concerning his baggage and that of his wife: "None but personal effects, nothing dutiable."

The tugs came out and began nosing the ship into her berth at the wharf. Bells jingled and jangled. Heaving lines were thrown and hawsers followed. Mates bawled out their orders, and finally all was made fast. The engines stopped; the gangway was brought aboard, and the passengers began to quit the ship.

The trunks and bags of Fitz and his bride were opened for the inspectors. Conspicuous in the former's bag lay the great pistols and their belt of cartridges. The inspector had glanced through the luggage, run his hand hither and thither amongst the clothing, and was about to close the covers and mark them with his bit of chalk when another inspector entered the stockade. He was a beefy, grizzled, experienced-looking chap.

"Hello, there!" said he. "Hold on! We had better have another look at that baggage—I know this lady," and with a familiar grin he turned to Madame. "I did not expect to see you out here, Marie."

Fitz's feelings may be imagined. He turned red at first and then very pale; with his best effort at self-control he asked the officer: "Do you know Mrs. Rupert, my wife?"

"Know her?" exclaimed the newcomer. "Rather! I don't know you, my bucko, but I surely know the notorious Diamond Marie, the craftiest smuggler of two continents. Why!" He got no further, for Fitz's fist was in his face and down he went upon the wharf. Fitz rushed towards his bag—doubtless for one of his big revolvers. These matters progress swiftly. Before he could gain his object his wife had thrown herself upon him, beseeching him, with cooing accent, to restrain himself. "It is all a mistake; it will be explained," she said. In another minute her hero was in irons and in the hands of two burly policemen. As he was dragged to a carriage his wife exclaimed volubly: "It is an outrage—it will be but for a few hours—I will see our consul at once—I will go to the Occidental—you will find me there." And then, despite the policemen, she threw her arms around his neck and gave him a dozen fervid kisses.

Madame was mistaken. It was not a few hours. The majesty of the law had been outraged. The papers were full of it; the customs people were enraged; there was a deuce of a time. The Honduranian consul came; a lawyer came; nice, little notes came from Madame, written upon the hotel paper, explaining that her zeal in his behalf prevented her coming to him, and that, of

course, nothing of a contraband nature had been found upon the re-examination of their luggage, and that his impetuosity alone, in resenting the officer's insolence, had involved them in the scrape. The notes always concluded with many endearments.

A day or two passed without any note; then, with great embarrassment, the Honduranian consul came to inform Fitz that he was free. He hastened to the hotel and was shown to his rooms. His wife was not there to receive him. Inquiry brought the information that she had gone to the country for a few days. There was a distinct shock in this, particularly as there was no line of explanation. The luggage was there, save the one trunk containing his wife's most valued personal effects. His own belongings were in place. The great pistols were particularly in evidence, and lay, with the handsome belt, upon a dressing table—a bunch of somewhat withered roses lay on top of them.

While Fitz sat wondering, a card was brought up. The name thereon was rather Hebraic and strange to him; he said, however, that he would receive the gentleman, who was shown up. He was a quiet, sleek person who, when asked the object of his visit, said he had called "thinking the Colonel might have some diamonds to dispose of."

After his caller's hurried departure, Fitz threw himself down upon a chair, using as much of the language he had picked up at sea as he could recall. As he cooled off, his glance fell upon a sealed envelope lying upon the carpet; he picked it up and saw that it was addressed to him in the handwriting of his wife; he tore it open and read:

My darling Fitz—my sometime husband:—

Helas! How am I to say it?—But it is true! That brutal customs officer did know me. I am the notorious "Diamond Marie": and, *mon cher*, it is over. Think no more of me.—No, not that, but think of me no longer as your wife. You need not divorce me—it is unnecessary. I have been married before—yes, several times. I confess that some of my husbands live—and they were not divorced. Consider our connection a mere episode of love.—It is shameful?—Ah, yes! Believe me, though, it is best for us both. A thousand pardons—but it is best for me especially. Let me explain: We were much in love; but, my dear, was there not much glamour in your case? I am an old woman—at least I am very, very much older than you. You did not perceive it? That was the glamour. In time, believe me, you would have done so. I admit that I look young; but the little artifices of the toilette would in time have been detected—and then there might have come repulsion. We lived for a little time in a sweet dream. It is well that it should end with that.

Will you say that I have trifled with you? No, no. When you came as you did, what woman could have failed to regard you as a hero? When you wooed me as you did, impetuous, ardent, compelling, what woman could have resisted? Singing and sighing win

maidens. Had that been your way, I could have temporized, reflected and resisted; but your impetuosity, which would have terrified a girl, carried me away before I had time to think.

Let me own that I was there in Honduras that I might be forgotten for a time. Perhaps, too, it was convenient for those who deal in politics that I should be there. Have you wondered how the plans of the revolution miscarried through the Washington authorities having been informed?

Yielding to you and to myself as I did, I knew could only be an incident; therefore I did not lose sight of an opportunity. Believe that I did not think of it at first; it came later as an inspiration. You were poor, and as for me, I must live in my way, too. Diamonds do not pay very high duties in entering your beautiful country; but, let me assure you, that the saving of all upon a very large consignment of those sparkling gems is a profitable transaction, as my principals and I well know. The chance of passing a large invoice under the protection of a bridegroom, who was also a distinguished officer of a sister republic, was too good to be lost. It was mercenary, my adored one, but it is best that you should be thoroughly disabused concerning us.

In your luggage, carelessly but artfully disposed, we brought in a prince's ransom in the precious gems—sufficient to delight my principals. My wedding gift to you was loaded with them. The cartridges were filled with them. Once again let me ask you to forgive me.

We are entitled to our tare, you and I, and I have not forgotten your share. You will find in one of the cartridges in one of your pistols some beautiful stones which are for you. Investigation will show that the lead in each cartridge can be unscrewed. This was my own device. The cartridges with the one exception are empty.

What will you do with these gems? Will you turn them over to your government? Be indignant, my dear friend, but be wise.

The Jewish gentleman who dropped this letter when you kicked him out—you see I have anticipated your line of action—also dropped his card. He will buy your stones. He may be hurt—but he is certainly not offended—he will pay you their true value. You may rely implicitly upon this, as he will be honest with me—he dare not be otherwise. The money received will be your compensation—no, not that—say rather you pay for the service you rendered to Honduras. Honduras owes you; my principals are indebted to Honduras. It is a roundabout way, but it is honest, save to your honorable country. In this last let me admonish you not to be silly.

You will never see me again. Forget all but the dream we had together. Be free. Be happy.

One thing more and I am done. I want you to have something of my very own—some little thing for you to keep. I have only one object to offer to you—it is the only link I have of the past of my innocent childhood—the only thing truly mine out of the time when I was what I might be had the old world been less cruel in marking my destiny. It was given to me by my mother when I was a little girl—Oh! so long ago! It has been my greatest treasure. You are the only one to whom I ever thought of giving it. Will you keep it and try to think of me as I was when it was first mine? Adieu.

MARIE.

For a moment Fitz was dazed, then he went over to the dressing table and removed the cartridges from his pistols. With little difficulty he succeeded in unscrewing the lead from several of the cartridges. He found that the powder had been removed and the shells were empty. In the third or fourth he found some cotton; this he removed and shook from the shell five large and brilliant gems. Not a fortune, perhaps, but of enough value to make Want seem far distant to one of his buoyant disposition. His fury had passed. He smiled sadly. He did not pick up the stones, but began to look about the dresser for something else. At last his search was rewarded; he found, attached by a discolored ribbon to the buckle of his belt, a tiny silver medal. It was slightly bent, but was bright and smooth, evidently from wear. What inscription there had been upon it originally was undecipherable—it had probably been of a religious character. He loosened the ribbon, looked at the poor little token, kissed it tenderly; then passed the ribbon around his neck and dropped it with its pendant, out of sight.

“What disposition did your client make of the stones?” I asked. “Ah,” said the Judge, “that is a matter of professional confidence. It may in time become part of the record of testimony, but, at present, I cannot tell you.”

Los Angeles.

THE BEES

By S. I. DARLING

HEAR ye the voice of the bees,
 The warning astir in the hive,
 The zip of the going and coming,
 The swallowy dart and dive
 Of them that prepare;
 The lessening drone of the humming,
 The gathering roar in the air?

Know ye the tone of the bee,
 The note of its love and its hate,
 Its path and the foot that may find it,
 The measuring rule and date,
 The way of the bee,
 The law and the chain that may bind it?
 Then whisper the secret to me!

Diamond, Cal.



THE picturesque adobe wall surrounding the Campo Santo at the Pala Mission had fallen to decay; thanks to the public spirit of the "old-timers" in that lovely valley, the Club has been able to rebuild this wall after the old fashion, but more solidly. A concrete cap now protects the wall from erosion. The enterprise was undertaken by Mr. Ami V. Golsh, who has long done a good citizen's duty here; the contract was let to Mr. Francisco Moreno at \$400, and the people of the neighborhood subscribed liberally according to their means—as they have never failed to do—for the preservation of their beautiful old Mission. The list of subscribers is given below. The Club pays the balance from its general fund.

Careful inspection of San Juan Capistrano shows the critical need of further repairs, and a contract has been let for additional protective work on what is left of the great stone church.

CONTRIBUTIONS TO THE WORK.

Previously acknowledged, \$8,400.

G. Wharton James, New York, \$8.

Account Landmarks Club Cook Book, \$10.50.

Prof. H. Morse Stephens, Berkeley, Cal., \$2.

Mary Agnes Lewis, L. A., \$2.

\$1 each—Marah Ellis Ryan, J. G. Mossin, Mrs. J. G. Mossin, Los Angeles; Michael Cudahy, Mrs. Michael Cudahy, Chicago.

SPECIAL SUBSCRIPTION

to repair adobe wall of the graveyard at Pala Mission:

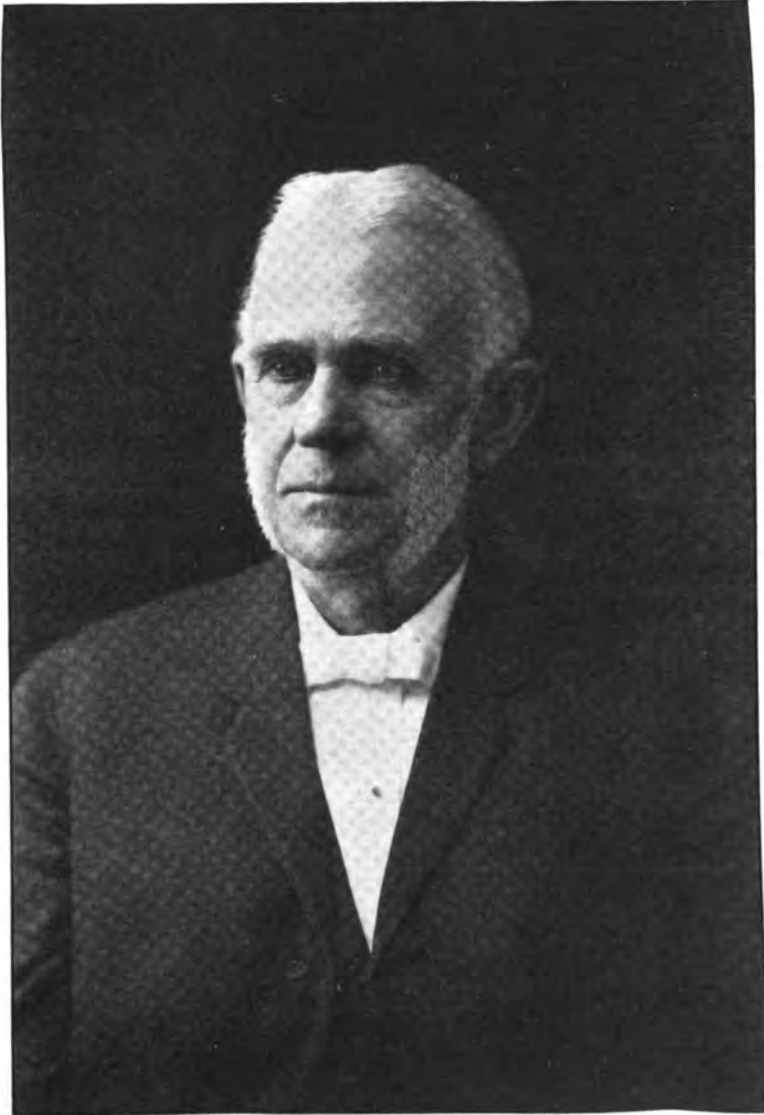
Ami V. Golsh, \$25; John A. Giddens, \$20; Cenobia G. Moreno, \$10; Flora Golsh, \$10; M. M. Sickler, \$10; Francisco M. Moreno, \$5; Francisco Castillo, \$5; Luis Ardilla, \$5; Dolores Salazar, \$5; T. Acundo Ardilla, \$5; Francisco Escalier, \$5; John Frey, \$5; José M. Cabrillo, \$5; E. Batchedar, \$5; Ramon Soberano, \$3; Ramon Silva, \$3; Placido Samaniego, \$5; Isabel Veal, \$5; Frank A. Salmons, \$5; Rafaela Garcia, \$3; Carlos Forbes, \$3; Albert Lancaster, \$3; Jean Boumet, \$2.50; Levi Giddens, \$3; Victoria Mayor, \$2; Frank A. Jascen, \$2; Francisco Contreras, \$2; José Pico, \$2; Virginia Sal, \$2.50; Braulio Gonzalez, \$2; Manuela de Salazar, \$2; Marcelina Lugo, \$1.50; Estanislao Lugo, \$1.50; Ygnacio Valenzuela, \$1.50.

\$1 each—José Alvaños, Alejandro Majal, Miguel Juan, Luz Robles, Francisco Camacho, Encarnacion Salazar, Clima de Beltran, Adelina Castillo, Luis Wolf, Belisario Duro, Frank Calac, Francisco Ardilla.

Miscellaneous, \$17.25.

Rt. Rev. T. J. Conaty, \$50.

Gen. Chas. Forman (acknowledged in December number), \$50.



JONATHAN SAYRE SLAUSON
Dec. 11, 1829—Dec. 28, 1905

Photo by Steckel



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MR. C. E. KELSEY, special agent for the California Indians, is now investigating the condition of the Indians of Southern California, and if he has eyes will find these conditions nothing of which the government can brag. Mr. Kelsey is a lawyer. He has long prior experience in the Indian service. For several years he has been acting in the cause of the 14,000 Northern California Indians, who have no title whatever to any lands whereupon they may live and die. The people who know the facts—long notorious in California—hope for useful results from an official inspection of local conditions by a man who knows something about them. The visitations of "Tenderfoot" Inspectors have left the Indians as badly off as they were forty years ago—and as they have been reported officially for the last thirty years. It is to be hoped that investigation by a Californian familiar with local conditions and needs, may help to wipe out the standing disgrace of the fashion in which the government has handled these matters ever since the American conquest of California.

CONTRIBUTIONS TO THE WORK.

Previously acknowledged, \$15.37.
 \$2 each, memberships—W. H. Merriman, Seattle, Wash.; Frank H. Spearman, Hollywood, Cal.; Marie A. Ney, Katherine M. Duncan, Pasadena; Mrs. Oliver H. Hicks, Redlands; Prof. Wm. H. Housh, principal L. A. High School; Miss Elizabeth W. Johnson, Pasadena, Cal.; C. J. K. Jones, Paran F. Rice, Edwin T. Earl, Mrs. Lawrence Newman, W. S. Bartlett, Los Angeles.

INDIAN RELIEF.

Previously acknowledged, \$1,398.50.
 E. L. Doheney, Los Angeles, \$50.
 First Spiritualist Society, San Diego, \$16.
 D. Freeman, Inglewood, Cal., \$25.
 Kaspere Cohn, Los Angeles, \$20.
 Edwin T. Earl, Los Angeles, \$5.

MERCED

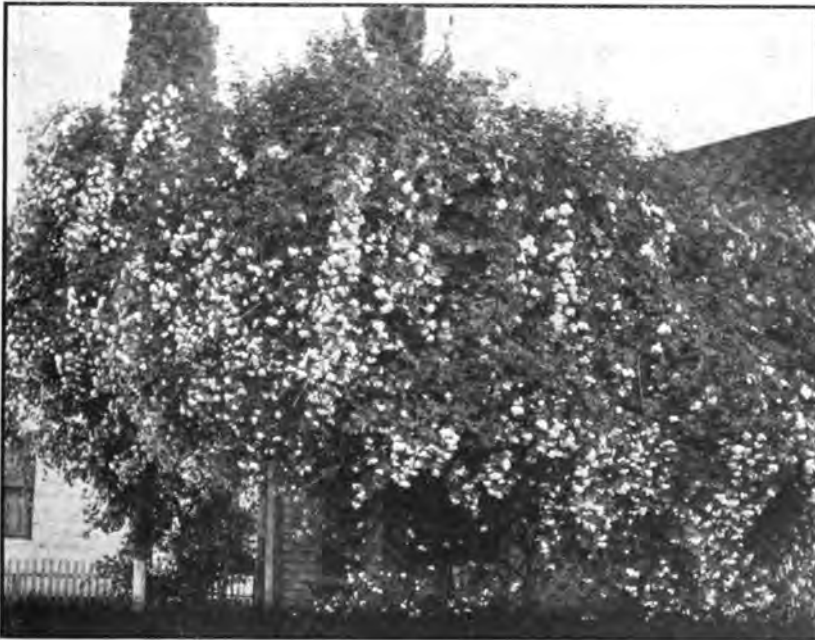
By T. O. ANDERSON.

☉ CALIFORNIA occupies a unique place in the galaxy of states. Its geographical position, far removed from the centers of population; its wonderful fruits and flowers, in a class by themselves; the beauty and variety of scenery; the rich mineral deposits and fertile soil; and above all the remarkable climatic conditions which exist in this most favored state, have caused the very name "California" to become a symbol of a beautiful and desirable location.

Nestling in the center of the state, shut in by the high Sierras, which shut out the cold and storms of Winter, Merced County is fortunate for situation, and combines within its boundaries the essential qualities of climate, soil, and water for irrigation, to make it a truly typical county of California.

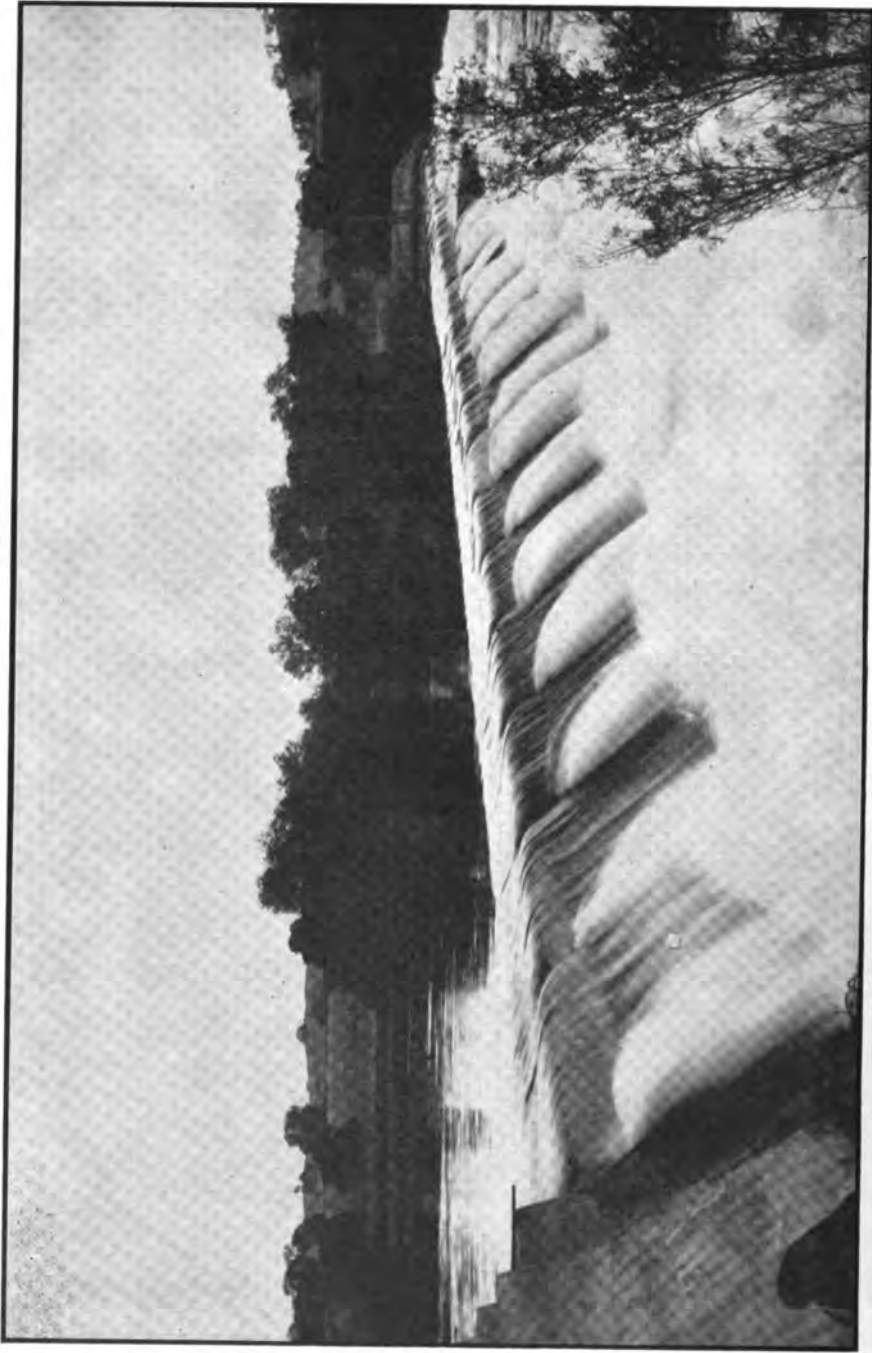
Merced, the county seat, is located on the east side of the county. The population is about 3,000. Two transcontinental railroads pass through it, the Southern Pacific and the Santa Fé, and the Western Pacific is expected to touch this point. Merced is also the starting place of the Yosemite Valley railroad, and the Oakdale branch of the Southern Pacific. Thus practically Merced has four railroads, giving it an advantage in this respect equal to any city between San Francisco and Los Angeles.

Merced is one hundred and fifty miles from San Francisco, which affords a ready market for its surplus products. Is far enough away from the ocean



MERCED ROSES

Illustrated from photographs by W. T. Hohenshell, Merced.



MERCED FALLS



A RESIDENCE STREET IN MERCED

to escape the sea fogs and rigorous winds, yet near enough to have the heat of Summer tempered by sea breezes.

Merced banks and business houses are modern and progressive; its two banks capitalized at \$100,000 each, with assets approximating \$2,250,000, supply an index to the prosperity of the city and surrounding country.

One daily and three weekly newspapers, amply provide the people with the news of the day.

Good schools and churches contribute to the intellectual and moral life of the town.

Merced is fortunate in having first-class electric light, gas, water, and sewerage systems.



A MERCED HOME



MAIN STREET, MERCED

The surrounding country is level and fertile, and much of it is under a great irrigation system, which takes its water from the Merced river. Thus, after adding to the beauty and grandeur of Yosemite Valley in falls and cascades, it reaches the rich plains to serve the more utilitarian task of making fruitful many thousands of acres of land, and making it possible for a dense population to exist under sunny skies, in a most favored section, blessed by freedom from Winter's cold and storms.

The completion of the railroad to the Yosemite Valley puts Merced in close touch with the most wonderful valley, perhaps, in the world, from a scenic standpoint; and as it will take only a few hours to make the trip, adds much to the attractiveness of living here.



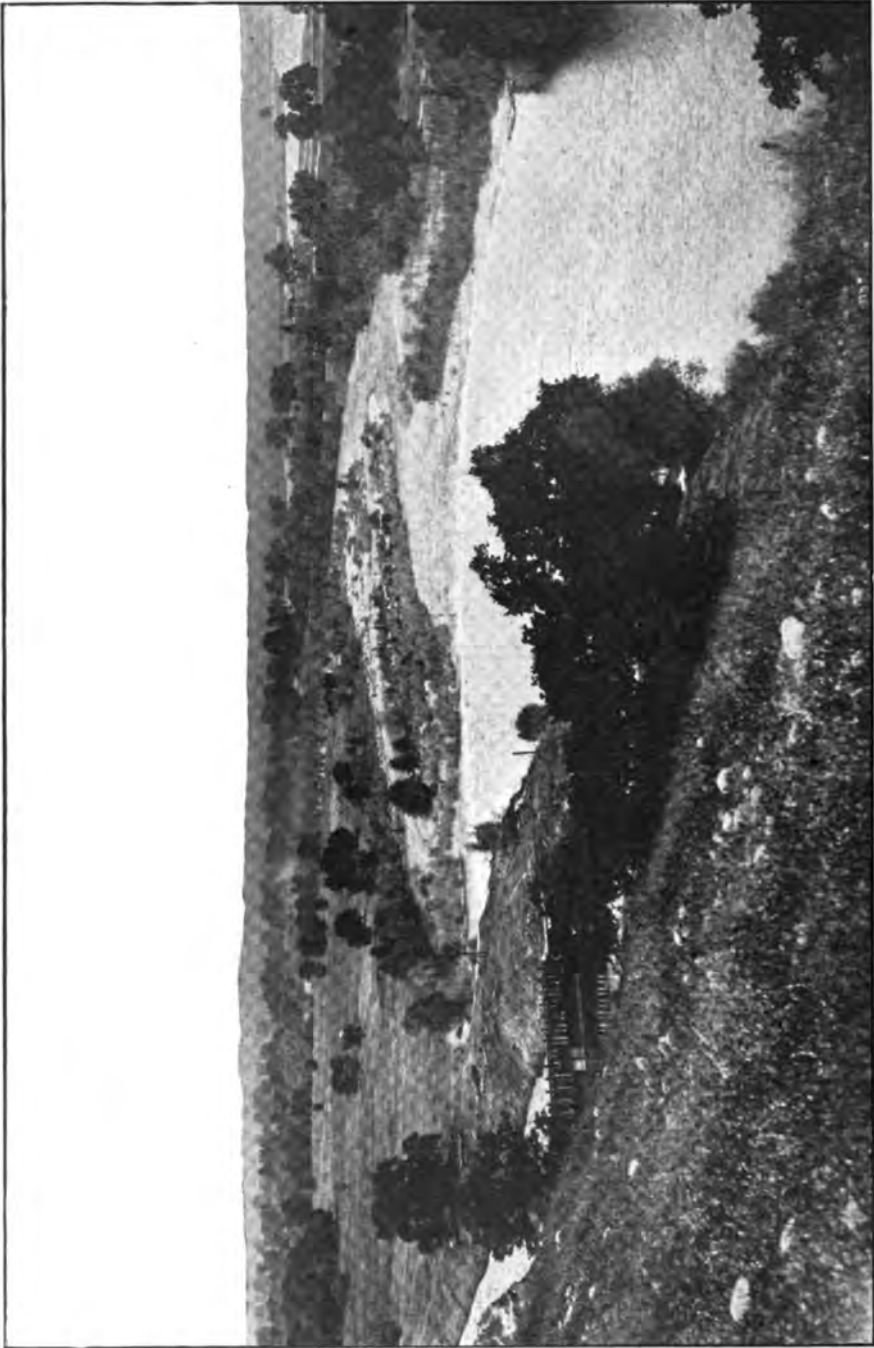
THE CITY PARK, MERCED



THE MERCED HIGH SCHOOL



A MERCED PUBLIC SCHOOL



MERCED RIVER AT CROCKER-HUFFMAN LAND AND WATER CO.'S DAM AND HEADGATE



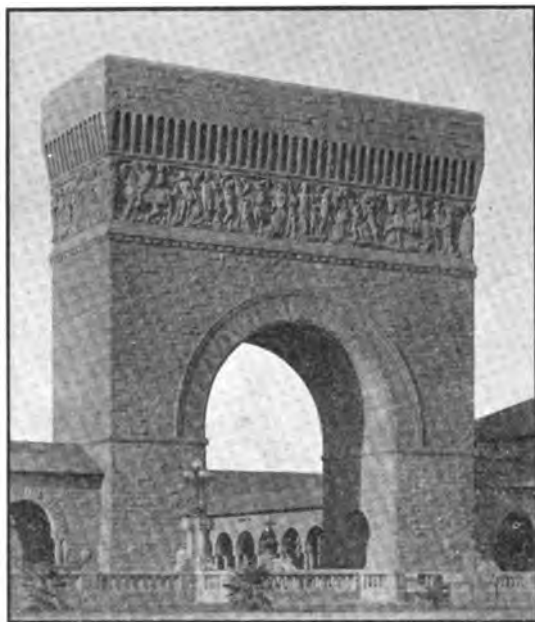
HARVEST TIME IN MERCED COUNTY

The country about Merced excels in figs, peaches, apricots, olives, grapes, and berries. Alfalfa and sweet potatoes are very profitable, a good creamery affords ready market for dairy products, and a cannery, now being built a short distance from town, will handle the fruits, etc., of this section. The county is largely undeveloped, making it decidedly to the advantage of the average homeseeker to locate here, and grow up with the country, securing land at very reasonable prices, instead of paying a premium, as he must do in more highly developed localities.

Merced has more miles of cement sidewalks than any city of like size in the state, and the beautiful parks, well-kept lawns, and attractive homes, impress one with the stability of Merced citizenship, and give promise of the continual growth and prosperity of the town.



Keep Your Eyes on
PALO ALTO



The J. J. Morris Real Estate Company

Invite your attention to the following facts
about the Town of Palo Alto:

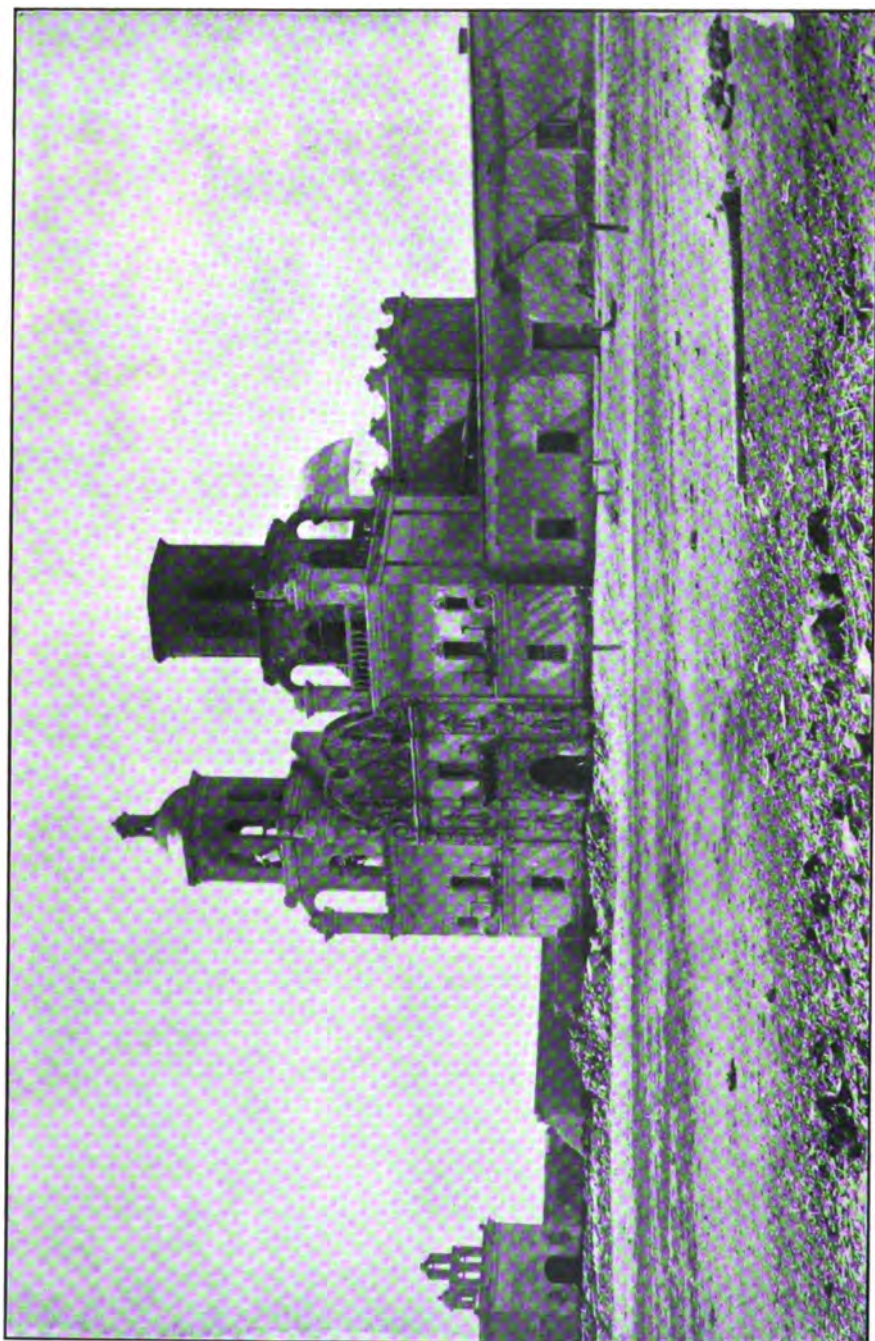
Palo Alto has 5,000 population. Two Banks. Four Public School Buildings. Seven Churches. A College of Photography. Three Newspapers. Free Mail Delivery. A good Fire Department. Perfect Sewerage. Artesian Water System owned by the Municipality. Electric Lighting Plant owned by the Municipality. Assessed valuation Two and a Quarter Millions of Dollars. The seat of the Leland Stanford Junior University, the most richly endowed institution of learning in the world. 35 Miles of Concrete Walk, 15 Mails Dispatched and 15 Mails Received daily. The Best all round Climate in the World.

For full information about investments in Palo Alto or Santa Clara County, write for the free copy of the Real Estate News, our monthly publication.

The J. J. Morris Real Estate Co.

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120 University Ave., Palo Alto, California



MISSION SAN XAVIER DEL BAC

Formerly

The Land of Sunshine



THE NATION BACK OF US, THE WORLD IN FRONT.



Vol. XXIV, No. 3.

MARCH, 1906.

THE MASS OF MANGAS

BY SHARLOT M. HALL

YEARS had the Mission stood alone,
Its silent chapels bat-tenanted;
On its altars the gray owl nested her young,
And the ground squirrels burrowed above the dead
By the western wall, nor stirred their sleep;
Bare lay the fields, sun-scorched and white:
As scatter from black hawks the timorous quail,
Padre and soldier and neophyte

Scattered before the Apache hordes
That swept the valley with death and flame.
Now back at last, like quail to their nests,
Timorous, fearing, they slowly came,
Priest and people—to wring anew
From the sullen desert a grudging chance
For scanty food and room to toil,
Or a quick-won end on a blood-stained lance.

With fragrant branches of gray mesquite,
And waxen yuccas fair and tall—
Lifting their bells like hands in prayer,
Slender and snowy and virginal—
And desert lilies as frail as hope,
They wreathed the altars, and lit once more
The long-dead tapers, and set the rood
Over the arrow-bitten door.

The pale Christ leaned from the ironwood cross,
High in its niche deep-walled and gray;

And under his feet, in order set,
 Censer and chalice in rough-wrought clay,
 Where once was silver shaped in Spain—
 Now spoil of fight to the savage foe,
 And banded from careless hand to hand,
 Unblest uses and lips to know.

The tapers flickered; and tenderly
 The last words whispered and echoed up
 To the painted saints in the dusk above,
 As the padre lifted the earthen cup
 And the blessed wine—but crash it fell,
 Staining the floor with a crimson tide,
 Unseen of the startled worshipers.
 For look—where the door unbarred swings wide!

Somber and splendid in paint and plume,
 With claws of eagle and puma skin,
 Mangas, the dread Apache chief,
 And a hundred braves at his back crowd in!
 He swept the shards of the cup aside
 And its silver mate on the altar set:
 "Padre, the boy you stopped to draw
 From the lion's jaws makes good his debt.

"With Death hot-heel on your track you turned
 To save a child of the enemy;
 Let these, beloved of your Hidden God,
 Be bond of peace for mine and me!
 And this in thanks for that other day!"
 Censer and chalice, he set them down,
 And bared his arms of their turquoise bands,
 And stripped the robe from his shoulders brown.

Man by man his men heaped up
 The pile, till it grew to the Virgin's feet;
 Skin and blanket, and beads that hung
 Like jewelled buds in the pale mesquite.
 Then, swift as they came, they went, again.
 But, so 'tis writ in the Mission rolls;
 With wine and incense the Padre straight
 Said holy mass for their heathen souls,

And held them saved to the Mother Church;
 For a grateful heart is a thing indeed
 That, weighed in the palm of the Savior's hand,
 Out-values penance and prayer and creed.
 And year by year, when the yucca bells,
 Like flags of truce swung tall and white,
 The name of Mangas was blessed anew
 With bell and taper and solemn rite.

Dewey, Arizona.



MAIN ALTAR, MISSION SAN XAVIER DEL BAC

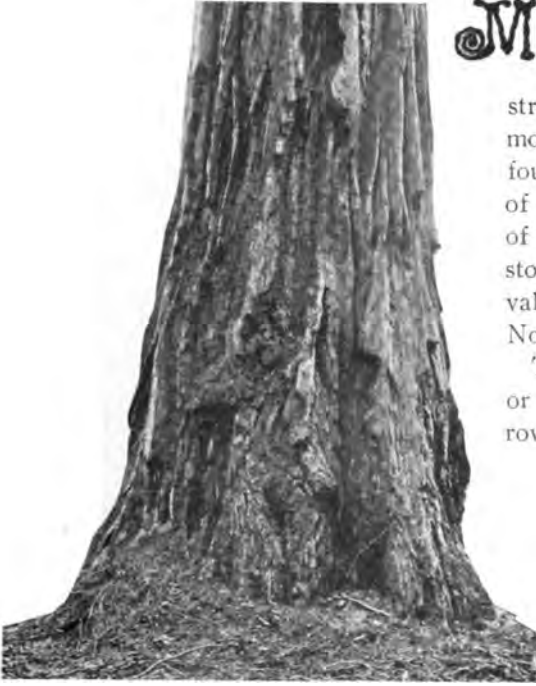
The Mission San Xavier del Bac, the most beautiful of the early Spanish Missions, was the extreme border outpost of missionary zeal, facing the mountains out of which the unconquered Apache menaced the Spanish settlements for a hundred years. At times it was entirely abandoned, priest and people retiring to the less exposed districts farther South. In these periods the old church stood undisturbed, unharmed except by weather. It has suffered more in the past twenty years at the hands of American visitors than in all the century and a quarter of varying fortune.



LEMMON HERBARIUM, OAKLAND, CAL.

FOREST ENDOWMENT OF PACIFIC SLOPE

BY J. G. LEMMON



MOTHER Nature is wonderfully lavish with her favors towards some countries, and as strangely niggardly to others. No more striking proof of this fact is found than that of the distribution of the forests over the land-surface of the earth. It is but little understood that the most wonderful and valuable forest known is that of Northwest America.

This forest possesses more kinds, or species, of resinous-wooded, narrow-leaved cone-bearing trees than any equal area in the world, and these trees are either the largest in dimensions, or they bear the largest fruits, called cones, that the earth has produced.

This matchless combination of superlative qualities has been bestowed by circumstances and forces so wonderful as to give the phenomenon the character of a special gift or local endowment.

There are 211 species of trees of all kinds growing in the Pacific Slope States, of which 111 species (more than one-half) are indigenous to California, while 34 of these are found only in this favored State.

Omitting the non-resinous, broad-leaved trees, of which there is a liberal allowance, the resinous-wooded, cone-bearing trees of the Pacific Slope number thirteen genera or families, comprising seventy-seven species or kinds of trees—twelve of the genera, with forty-one species, being in California.

Of these species twenty-six are pines, two are larches, five are true spruces, two are hemlock spruces, two are false hemlock spruces, ten are true firs, two are redwoods, two are American cedars, seven are cypresses, nine are junipers, and two are yews.

Three of our pines—the great Sugar, the Yellow and the Jeffrey Pine—all of them being very valuable trees, are also the largest trees of the family, often attaining a height of 250 feet, with a diameter of ten to twelve feet. No pines of foreign countries, with one minor exception, attain one-half of these dimensions.



SUGAR PINE (*Pinus Lambertiana*)
Near Mt. Shasta. Over 150 feet high.

Photo by Britton & Rey



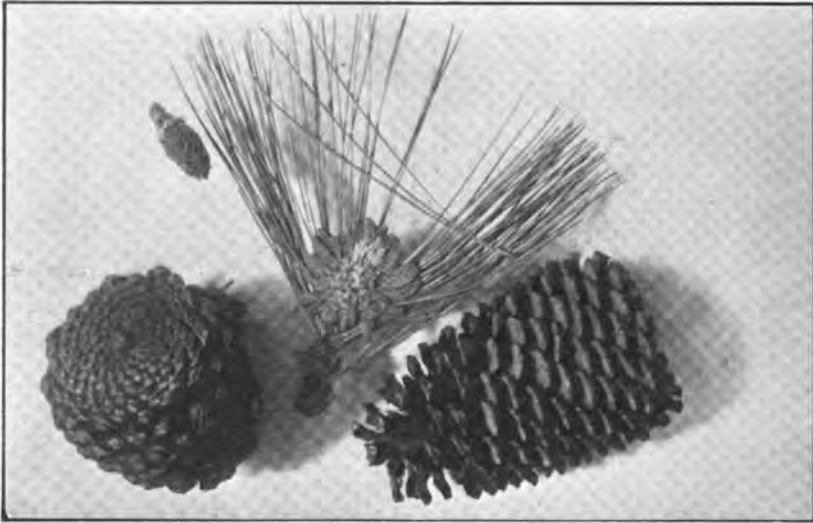
FRUIT AND FOLIAGE OF THE SUGAR PINE
Cones more than 20 inches long.

Five of our pines bear longer or heavier cones, with larger seeds, than any found elsewhere, the cones of the very valuable Sugar Pine being 15 to 20 inches long, while those of the Coulter Pine often weigh eight to ten pounds, the Gray Pine three to four pounds, the Torrey Pine two pounds, and the Jeffrey Pine one and a half to two pounds, while the largest cones outside of California scarcely exceed six inches, and the heaviest rarely weigh one pound. Two of our spruces attain enormous dimensions. The very beautiful and valuable Douglas Spruce, of the Sierra and northward, becomes 300 to 350 feet high, with a trunk eight to twelve feet thick. The great Tideland Spruce of the north coast is but little less in dimensions, while the cone of the Big-cone Hemlock Spruce of the San Bernardino Mountains is five to seven inches long and three to four inches thick

when ripe and expanded—these dimensions far excelling any foreign spruce.

Five of our firs, the Red-bark, the White-bark, and the Shasta firs of California, and the Grand and Noble firs of the region northward, become two or three times as large as any eastern or foreign fir, being often 200 to 250 feet high, five to ten feet in diameter, with cones six to nine inches long.

Our two world-renowned redwoods—the Coast Redwood and the Sierra Big Tree, rising to the height of 300 to 320 feet and enlarging,



FRUIT AND FOLIAGE OF THE JEFFREY PINE

while yet young, to a diameter of twenty to thirty-five feet and growing for 3,000 to 5,000 years—are not approached in grand proportions and regal majesty elsewhere. And the cones of one of our redwoods—the Sierra Big Tree—though small as compared with our pine cones, are yet, doubtless, the monsters of their race, the largest being the size of a hen's egg, while the largest cones found in connection with fossil remains of the twenty-five extinct species do not exceed the size of a nutmeg.

So with the two to three-inch cones of our Alpine Hemlock Spruce, the one-inch cone of Incense Cedar, the one and a half-inch cone of the Monterey Cypress, the three-eighths-inch berry of the California Juniper, and the one and a half-inch California False Nutmeg, all the largest cones of their respective families.

This prodigality in number and size extends to other vegetable growths. Our oaks are numerous and often large, with the largest acorns and cups known. One of our maples bears leaves six to ten inches across, while the little shrubby popgun elder of the East is supplanted here by a tree twelve to twenty inches in diameter.



BIG YELLOW PINE OF CALIFORNIA (*Pinus ponderosa*)
The principal lumber tree of California. Attains a height of 200 to 230 feet

Most of the trees mentioned are indigenous to California, and three-fourths of them are found only in that state. Why this great prodigality of Nature in behalf of the Pacific Slope, and especially of California?

The solution of this problem involves a brief discussion of certain controlling factors.

At the outset we may observe that an impassable climatic barrier is set up at present, by Nature, preventing migration north and south—the Torrid Zone, in which no resinous trees can grow except on high peaks. This zone separates the world's forests into two unequal and very different floras.

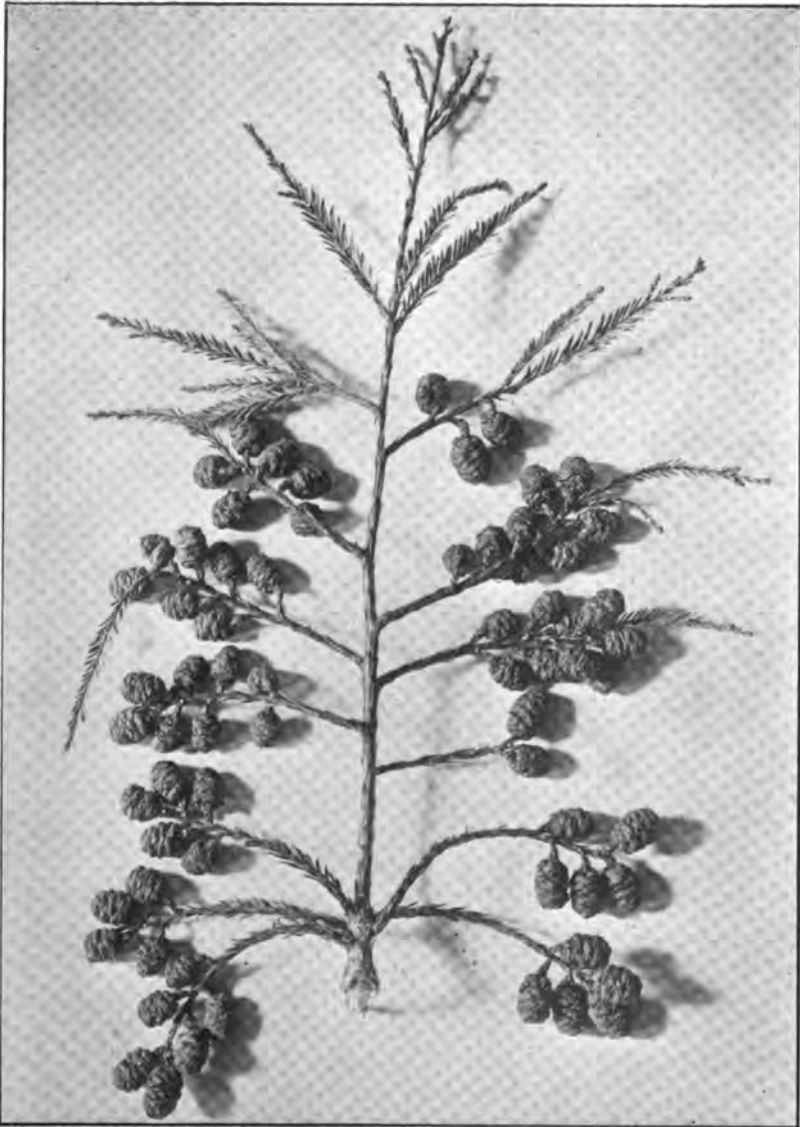
The Southern Hemisphere is the the home of the Araucaria, the Eucalyptus, the Acacia, etc., while in the Northern Hemisphere are found—in addition to the hosts of broad-leaved, non-resinous trees, such as oak, ash, hickory, etc.—all of the large families of pine, larch, cedar, spruce, and fir, with the redwood, cypress, and juniper. The distribution of these trees across the two continents, however, is very unequal.

The northern part of the eastern continent—Eurasia—is approximately 9,000 miles across. North America is but 3,000—one-third as far. We would naturally expect, for instance, three times as many pines in Eurasia as in America. Just the reverse is the case. Of the 80 species, and well-marked varieties of known pines, only 20 are indigenous to Eurasia, while 60 are flourishing in America.

Again, the Pacific Slope region, from the Rocky Mountains to the Pacific shore, is about 1,000 miles, or one-third of the distance across the continent; yet it has 45 out of the 60 American species, and well-marked varieties, 14 being in Mexico and 26 in the western United States, with 20 of these in California—a narrow strip of coast only 800 miles long by 150 wide, yet containing as many kinds of pine as all Eurasia!

Now if the distribution was equal, Eurasia having 60 pines and North America 20, the Pacific Slope, being one-third of America, would be entitled to but six and two-thirds species, and California, which embraces about one-tenth of the Pacific Slope, would have little more than half a chance to get one species!

This excessive prodigality of Nature in favor of the Pacific Slope and especially the California part of it, is due to a combination of factors, chief of which are the contours of continents, the trend of principal mountain ranges, the behavior of certain oceanic and atmospheric currents, the alternate elevation and depression of continental area, together with the ability of all these factors to modify the effects of certain crucial climatic periods, called the Ice Age and the Thermal Age.



FINE EXAMPLE OF A FULL-FRUITED COAST REDWOOD (*Sequoia sempervirens*)

The phenomenon of hot and cold ages or periods in the earth's history compelling the migration, the change of location, of the entire organic world—the kingdoms of the animals and plants—is a much discussed and controverted topic. Seven theories have been presented from time to time, accounting for these important epochs, chief of which is the very interesting Astronomical Theory.

This theory, first presented by Mr. Croll, and endorsed by Professor Geikie and many other English geologists, "attributes the Gla-

cial Age to the combined influence of the precession of equinoxes and consequent secular changes in the eccentricity of the earth's orbit," whereby the seasons, summer and winter, would have a disparity of nearly five weeks instead of one week, as at present. This disparity, it is claimed, would produce Glacial and Thermal Ages alternately, every 21,000 years.

However, the late Professor Le Conte, America's most renowned geologist, controverted this theory in part, quoting from many authorities, showing that but one Glacial Age can be proven. Referring to the researches of Professor Wallace and others he asserted that the phenomenon in question is the result of several agencies—



FRUIT OF THE BIG CONE PINE

astronomical, geological and geographical—producing a severe Glacial Age of great length, with two cumulative points of greatest severity and a Sub-Thermal period between; the Ice Age commencing about 240,000 years ago, continuing 160,000 years, and ending 80,000 years ago.

During this Glacial Age the plants were driven slowly, generation after generation, a few feet at a time, down across the North Temperate Zone, by a world-wide sheet of ice, to be subsequently as slowly driven back by waves of tropic heat.

In this double migration, owing to the configuration of continents and mountain ranges, most of the plants were destroyed, only a few vestiges of the post-glacial families being extant today, gathered here and there upon the plains or stranded upon the mountains.

The means and manner of this destruction are most interesting. The continents of both the old and new world are greatly expanded at the north, while the southern portions are attenuated to narrow peninsulas.

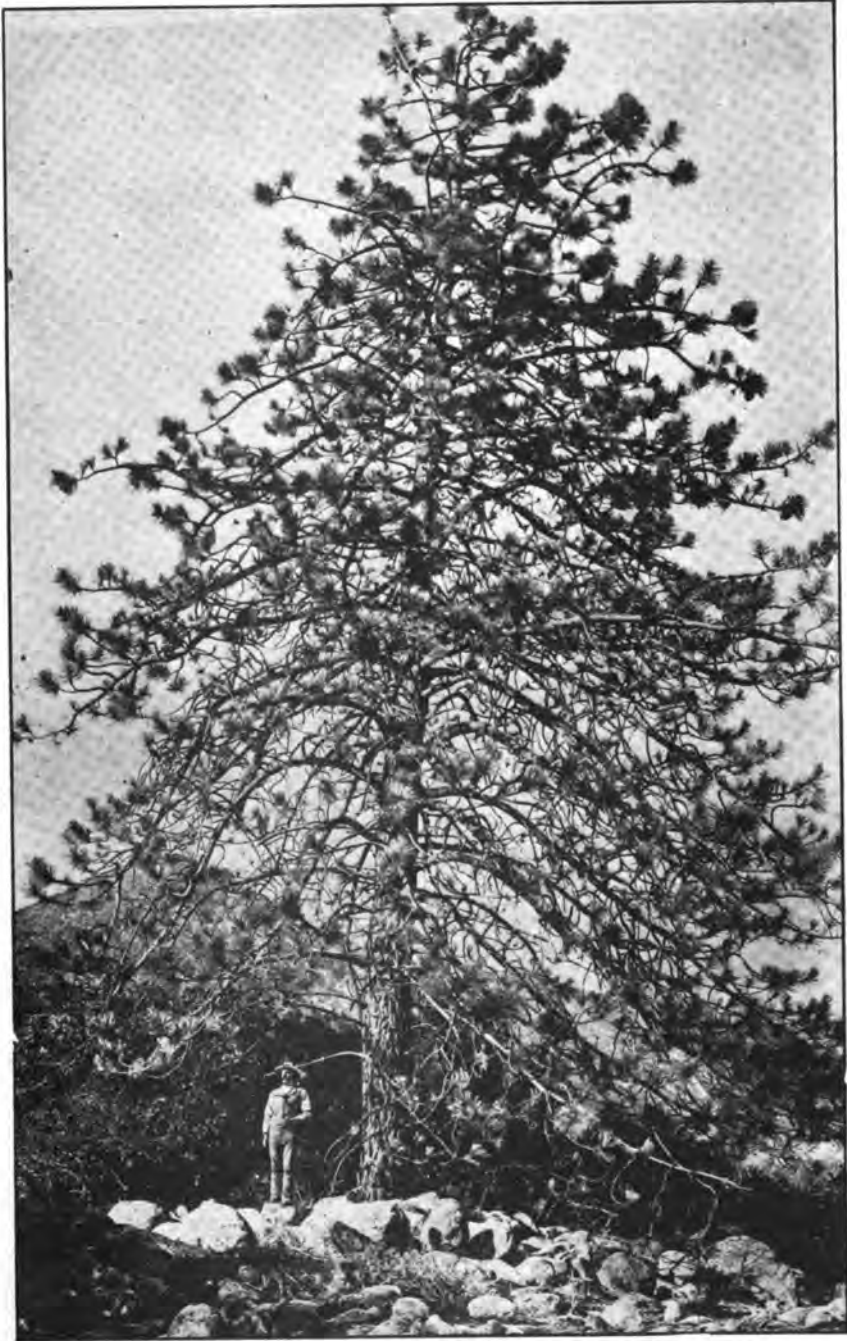


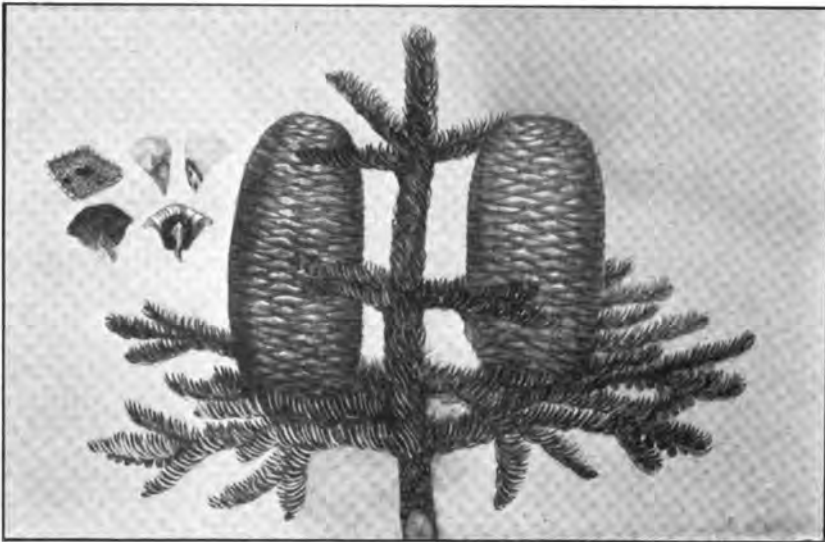
Photo by Britton & Rey.

THE BIG-CONE PINE (*Pinus Coulteri*)
San Bernardino Mts.

These configurations give to the North Temperate Zone its greatly dominant character, having most of the existing families, while the peninsulas are sparsely furnished.

The Eurasian mountain ranges are mostly transverse, like the Alps, Himalayas, and Thian-Chan Mountains, forming barriers to the progress of plants; while the North American ranges are nearly longitudinal, permitting the plants to escape southward during a Glacial Age, and return during a Thermal one.

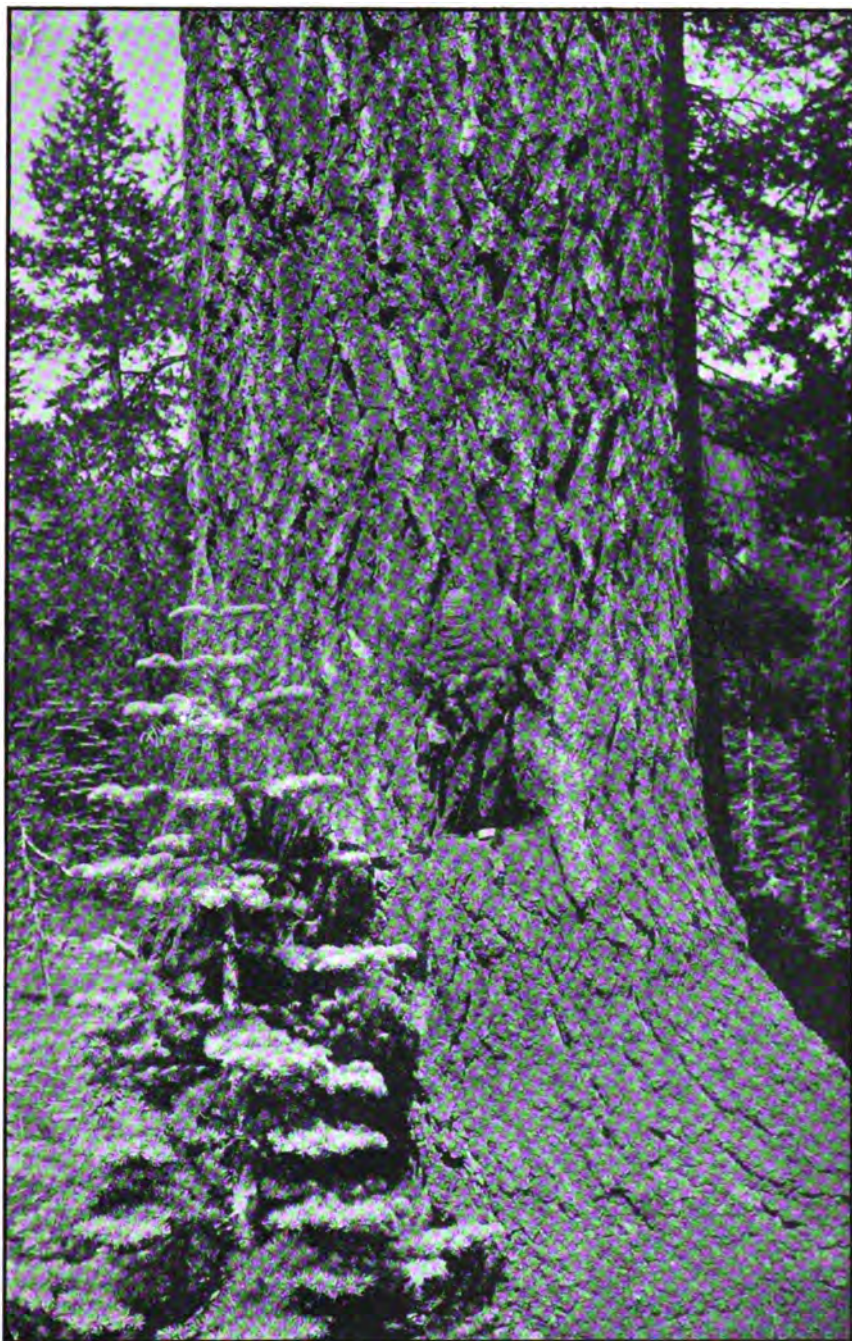
There is much evidence found in the fossiliferous rock strata, that an abundant flora of monster trees once occupied the Arctic regions, similar on the two continents, owing to the connections then existing or to nearness of extremities. Also they were similar to certain present species.



FRUIT AND FOLIAGE OF BIG RED FIR *From painting by Mrs. Lemmon*
Reaches a height of over 200 feet. Cones nine inches long.

The formation of an ice-cap over the polar regions, and of snow and ice deposits on the summits of mountains to the southward, drove the plants down from the northern plains, and down from the sides of mountains in the temperate zone, to form vast hordes of fugitives hastening to southern plains.

This heira continuing as the sheet of ice expanded and plowed with its glaciers slowly down to median latitudes of Europe and Asia, the entire members of many families were overtaken on the northern side of the mountain ranges and frozen out; others, passing between the ends of the ranges, reached the shores of the Mediterranean Sea and the Indian Ocean, and were then and there destroyed, a few only escaping by the narrow, devious Isthmus of Suez into



BIG RED FIR (*Abies magnifica*)
Slopes of Sierra Nevada

Africa, while others huddled upon the three peninsulas of Arabia, Hindustan, and Malacca.

On the Western Continent a great portion of the plants in their flight came down unobstructed, to the Gulf of Mexico, to be caught and frozen there; a few eastern families escaped on the peninsula of Florida; while the greater part of the western plants ran down along the plateau of Mexico into Central America, and some of them, perhaps, finally crossed on the Isthmus of Darien into South America.

Following the Glacial Age came the Thermal, with contrary effects, and with more destructive results. The ice melts on the southern verge of the ponderous ice cover, allowing the plants to return, timidly seeking the newly-emptied glacier beds. Soon after, the flood-water sinking into the mountain-sides, the brown earth, becoming vivified, invites the grasses and flowers to new-made homes, while sunny parterres beckon to the spying trees, promising centuries of occupation—if they can withstand the climate.

The rising heat rolling in waves from the south, nearer and nearer, urges on the lagging columns, adding the necessity of avoiding death to the attraction of better homes.

But the universal return of plants from the south, was prosecuted under vastly different, more destructive conditions than those of the northern flight. The plants on the return trip were attracted northward along the cool plains, and also, some of them upward on the mountain-sides; for it is the same thing, in effect, to ascend a mountain for cooler weather as to journey northward.

Now the first elevations beside a valley are usually low ones, foothills, outlying ridges or higher spurs. The plants that ascended these elevations, as the heat came on and proved too severe for their constitutions, were shriveled and burned then and there—the last battle ground and altar-places where were immolated the greater part of the vegetable creation of the period!

Here and there straggling members of a family, reaching a locality on the plain, or part-way up a mountain, when the present equilibrium of seasons was established, found themselves suited to the environment—and it is the descendants of those plants that are the inhabitants of our plains and mountains today.

These terminals of broken lines of development—these remnants of a past multitudinous vegetation,—ever since they were allowed to exist and perpetuate their kind, have been obliged to wage war upon crowding neighbors from generation to generation, in order to gain or retain a foothold, resorting to changes of ground, of character, or weapons, in order to win in the incessant battle of life. Incidentally these changes of character, these weapons and disguises furnish the greater part of the data upon which botanists are enabled to classify genera and species of plants.



THE GRAY-LEAF PINE (*Pinus Sabiniana*)
NEAR AUBURN, CAL.

Photo by Britton & Rey

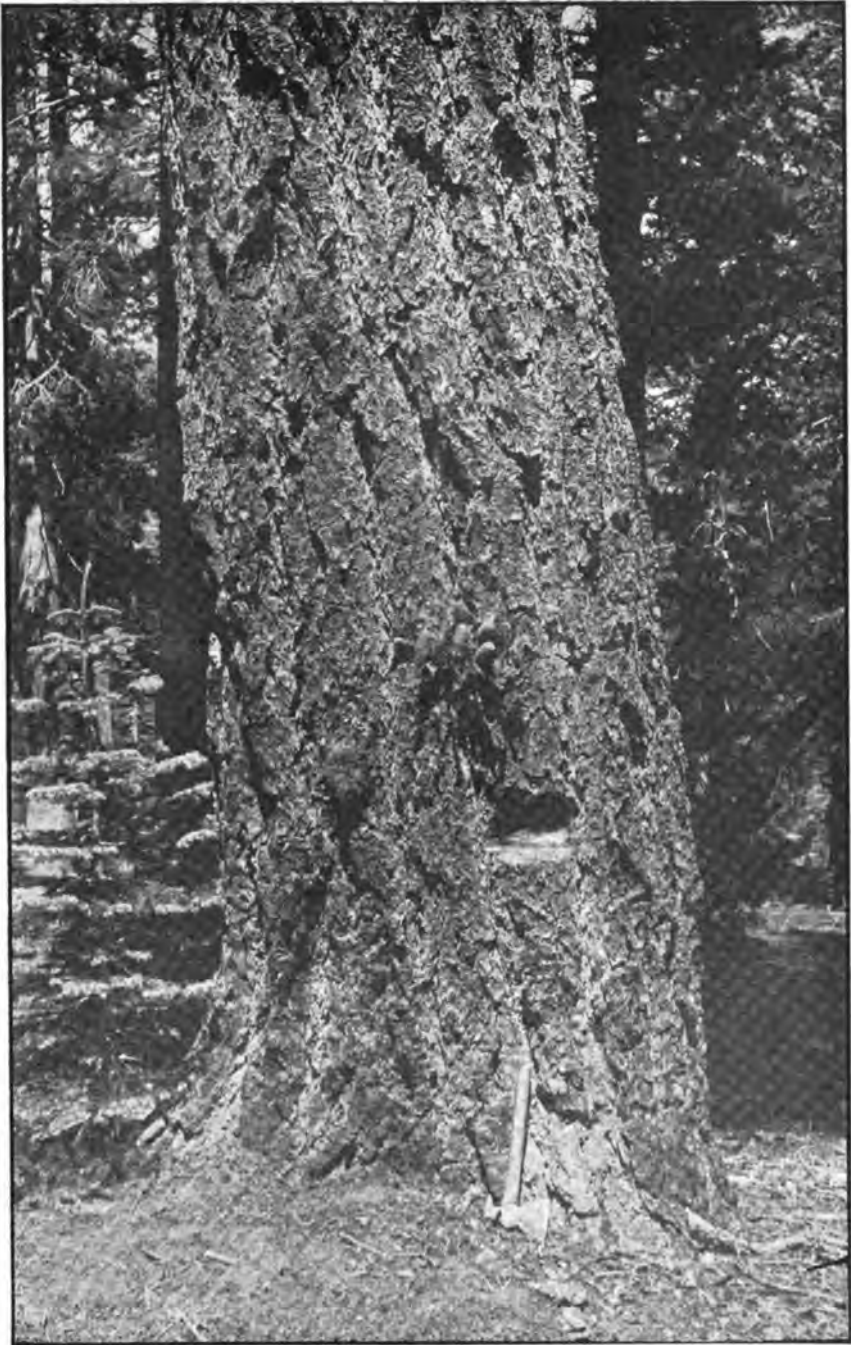
That the plants have made the double journey described is plainly proved by the characters of alpine plants on high peaks of the North Temperate Zone. They are found to be identical, or nearly so, with present Arctic plants. Now they could not have passed from northern regions directly to these summits during the southern flight, for the reason that both Arctic regions and these mountain tops were being slowly covered, simultaneously, with snow, soon becoming permanent ice. Manifestly, cold-loving plants—our Alpine plants—could ascend mountains only when fleeing from torrid heat—and exactly that condition was experienced on the return journey; so here near the snow-line, on all the high peaks of the North Temperate Zone, are stranded Arctic species of plants, with less northern families established on the slopes of the mountains.

It has been stated that Europe and Asia were deprived of their quota of plants by the many long transverse ranges of mountains preventing the passing of plants south or north, except through the wide gaps between ranges; while North America was favored by having nearly longitudinal ranges, permitting the free passage of plants to and fro along unobstructed plateaus.

The two long, nearly longitudinal American watersheds—the Rocky Mountains and the Alleghenies—delimitate three plateaus, Atlantic Slope, Mississippi Valley, and Pacific Slope. We have seen that the distribution of plants was not equal—the Pacific Slope having the lion's share, and largest growths. This is due principally to four potential agencies.

The Rocky Mountains, lying near the western side of the continent, extend southeasterly, upon the eastern side of the high plateau of Mexico, to Central America. The plants returning from the south at the beginning of the Thermal Age, 80,000 years ago, were divided at the outset in Southern Mexico, and a large part barred out of the Mississippi Valley by the Mexican Cordilleras, that killed off unfortunate individual families which ascended their foot-hills and spurs—as described—while other families or other members of the same families were attracted to pursue the broad, free, and, at the time, cool, and inviting pathway along the high plateau of Mexico and Arizona, diminished at every league by the many western spurs of the Rocky Mountains; the survivors escaping to pass into the valleys and along the sides of the mountain ranges, some of them particularly directed northwestward again by the favoring coast plateau, decimated the while, by the high, similar westwardly inclined and destructive Sierras of New Mexico, to reach final destination in California and the region northward.

A very important agency helping on the capture and directing the distribution of the trees all along the western coast from California to Alaska, is the presence in the North Pacific Ocean of the warm



LOWLAND FIR (*Abies grandis*)
California coast and northward

Kuro-Shiwo, or Japan current. This is primarily a hot tropical current which strikes the islands along the southern coast of China and is deflected northward, to be more deflected by the Japan islands and hurled northeastward across the Pacific Ocean. There it meets the southern side of the long chain of Aleutian Islands, which turn a part of the current down along the coast of America, delayed and accumulated during its long sweep by the many islands and capes on the way, while its heat rises into the atmosphere, increasing its temperature and carrying with it enormous quantities of water.

Another factor closely connected with the preceding is found in the cool, broad, overrunning Pacific breezes that prevail most of the year on the northwest coast. Mingling with the heated and moisture-filled air over the Japan current, the volume presses inland, the moisture condensing and falling most copiously upon the nearest



DOUGLAS, OR BLUE, OAK (*Quercus Douglasii*)
Near San Luis Obispo

cool elevations—giving sustenance and stimulus to the richest and most remarkable forest on the face of the globe.

The fourth factor necessary, it is found, for the production of the largest growths, is a high degree of heat, of which the Puget Sound region lacks sufficient for some plants, although many of her trees, such as the Noble, Grand, and Amabilis firs, and the very valuable Gigantic Cedar (or Shingle tree) became monsters, and the Douglas Spruce, one of the most valuable timber trees on the earth, becomes in Oregon and Washington the tallest tree known, 350 to probably 380 feet high!

This necessary heat is found under the semi-tropic sun in the latitude of California. This heat added to the enclosed conditions of the state—the high Sierra on one side, the lower Coast Range on the other, the latter admitting the ocean breezes through its passes, and

with low interlocking ranges at each end—furnishes just the right conditions, it seems, for strongest allurements to enter and for highest development afterward; for here only, in this *cul de sac* of California, are found the largest cone-bearing trees on earth, of some nine different genera; and here only are found the largest and heaviest cones of twelve different species!

Is it not passing strange that out of the twenty pines of Europe and Asia, and the twelve pines of the eastern states, not one should develop cones as large as either one of four pines in California?

It is interesting to note, in this connection, our absolute dependence upon Mexico, in the first instance, for all the blessings of this ample forest endowment.

That long, narrow, high-raised peninsula, 600 miles wide at its junction, diminishing to 200 miles, at the Isthmus of Tehuantepec, and 8,000 to 4,000 feet in elevation along its flat central extent, presented a high, uninterrupted plateau for the escape of the western plants southward, at the approach of the Glacial Age; as also, later, inducing and providing for their safe return during the progress of the Thermal.

Incidentally, the dear old foster-mother kept the majority of the western oaks upon her genial plateau, as also nearly half of the western pines. Also, (to her great advantage) she detained three out of the four great *Taxodiums*—Southern Cedars—closely related to our Sequoias.

It is interesting also to picture with the imagination the majestic (not to say pathetic) universal processions, back and forth, of the early plant-kingdom. The progress—the steps—in these slow and silent marches were made, of course, by the seeds, and only those that, during each of the ages were carried by the wind or other means of travel, to a safe distance from the beleaguered parents, and there found favorable conditions, were enabled to germinate, flourish and continue the species.

Limiting our view for the present to the southern route of one family, let us take the progenitors of the beautiful feather-cone Spruces (*Pseudotsuga*) traveling slowly along, generation after generation, perhaps but a few feet at a time and scattering laterally also, as opportunity was afforded, all across the North Temperate Zone; the most of them to be caught and exterminated on the then bleak shores of the Indian Ocean, the Mediterranean Sea, and the Gulf of Mexico. Among those species on the American continent, that escaped death were those that by the accident of their proximity to its western border, were enabled to migrate to Mexico and Central America. Subsequently, when the reverse condition—the hot Thermal Age—came on, and only a high road northward could offer relief, there was the same Mexican plateau inviting the beleaguered



Photo by J. G. Lemmon

BIG TREE FOLIAGE AND FRUIT (*Sequoia Washingtoniana*)



THE BIG SKOUOIA OF THE KINGS RIVER FOREST
35 feet in diameter



FRUIT AND FOLIAGE OF THE GREAT VALLEY OAK (*Quercus lobata*)
The large-cupped form on the left is a variety, named for the author of this article.

plants to retreat, which they accepted (with what expressions of relief we cannot tell, being animate creatures of another grade); albeit many were inveigled into ascending, fatally, the mountain spurs, besetting their course; so that finally, but two species, keeping to the good old highway, escaped to the Northwest; one being the great Douglas Spruce (the so-called "Oregon Pine" of lumbermen), which is well distributed over the Northwest; the other, the rare Big-cone Spruce, reaching only a limited locality of Southern California. No other species, the world over, survived the forced double migration.

A similar case, but not so fatal, is that of the curious genus *Tu-mion*—the False Nutmegs. Only four species are extant; one of them is in California, the three others distributed to Florida, India and Japan.



GREAT VALLEY OAK. LIMITED TO CALIFORNIA

Similar, also, is the case of the genus *Pasania*—the Chestnut Oaks. One species only, our beautiful and useful "Tan-bark Oak" of the California coast, is indigenous; the rest are in the far-distant region of Siam and her near-by islands—one-half of the earth's circumference away!

Another definitely known case is that of the genus *Sequoia*—the Redwoods. Of the score or more species known to have inhabited the high northern regions of both hemispheres, and, of course, to have been forced, with the vast horde of other plants, twice across the North Temperate Zone; the only survivors are the two species that, ultimately, escaped to California. These are our renowned Coast Redwood and the Sierra Big Tree.

Whatever of pigmy growth and rudimentary characters all these double-emigrants of so remarkable experiences presented when they arrived for the second time on the Pacific Slope, they at once came under the beneficent influence of the stimulating factors described, which, operating with increased energy during thousands of years, have produced, and are still enlarging, the monstrous trees and prodigious fruits that are the joy of the West, the envy of the South, and the amazement of the East!

And our beloved California is the throbbing heart, the central stage of activity, the most favored sister of this glorious galaxy of Pacific Slope States!

The great truth is forced upon the attention that it is California that was set apart from all the world, when, as the geologists tell us,



MONTEREY CYPRESS (*Cupressus macrocarpa*)
Limited to California.

the Pacific Slope was raised from the ocean bed, in comparatively recent geologic times, by a mighty geotherm, or earth heat-wave, with the Sierra and Cascade Range as its axis of elevation; followed in a later age by another uplift with the Coast Range as its axis; while the long, broad valley between the ranges was cross-fenced by low mountains into several magnificent parks, principal of which are the valley of California, the smaller Willamette valley of Oregon, and the extensive Puget Sound region.

Of these, California was assigned first place in the pathway of the southern fugitives, inviting to enter and urging to tarry and form a natural, unexampled arboretum within her mountain walls, supremely aided thereto by a semi-tropic sun dispensing beneficent heat—the



GREAT DOUGLAS SPRUCE (*Pseudotsuga mucronata*)
200-250 feet in height. 10 to 12 feet in diameter,



FRUIT AND FOLIAGE OF THE CALIFORNIA TAN-BARK OAK (*Pasania densiflora*)

whole array of factors mentioned combining to produce the most generous and forcing climate on the face of the earth—as magnificently evidenced by this matchless Forest Endowment!

There is a collateral thought, pregnant with great promise, clearly deducible from this forest phenomenon. It is this: Because the physical conditions producing largest and best forms in one of the two organic kingdoms—the vegetable—prevail now upon the earth in one sequestered region, we may believe that the other animate kingdom—the animal—and especially the human family, is equally susceptible to the world-excelling stimuli, and we may logically expect that this favored state—with the contiguous country it shall dominate northward—is the coming Empire of the World, with a people and rulers pre-eminent in moral and æsthetic culture, as well as in marvelous and solid growth.

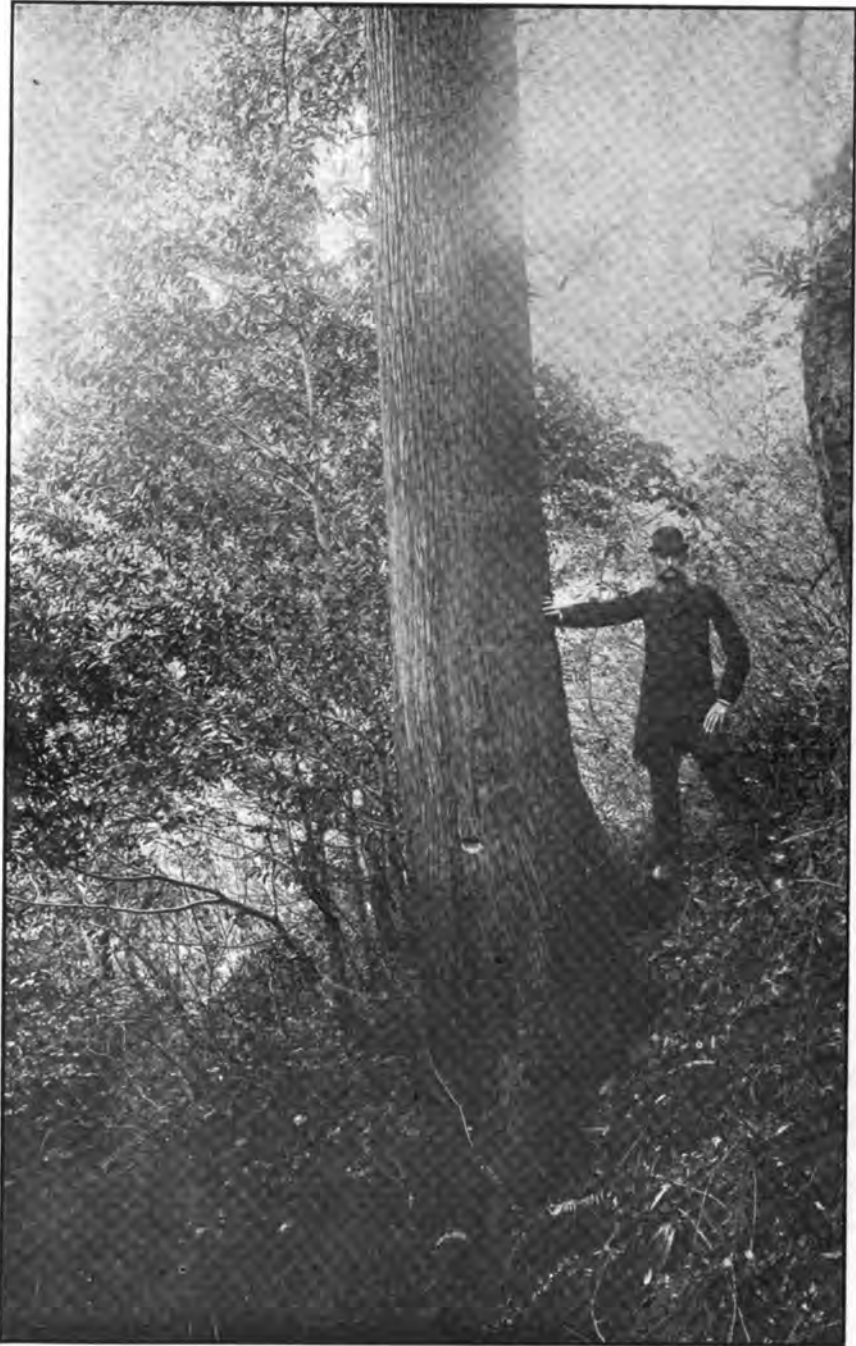
The poets, those inspired persons of all ages, have given us hints of the future great Republic of Arts and Letters that shall arise on these shores, as foreshadowed by our Joaquin Miller:

“Dared I but chant a prophecy,
As sang the holy men of old,
Of rock-built cities yet to be
Along these shining shores of gold,
Crowding athirst into the sea,
What wondrous forecasts might be told!

“Enough, to know that empire here
Shall burn her loftiest, brightest star;
Here art and eloquence shall reign,
As o’er the wolf-reared realm of old;
Here learn’d and famous from afar
To pay their noble court, shall come.
And shall not seek nor see in vain,
But look on all with wonder dumb.”

Oakland, Cal.





FALSE NUTMEG (*Tunion Californicum*)
Found only in California.



GIGANTIC RED CEDAR OR SHINGLE TREE (*Thuja gigantea*)
Over 200 feet high, and often 12-15 feet in diameter.

THE REDWOODS

BY D. S. RICHARDSON

LIKE tufted arrows, straight and tall,
Down-hurled by some titanic hand,
Against the purple sky they stand
And tremble on the mountain wall.

From gulfs where limpid waters cry,
From deep ravine and fern-lined cup,
They lift their shafts of glory up
To touch the glory of the sky.

In fadeless verdure, host on host,
They flank the meadows, cool and wide,
They dip their fingers in the tide
And run along the golden coast.

They run from cape to cape and free
Their pungent breath on every gale;
They lean where winding rivers trail
Their scented currents to the sea.

Hoarse, where they stand, the west wind springs
Along their giant pipes and lo,
Æolian symphonies outflow
And all the fragrant woodland sings.

O temples, reared of mist and sun,
To crown the glory of the hills,
Perennial joy thy beauty thrills,
And all thy aisles to music run.

The night is here; and stars again
Look through thy arches to the sea;
Where God so moves in majesty,
What hand shall mar, what lip profane?

San Francisco.



IN PURSUIT OF A GRAVEYARD,

Being the Trail of an Archaeological Wedding Journey

By *THERESA RUSSELL*

CHAPTER III

THE CARAVAN

"Our four-horse team
Shall soon be seen."



THE first day out we kept going along until we came to no place in particular. Then we stopped.

"Dry camp tonight," remarked Nosifor, genially.

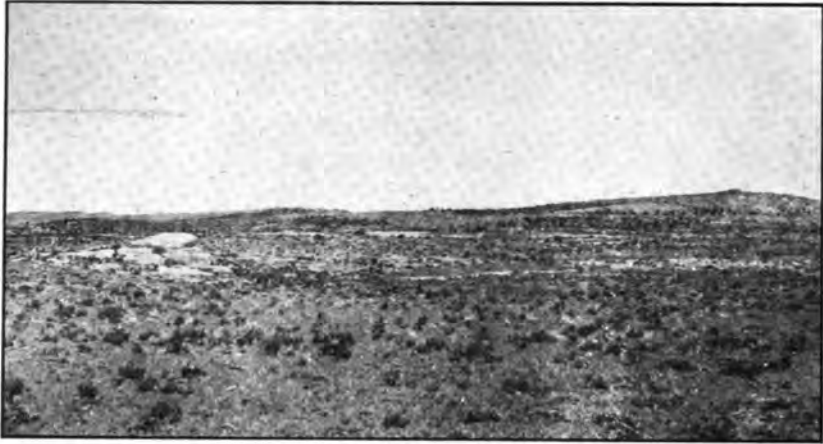
It was noted that if anyone did remark anything, it was liable to be Nosifor. When not engaged in making remarks, he zealously occupied himself in rendering Mexican ballads—and rending the atmosphere in the process. His repertoire was inexhaustible. Much of it was unmentionable. We knew enough of the language to be thankful we knew no more. As an avocation, Nosifor sat on a box in the front of the huge, canvas-canopied prairie

schooner and administered the brake.

Erminio's talents, useful and ornamental, lay in another direction. He sat astride of Macho, the brown mule (who had to perform double shift as night-wheeler and saddle-steed for the driver) and flung his writhing black-snake about with a practised hand. He was a thick-set fellow, with a pock-marked face that made him repellantly ugly at first; but he had clear blue eyes, and the habit



"OUR FOUR-HORSE TEAM."



"NO PLACE IN PARTICULAR"

of minding his own business. This reticence appeared to be due partly to shyness and partly to ignorance of our language, but before the summer had waned we learned it to be the reserve of a worthy nature and a faithful heart.

On an elevated spring seat, amid a mighty conglomeration of supplies and effects, sat the Instigators of the Expedition in lofty state and looked far down upon the little dog below.

Alongside, or perhaps to the front or the rear, paced Sliver's pinto pony, plus Sliver. What was the real Navajo name of this dignitary, we, of course, could never discover. No possession of the Indian is to him more inviolable than his name. But it should have been Daniel, or words to that effect, for he wore a perpetual come-to-judgment aspect. He was a medicine-man of the old school, and had the detached, esoteric air provided for those of his high calling, be they labelled swami, rabbi, priest, prophet, or shaman. His to approach the sacred Shekinah, his to converse with the oracle, his to impart to the people in cautious segments the words and the will of Those Above.

It was not for this purpose, however, that he had been enlisted as a member of the Expedition. Being of versatile accomplishments, at least by reputation, he had been engaged as guide, interpreter, and cook. The meager fact that he proved pretty much of a failure in all these capacities did not prevent him from being worth the price of admission, just to look at and listen to. Not that he ever voluntarily looked at or spoke to us—but perhaps that only enhanced his charm. He would ride along, bareheaded in the sunshine, forever chanting in subdued monotone the rhythmic cadences of the Indian song. Unlike the roundelays of Nosifor, Sliver's music awakened

the keenest interest in its meaning. If one might only know the significance of those subtle, eerie strains! Breathed out into the Desert, the Desert seemed to absorb them as her own—akin to her in barbarism, in mystery, in appeal at once yearning and resigned.

And even more, one longed to know what mental processes were going on behind that impassive shield of features, the tropic-browed skin, the meditative brow, the experienced wrinkles radiating around the kind, dreamy eyes with the light in them, the thin lips and good, square chin. His slender form was still as erect as though



"CLAD IN CORDUROY"

it were youthful. Its slenderness was, indeed, the *raison d'être* for his current cognomen. The Señor from whom we had acquired him, believed in the fitness of names. His own cook, being epileptic, was called "Crazy."

The one analyzable attribute about Sliver was his costume, and that, save when he dressed up *a la Melicano*, was a simple solution. His shirt and trousers of figured calico, different in pattern, but alike in magnificence, made a fine dash of color on the landscape. His moc-casins were fastened under the ankle by silver quarters made into clasps. His black hair was bunched up into a wad and tied with a



"WHAT ARE WE STOPPING HERE FOR?"

white string, escaping locks being confined by a bandana fillet bound around the forehead.

If Sliver had been of the aristocracy of wealth, instead of mere culture, he would have been clad in corduroy. He would have worn a heavy, splendid, silver necklace with many pendants. He would have gloried in fine earrings of turquoise, tied on with a bit of twine or an old rag. He might even have had a handkerchief of silk knotted around his neck, and he would certainly have had an impressive cartridge belt buckled around his waist.

But he had none of these things. And probably, being a theologian, he desired them not. In any case, his garb was suitable and satisfactory, and that, as we all know, is a millennium difficult to attain. He was also, being a desert Indian, possessed of a spontaneous cleanliness, and thus formed a happy combination of the gaudy and the neat.

"What are we stopping here for?" I inquire. In one's tenderfoot days one will ask questions.

"Cause."

"What kind of Cause? Final or Efficient?"

"Both. Final, because we're hungry, and efficient, because it's time to eat."

"I fear me the dread Professor would have decorated your answer with a nice, plump zero, in the good old Phil. IV. days."

"But even he would admit it to be a sufficient reason."

"Especially if he were here. What shall I be doing?"

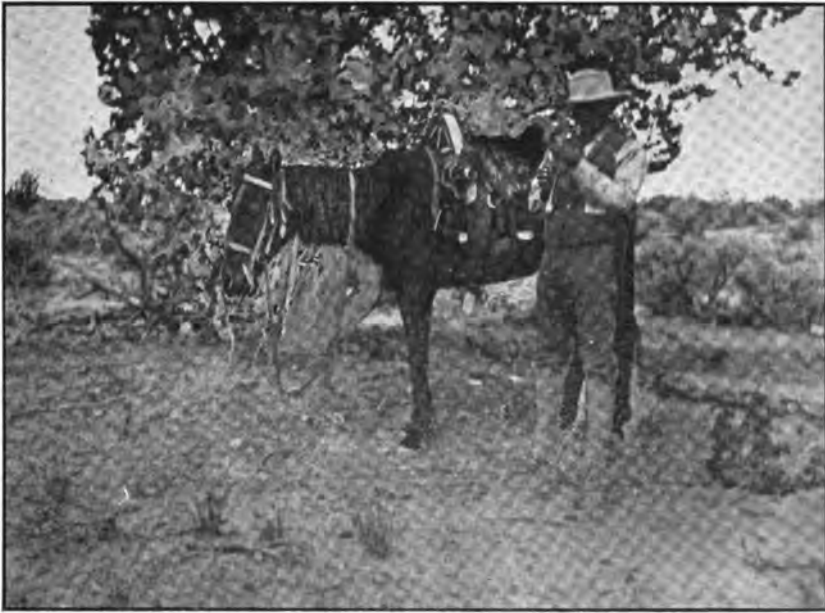
"Oh, hunt around in the sage-brush and find a funny little horned toad to play with."

Instead, I discovered an Arizona ants' nest. It was of a size proportionate to the space surrounding it. No ignoble saucer could

cover its curving dome. Indeed, it could scarcely have hidden itself under a bushel. It was no cheap adobe shack, either, but a palace of marble halls. Through its white and shining corridors hurried the black-costumed inhabitants, hurrying ever silently.

Not far away, a swift little lizard, all dressed for some social function, his grey livery gemmed with iridescent sapphire and emerald, issued from underneath a greasewood bush and glided away, gliding silently.

Yonder a busy jack-rabbit, having all at once recollected an overdue engagement in the next county, rushed from his covert of *cholla* and bounded away, bounding silently.



"DRESSED UP A LA MELICANO"

Away over there, a watchful coyote sneaked from an arroyo, covering his alertness under an affectation of indifference, and paced rapidly along, pacing silently.

But later on, when night is fairly come, he, of all these mute citizens, will find a voice, and that a voice that cuts the silence sharply. A series of short, staccato notes, a long drawn, quivering breath, rising into a cry of anguish, the wail of a lost soul.

"Lost soul, indeed!" sniffed the Man of Science, in a parenthesis between changing the camera plates and unrolling the bed. "The soul of the coyote is a multiple personality, and every one of him is irreclaimably lost and consigned to perdition."

After that I sat down on a roll of blankets and watched the boys make camp. No, there is no cause for alarm. I shall neither de-



"THE WITHDRAWING SUNSET."

scribe to you how they did it, nor explain to you how it should not be done. "For on this subject," as his Double Who Undid Him was instructed to say, "so much has been said, and so well said, that I feel I can add nothing of interest."

But of that first camp in the open, with the sand for a mattress, the sky for a ceiling, and stars for midnight tapers, two impressions can never be effaced.

One is of sound—the contented crunching of the equine quintette, the audible, artless enjoyment of their well-earned supper. What positive, if reflected, comfort there is in it!

The other is of sight—the withdrawing sunset, yielding its vivid splendor to the calm, white radiance of the rising moon. Somehow you feel yourself in the presence of a Great Change that makes you hold your breath. It is as though some one dear to you had flaunted herself all day, and flouted you; as though she had dazzled and jeered and broken your heart with her flippant garishness and hollow pretense; as though she had finally seemed about to depart with a riotous, Bacchanalian adieu—and then—quite suddenly, quite unexpectedly—had turned back to you with a rush of penitence and apology and given you a glimpse of the tender sweetness that had dwelt in the heart of her all the while. A cool touch caresses your cheek. A soft illumination trembles against your tired, strained eyes.

"Why, my beautiful Desert," you hear yourself saying, "I did not suppose you had it in you!"

[To be continued.]

THE LONE TRAIL

BY NELLIE SUYDAM

WE KNEW the round-up trails that swing
 O'er sunny plains where faint winds drift,
 Up through the cañon's dusky rift
 To some hill-meadow's moss-rimmed spring;
 The trails that plod through wind-smoothed sands,
 When lips are black and canteens clank,
 From bitter spring and dust-filled tank,
 Toward dim sky lines of lonely lands;
 Trails drifted deep with snows that fall,
 When the last daylight flickers out,
 And, on the peaks, the storm-winds shout
 Among the pines: we knew them all.
 O Love, the trail today you ride
 Too fearful is for me to tread—
 The Lonely Pathway of the Dead,
 It leads across the Great Divine.
 Martinez, Arizona.

RUHAMAH

BY ANNA BECK ALLEN



I DON'T see why you should be put out so about it, Ruhamah, when you know that Ben Quiglin worships the very ground you walk on."

"That's just it, Mother. I know he worships the ground I walk on," Ruhamah's head emphasized every word, "and the horses I ride, and the cows I milk, and the wheat I send to market. Don't you suppose I see through Ben Quiglin's worship? You know I can't bear him. He has no honor, no principle—and I'm sure he drinks."

"No, he don't drink. He used to—a little—but he's quit—he told me so himself; and you know he's a good manager."

"But we don't need a manager. You've said often that nobody could manage the farm and the stock and the men better than I have done for the last four years."

"Yes, you've done powerful well, for a girl. But you're a grown woman now, 'most twenty years old, and it ain't fittin' that you should go on traipsin' around over the country with them bloomer things on. You've been doin' men's work long enough. That's why I'm lettin' Mr. Quiglin come in and run the farm on the sheers."

"Mother! You aren't going to let him come into our home, are you? I could not stand that."

"I done it for you, Ruhamah. I signed the contract today." Mrs. Ellendorf dropped the apple she was paring, and her fat, good-natured face took on an expression of fright. "Don't look at me so, daughter; you'll not have to do so much hard work now, an' me'n you'll have such good times visiting around—an' it's only for a year."

Ruhamah shut her lips hard to keep back the angry, useless words. Her whole life, its achievements and its plans, lay in ruins about her. A year—nothing lay beyond that year. She went out of the room. The wind blew chill from the mountains. All the sweet, intimate voices of the early springtime were hushed.

When Ruhamah came to herself, she was far up among the hills. Her horse was black with sweat; flecks of foam flew from his mouth; and he was panting mightily from the effort of that sturdy, ten-mile climb. Ruhamah sprang down, and put her arms around Rollin's neck. "Poor old fellow," she whispered, "we have had many a run together, but never from such a black devil as followed us today." She fastened the bridle-reins around his neck, and put him to graze in a patch of grass, growing luscious and tender in a little hollow

beside the trail. Then she threw herself down in the warm sunlight, and let the waves of despondency beat upon her.

Ruhamah Ellendorf was as truly a product of the West as was the Douglas fir, against whose roots her young despair was wearying itself. Her father had died when she was but twelve years old, leaving his homestead, pre-empted from the government, mortgaged to the full value of its improvements, and for the small bunch of cattle that were to pay off the mortgage. Mrs. Ellendorf, an easy-tempered, gullible woman, had worried along for a few years, getting every year more deeply in debt, and yielding more and more to Ruhamah's faculty for managing. By the time Ruhamah was sixteen, the debt had stopped increasing. Two years later, a hundred acres of the wild land had been made to yield two crops of wheat that had paid off the mortgage. Now, when she was twenty, the whole farm lay smiling and fair, with its big wheat fields, its orchards, and its meadows dotted with fine cattle, all of which were scarcely less coveted than was Ruhamah herself, the actual owner of one-half the farm, probable heiress of the remainder.

Ruhamah was, however, a woman who needed no accessories of wealth or position to render her attractive. The rugged demands of her outdoor life had made her straight and strong. Her skin was tanned by the sun and roughened by the wind; but its lack of delicate beauty was more than atoned for by the noble cast of her features, the healthful coloring of cheek and lips, and the clear glance of her dark grey eyes. Many suitors had come—some of them had gone—a few had awakened a friendly interest, but no other had aroused her detestation as had Ben Quiglin, most openly devoted of them all.

Quiglin had first come into the neighborhood as manager of a big steam-thresher. It was the custom for each farmer to board the "hands," while his wheat was being threshed. During Quiglin's first meal at Mrs. Ellendorf's table his audacious compliments had brought an angry red to Ruhamah's face; on the second day she administered a stinging rebuke; and on the third day she forbade him to speak to her at all. But nothing abashed him. He simply changed his tactics, sighed prodigiously when she was near, and paid court to Mrs. Ellendorf when Ruhamah was absent; and the result of his six months' assiduity to the widow was a year's lease of the farm and stock on terms highly advantageous to himself.

When Ruhama's anger and despair had worn themselves into quiescence, she set herself to a sane consideration of the situation. She knew that her mother's contract would hold good for only the mother's half of the estate. Ruhamah's first resolve was to demand a division; but love for her mother, a feeling which twenty years of

intimate companionship had made very deep and tender, caused her to forego a resolve that would not only grieve Mrs. Ellendorf, but leave her to fall a financial victim to Quiglin's trickery.

"No, I'll fight it out," Ruhamah cried, springing to her feet. "I'll do the right thing. He can do his part of the managing, but he'll have to get up before daylight if he gets the advantage over me." She mounted Rollin, and rode slowly down the mountain trail.

When she drew rein at the horse-block, Quiglin was leaning against the fence, his chin resting on his folded arms. He was a heavy-set, heavy-featured man, with a careless, jaunty air that seemed borrowed for each occasion. Since coming into the neighborhood, the little touch of brotherly familiarity with which he treated the girls, the broad, sportive flattery which he heaped upon the older women, had gained for him the distinction of being a well-bred man of the world. But the older men distrusted him; the young men envied and disliked him; Ruhamah hated him.

He stepped forward with easy assurance to grasp Rollin's bridle. Ruhamah raised her right hand, unconscious of the riding-whip which she held, or of the threat that her gesture conveyed.

"Mr. Quiglin, my mother has told me of her contract with you. You know that it does not bind me nor my interest in this farm. I shall examine it, and if it is one that my mother can legally make, of course it will hold good, and I shall let it go as long as you attend to your own affairs, and leave me to manage mine. I know how I want the farm run; I have my plans all laid out for the season's work—and I'm not going to have them interfered with."

"Why, Miss Ruhamah, I don't want to interfere with none of your plans. Your mother thought the responsibility was too much for you—an'—an' I just want to work under you, to be your right-hand man—to—"

"No matter. You know that I won't listen to many words from you. When you want to consult me about the work, all right; but not a step further. No!" as he raised his hand to Rollin's bridle, "I prefer to take care of Rollin myself. I want you to let me and my horse entirely alone. If you'll understand that right now, it will save trouble."

The season's work progressed with less friction than Ruhamah had anticipated. Quiglin bent his will to hers, and trained himself not to offend by word or deed; but sometimes she surprised a look in his eyes that shamed her face to crimson, and made her clench her fists with rage, and sent her off for a gallop among the hills.

If the girl had been less self-absorbed, she would have noticed the surprising physical change that the passing weeks were producing in Mrs. Ellendorf. The bent figure straightened, and its over-

plump outlines were adjusted to due proportion by friendly stays. The sombre hue of her garments gave place to the prevailing tints of springtime. Her demeanor, on occasions, became characterized by a heavy coquetry that one would have thought quite foreign to her nature. But on such occasions Ruhamah was never present, else she would have been less unprepared for the surprise in store for her.

It was a hot summer day, and the wheat harvest was in full swing. Quiglin had had a row with the harvest hands, and they were threatening to leave in a body when Ruhamah rode into their midst. Seeing the state of affairs, she advised Quiglin to go about his business, promised the men increased wages, and so induced them to go to work again. Fearing that Quiglin might interfere with her arrangements, she staid in the field all the afternoon. When the day's work was over, she mounted Rollin and rode homeward, resolved to buy out Quiglin's interest, even at the cost of the whole year's profits. She found the door locked, but the key was in its accustomed hiding-place. Supposing that her mother had gone to Dayton on a shopping expedition, she at first felt no uneasiness. But a strange loneliness brooded over the place. Some presentiment of evil about to befall chilled Ruhamah's heart as she went from room to room, expecting she knew not what. On the dresser in her mother's room she found it, the brief note, brutal and exultant, written in Quiglin's hand:

"We've gone to Dayton to get married. Who'll do the bossing now?

"Your loving father,

BEN QUIGLIN."

That horror bit to her heart. She gasped as from a vital stab. Her mother to marry that man—surely any woman's instincts would have revolted from so base a marriage! It could not be true. Then a thousand circumstances recurred to her, making certain the hateful news. "I can't—I *can't* stay on here, a witness to my mother's degradation." That was Ruhamah's inmost thought, the unacknowledged instinct that hardened her heart, and kept her awake, making vain plans for escape out of the maze in which she was involved.

But the next day, when bride and groom came home, the bride already in tears, the groom half-drunk and coarsely triumphant, Ruhamah's heart melted with pity and tenderness for the weak, good-natured woman, who was making such shipwreck of her own and her daughter's happiness. Ruhamah could not bear the sight, but rode off to the fields to inspect her herds, and to watch the progress of the harvesting.

When she entered the dining-room at supper-time, Quiglin stood at the cupboard mixing a glass of brandy. He gulped it down, and turned to Ruhamah.

"And what have you got to say now, stepdaughter? I guess there'll be no more bossing of me around after this. I've got as good rights here as you have—you understand?"

"The fact that you have married my mother gives you no right to her property. I suppose even you know that?"

"It don't, eh? Do you take me for a fool? What about a deed of gift—to my beloved husband, Ben Quiglin, consideration love? How does that strike you, my little darlin'?"

Ruhamah stepped to her mother's side, and grasped her arm. "Mother, is it true?"

Mrs. Quiglin breathed gaspingly.

"Well, Ruhamah, you see what's mine is Ben's now, an' what's his'n is mine. He thinks he can do better if everything's in his name; an' so I just concluded to deed everything to him. I ain't afraid to trust Ben."

Ruhamah went out into the darkness, and walked the fields till midnight. Then, because the house was hateful to her, she hollowed out a place in the sweet, new straw and slept there till the dawn.

Quiglin was not slow to carry out his covert threat. He took every opportunity to annoy Ruhamah. His days seemed to be spent in devising ways to annoy and humiliate her. He changed her plans for the work, quarrelled with the men, dismissed them for trifles, let part of the hay go unharvested, sold off stock that Ruhamah wanted to keep, and in a hundred ways made her life a series of horrible nightmares impossible to be long borne. But he could not break the spirit of the girl, nor win from her any concession of goodwill or friendly tolerance. Then, suddenly, when farm-help was not to be had for love or money, he let go of the work altogether, and began to spend his time in lounging half-drunk about the house, or with boon companions in the saloons of Dayton. Ruhamah did what she could to get things ready against the coming of winter: but her work was harder than it had ever been before.

Mounted on Rollin, one day in early winter, with Rex, her shepherd dog, trotting by her side, she scoured the hills for the ponies that had been grazing all summer on the wild lands. Returning home late in the afternoon, she swept the sky and the fields, and the nearing homestead with a weather-wise eye.

"Bring the sheep home, Rex." She raised her whip and pointed to a dark grey mass in the corner of a distant field. The dog did not obey immediately, but stood looking up into her face, in argumentative mood.

"Oh, you needn't be uneasy about the ponies, Rex. They'll smell the blizzard and will be glad enough to get into the barn. Go quick, doggie!"

Rex started off with convinced alacrity, and Ruhamah followed the herd of horses that were making straight for the barn-yard. She watched them until they had swept through the open gate and were swallowed up in the blackness of the barn. As she rode inside the yard, a man stepped from behind the swinging gate, and touched his hat.

"I beg your pardon, are you Miss Ellendorf?"

"Yes."

"I heard that you wanted to hire a man to take care of the stock. I would like to get the job."

"Yes, I do. There's forty head of cattle in the barn; and this herd of horses, that I've just brought in from the hills, and the sheep yonder, all have to be fed and watered. Besides, there's a dozen cows to be milked. Do you know how to handle stock?"

"What I don't know, I can learn," he replied, with such a convincing air that she forebore to ask her usual list of questions.

"I must tell you," she said with some hesitancy, "that you may find the place a hard one. My mother's husband owns half the farm and stock, and we don't get on well together. He isn't often sober enough to take care of the stock himself, and he drives off every one that I hire to help me. If you've got the grit to stay, no matter what he says or does, I'll pay you fifty dollars a month and board—ten dollars a month more than any one else is paying."

"Then it's a bargain—only I want no more than the customary wages; and I'll stay until you tell me to go."

"You are not a farmer nor a western man. May I ask what your business, or trade, or profession, is?" Ruhamah blushed, for the question had been prompted, not by business caution, but by mere curiosity.

The man lifted his smiling eyes to hers.

"No, I'm not a farmer, but I want to be for a while. I'm just out of college and I want to tackle a new kind of life. I've always had a hankering for the farm. That's why I'm here."

"I—I don't quite know about it. I'd never have the cheek to tell a college man to milk the cows, or mend the fires."

"A college man ought not to have to be told. Just show me once what you want done, and I'll put my athletic training to the test. Allow me to assist you," as he saw Ruhamah preparing to dismount.

When the sheep had been housed, the cows fed, and the milking done, Ruhamah led the way to the house and into the kitchen, where she introduced the stranger to her mother, and explained his presence

there. Quiglin, hearing Ruhamah's explanation, came out, blustering and bullying, as usual.

"So she's gone and hired you, has she, without saying a word to me about it? But I'll let you know, young fellow, that I'm boss here, and I won't stand for it. You can just hit the trail out there, and count ties to Dayton.

As he advanced into the circle of lamplight, the newcomer stared at him in surprise.

"No, Mr-r—I beg your pardon, what is your name now?"

"That's my husband, Mr. Quiglin," Mrs. Quiglin hastened to say, in the hope of averting a threatened quarrel.

"I'm glad to meet you, Mr. Quiglin—but it doesn't suit me to hit the trail tonight. A blizzard is already upon us, and besides, I have agreed to work for Miss Ellendorf—and I'm going to do it."

"Oh, you are? I'll see about that. Get out of my house this minute, or I'll have the law on you tomorrow."

"I think not, Mr.—Quiglin, is it now?" the stranger answered pleasantly. I rather fancy the law is the last thing you want to monkey with. Mrs. Quiglin, may I have a wash somewhere?"

Ruhamah ran up to her room, lit her lamp, and looked at herself in the mirror. What she saw there was a bright, animated face, frank and fearless; but the reflection did not please the owner.

"You look like a frowsy tomboy," she apostrophized the mirrored face, flinging her red tam-o'shanter across the room. "You are as red as a beet and your hair is a brush-heap, and your hands look like a pair of lobster's claws." But she rearranged her hair, put on a pretty house-dress of dark blue serge, and descended to the dining-room.

When Ruhamah entered the kitchen the next morning, she found Mrs. Quiglin already astir. The haggard appearance of her mother's face and the frightened look in her eyes gave Ruhamah a sudden heart-ache. She threw her arms around her mother in an unaccustomed embrace.

"What is the matter, mother? Are you sick?"

"I—I don't feel well, Rusie. Ben blames me for all your head-strong ways. If you'd be friends with him, he—I'd be so much happier. He's so mad now, because you've gone and hired this man—an' you oughtn't to 'ave done it nohow without consultin' him. We don't need the man—Ben he's goin' to take care of the stock this winter, an' I want that you should send him away right after breakfast."

"You know how it always is, mother. Mr. Quiglin will feed the stock once—then he will go off to Dayton for a jug of whiskey, and I'll have everything to do for a week. I can't do all the work

now—no one person can—and I won't try it again, if I can help it."

"Ruhamah," Mrs. Quiglin's voice was the whisper of one who sees ghosts, "Ruhamah, Ben's awfully mad, an' he's half drunk too, an' he says—oh, there's goin' to be trouble such as you've never saw, if you don't turn that man off."

"Let the trouble come, mother; it has to come sometime. We can't go on like this forever. I'm ready for my part, whatever it may be."

"But you don't know anything about it. You don't have to bear it. When he gets mad at you, he—he—oh, child, you don't know what last night has been to me. For my sake, turn the man off, and make friends with Ben."

"Make friends with that man—your husband? Mother, you don't know what you are asking. I can never be friends with him."

"Don't say it, daughter—please don't say it—hush—don't make any noise—don't let him hear you—for the Lord's sake, don't ever let him know—but look here!" Mrs. Quiglin rolled up her sleeve, and showed her upper arm, blackened, bruised, mangled as by the teeth of a mad dog. Then she bared her bosom, and on chest and breasts were the same marks of brutal rage. "I thought he was goin' to kill me last night—an' he will kill us both, unless somethin's done to pacify him."

Ruhamah did not speak, but the horror grew in her eyes and on her white face. She took up a heavy riding-whip from the table, where she had left it the night before, and went out of the kitchen, leaving Mrs. Quiglin dissolved in tears.

Ruhamah went straight to her mother's bedroom, and saw Quiglin, who had made the merest beginning of his morning toilet, seated on the side of the bed. His bare, pudgy feet were on the floor; one arm was upraised to adjust his suspender, and his broad, fat back was unprotected save by a well-worn flannel shirt.

"You'll bite and bruise and beat my mother, will you!" cried Ruhamah, as she strongly laid the stinging lash across his shoulders. Twice—three times she sent it whistling along its way before the sodden wretch had realized the source of the red-hot furrows that seemed ploughing into his skin. He bellowed like a frantic bull. He threw out his hands, and the whip left its mark across his tender arm. Half blind with pain, he staggered to his feet, and beat out with both hands. But Ruhamah, wary as she was agile, saw a new point of attack, and laid the whip across his dumpy feet. When he stooped to guard his feet, the broadside of his back offered an irresistible field for operations, and a full half-dozen lively strokes left mementoes of their tender touch.

Bellowing with threats and curses, Quiglin threw himself upon the bed, and dragged the covers over him, Ruhamah still applying the whip to such parts of his body as were, for the moment, left exposed.

For two minutes, or it may have been five, Ruhamah wielded her instrument of justice without mercy or delay. Then her whip hand fell limply at her side.

"I think I can promise you, Mr. Quiglin, that my mother will never come into this room again while you are in it. If you want any breakfast, you'd better dress yourself, and come into the dining-room for it." And taking the jug of whiskey from the table, Ruhamah went back into the kitchen.

Seattle, Washington.

THREE SHORT WORDS

By DR. WASHINGTON MATHEWS

(As finished March 5, 1905)

THEY stand like elfin knights on guard at twilight,
 Dumb as the riddle of old Egypt's land,
 Yet they disclose a thousand tales to my light
 In three short words that all may understand.

In three short words upon their armor graven,
 A thousand tales of woe they tell to me—
 Of homebound ships that never reached their haven;
 But perished far upon the pathless sea.

Of homebound ships that saw the beacon flashing
 That welcomed them to port, but lo!
 Only to sink among the surges dashing
 In stormy midnight upon Norman's Woe;

Of shipwrecked mariners in frenzy clinging
 To broken spars that drift upon the main,
 Hearing on well-known shores the fog-bells ringing,
 Ringing on shores they ne'er shall tread again.

They tell of widows clad in sable, kneeling
 Among their sleeping babes and sobbing prayers;
 Of pallid orphans, their sad eyes revealing
 How small the comfort of a stranger's care.

They tell us of a star-eyed, gold-haired maiden
 With cheeks as rosy as the dawn of day,
 Who saw her lover's ship for India laden,
 Long years ago, sail gaily down the bay.

With snowy hair and eyes bedimmed with weeping,
 And withered cheeks, she gazes from the shore,
 Today, in vain her weary vigil keeping,
 Once more to see "his swift-winged Isedore."

Twilight has vanished and the moon is beaming.
 The harbor lanterns rock upon the wave,
 From towers twain on Thatcher's isle are gleaming
 The blessed lights that shine to guide and save.

But lights and music in the city merry
 Cannot dispel the thoughts ye bring to me,
 O stones that stand in Gloucester cemetery,
 Raised to the memory of the "Lost at Sea."

This posthumous poem by the lamented Mathews, "finished March 5, 1905; to be amended," was found among his papers by his scientific executor, Dr. Pliny E. Goddard, of the University of California.—Ed.

THE FRIEND OF THE LITTLE PEOPLE

By SHARLOT M. HALL



WHEN the San Ritos foothills broke away from the mountain range behind and rolled down into the desert, one lone cañon followed them, its rough walls of broken limestone cutting like a gray slash between the barren mesas.

The hills were barren; the cañon was all but lifeless; only here and there some giant cactus or starved wisp of greasewood found harsh footing and clung defiantly. No thread of friendly water blessed the bottom, but sand and boulders—sand and great slabs of fallen limestone from the ledges above. No trees, no flowers, no grass; only the white cliffs and rock-strewn channel and the gray desert beyond.

Yet it could not have been always so; for the great cliffs, where the cañon ended abruptly and the desert began, were honey-combed with strange caves and passages hollowed out in the soft stone by some forgotten race. Far up beyond reach of any foot, there were little walled doorways of long-deserted homes. What lay beyond those doors and down through the tunnel-like passages only the birds knew. But the woman who walked in the cañon below looked up and wondered.

The lime-pits were at the mouth of the cañon—deep holes dug in the earth, where her husband burned the broken rock into quicklime and hauled it away to the town beyond the desert. Those were the times when she wondered most; for in the long, hot days and silent nights she seemed alone on an unpeopled earth. There was nothing to fear; the gun he always left hung untouched over the bed. But somehow her footsteps had a strange, awesome sound when there was no other ear within half a hundred miles to hear them. The days when he came back were feast days. He brought wood for the lime-pits and water to fill the barrels by the door, and the Mexican helper came with him. She could see them coming far out across the desert, and when they were at a certain hill she ran to the house and cooked till every dish was full.

While they were eating, she talked and laughed and asked questions about the trip, and the town with the happy excitement of a child; but he was mostly too busy to answer, for there was more lime to burn. Then she walked in the cañon with the collie. The collie could not talk, but his beautiful eyes were full of joy in the reunion. He never forgot the months when they two had "kept camp" together, before her husband discovered that the sick, friend-

less tramp she had nursed was the best wagon-dog in the desert. After that he had to go with the lime-wagons, and see that the horses did not stray at night, and do half the other things that the Mexican "swamper" had done before; but he did it sullenly, with his heart back in the cañon.

The winter was better. It was cool at least, and the wild pigeons came down out of the mountains, where their summer nests were full of snow, and stayed in the cañon. Daily they went for water to some spring far up in the hills and came back to her with a whirr and flutter of beautiful wings, and soft friendly cooing. She begged her husband not to shoot them; but mountain pigeons are rare eating, and, more often than not, there was a heap of gray-blue feathers behind the cabin.

When the spring came, she dug a little spot of earth by the door and planted three squash seeds. Her husband reminded her that there was no water to waste on such things, but she hoarded every drop that had been thrown away before. When the big soft leaves unfolded, she would have gone thirsty herself rather than stint them.

And the first blossom that opened its wide, pale-yellow cup was not a squash blossom, but all her life unfolded. Down in its heart she saw her childhood, her girlhood, the stony farm, the green woods—the desert, the silence were forgotten. She knelt and kissed the petals; then she whispered a swift secret deep into the cup and rose with a hurried glance, as if some unseen listener might have heard.

After that she sat by the growing vine and sewed, or pressed the green leaves against her eyes, and dreamed. Sometimes her husband was at home longer, and she tried to tell him the dreams; but he was busy—dreams would not feed another mouth.

An old Mexican woman came from the town to stay with her, but she never quite understood the rest. Only that for a few hours she had lain very still, with soft, warm, breathing lips against her breast, and eyes like deep violets that opened and looked into her own, and hands that were like the arbutus blossoms she had gathered long ago clasped in hers.

Then it was dark—and the lips were cold—and the little hands would not move. When she woke again, her arms were empty. The old woman told her that she had "said a prayer over the poor *angelito*. It would go to heaven undoubtedly! It was so very little, and the Devil had already more grown people than he could find work for."

Her husband told her, before he went away with the lime wagons. He led her to the door and pointed over to the foot of the cliff under the walled doorways. The old woman went back to town with him; but the collie growled and showed his long wolf-teeth, when the swamper told him to get on the wagon.

When they were gone, he came and laid his head in the woman's lap and his eyes were full of unshed tears—but hers were bright. They had said at the cliff, the foot of the cliff; but it was not there. People had lived up in those doorways above—mothers and little children. If she could ask them, they would know.

The collie followed uneasily. There was a little ravine, a mere break in the face of the cliff, and half-way up it she came to a walled entrance. She pushed the stones aside and crawled in; it led far back; there were many little round rooms with long, tunnel-like doorways through which she crept. The bed-places were piled with dry grass and mats woven of bark; and earthen dishes stood in the cold ashes of the cooking-fires.

She came out, at last, in a little room on the very edge of the cliff. It overhung the desert like a swallow's nest, and there was a window-like opening with a stone seat below. The walls had been daubed with mud to fill the cracks. She found finger-nail marks in the long-dried clay; and—Oh, wonder!—on the mud hearth the tiny imprint of a baby's foot. She touched it gently with her fingers; then she stooped and pressed her lips where the little heel that was now dust had rested, untold centuries ago. Had it, too, slipped from the mother's arms and gone away in the dark?

She sat down on the stone seat, and the collie pushed his head into her hand and watched. Her eyes were closed, but through a door beyond the hearth, little brown women were trooping. They smiled and touched her cheeks with their hands; and one of them, lifting a cradle of woven grass on her back, showed a dark-faced baby smiling in its sleep.

Their soft speech seemed like the twitter of eave-swallows in her ears. Too soon they went away through the door; and when she would have followed, they pushed her back—very gently. Through the window-hole the desert looked far and strange, with the sunset light across it, and the swallows were chirping sleepily in the rocks outside, or flitting like brown shadows from nest to nest.

She told her husband about it, when he came home. While the lime was burning, he crawled into some of the rooms; but there was nothing to see but swarms of bats and the grass beds and earthen dishes. So he forgot what she had said, and only remembered when he came back from town, and the things she had used to do were not done.

She smiled strangely, like a child wakened from a dream. She was so sorry. The Little People in the cliff had called her, and she had stayed too long. She never forgot the work again, and, always, when the lime was loaded, she made the collie get up on the wagon, though he sat at the end of the load and looked back as far as she could see.

But the Mexican swamper wanted to stay in town. He said she had bewitched the dog till he was a snarling devil; and that she must indeed talk with the spirits of the dead who had lived in the caves—else why did her eyes shine like the candles on the altar on All Souls' night?

Her husband called the swamper a fool; but he was not easy himself. It was not good to live with a woman who saw people who had been dead a thousand years, perhaps. It gave one a queer feeling when she said she wasn't lonesome any more because the Little People were with her, and that now they told her not to cry and watch for the wagons. The dinners, too, were not as they used to be. If it kept on—a man could only bear so much. He told her of the place where people were shut up always for thinking strange things.

He did not take lime across the desert, that last trip. She tried again to tell him of the gentle little friends whose voices were like the swallows, and who came out of the doorways and called her when she walked in the cañon. He was afraid of the light in her eyes and tried to coax her to get in the wagon; but when she would not, he drove away as if he was glad to see the distance widen between them.

He was angry, she knew, but he would come back. Feverishly she put everything in order; the poor cabin had not looked so home-like for months. She opened a box, on whose lid the dust had settled thick, and laid out a tiny white dress, smoothing it tenderly. Then she cooked the dinner; if it was all ready, he would not want her to go.

When the wagon came in sight, there was a stranger on the seat beside her husband. She caught the little dress in her arms and slipped into the cañon. Her heart was fluttering like a caught bird when she climbed through the last doorway and sank on the seat by the lookout. The team was still half a mile away. They had not seen her flight.

She leaned back against the dark stone and a cool wind fanned her cheeks. Her eyes closed and the little dress fell from her hand. Soft, pattering feet glided over the floor; the door beyond the hearth was open and the little brown women came through, pushing each other in their haste. "Come away, come away, friend of the Little People," they sang; and gently one took her hand and led her into the circle, moving with light, swaying steps to the door.

"Come away, come away!" and, as they sang, the dark walls dissolved into green mist. No! it was leaves—the leaves of trees arching over a grassy pathway. There was a faint, sweet, earthy fragrance, as in the spring woods after rain. She could have gone

on forever, just for that soft, rare touch of grass under her feet; but the way widened and under the trees brown, gentle women beckoned her.

One gave a quick, sweet call like the note of a bird—and a very little child, with hair like sunshine, flew toward the woman who came, and nestled in her bosom. Its eyes were like violets and the little hands were like arbutus blossoms in the snow. The soft chant went on, but she sank in the grass, lulled into a deep, happy sleep with the child on her breast.

* * * * *

They searched the house almost at a glance and turned to the cañon, where the smooth-worn trail led them to the walled door. They went in through the many rooms to the nest-like one at the top of the cliff. The stranger went first and held up his candle as he entered. "She is here," he called; then he went over and lifted the wind-blown hair that shaded her face. The Little People had saved their friend.

Dewey, Arizona.

EARNING A LIVING AT STANFORD

By *KARL A. BICKEL*



VERY August hundreds of young men and women, who, the May previous, had proudly stood up among their classmates and received their high school diploma, begin to prepare to go to college. Yearly their numbers grow larger. They come from the little white-washed ranch-houses that are tucked away in the valleys of the mountains; from homes in the wheatfields of the broad San Joaquin; from the borders of the desert in Inyo, and from out of the shadow of the forest in the valley of the Columbia river. They register from homes on the hills of San Francisco, from the broad avenues of Los Angeles, from Portland, from Seattle, from New York and from Yokohama. When they reach the campus, they all ask the same question, "Where is the registrar's office?" At that point the divergence begins. Those who have a reservoir of cash, in a father's pocket or elsewhere, on which they can draw, go to the post-office and ask for their mail; the others go to the Employment Bureau and ask for work.

The student employment bureau at Stanford is owned and managed by Stanford undergraduates. Out of the sixteen hundred students enrolled, it is estimated that about two hundred are either wholly or partially dependent upon the employment bureau for their means of subsistence. Since the opening of the present semester, a little less than five thousand dollars has been paid out by employers

of student help at Stanford and Palo Alto. All of these positions have been given out by the Employment Bureau.

Fundamentally, the economic problem on the campus is no different from that on Market street. The ambition of the moneyless student is to gain the greatest amount of return for his labor with the minimum of pain. The lines of division are sharply drawn. The campus has its aristocracy, as well as its democracy, of labor. The social advantage accruing to the laborer of the white-collar variety, over him of the blue-flannel-shirt, is recognized; and the competition among the members of the second class, to secure a footing in the first, is sharp. A few months ago it was rumored that the correspondent of a San Francisco daily was about to leave college. Within one week a hundred and eight applications were filed for the position.

The student employment bureau at Stanford is an auxiliary organization of the Stanford Young Men's Christian Association. The bureau is about four years old, and has always been in charge of undergraduates. H. F. Henderson, of Santa Ana, Cal., is the present superintendent. He spends from four to six hours daily in the office of the Bureau, and is busy every moment of that time. For this service he receives a yearly salary, which is sufficient to cover his living expenses.

The work is varied and interesting. It does not cease with the closing of the school year, but continues during the summer months, when the office is flooded with letters from prospective students containing inquiries as to the possibilities of obtaining work. The letters come from all over the world. A student in India asks for information in regard to obtaining work as a draughtsman. Another in Maine writes that he is an experienced slate-roofer. A New Yorker has fine recommendations as a linotyper; a Louisiana student is a tinsmith. "Can you supply us with work?" is the burden of their song.

All of these letters are answered. "Work," replies Henderson, "can always be had in time. No student should come to college, however, without at least enough money to carry him through one semester." At times this warning is disregarded. Prospective students, rich in ambition and hope, but with scarcely enough money to pay for their next meal, appear at the office. They want work and want it in a hurry. The Bureau rarely fails the test. Work of some kind, providing board and room, is secured. With the question of actual necessities settled, an extra hour or two of employment is arranged for, and if the metal in the man's heart will stand the wear and his head stay clear for the long night-hours of study, he will be able to remain in college. Poverty, however, is as grinding on the campus as off, and the contact between the well-to-do and the

stricken is so close that the sting is, to a sensitive nature, even sharper.

The rush at the little office on the campus begins about August 20th of each year. At that time the labor market is "easy;" the demand usually leads the supply. Restaurants want waiters. The fraternity and sorority houses require help in their house-cleaning operations. The student transfer-company needs men. The faculty members want gardeners and men for odd jobs about their houses. Waiters are in demand at the Stanford Inn and at Roble Hall; tutors are required by delinquent sub-freshmen. A notice is left at the office. In an hour the place is assigned.

In the month of September twenty men were set to work beating carpets and cleaning rugs. Four Japanese students were provided with positions as cooks. Waiters and dishwashers were placed in all of the Palo Alto hotels and restaurants. Stenographers were given work. Twenty-six permanent positions were given out, providing board and room.

Superintendent Henderson has worked out a wage scale that has been generally accepted on the campus and in the college town. It runs as follows:

Three hours work per day—table-board.

Four hours work per day—table-board and room.

Work all day Saturday—twenty cents per hour.

Work half day or less—twenty-five cents an hour.

This scale provides only for those in the unskilled division.

In the skilled division, the men as a rule dictate their own terms, which are usually based on the demand or on custom. Tutors average a dollar an hour. In certain studies this rate is higher. Special "cramming" for an examination has been known to be let out on contract, the tutor taking a flat sum to see the candidate through the mental trial.

In the economic world at Stanford there are no Captains of industry. The opportunity is lacking. The members of the aristocracy of labor receive good salaries from the students' point of view, but there are no real "grafts."

The white-collar division of the college laborers might be divided as follows in relation to the financial returns:

- (1) Tutors.
- (2) College news correspondents.
- (3) Assistant instructors.
- (4) Laundry agents and business representatives.
- (5) Stenographers.
- (6) Library assistants.
- (7) Club-house managers.

This list does not include men who hold elective positions, such as

student-body treasurer, editor of the *Daily Palo Alto*, editor and business manager of the *Sequoia*, editor and business manager of the *Chaparral*, and editor and business manager of the *Quad*. Excepting the position of student-body treasurer and editor of the daily, these offices have no fixed remuneration. The returns depend on the business ability and talent of the men. The salary of the student-body treasurer is \$100 per month. With this single exception the salaries of the men in the above positions range from twenty-five to sixty dollars per month. Recently a newspaper correspondent combined his position with that of the editorship of the "Daily," and for one velvety semester he drew the comparatively princely income of \$140 per month. In certain periods of newspaper excitement, the newspaper correspondents reap rich harvests. Library assistants earn twelve and a half cents per hour. Club-house managers usually earn their board and room and eight to ten dollars per month.

Positions in this division of college work are rarely in the gift of the employment bureau. They are usually held by small groups of students in close corporation, and are passed down from one to another.

"Positions such as library assistants and newspaper correspondentships are controlled largely by the fraternities," declares Superintendent Henderson. "This style of work does not interfere with the social position of the men employed, and as they assure a certain income, they are valuable assets in any house." Some of the correspondentships have been held within the lines of a single fraternity for years, the older men regularly educating a freshman to take up the work, when his turn came.

"There are positions of value in the gift of the student-body treasurer," states Henderson, "but the Y. M. C. A. will not go into the whirl of college politics to secure a lien on them. The organization did this several years ago, and as a result the Y. M. C. A. fell into the control of a group of college politicians and became rotten to the core."

No particular effort is made by the management of the employment bureau to supply athletes with positions, and no preference is given to such men. When a specific case is brought to the attention of the bureau, it will exert itself to procure work for the man which will not interfere with his training; but no sinecures are held open and saved in order to be offered as inducements to possible athletic stars.

"The men who work about college," avers Henderson, "and by 'work' I mean manual labor like dish washing, waiting on table, or cleaning house, suffer the same social restrictions here as they would out in the world. There are several reasons for this. One is that the average student is sensitive about his work, especially if it is of

the kitchen-maid variety, and refuses to go out. The other and more probable reason is that he is too tired and too busy.

"Between man and man at Stanford, there is no line drawn between the working student and the most pampered son of a rich father. In fact, as far as the student body as a whole is concerned, absolutely no distinction is drawn. The student-body yearly elects to its highest offices men who toil daily for the means which enable them to remain in college."

Stanford is essentially a democratic school. The snob spirit is there, as it is in any community of sixteen hundred young persons; but it is practically smothered under the weight of the healthier ideals of the vast majority. The guardianship of Stanford spirit and honor is in a large way entrusted to the men who work. Constantly grappling with the problems of their own existence, they are better prepared to solve the problems that confront the student-body.

It is this spirit of recognition of real worth, over the artificial standards dictated by money and social position that prevail in some universities, which compels the men taking part in the management of Stanford's athletic activities to be clean to the bone. Any hint of cancerous corruption, like that which has eaten out the element of decency in the athletic activities of the universities of the middle west, would be instantly subject to the knife of universal disapproval. The men who work realize the absolute necessity of the policy of the "square deal," and as long as they occupy a position of influence in the Stanford student-body, purity will be the watchword.

Stanford University.

IN THE SPRING

By LAURA T. KENT

I HAD guessed it before! Now I know it!
 Glad Earth, you love me—you love me!
 I feel the truth in the air today—
 The blue heavens bending above me
 Tell me, "Earth loves thee!"

Was there ever a creature so lavished upon?
 Mine—*mine* are gifts without measure—
 The golden sun flooded forth on the world,
 And the Springtime with all of its treasure.

And mine is this breeze—breeze was never so sweet—
 'Tis the very breath of the heaven,
 And mine are the mad, glad songs of the birds,
 And the fragrance the flowers have given.

Yes, mine are the joys of the world today,
 And the life about me—above me—
 Whispers and sings in the joy of my heart,
 "The mother of all life loves thee!
 Loves thee—and loves thee!"

Claremont, Cal.

OUR ROSEBUSH NEIGHBORS

By ANNA WARNER



THEY had already built their house and gone to housekeeping before we were aware that they were our neighbors, and it was then only by accident that we discovered them.

Sitting on the porch late one afternoon we were startled by a sudden rush of whirring wings and a humming-bird flew past and into the Lady Banksia rose-bush that ran riot over our porch and bow-window. Looking up, we soon discovered the snug little home to which this smallest and daintiest member of the bird family was winging her way in such eager haste.

No larger than half a hen's egg-shell it hung above us, woven of moss and bark so as to be hardly distinguishable from the branch to which it was so cleverly attached. In fact, on looking away from it, it was not easy to locate it a second time.

How long the little mother had watched us from her home and given us no sign we do not know, but she and her mate had selected the rose-bush site and built their house after the most approved fashion of "hummers," before her hurried homeward flight drew our attention to her.

There she sat looking down at us as if asking us not to follow up our discovery with bird's-nest burglary after the non-approved fashion of human beings. She need not have feared. We love the birds, and were more than glad to have had our rose-bush selected for bird housekeeping by this most elusive of feathered friends described so vividly by Emily Dickinson in her dainty poem as:—

"A route of evanescence,
With a revolving wheel,
A resonance of emerald,
A rush of cochineal"—

Even more than the selection of the site and the building of the home had taken place while we were ignorant of all proceedings; for, going out on the top of the bow-window and getting a view of the inside of the nest that we could not obtain from below, we saw two eggs on the downy lining of the nest—eggs so small we could hardly believe that they *were* eggs. They were about the size of beans.

From the day of our discovery, our interest centered in this little home. What good fortune was ours in having this opportunity of observing a humming-bird's domestic arrangements at such close range! Once in a while we caught sight of the male bird resplendent in his ruby-colored neckwear, but evidently the cares of the

household sat very lightly upon his shoulders, and his weight of responsibility was not a heavy one, and it was the little mother with whom we became more intimately acquainted. She was disposed to be fairly friendly, flying quite near us and uttering a little cry, half timid, half defiant. Most of the time she sat patiently on the nest, covering the diminutive eggs with the warmth of her lovely breast, awaiting the day when her care should be rewarded by baby bird-life in her little home.

Each day we took a view from the top of the window and at last we were repaid for our climb by seeing, in place of the eggs, what seemed to be a pair of very scrawny bumble-bees. The greatest stretch of the imagination could not enable us to see a future humming-bird with daintily formed body, graceful motions and exquisite coloring, in these ugly mites; but to the mother they were evidently beautiful, and her seeming pride and watchful care could not have been surpassed had they been dressed in the most gorgeous of bird colors and perfect in every way—so surely does the mother heart, wherever found, see glories all unrevealed to those outside the sacred circle of Motherhood.

In and out of the rose-bush she flew; out to find baby food, and in to administer it, which she did by standing on the edge of the nest and running her long slender bill down first one small throat and then the other. It really seemed as if she would spear clear through their little bodies, as she made an up-and-down motion that was more suggestive of ending life than of saving it. How the birds received any nourishment in this way I do not, to this day, understand. By looking out of the parlor window we could see this process many times a day, and very interesting we found it. The mother seemed to have very little fear of her human spectators.

Thus things had been going on smoothly for a couple of weeks or more after the birds were hatched, when about eight o'clock one evening, as we were all sitting indoors, we heard a kind of splitting noise and then a heavy thud as if something had fallen on the porch. We knew in a moment what had happened. The railing around the top of the porch, which was old and had become loose, had broken and the rose-bush which climbed over it had fallen with it to the steps below. Our first thought was for the bird's nest, and more than one of us exclaimed:

"The humming-birds are killed!"

Taking a lamp, we went to investigate. There was the rose-bush blocking the front steps, and from the porch we could not see what the damage to the nest had been. Had all these days of patient waiting and tender solicitude on the part of the mother, and all of our pleasure in watching her, ended in the tragedy of an empty nest and a grieving mother heart?

Going to the parlor window we looked anxiously out. No! Strange as it may seem, the nest, although tipped over on one side, and much lower than at first, was still unbroken and secure, and the baby occupants unharmed.

We all breathed a sigh of relief and began to devise a way by which we could get the nest righted, so there would be less danger of the birds falling out, and into a better place, where the mother could reach it more easily. She had flown off in terror.

Taking some string, we fastened one end to the branch that held the nest, and drawing it up until the nest was once more in the proper position, we tied the other end to a branch very close to the house, thus bringing the nest so near that we could easily touch it by leaning a little way out of the window. Whether the mother bird would be brave enough to venture so near we could not tell, but we trusted to her mother love to give her courage. She must have found the nest again that night, as the birds were all right in the morning, and if they had been left alone all night they would have shown the effect of it, for it was windy and cold. As we stood watching them the next morning, she came flying home. She seemed a little puzzled, not yet being used to the change, and fluttered outside a little before daring to enter by the new opening, but finally she came, and the feeding process went on just the same as if the accident had not happened.

We were obliged to stand a little back in the room, as the nest was now so near the window she could see us easily, but in a few days we could come close, and she was not afraid.

One day, as we were out on the front lawn under the pepper trees, she came flying almost in our faces. Darting back and forth so quickly that our eyes could scarcely follow her, she uttered that little defiant cry which we interpreted immediately. She said: "I like you people fairly well on the whole, and I am much obliged to you for repairing the damages to my home, but I don't want any trifling with those babies of mine now they are where you can touch them." With this bit of advice she flew into the rose-bush and perhaps she gave some timely warning to her children about being too familiar with those great monsters who looked at them so often from the window.

The morning after the accident the gardener came, thinking to trim up the rose-bush and make our front steps once more passable. We allowed him to cut away enough of the bush to make a passage-way, but when it came to trimming and tying it up, it could not be done without disturbing the nest so much that we gave orders that it must not be done at all, and until the birds had flown the bush remained as it was.

Every day the occupants of the nest looked less like bumble-bees

and more like humming-birds, but once more we thought that everything would end tragically.

One day we missed the little mother, and though we went often to the window we did not see her feeding the babies as we had always before seen her many times a day.

The next day it was the same, and we feared she had fallen a victim to a cat or to an unthinking boy's slingshot. I say "unthinking" not "cruel," for had any boy thought, for even a moment, about a possible little home and some hungry, waiting baby birds, I am sure he would never have been cruel enough to have caused their waiting to end in starvation.

In the absence of the mother we decided to adopt the little ones. The first thing was to feed them. We mixed sugar and water until of the consistency of thin honey, and, taking a broom-splinter for a spoon, began operations.

No fear of us on their part. How eagerly they took the sweetened drop! First one and then the other. One little fellow acted like a naughty child, and if we tried to give him more after he thought he had had enough he would shake himself, jerk away his head, and act as indignant as such a small atom could.

It did not take them long to learn to stretch their necks and open their mouths every time we appeared with the broom-splinter, and we could touch them without alarming them. The only thing we feared was that the mother bird, if she did return, would desert them; as we had been told birds would do this if their young were disturbed and handled. For two or three days we fed our charges, when suddenly the mother appeared again upon the scene. She seemed delighted to be back, and during the first day it seemed as if she did nothing but feed those children. Every time we went to the window we could see her diligently at work and always with that funny "pumping" motion with her bill. We left matters in her care after this. It was always a mystery where she had been. It seems as if she must have brooded the birds at night to have them keep in such good condition, but certain it is, we did not catch a glimpse of her for all that long time.

Certainly these baby birds, like the proverbial "birds in the nest," must have "agreed"—for with the slightest inclination on the part of either one to disagree, that tiny home would have been minus an occupant, since with every day they were growing larger, while the nest gave no sign of stretching to accommodate them. The most perilous time was when they took their daily exercise. First, one would wriggle about until he worked his way to the edge of the nest on his side, where he would stand and flutter his bits of wings as rapidly as he could, with much the motion an old bird gives when hovering over a flower. After a few seconds he would fold them and very carefully squeeze himself back into the nest beside his brother, who looked rather uncertain whether he was going to stay in the nest during the performance or not. No sardines were ever

packed more closely in their box than these two fledgelings in their nest.

Then it would be the other's turn to try his wings and the first one's turn to look a little anxious about his safety during the operation. Many times a day we saw them go through their daily calisthenics.

The mother made no pretense of occupying the nest. She was literally "turned out of house and home" by her growing children, and though she sometimes perched on the edge of the nest, most of the time she was on some near-by branch, or on the telephone wire, sunning herself, when she was at home and not feeding them.

Each day they exercised oftener, and it soon became apparent that it was entering their heads that there was a world outside which it was their duty to explore, and that their present quarters were decidedly too cramped. But how long it took them to gain courage for the first attempt! We were afraid that they would fall to the ground in learning to fly and have small chance of life, owing to the number of cats about the place. But we did not know the way of humming-birds until we learned it from our rose-bush neighbors.

We expected now each day to find that one or both birds would be gone when next we looked out of the window, but we hardly expected to be fortunate enough to be on the spot at the moment of departure. Each day they grew more courageous. The wings were fluttered faster and longer, and would be almost upon the point of bearing away their dainty burdens, but it was evidently a serious proposition—this first daring effort to fly.

It was not my good fortune to see the actual leave-taking, but another member of the family was on the spot at the exact moment when one screwed his courage to the flying point and left the nest.

No need of our foreboding about cats, for was he not a humming-bird? and do we often, if ever, see a humming-bird on the ground?

Straight into the pepper tree he flew, and such a mite he looked as he settled with commendable pride and satisfaction upon one of its branches. There the mother found him, and after that, looked after him there, as he never returned to the rose-bush. She fed him in the tree and his brother in the nest, as it was not until later that the other decided to leave home. Perhaps he wished to enjoy the comfort of a nest all to himself after the squeezing that had been inevitable. At all events, he stayed there two or three days longer, and then he, too, sought the branches of the pepper tree, where he flew unobserved.

We don't know whether or not the father visited his family. He probably kept track of them, but we saw him only once or twice.

For a few days more, the mother and babies lived in the pepper tree. We could see her feeding them, and then one day we missed them, and all that was left was the little empty nest in the rose-bush. This we saved. The gardener was allowed to make our porch look once more presentable. The rose-bush was cut back and trimmed, and although it could now deserve only words of praise as to its appearance, it has never looked so beautiful to us as when it sheltered our humming-bird neighbors.

Oakland, Cal.

A RUFFLED PACIFIC

By FLORENCE NIGHTINGALE HAMILTON



THANK you, Jessie, I will take another cup of coffee, and one more of your delectable rolls. Such placidity on the verge of an ocean voyage is remarkable—quite a relief from the wonted confusion attending a woman's departure on a far less important trip. My trunk off yesterday, only a small grip to carry—No, not a suit case. One must hire a porter by the year, to travel with one of those. Thank you, I don't need to take yours. For the good of the general public, there should be published once a month an article on "Traveling Made Comfortable." It still lacks fifteen minutes of train time, and no confusion, no hurry. Otie and I can walk as decently to the station as if out for a day's shopping. I refuse to hurry—I refuse to worry.

The amaryllis bulbs for cousin Susie? No, I forgot to put them in my trunk. They will go nicely in my grip, I think. Full already? Perhaps you had better lend me your suit case. It's too shallow. Never mind; I'll just transfer the contents from my grip, and put them in that. Can't you close it? Otie, where are the roses you promised me? Will you please gather them now? That's a dear. Now, Jessie, you press this side while I snap the clasp. There! Did Annie prepare the luncheon of dried beef and wafers? That's fortunate. Thank you, ever so much, Otie. You have picked the prettiest in the garden.

Are you watching for the local train, little girlies? Are you sure it hasn't gone? There is plenty of time while that is returning. Let's walk on, Otie, to make sure. It's vulgar to hurry. Once I saw a woman, panting and florid—Where's my purse? Have any of you seen it? Look on the table—on the writing-desk under the papers—all look—anywhere but at me. Of course my ticket was in it. Don't waste time running up stairs; it isn't there. I've looked there a dozen times already. Found it, Jessie? On my dressing-table? You sweet girl! No, Otie, you must let me carry the suit-case and the luncheon. You may carry the grip and the flowers. Where's my umbrella? Look up stairs. You will be glad to have me gone. Good-bye, dearies. Throw me a kiss. Well, hurry, then. I mustn't miss my train. I have to go, you know. Good-bye, Jessie. We'll have a leisurely half hour at the wharf, to recover from the agitation about the ticket.

The train at last. What? Is it going down? My stars! Then we have missed it. I won't wait four days for another steamer. I'll emulate time and tide. I shall go on this steamer. Take

the other train, to be sure. I know it's slow, but if it is not late we shall have ten minutes to reach Broadway Wharf. It's our only chance. I shall trust to nothing now but my good watch. So kind of you, Jessie, to help me. I've had a lovely visit. Yes, I'll come again soon. Good-bye.

Here we must do the waiting. Just our luck to have this train behind time. It's late already, and there are five more stations. At last! As haste will avail nothing now, we'll settle ourselves and regain our composure. The train is slower than usual to-day. Why did it have to be today? Now we are side-tracked, just to lose time.

We're really on the boat. That's one comfort. There's Mrs. Londonderry, reading a book. Let's pretend we don't see her, because we never can excuse ourselves to hurry off the boat. There is nothing we can do but sit still. Good luck! There's a telephone. I'll speak to Captain Merrill, and ask him to hold the ship—tell him a "matter of great importance." Hello, Central! Hello! Central, hello!! Hello!! Out of order, as usual. Hello!! Central!!! "Not to be used except when in the slip." How was I to know that? What are those people laughing at? Some people would laugh at their own funerals. Perhaps it is funny when you are not missing a boat.

Mrs. Londonderry sees us, and is holding out her hand. How do you do, Mrs. Londonderry? I'm delighted to see you. Yes, pretty well, thank you. No, I haven't read it. Yes—yes—oh, to be sure—about the Lost Tribes returning to Jerusalem. It must be very interesting. Yes, if it won't tire you to read. Very good, indeed. Thank you. I should like to hear more of it some time. Very worthy people. I hope they may. I haven't the heart to wish any one disappointed of reaching his goal. Oh, for Broadway No. 2! Tell her, Otie, that we must go. We're rather anxious to reach the pier in time for the Santa Rosa. No. I'm going myself—that is, if I am not too late. Not for the world, Mrs. Londonderry—your poor rheumatism, you know. Good-bye. Thank heaven! Now for the lower deck, to be the first off the boat.

Did you ever see so many trunks and bicycles? They always have the right of way. Passengers travel only to accommodate expressmen—give them some excuse for being. One minute late. Still nine minutes to outdo the runner at Marathon. This interminable exit! Here, boy, don't you want to earn a quarter by carrying these grips to the steamer Santa Rosa? Keep in sight of us, if you can. You are scattering the flowers, Otie. Don't stop to pick them up. There goes my handkerchief, too, but we won't mind such trifles. It isn't *easy* to run over these

slippery cobbles, is it? The mist doesn't improve matters. Everybody seems to be coming this way. Can she have started? This is only Number One. Still another pier.

Joy! I see the prow. Let's run faster. Can you run any farther? I wonder what's become of my trunk. There's an expressman guarding a lone something. It's mine. Tell them "One trunk more." Too late to check it? How will I ever get it again? Yes, purser, I'll go aboard as soon as this man gives me back my ticket. Yes, you did. Where is it, then? In my hand? So it is. Pardon me. Only a dollar! Otie. I should willingly have given him five.

Do, Captain, let him carry the trunk up the gang plank. It isn't his fault. Boy, you follow with the other baggage. Otie, tell everybody good-bye for me. I'll stand by the first column on the upper deck, and you be sure to answer my signals. Give me your handkerchief, and I'll watch your white plume. Poor thing! It does look rather bedraggled—no longer a thing of beauty. Leave it at the cleaner's, and send the bill to me. Yes, Captain, I'm coming. I can't walk any faster—the gang-plank wabbles. Saved! Boy, here's your quarter—catch it. Good-bye, Otie, dear. So good of you to help me. Tell Jessie that you left me as composed as I was at breakfast time—almost. Good-bye!

Nevada City, Cal.

LONGINGS

By H. DUMONT

THE hills call, and beseeching voices come
 From fields afar, and one can hear in dream
 The distant, drowsy murmur of a stream,
 Even in day when wakeful by the hum
 Of tragic city voices. O for some
 Sweet, magic potion, potently supreme,
 Whose power might a precious sense redeem,
 Which cold imprisonment hath rendered numb.

Hopeless, the longing eye turns toward a place
 Where sunshine sweeps the fields with golden broom,
 And hills laugh unto heaven with youthful glee.
 An old wall grown with roses in full bloom,
 Which lay their tender perfume on the face,
 Is ample shelter for the heart that's free.

San Francisco, Cal.

THE FIRST CALIFORNIA NEWSPAPER

IV.

Larkin's account of his adventures while a prisoner and his final release.

BY W. J. HANDY.

THOMAS O. LARKIN was born in Massachusetts in 1802. He came to California, via the Sandwich Islands, in a vessel from Boston, sent out in search of trade in hides, tallow, etc. Arriving at Monterey in April, 1832, he found his brother, who had preceded him, and together they entered into business.

Mr. Larkin soon learned to speak Spanish, and gained the good will of all with whom he came into contact. The influence thus gained was of great service to the American officers who came later.

In 1833 he was married on board a vessel then on the coast under the American flag, by John C. Jones, the United States Consul for the Sandwich Islands, who was a passenger on board. The Mission Padres refused to perform the ceremony unless both parties would become Catholics. Mrs. Larkin had come from Massachusetts to meet her future husband, via Cape Horn, on a sailing vessel, and was the first lady from the United States who settled in California. Their children were the first of American birth (paternal and maternal) born in this territory. In 1844 Larkin was appointed United States Consul at Monterey, the California capital, and was the first and last one holding that office in California.

The following is from his own pen, and was first printed in the "Californian," February 27, 1847:

On the 15th of November last (1846), from information received of the sickness of my family in San Francisco, where they had gone to escape the expected revolutionary troubles in Monterey, and from letters from Captain Montgomery requesting my presence respecting some stores for the Portsmouth, I, with one servant, left Monterey for San Francisco, knowing that for one month no California forces had been within 100 miles of us. That night I put up at the house of Don Joaquin Gomez, sending my servant to San Juan, 6 miles beyond, to request Mr. J. Thompson to wait for me, as he was on the road for San Francisco. About mid-night I was aroused from my bed by the noise made by 10 Californians (unshaved and unwashed for months, being in the mountains) rushing into my chamber, with guns, swords, pistols and torches in their hands. I needed but a moment to be fully awaked, and knew my exact situation. The first cry was, "Como Estamos Señor Consul." "Vamos Señor Larkin."

At my bedside was several letters that I had re-read before going to bed. On dressing myself, while my captors were saddling my horse, I assorted these letters and put them into different pockets: after taking my own time to dress and arrange my valise, we started and rode to a camp of 70 or 80 men on the banks of the Monterey River. There each officer and principal person passed the time of night with me, and a remark or two. The Commandante took me to one side and informed me that his people demanded that I should write to San Juan to the American Captain of Volunteers, saying that I had left Monterey to visit the distressed families at the River, and request or demand that twenty men should meet me before daylight, that I could station them before my return to town, in such a manner to protect these families. The natives he said were determined on the act being accomplished. I at first endeavored to reason with him on the infamy and impossibility of the deed, but to no avail, he said my life depended on

the letter, that he was willing, nay anxious to preserve my life as an old acquaintance, but could not control his people in this affair—from argument I came to refusal. He advised, urged and demanded. At this period an officer called out * * * * (come here those who are named). I then said, in this manner you may act and threaten night by night! My life on such conditions is of no value or pleasure to me. I am by accident your prisoner, make the most of me, write I will not, shoot as you see fit, and I am done talking on the subject. I left him and went to the camp fire. For a half hour or more there was some commotion around me when all commotion subsided.

At daylight we started with a flag flying and a drum beating and travelled 8 or 10 miles when we camped in a low valley or hollow. There they caught with a lasso 3 or 4 head of cattle belonging to the nearest Rancho and breakfasted.

The whole day outriders rode in every direction, on the lookout to see if the American company left the Mission of San Juan or if Lieut. Col. Fremont left Monterey. They also rode to all neighboring Ranchos and forced the Rancheros to join them. At one o'clock they began their march with 130 men (and 200 or 300 extra horses). They marched in four single files occupying four positions, myself under charge of an officer and 5 or 6 men in the center. Their plan of operation for the night was to rush into San Juan 10 or 15 men, who were to retreat, under the expectation that the Americans would follow them, in which case the whole party outside was to cut them off. I was to be retained in the centre of the party. Ten miles South of the Mission they encountered 8 or 10 Americans a part of whom retreated in a low ground covered with oaks. The others returned to the house of Señor Gomez, to alarm their companions. For over one hour the 130 Californians surrounded the 6 or 8 Americans, occasionally giving and receiving shots. During this period I was several times requested, then commanded to go among the oaks and bring out my countrymen, and offer them their lives on giving up their rifles and persons. I at last offered to go and call them out on condition that they should return to San Juan or go to Monterey, with their arms. This being refused I told the Commandante to go in and bring them out himself. When an officer crept on his hands and knees in the grass to have a fair view and received a ball in his body and was carried off on a horse by a companion: while they were consulting how this could be done, 50 Americans came down on them, which caused an action of about 20 or 30 minutes: 30 or 40 of the natives leaving the field at the first fire, they remained drawn off by fives and tens until the Americans had the field to themselves. Both parties remained within a mile of each other until dark. Our countrymen lost Capt Burrows of St. Louis Misso, Capt Forster and two others, with 2 or 3 wounded. The Californians lost two of their countrymen and Jose Garcia of Val Chili with seven wounded. At the beginning of the action I had my own saddle and horse. The horse was supposed to be too swift a one for me to have, when so near my countrymen, so the officer in charge of me exchanged with me. His Seargent seeing the one given me was better than his, again made an exchange, a soldier followed his example, until I had the worst of saddles and a horse hardly able to walk. During the action a Rancho seeing a relation shot down, came full speed towards me saying, "this man caused it all." He levelled his gun when within 30 yards. At that moment I backed my horse and put myself behind another person. The man with some rude expression passed on.

All intention of camping near Monterey any longer was given up: we therefore travelled South and encamped about midnight far in the mountains off the main road to Santa Barbara. On awakening next morning I found ninety of the party had disappeared. Three officers and 5 or 6 soldiers were then ordered to proceed with all speed with me for Santa Barbara, leaving their horses on the road as they tired them and seizing others from any persons they met. On reaching the Cuartel of that town, I found a concourse of people waiting to see their prisoner. I was to be confined in this building until orders should be received from their General.

By the influence of Dr. N. A. Den, and his promising to feed the guard and their officer, I was removed to his house in Santa Barbara. My captors waited for the arrival of 130 men who were in the action of the 15th; only some 15 or 20 made their appearance. We then started for the Pueblo de los Angeles—On my arrival there, the second in command, (making an apology that his General was unwell) brought out one hundred men in arms, received me and placed me in the best room in the Government house. The first day I was supplied with bedding and furniture, soon after with clothing and anything they supposed I needed.

The General of the forces on visiting me offered me everything I might desire, except English books, which he did not own. My table was supplied from two or three houses with all the market afforded. I could therefore invite the officers around me, as they had nothing to eat only when they visited their relatives in the town. No person was allowed to visit me only in the presence of certain officers, I had then to converse in Spanish. Those supposed not friendly to their cause, was debarred from entering my room. Once I was allowed to dine out at the house of a Spanish gentleman, whom they could not well refuse. Their General was sent with me. In the different rooms of the Government house there were 16 or 18 American prisoners (many of them had married in the country) these men associated together, and although we at times elbowed each other could not speak to them.

At the end of December it was ascertained that my health was in danger from close confinement, I was therefore permitted to reside at the house of Don Luis Vignes, where I had large gardens and a vineyard to walk in, without any guards, I promising not to correspond with my countrymen and not to talk politics with my visitors.

On the 3rd or 4th of January news reached the Pueblo that Col Fremont was South of Santa Barbara, marching to meet the California forces.

The latter then mustered all they could, to the number of 400 to 500, and encamped two or three days at the Mission of San Fernando, awaiting the arrival of the Riflemen, and appeared very anxious to have a fight. Information now reached Gen Flores that Commodore Stockton with 600 men from San Diego would soon be in his vicinity.

He immediately ordered all the Mexicans and Californians to leave San Fernando and march to the opposite of the Pueblo to meet the marine forces, 12 or 15 miles South of the Pueblo the two forces met on the 8th of January: the Californians were 100 men less in number than the Americans. Yet they were well mounted, with hundreds of extra horses. When Commodore Stockton was crossing the Rio del San Gabriel, the enemy had every opportunity of destroying many of his people, but they permitted the time to pass by, and on seeing the Commodore arrive on their side of the river declared the war was over on their part.

On the night of the 8th both forces encamped in sight of each other: on the 9th near two hundred of the Californians left the field for their homes: the action on the 2d day was carried on at even longer shots and a safer distance than on the former day.

On this day I was taken to the field and retained there until sometime in the night. The house and premises where I had been the past week, had

received many families for protection, whose husbands or brothers had taken up arms: on seeing me taken away they became frightened, under the idea that if I was not returned, my countrymen on entering the Pueblo might cause more injury than they otherwise would, had I been there. The mother of one of the principal chiefs in arms, sent to the field a short address to her Paisanos in my favor, fearing the former threat of carrying me to Mexico by land was now to be put in force. A military junta was formed on the field who ordered my discharge after dark.

During my imprisonment an attempt was made by the Mexican officers to send me with Messrs Rouland, VWilson, Godey, and other Americans to Mexico via Sonora: this the Californian officers would not permit for fear they might be sent round Cape Horn by Commodore Stockton or General Kearney who they had lately heard of. The attempt caused a revolution among the officers, which on the third day ended by Flores putting all the Monterey officers in prison, where he confined them until he required their presence to meet Col Fremont.

During my imprisonment I endeavored to effect an exchange, or to be allowed to go on parole. This the General would not permit.

Four-fifths of the Mexican and Californian officers who had given Commodore Stockton their written parole, broke it and took up arms, they therefore supposed a parole of no consideration or value in California. I was also informed that my countrymen could not produce as many prisoners as they would demand for my liberation, that I had been for years engaged in wresting California from the Mexican flag and introducing my countrymen into it, to overthrow the native Government. In fact my captors had made up their minds that all their troubles and loss of power originated from my past machinations.

They concluded that my pen, voice and intrigue were now brought to a close, with some vague idea that my separation from my countrymen would produce something to their benefit, and that although I should have the best treatment in one respect, I should be closely watched, and when all their offers to me had failed and Gen. Kearny, Com. Stockton and Lt Col Fremont were drawing near to surround them, I was discharged on the field;

After hearing from several hundreds of reasons why they had taken up arms, and many requested me to assist their families when my countrymen should re-take the Pueblo: during my imprisonment it was very rare that I heard any boasting from a Californian, on the contrary, very many regretted the force of circumstances that had caused them to again unfold their flag without certainty of not having to surrender to the American forces.

Commodore Stockton and Gen Kearney entered the Pueblo de Los Angeles on the 10th of January and the moment of their entry the streets were full of armed men who soon disappeared.

On the 11th, Gen Flores, Manuel Garcias, his Second in command, the prefect of Monterey and some thirty others deserted from the battalion in the night, and fled to Sonora, taking away from the misled natives two or three hundred horses. On the 13th Don Andres Pico, collected together within a few miles of Lt Col Fremont's forces, and obtained a capitulation which enabled every Californian to retire in peace to their Ranchos. Col Fremont and his forces entered the Pueblo on the 14th. The next week Gen. Kearney and Commodore Stockton returned to San Diego with their respective force.

From the Pueblo I travelled to San Diego, by my own will and pleasure, having travelled before at the pleasure of others', at San Diego Commodore Stockton, dispatched the Cyane to land me in Monterey where I arrived after an absence from home of 88 days.

The war in California is now over, as far as Californians are concerned, and their manners and customs are tolerated, and common protection afforded them, they will gradually fall into the new order of things.

They have had in different parts nine hundred men under arms, every man with good horses and a lance, most of them with swords, pistols, rifles or carbines, everyone of their countrymen to aid them either by choice or force: a perfect knowledge of every hill and valley, and an utter contempt for foreign infantry, especially seamen: yet they did not succeed and have found that their losses in horses and waste of time so great as to prefer peace for the future under a guarantee of good treatment.

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THE unprecedented growth of the Southwest Society continues. In spite of a few deaths and resignations last year, the membership is at this writing 397, and will doubtless have passed the 400 mark before these lines are read.

The publication of the Third Bulletin is delayed in hope to announce the great museum plan. Mr. Henry E. Huntington has offered the Southwest Society its choice of four magnificent hill-sites, of which the largest is worth at least \$100,000 in the market. This generous offer has not yet been accepted, since the society intends to have absolutely The Best location within the city limits of Los Angeles, even though that location should have to be paid for.

In all probability, very vital questions will be settled within a few days, and important announcements made through the press. It is desired to include these things in the bulletin, which becomes part of the archives of the world's great museums. This bulletin will also present the roster up to date.

Since the last announcement in these pages the following members have been added to the Southwest Society:

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IT is a long lane that has no turning. There are indications that in the matter of the Mission Indians of Southern California, a long-suffering public has come near to the turn. For more than a generation we have been distressed and disgraced by the fact that some thousands of Indians within the geographical limits of God's Country have been dying of hunger and the weather—for no better reason than that a remote and careless government has allowed them to be crowded out of their fertile valleys, for which no one has ever paid them, and has left them to rot on the desert hill-sides.

The presence of Mr. Leupp in the Commissionership of Indian Affairs was in itself a great step forward. He has the startling advantage over his predecessors that he knows something about his job.

The Sequoia League, by crystallizing and focussing public sentiment in Southern California has brought the personal influence of hundreds of influential citizens to bear for justice.

Senator Flint, last fall, took time and pains to inform himself, by arduous journeys, of the actual conditions of these suffering reservations; and with this first-hand knowledge of the disgraceful conditions permitted by the government for decades, he will not be pooh-poohed by the routine clerks in Washington, who remind one of Mark Twain's cable: "Reports of my death greatly exaggerated." These red-tape votaries have always been ready to assure

their superiors that the reports of destitution among the Southern California Indians were "greatly exaggerated."

Another factor in bringing matters to a focus has been the recent inspection of these Southern California reservations, not by the usual worthy and tenderfoot Inspector, but by a Californian, who is at once a lawyer and substantial citizen, and a man of experience in the Indian service. Mr. C. E. Kelsey, of San José, who has been for years as a mere citizen trying to secure justice for the ten thousand homeless Indians of Northern California, has been appointed Special Agent for California, to examine and report upon actual conditions. He has, within the last month, investigated the Southern California reservations. It needs no prophet to tell what he will report—for that matter, the printed volumes of the Interior Department for the last 20 years have contained very much the same statements that an honest man today would have to make.

Things are moving. Senator Flint has prepared a bill making an appropriation to purchase lands on which these Indians can, by hard work, refrain from starving to death. The latest investigations of the government will fortify his recommendations. A large number of the most influential citizens of Southern California will memorialize the President and Congress to the same effect. It really seems as though the very small thing which should have been done half a century ago is at last in a fair way to be done. Meantime, public interest is growing.

CONTRIBUTIONS TO THE WORK.

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2 each, memberships—Rev. Father Raphael Fuhr, O. F. M., Edwin T. Earl, J. A. Foshay, Los Angeles; Mrs. H. K. Macomber, Clara S. Watson, Miss Blakeslee, Mrs. W. A. Butterworth, Mrs. Geneva F. Scharff, Pasadena; Mrs. F. D. Franklin, South Pasadena; Mrs. John P. Jones, Santa Monica; Albert K. Smiley, Redlands; Mrs. E. Martin, San Francisco; Thos. A. McElmell, Philadelphia; F. W. Sisson, Flagstaff, Ariz.

INDIAN RELIEF.

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Wm. H. Burnham, Orange, Cal., \$25.00; E. P. Ripley, Santa Barbara, Cal., \$20.00; D. M. Riordan, New York City, \$13.50; Father Raphael Fuhr, O. F. M., \$5.00; Edwin T. Earl, \$5.00, Los Angeles; Miss Julia A. Mason, Boston, Mass., \$10.00; Mrs. John P. Jones, Santa Monica, \$5.00; Mrs. W. A. Butterworth, \$3.00; Mrs. Arthur Wilson, \$1.00, Pasadena; Miss Flora Golsh, Carlisle, Pa., \$1.00.





San José is pretty well known as "the Garden City;" and the Santa Clara Valley around about it is famous as a chief garden of the Garden of the World. But other things than flowers have a tendency to spring up in gardens—and there is always need of the man with a hoe to chop down weeds.

HISTORY
AND THE
PEDDLER

San José has just made the most astounding discovery in the history of California. Perhaps we should rather say that a few of the mentally unemployed in San José have made this startling find. The eureka of an obscure gentleman named Marshall, on the 19th day of January, 1848, had more money in it, but was not one-half so rich in humor.

The discovery is that San José is "handicapped by its name." The leading daily there gives editorial prominence to the theory of a returned promoter who has been re-visiting the pale glimpses of the East:

"The fact is that the name of this city is one of the worst obstacles it has to contend with in the East. It disguises us. The people see 'San José' in print, but they do not half recognize it as 'San Hosay' in conversation. . . . If you undertake to explain to them that San José is pronounced Hosay, life is too short and the nervous tension too high to give and take such an explanation at every turn. Seriously, it is a handicap on us."

This is a finite world, and we are *all* handicapped. It handicaps every real-estate man in California that his broad acres are so far from Wall street, and that it is difficult for him to thrust a persuasive fore-finger through the button-hole of every Boston and New York millionaire who might buy real estate if he could be harpooned. This geographic handicap is the worst with which those have to contend whose only conception of California is to make money out of it. But many of us are willing to reverse the historic saying of the most famous tenderfoot, Daniel Webster: "Mr. President, I will never vote one cent to put California a mile nearer to Boston than it is at present."

The ignorance of our neighbor handicaps us all at every turn of civilization. There are quarrels, feuds and wars because the Other Fellow does not know what we are after, and we do not know what and why he is doing what he does. But the West has mighty gastric juices. It digests even tourists. There is a latent intelli-

gence even in Easterners. Although at home they speak by the letter, and call it "Chy-héwa-hewa" and "Mo-jave" and "Loss Angie-lees" and "San Joe's"—after all, these good people are willing to learn. Enough of them do learn. Not so many as the boomer might desire, nor as fast—for the boomer's appetite is of the tape-worm variety—but quite fast enough for the good of the State which receives daily "into its midst" about as large a meal of raw immigration as even this young giant can digest.

The worst handicap from which San José, or any other part, or the whole, of California suffers is not the innocence of Easterners, nor the attraction of gravitation, nor that arrangement of the universe which lets it rain on the day that Timothy Timpkins, Esquire, desires to give a picnic. God made a pretty good world on the whole—and rounded it up with a place to which those may escape who know enough to choose. Our worst trouble is from those tenderfeet in mind, if not by the calendar—who have no use for God's bounty except to peddle it. San José is not half so badly handicapped by its name as it is by the example of worthy and well meaning citizens who are sorry that history should momentarily delay their real-estate deals. If San José wishes to "print on every envelope, letter and bill head, and every other document sent out from San José," the phonetic spelling, there is probably nothing to hinder. It may ameliorate the ignorance of some Easterners—it will certainly advertise the ignorance of its users. For it is ignorance to be in such a howling hurry to make money that you forget the past and your parents.

San José is not alone in having this class of citizens. We have imported them in at least adequate quantity to every community in California. Los Angeles, to which an enormous preponderance of the new migration tends, has more than it really needs. But you cannot find a single person who has worn out twenty pairs of shoes in California, who will favor these irreverent, ignorant and abortive measures—as cowardly as they are ignorant—for vulgarizing the heritage that every one becomes proud of as soon as he has lived long enough in California to know what the heritage is.

THE HABIT
OF BEING
A MUMMY

There is probably no other habit in the world so insidious as routine. Morphine and whisky are innocent and swear-off-able customs by comparison. A vulgar dissipation does not usually seize upon respectable people; the curse of routine is that no one is truly immune. Like fire, also, it is a good servant but a bad master.

Presumably most of the grown-up citizens of Los Angeles know who wrote "Daniel Deronda," "Middlemarch," "Mill on the Floss," and so on. Most of these people do not particularly care with whom, when, why, how or whether at all, "George Eliot" committed mat-

rimony; nor under what name a real-estate agent would have looked up her taxable property.

Human life has to have system. Every system follows, in general, the line of least resistance. This line is everywhere, in every system, to let the bookkeeper have his way. The organized library bookkeepers of the United States have had their way to a point which begins to distress such Americans as are not bookkeepers.

A good many public libraries in this country seem to have conceived the notion that they are detective bureaus; and that one of their first functions is to find out the latest alias of an author and brand it a Scarlet Letter upon his brow. The Los Angeles Public Library, following in the footsteps of distinguished predecessors, has fallen into something of this literary police-duty. The books above mentioned are in numerous copies in said library. The title page says "Daniel Deronda, by George Eliot." Such copies as are in the original covers say on those covers the same thing. Such copies as have been worn out by readers and rebound for said library are generous enough to retain the name of the book; but have changed the name of the author to "Cross."

In the same way, the library has copies of "Innocents Abroad, by Mark Twain." It has also amended copies of "Innocents Abroad, by S. L. Clemens"; and so on down the category of people who have made a pen-name, or their own name, famous to the world, and have not changed it in their books with every vicissitude of life.

Now there is a conception of a library as a collection of the best books obtainable with the money in hand, so arranged as to be found as easily as possible, so regulated as to be of the widest possible usefulness. The object of a catalogue, and of the "binder's title" on a book, is to enable people to find what they are looking for. Library patrons are not expected to be mind-readers. They are not expected to have telegraphic advices as to the latest married name of some lady author. When they look in the catalogue for a book, they will look for the name which author and publisher have conspired to put on the title page; a name by which book and author are known to the civilized world. The impudence and the imbecility of a library systematist who kills off George Eliot in favor of Mrs. Cross, do not seem to need further comment. Every catalogue should have its full cross-references. Anyone who happens to think of Samuel L. Clemens or Mrs. Cross, sooner than of Mark Twain and George Eliot, should find the given book under either entry. But the major entry in any catalogue, and the author-name on the back of any book, should be modest enough to follow the usages of civilized man and the preference of author and publisher. When "Daniel Deronda" shall be *published* as "by Mrs. Cross," it will be time enough for any library to letter it so, and so catalogue it. But not until then.

If there is any more reliable recipe for being a prophet BY ITS FRUITS than to be born with a caul or as the seventh son of a seventh son, it is—to use common sense. Prophecy is merely a foreseeing of the fact that other people know something—and will, in the long run, use their knowledge. In other words, that natural laws will continue to prevail.

When the Los Angeles Public Library, a few months ago, founded

its department of Western History Material, including that branch which deals with biographical data of the citizens of the Southwest, it was prophesied that such data would be useful to the public soon and to the historian forever.

In adapting this new and important function to the Public Library—a procedure long in use by and for scholars, but perhaps not hitherto employed by any American city—it was held that every man and woman who serves a community seriously, is part of the history of that community; and that each knows more about his or her biography while alive than any one will know about that biography when they are dead.

In January, a quiet, modest man, personally known to relatively few persons in this city, but known by repute to every botanist in the world, and by all of them honored, died in Southern California. His biography will be part of the archives of every important library in the world. His widow is expected to supply this biography. A few weeks before his death he filled out one of the blanks issued by the Los Angeles Public Library to preserve the vital facts as to the important citizens of the Southwest. And—a few days ago, his widow came to the library to secure from its record the vital facts of her husband's life!

HISTORY

AS SHE IS
SPOKE

What is the use of wasting time to study history, when you can get it ready made for you? Other States probably suffer in proportion to their interest; but California, having a peculiarly interesting history, may be pardoned for stickling a little harder for the facts.

It was not at a meeting of tourists, but at a reunion of the Associated Pioneer Women, held in San Francisco in January, at which a "terse and interesting retrospect on the past" was read—and thence incorporated in the archives of the San Francisco News Letter.

Life is short; but here is a typical excerpt from this "California history," prepared by a California pioneer and printed by a California weekly:

"When Dr. Eschol [doubtless a lineal descendant of the biblical grapes] visited this coast, he took home some of the poppies, and they were called *Eschscholtzias*. . . . Sir Francis Drake was an Englishman, but was dissatisfied with the English and left their service. He sailed under the Spanish Queen and came to this coast, relieving the pirates of what he could in the way of pearls and gold. After he had literally filled his ship with treasure, he wished to find a northerly way to reach home, lest the English might overhaul and capture his valuables. . . . He needed help from the Indians, and to impress them, he read prayers on the shore. . . . It is said none but Drake and the Queen of Spain ever knew the value of the ship load. That proves there is no truth in the saying that a woman never can keep a secret.

"California had been occupied by pirates who fished for pearls in dull times, and when the vessels came from the Philippines, stole what they could. . . . Two Jesuit missionaries started the Pius Fund, which increased wonderfully. In 1776 the Jesuits were expelled by royal mandate from Lower California."

California was pioneered by a good set of people, mostly. It is doubtless fortunate that the conquest was not entrusted to a brigade of bookworms and college professors; since these gentlemen are as a rule more successful in some other things than in chopping wood or toying with the washboard—which are two personally-conducted and imminent functions of the frontier. On the other hand, if those

whose homely heroisms laid the foundation of a commonwealth would stick to the implements they *can* "play on," and leave art and history to be done by the prepared—not only would it be a fairer division of labor, but the State would acquire a better repute. As for California periodicals which perpetuate this kind of idiocy, let us hope their reward may be in—whithersoever they go.

Nothing more gratifying in the historical sense has occurred in California in a generation than the arrangement by which the lawful successors and heirs of the men that first explored and civilized California come back to one of the old Missions to rehabilitate, in 1906, the magnificent monuments of faith and of architecture their predecessors builded in 1776. Poetic justice seems to be "getting in its work" in California. This is partly because California is a land where justice and poetry alike come naturally; and partly because it has and develops the kind of people who forward this sort of outcome.

More than a decade ago, the Landmarks Club—a non-partisan group of citizens of many lands—undertook to do what could be done to save to California and the world, what time and the vandals had left of the most beautiful architectural remains in the United States. The success of this movement is well-known. It has not only saved for this community our immediate historic monuments; its example has gone forth to a dozen other portions of the United States, and has stimulated similar effort there. For a decade the Landmarks Club has been active in preserving the old Missions of Southern California. It has raised the funds, has expended them judiciously, and has got its money's worth and more. Except for these efforts, the missions of San Juan Capistrano and San Fernando and Pala, at least, would have been by today merely shapeless mounds of adobe mud. As it is, at each place, through the efforts of the Club—enabled by the money generously given by people not only in Southern California, but all over the world—the chief buildings at these missions are in better condition today than they had been in 25 years.

In this work for the public, the Club has been greatly assisted by two broad-minded churchmen—Archbishop Montgomery, now in San Francisco, and his successor in this diocese, Bishop Conaty. The latter has carried the matter to its logical conclusion in one instance at least. All the missions in Southern California were founded by the Franciscans. There is no one name in all California history so universally known and so universally loved by people of all places and all creeds as that of Junipero Serra, the Franciscan founder of civilization in the Golden State.

For several years a little body of Franciscans has had possession of San Luis Rey. Through their efforts this magnificent mission has been safe-guarded, and a little restored. Now, thanks to the activities of Bishop Conaty, San Juan Capistrano is to come back to its own. A colony of Franciscan friars will take charge of this mission and will not only repair it, but restore it to the stature of its old-time glory.

The historic fitness will thus be realized; the public utility will be much advanced. This great establishment—not church only, but an outpost of civilization on the frontier—will resume, after nearly a

SAVING
OUR GREAT
MONUMENTS

century's neglect and vandalism, its due proportions. Its religious activity will concern chiefly the church to which it belongs; but the reconstruction of this historic pile will concern the whole public, not only here, but throughout the United States.

The Landmarks Club, which has expended several thousand dollars at Capistrano alone, has had its money's worth in preserving for the public benefit this noble ruin. It welcomes the larger utility. On the other hand, it has not given up the responsibility it undertook at the outset and it is able to count still, as it has counted all along, on public spirit from the other side. The restoration of San Juan Capistrano by the Franciscan friars will be in consultation with the Landmarks Club, and its architectural experts. The result will be something for which every good citizen will be grateful.

CALIFORNIA'S

SHARE No mistake could be more fatuous than the idea that the "Statehood fight" concerns the territories only, and is "no skin off the knuckles" of California.. As a matter of fact, California, with its larger population and its identical interests, has far more at stake than have Arizona and New Mexico, to see that justice is done to these American commonwealths and to the West as West.

The West needs more representation in Congress, and in both houses thereof. With all due respect to Washington, the young and strong half of the continent is not understood there. It is only through the personal force of the president that such a measure as national irrigation—enormously important to the West indeed, but hardly less important to the nation as a whole, could be put through. It was not because Eastern senators and congressmen knew enough of the needs of half the nation, nor because that half-country had enough representatives to present the case. In a thousand other things, this half-continent suffers for want of adequate representation in the national legislature.

And while it does not know it, and will be slower to learn, the East suffers by the same token.

Wall street and the trusts, the railroads and the business interests need to be taught something of the fullness of the nation. They need to learn the lesson of youth, for they themselves are becoming old and pecuniary. Precisely as California financed the nation, put it on a sound money basis, preserving that political balance which decided the fate of the Union as against disruption—so today, the old and conservative communities need the stir of the example of youth. The West is the only young part of the United States. It has the faults as well as the glories of youth; but the gray-beards will make a mistake for themselves if they fail to take into counsel the lusty stripling of the family—the grown man, tall, broad-shouldered and thick-chested with achievement, with some mature sense and with that young faith and zeal for the loss of which human life has no compensation. The impotent wisdom of old age is not to be despised, and the West does not despise it—but neither is the muscle of youth contemptible. The country needs both.

CHAS. F. LUMMIS.

HIGHLAND, CALIFORNIA

By HERBERT W. JOHNSON.

HIGHLAND, situated six miles to the north of Redlands and seven east of San Bernardino, along the sunny, sloping foothills of the Sierras, is famed for her oranges, easily holding a foremost place in the markets of the country. Her fame is founded upon merit, since she produces a quality of this famous golden fruit, the peerless Navel Orange, second to none.

Her situation for citrus culture is an ideal one, being a sunny, southern exposure upon sloping foothill lands of deep, alluvial soil, composed chiefly of decomposed granite—technically called Maricopa sandy loam—giving the fruit that rich coloring, firm, fine rind and splendid keeping quality that so distinguish it. Her proximity to the sheltering mountains protects her from destructive winds and guards her from blighting frosts, (the sloping character of the lands draining off the heavy, cold-laden air) and provides her with abundant irrigating water for her fertile groves. Her water-right is riparian, antedating all other rights of this well-watered region, and coming from the melting snows and seeping springs of the eternal hills above the Santa Ana Cañon, head-waters of the Santa Ana River.

Her territory extends from Del Rosa in the west, lying under the point of that unique land-mark, rich in historical tradition, the mysterious Arrowhead; through West Highlands, with its orchards of large area, soon, probably, to be subdivided into smaller tracts to provide ranches and homes for the many home-seekers knocking at our gates; Harlem Springs, with its warm, health-giving mineral water; Patton, with its large orchards, truck gardens, dairy farms, and stately buildings abiding securely under the shadow of the majestic mountains, reminding one of a dignified Rhenish castle; through the thriving town of Highland, the central point, with her up-to-date stores, modern, mission bank, capacious packing houses, creditable churches, splendid schools, cosy, comfortable, often luxurious homes, and contented citizenship; with her complete domestic system of sweet artesian water, of the purest in the state; her lumber and box mills, turning out large quantities of fruit-crate material and fine finishing lumber and providing employment for large numbers of men; her superior citrus nurseries, whose young trees show their vigor by their well-developed fibrous roots and dark green tops; and that model residence tract, Boulder Park, which, by the high-minded devotion of a distinguished citizen's ability, energy and wealth, has converted one of the most uncompromising bits of uncouth nature into a veritable beauty spot; to beautiful East Highlands, with its matchless orange groves, than which there



"WITH ITS MATCHLESS ORANGE GROVES."



"REMINING ONE OF A DIGNIFIED RHENISH CASTLE."

are none better in this State of marvelous products, situated as they are upon high, rich bench-lands and commanding a magnificent view of mountain and valley, doubtlessly destined to become the "Smiley Heights" of this greatly favored place, thus in her large territory and varied products making up a splendid community, of which her citizens are justly proud, and rejoice in calling themselves "Highlanders."

Highland has not all the advantages, nor is it the only place good to dwell in. Other places have their peculiar characteristics and distinguishing features. Nevertheless she has many charming characteristics and delightful attributes of climate and scenery, with that rich productiveness that makes for a contented, prosperous and happy citizenship.



A PART OF THE HIGHLAND DISTRICT.



A HIGHLAND STREET SCENE.

She is a graceful Queen of communities with beautiful surroundings, her throne the everlasting hills of the Sierras, her footstool the smiling, changeable, gently-sloping foothills, her crown a diadem of green and gold—the glorious velvet-green of her orange trees, hung with fruits of gold.

She has a charm of the silvery morning, of radiant noon, and of golden evening; and, after the day is over and gone, a charm of the mysterious night with the dim, mystic outlines of the grand old Sierras behind her, and the twinkling, cheerful lights of her sister communities lying around and below her in the distances of the darkening night.

Hers has been a simple, unspoiled life, without self-consciousness or eventfulness, and hence she is relatively unknown to the many.

She has been quietly going her way, without ostentation or a sense of importance, as a simple comely maid grows into graceful, glorious womanhood, unconscious in her simplicity, of her developing charms and virtues, when she becomes suddenly conscious that she is an object of interest and admiration because of subtle grace and charm of beauty. But the awakening has



"UNCONSCIOUS IN HER SIMPLICITY OF HER DEVELOPING CHARMS."

come, and she is beginning to realize her possibilities and, planning her bright future, is ambitious to take her proper place in the progress and development of this delightful land of sunshine and plenty.

As an evidence of the progressiveness of her citizens there was recently organized The Highlands Chamber of Commerce, with a charter membership of one hundred and thirty, from which, judged by the spirit of its first meeting, in which plans for improvements of extensive nature for the beautifying and development of the place were laid, much should be expected.

Much also might be said of the character of her citizenship, made up as it is of the "better classes" of society, men of all characters of business and profession, many of whom have come to this pleasant clime to spend the autumn of life in comfort and contentment, and of the real "backbone" of the community, the sturdy, intelligent tillers of the soil, combining to make up a social body not found elsewhere than in cosmopolitan California; much, too, of her commendable public spirit, which provided a fine Public Library by popular subscription, and, when it was destroyed by fire, rising from the ashes of her loss with a firmer determination to erect a more worthy monument of her aspirations for culture; of her electric light system, telephone systems—two of them—street-car system; in short, the conveniences of the city, with the wholesome freedom of the country.

A land of promise where the homeseeker from the less fortunate east may come with his family and build his home in ideal conditions, among ideal surroundings, amid an ideal people.



"HIS HOME IN IDEAL CONDITIONS."



MAJOR SIDNEY S. PEIXOTTO.



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THE COLUMBIA PARK BOYS' CLUB

By *SIDNEY S. PEIXOTTO*



THE story of the Boys' Club is an old one. The story of the successful Boys' Club is still, unfortunately, rare. By the term "successful" I refer to one that can look back upon its years of life and see a definite line of development and a realization of some definite end which has been the guiding thought from its inception.

All the philanthropic friends of this country are struggling with this "boy problem." The boy is the subject of lengthy conferences and of endless essays. In spite of all the energy devoted to his betterment and welfare, it is difficult to point to many really satisfactory expressions of boy accomplishments. With my fifteen years of experience I would say that the great cause for failure lies in the fact that most of us wish to give the boys of our country that which we think they ought to have and not that which the boys desire and seek. It is this spirit of unwillingness to get down to their level and draw them up to ours which makes so much unsatisfactory and unsuccessful work. I realized long ago that these fads of giving boys talks about their personal cleanliness, of getting their spare nickels for dues to teach them self-respect, or lecturing them as to their treatment of dumb animals and about the cleanliness of their neighborhood, had but a passing and almost fleeting significance to them. I realized that what they needed more than anything else was association, and training, and vigorous methods by which they would be dragged from their comatose state and unhealthful and narrow surroundings into an atmosphere of vigor and life, and uplifting influences. The main thought must be how to get them there.

The importance of the work described in the following pages can hardly be exaggerated, either as to results already accomplished or for its value as a guide-post. The writer of this article is the man who planned the work, organized it, and has been its backbone throughout—and his speech concerning it has weight accordingly.—Eds.

and how to hold them there; and I believe that the Columbia Park Boys' Club is one of the best expressions today of what such an institution should be to the city boy.

It has not been a simple struggle to arrive at this condition of affairs. I call my fight for existence a ten year's war for supremacy. The boys of this part of the town have waged a bitter fight against this Club and what it stands for, and what it demands. They have slung the most irritating names at me as I passed along; they have condemned the members of the Club at all times of the day and night. As the military would pass up the street, the most offensive names would be showered upon the members of this growing corps. The baseball teams have been laughed at and jeered on the public playgrounds, and in fact



SOME OF THE ACTIVE WORKERS.

the underlying current has been to pull down and defeat the ends in view, which every boy in the neighborhood knows to be the introducing of better ways and higher thoughts among them. It has taken a membership of two thousand two hundred boys to produce the atmosphere of refinement which is found in the Columbia Park Boys' Club of today. It has taken ten years of strife and struggle almost impossible to relate; yet at the end of this time we see in this neighborhood a group of boy gentlemen, trained in every line of endeavor that appeals to a boy; a group of bright, clean, clever children, who follow the leadership of the men and women of the organization with spirit and obedience.

The institution has grown to be the wonder of the city. Every one marvels at the way in which this body of boys are handled.

Whatever the boys of the Club undertake to do it is always done well. Wherever they go they are looked upon as model performers. Their gymnasium, their military, their outdoor athletics, their indoor gymnasium work, their singing, their wonderful band and drum-and-bugle corps, all bear the stamp of individuality and of originality and perfection of work. The Club spirit has grasped each member and made him a loyal, active worker, feeling his individual responsibility as to the success of the whole. While the Club has the most entrancing boy singers, and the most clever boy actors, and the most remarkable boy musicians—scores of them—there are no stars; there never has



MILITARY BAND AND DRUM CORPS ON PARADE.

been that feeling of rivalry. In the make-up of all the teams, and in the make-up of all the programs, there is rarely a murmur because certain boys are not among the chosen ones.

The first Boys' Club in San Francisco was established fifteen years ago. The movement in this city was begun under conditions that made it particularly interesting, the men and women "workers" being made up mostly of clever literary folk, artists, architects, persons with high social qualities, and apt to give an atmosphere of sincerity to the work, and yet a Bohemian touch that would make it jolly and attractive. It was my good fortune to be a member of this original body of workers, and it was here

that I obtained my first insight into the needs and the possibilities of the work with boys. I found the boys needing a leader, a person not so much of education, but with manly instincts, who sympathized with their misfortune of being born into the world without any fine influences, and of being thrown upon their own resources at a very early and critical age. There came to be something more in the thought than the mere creation of a boys' club. I felt that what these children needed was a fine moral influence, wherein there was everything that would be uplifting and inspirational to the young child, and, above all, something that would please and cater to his heart's noblest desires. Boys



THE CLUB HOUSE.

of the class I met spend their time in the most ugly and dirty streets imaginable; they never see any of the beautiful creations of man, and they grow up with dulled intellects, with common gossip on their tongues, and with a love for brutality and criminal life. My own associations had led me to appreciate those things in life which broaden the scope of man. The contact with musicians, artists, men of talent and energy, gave me a splendid ability to instill some of my knowledge of this nobler side of life into the lives of these boys.

I have always tried to keep the Club-house furnishings simple and beautiful; a place of strong contrast to the little rooms in which boys I have known live. I have always labored to give

these boys association with men and women of artistic temperaments. I have introduced into their routine work at the Club, above everything else, work along artistic lines, and I have made as far as possible the costumes of the military, and the chorus, and all the work of the Club, a matter of careful consideration as to its simplicity and good taste. It has not been an idle task, and I believe, speaking from fifteen years of earnest work, that if a boy who has been in my club would testify to one thing it would be to the value of his association with the beautiful things of life when he was a boy. Beginning in a simple way with a simple Club, and with simple tools, I have been able to develop this most fascinating educational work until today I have reached



THE FIREPLACE IN THE MUSIC ROOM.

within the walls of our little club-house the most beautiful results that a man could hope to attain.

The house where the Club is situated is a relic of the pioneer days of San Francisco, a mere shell covered with a wooden imitation of stone work, and can only be distinguished from its unattractive neighbors by the artistic door which adorns its entrance. The entrance through a narrow hall, finished in pearl-grey stone, opens into a library and game-room. Here the wood-work has been tinted a black-green; and in this little game-room one sees the most fascinating pictures of child-life against this black back-ground. The soft flesh of childhood stands out in brilliant color, and the careless dirty clothing of the wearer is merged into almost nothing because of the positive background.

Game tables for checkers and chess adorn the room, while a piano suggests the music and singing. The library is another quaint room finished in the same way, with a beautiful reading-desk running the entire length, where one finds the current art and literary magazines up to the present month of publication. There are reproductions of Barye animals and charming steel engravings of the Presidents of the United States and the heroes of American history. The heavy carpet upon the floor makes an appeal for quiet and reading.

Back of these two rooms we enter a dark but impressive set of two rooms, divided by a squared arch, where hangs a brown curtain. In the far room, arise four tiers of benches, resembling



A CORNER OF THE MUSIC ROOM.

pews in an old-fashioned church. A large desk for the secretary and a president's table adorn the opposite room, and the walls are tinted a dark maroon color. The whole effect is one of exquisite quiet and rest. This is the parliamentary meeting-room of the Club, and the theatre. The adjoining rooms form exits for the actors on either side.

In the rear of the house is a large room, called the Assembly Room. This is another beautiful room of fine proportions, with a brick fireplace where great logs can be burned, and around the edges are high-backed settles that can be moved on castors in front of this chimney-piece. At the far side of the room are three tiers of benches where the chorus of the Club sit when they are

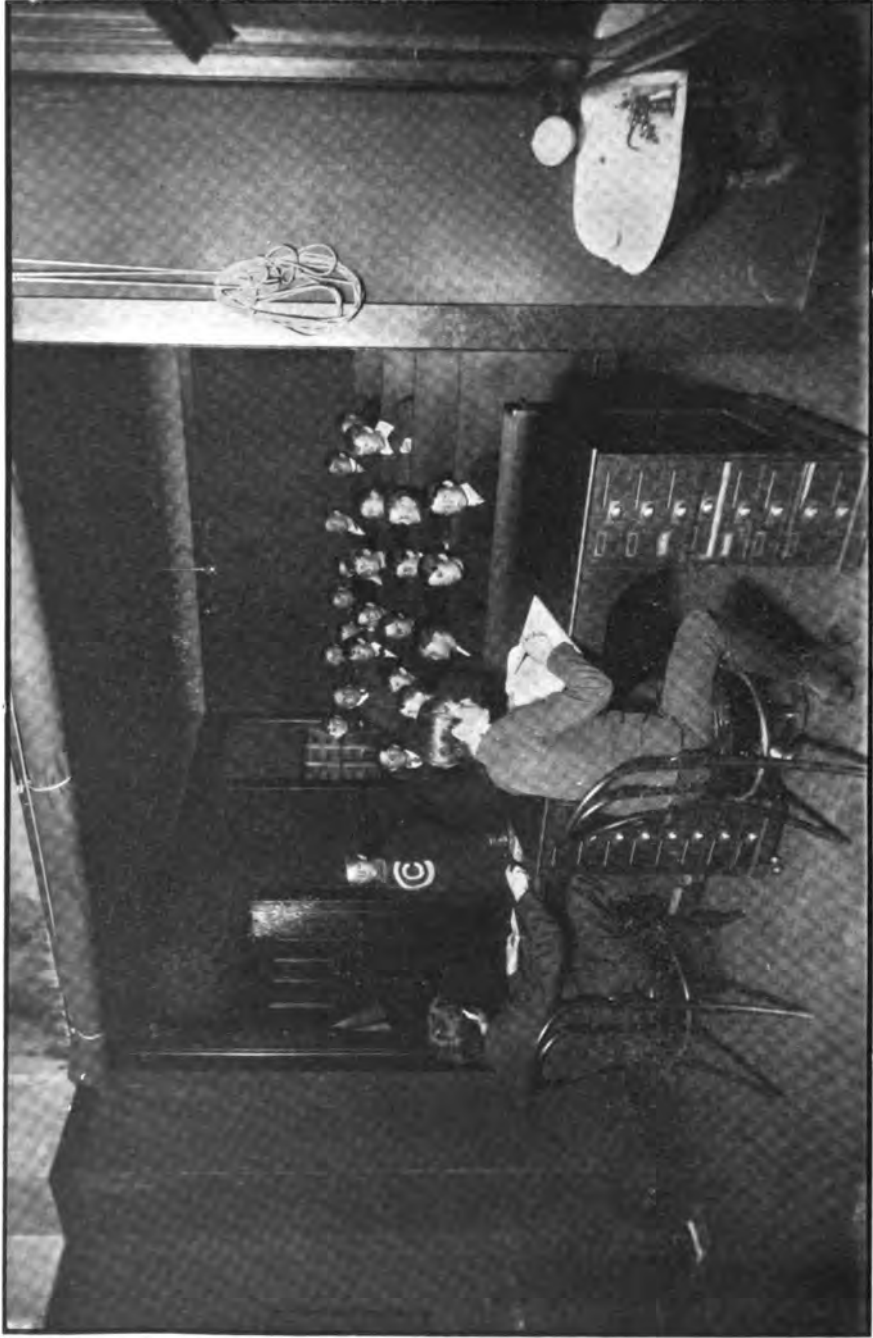
singing. In this room the band and orchestra practices, and on Sunday evening it is filled with eighty or more Club members to hear the Sunday evening talk, delivered by our best professors, savants and musical people, who are entranced by the attention given by these charming boys.

On the lower floor is a small gymnasium, poorly adapted to the work, with shower baths, and lockers up to the ceiling, where the military suits of the two hundred members are kept in perfect order. The armory contains the regimental colors; the drums and the bugles are on the shelves, and guns for the military. Tinted in a dark red, it makes a very impressive room.



THE CLUB LIBRARY.

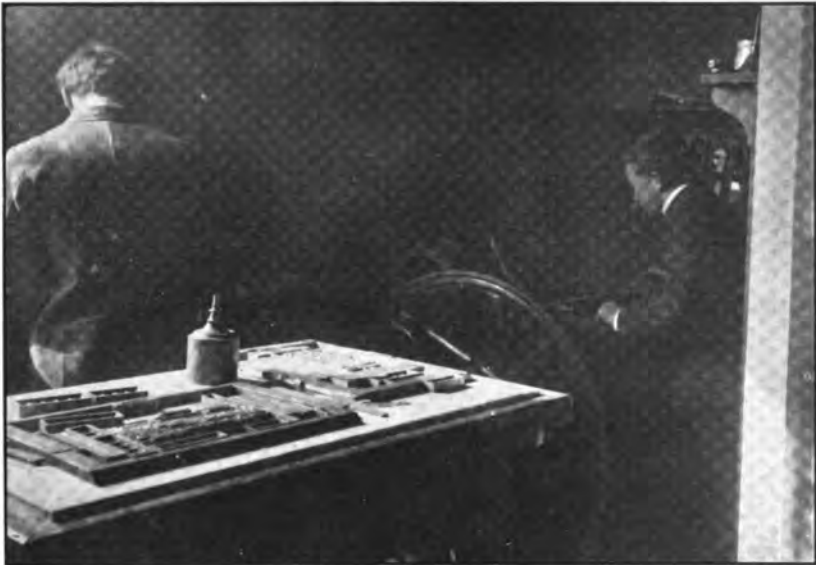
On the upstairs floor, we find a cosy office decorated with many pictures of the boys in their various costumes; groups of the chorus, the officers, the band and drum-corps, and the military in various parades, adorn the walls. In the next room to the office is a reference library, designed to be used by school boys who have difficult studies; and here they may find encyclopedias and books of reference to assist them in their work. A shelf contains the sporting trophies won by the boys in many struggles in the years gone by. Another room contains chests of drawers where are stored materials, consisting of old articles of wearing apparel, hats and other paraphernalia, which are used by the boys in their nightly plays.



A PARLIAMENTARY MEETING. The same room is used as the theater.

There are five other rooms in the house. One is the studio, where the various classes in art work are instructed. Three of the others are provided with benches where the manual training classes work, five boys in each room working under the guidance of a teacher. In the rear is a complete printing office, where for ten years we have turned out all the beautiful press-work for which the Club is so noted—programs and rules of order, tickets for admission, and various things that are continually needed in such an active work.

The Club-house is not imposing from without. It is a crowded structure at best; but it is a place of beauty within—an environment that leaves a deep impression upon the boys who have



IN THE PRINTING OFFICE.

become a part of its membership. The crowded rooms are, perhaps, its most successful feature; for in these small areas the wild boy of the street is not apt to find an incentive to run about as he would if larger halls were provided.

The membership of the Club this year is two hundred and forty boys. They are divided into four afternoon and four night Clubs, with a membership of twenty-two boys in each. The afternoon Club boys are between the ages of nine and twelve; the evening Club boys are between the ages of twelve and fifteen. There are, besides these, two Clubs for older members, those who have grown up in the Club work, now numbering sixty-six members. These boys are all required to attend the Club three times each week, once to their Club afternoon or



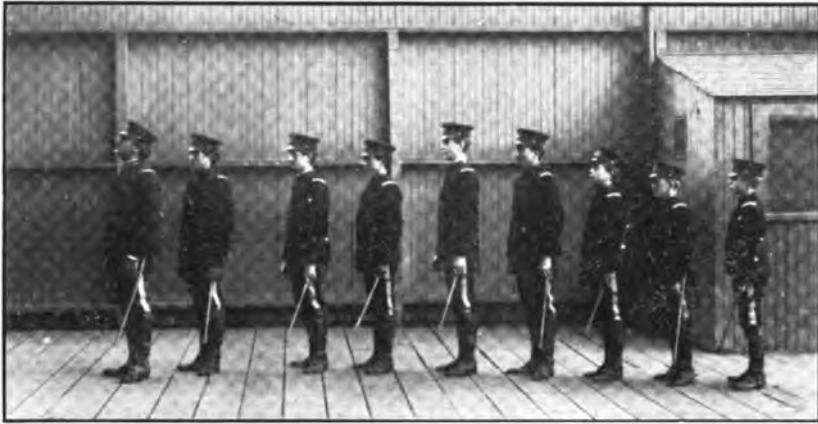
THE CRACK DRUM AND BUGLE CORPS.

night, when the routine of work consists of parliamentary meeting; then one hour spent in the manual training workshops; and then the boys repair to the meeting room below, and a play, as explained later, is given; and after the play, with a few cheerful songs sung in unison and with great spirit, the boys depart with fervent good-nights for their homes. The Club member must come again for military drill, and again for his gymnasium training. The music requires an extra attendance, and it can be said that more than half of the Club boys come to the clubhouse seven or eight times each week.

The military battalion, which would be an ornament to any community in the land in which it would be placed, is headed by a military band of thirty pieces, whose admirable work, as a marching organization and as a concert band, is well known. Most of these boys learned to play their instruments within the atmosphere of the Club, and they in turn have been the teachers of many of the younger boys who have now attained membership



THE MILITARY BATTALION—COMPANIES A, B AND C.



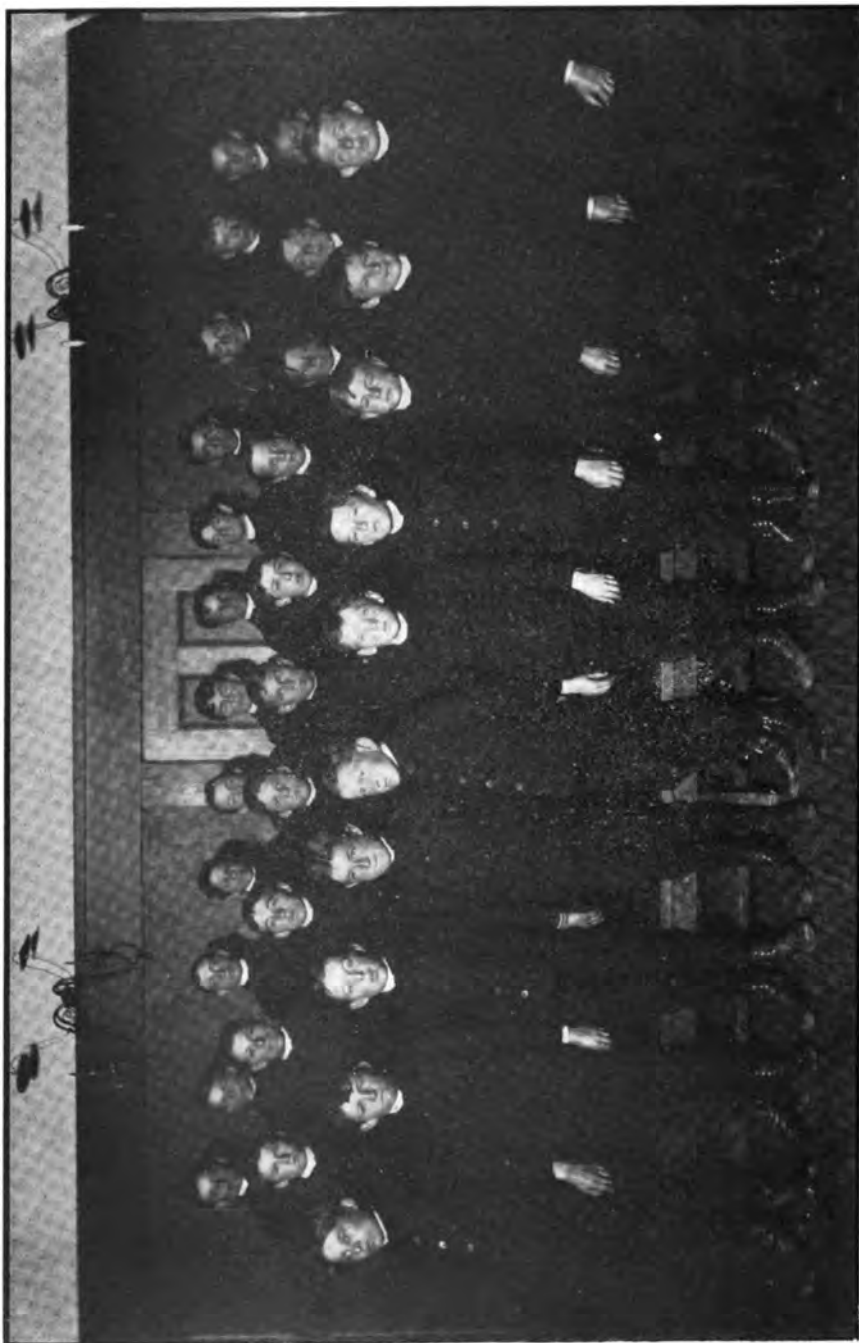
OFFICERS OF THE MILITARY BATTALION.

in this band. Following this organization comes a corps of boys with drums and bugles, numbering twenty-five. It, too, is an organization of which both we and our city are very proud. There are three military companies, containing forty boys each, officered by young boys who have spent seven or eight years in a military atmosphere that has dignity and high discipline as its first characteristic. Their movement is inspiring, their work is done with enthusiasm, and the corps has received the commendation of the President of the United States and the Governor of the State of California, and I have been given the commission of Major in the National Guard of the State of California by reason of the very beautiful work which my command has demonstrated to the public of the city.

The band is not the only music which has been fostered. Ever since my first association with the boys I have made singing a



NON-COMMISSIONED OFFICERS OF MILITARY BATTALION.



THE CHORUS OF THE CLUB.



A CRACK BASEBALL TEAM.

feature of the club work, and six years ago I organized a soprano chorus of thirty-five boys about the age of twelve or under, and in my own way, without any particular knowledge of the technique of music, I have taught these boys, a hundred or more, who have belonged to these organizations, the songs of the masters dear to the lover of music. I have made them learn all these songs by ear, and from printed copies of the words, and whenever the boys sing in public they sing without books and from their hearts; and it is this that I have tried to make of their singing—an instilling into their very souls at an early age the beautiful compositions of the masters of song. It is not exaggerating to say that the chorus of boys of this Club has a repertoire of two hundred songs, ranging through every phase of the song world. A pleasant feature of the work has been the creation of boy solo-

ists, many of whom have won more than public favor by the taste and expression with which they have rendered their work.

From the very beginning we instituted manual work, taking it up in an original way and giving to the boys simple occupations that produced some finished object in a short time. After a few years spent in this form of shop-work, the artist members of the teachers introduced work of a more artistic type, and the result has been the creation of an art atmosphere and an artistic talent among these young children that seems to point to the ultimate creation of a co-operative press or workshop whose work shall be deemed of more than ordinary artistic value. I am interesting



THE START ON A VACATION TRAMP.

the boys in the illuminating of manuscripts, in Japanese water-color work from nature, designing of various types, copper re-poussé, printing, and all forms of art expressions, and the talent shown by these boys is sufficient to admit of an exhibition of their work in our leading art gallery.

In a country given over so completely to the love of sport as America is growing to be, it is necessary, in catering to the wants of youth, to enter into the athletic field with all the spirit that boys put into a work which they love. The American boy above all things is a lover of sport. He loves his baseball and his outdoor play more than anything else in the whole world. I have found that this is the most attractive force in the club work, and so, from the earliest foundation, we have given the boys the opportunity to play among themselves with the finest influences

surrounding their struggles; with men to supervise their game, their passions, and teach them how to play with their heads and with their hearts, and to eliminate the quarrels which, as a rule, dominate the struggles of the young. We have arrived at a most advantageous point in this particular line of work; we have baseball teams of boys which seem to overwhelm their opponents and who have the ability to play the game they enter into with a dash and an energy that is inspiring to the onlooker. We have instituted the sports of the track and field as part of the club work, and a boy of this club at the age of nine and ten is well informed as to the method of running in the various races, of



THE 1905 WALKING PARTY AT THE END OF ITS 500-MILE WALK.

jumping, hurdling, throwing the shot, and in all manner of exercises which it is possible for boys to do. We have made these outdoor sports more valuable by giving these children the use of a gymnasium where a competent instructor leads the members of the club in every form of gymnasium work. For six years this gymnasium work has been in the course of development, and we can now point with pride to the wonderful quality of the work of these young boys, and to the creation of many beautiful results; such as a team of twelve fire-torch swingers, pyramid building, and fine tumbling acts, done by children be-

cause of the knowledge gained at an early age of the possibilities of their muscles.

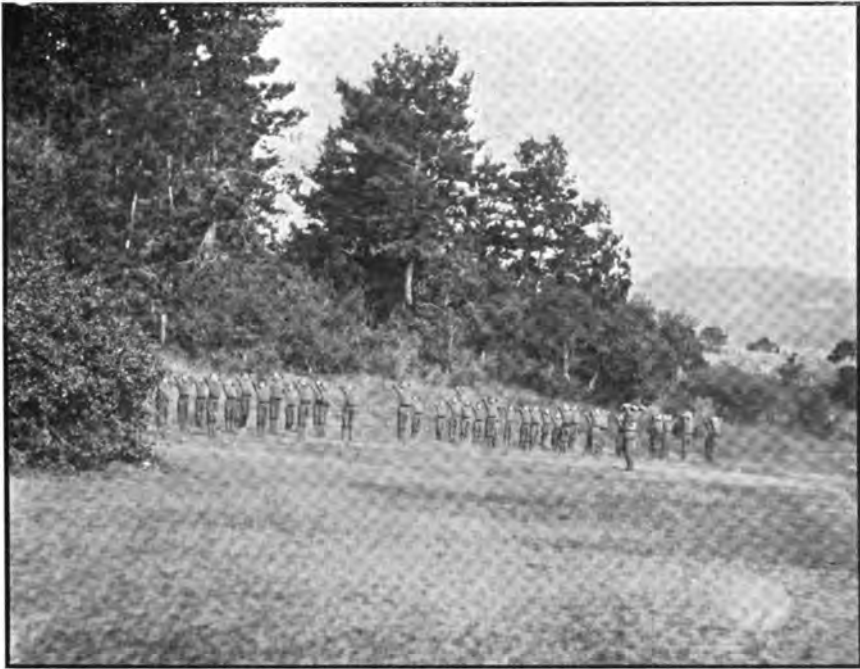
It is generally the custom in our school methods to give children a long vacation. My experience has been that this is a time of great trial to the growing child; so I instituted vacation trips for the boys of the club. I spent my first summer, ten years ago, taking a party of three boys on a walk of one hundred and twenty miles from the city of Stockton to the famous Yosemite Valley. In the valley we walked over and explored the trails, and saw the wonderful water-falls, and came back, three weeks later, delighted and happy with our experience. This was



CITIZENS OF THE SUMMER REPUBLIC, AT CARMEL-BY-THE-SEA.

the pioneer party of ten years ago. Consider, then, the wonderful growth when I say that last year I took a party of forty-one boys, walking from the city of Petaluma, in California, to the city of Eureka, two hundred and eighty miles away, through the vineyards and the valleys, through ravines and over almost uninhabited mountains, and through great forests of redwoods; and then, retracing our steps, we walked down the coast of California for one hundred and twenty miles, where we took a small steamer for San Francisco. Not only did we walk this long distance of four hundred miles, but these boys gave, in fifty-one days, thirty-four evening performances in the best theatres and halls along

the line of the route, at which we took in a total income of two thousand two hundred dollars! The boys also played twelve baseball games at different points along the route, and certainly spent a summer great in its inspiration, great in its value and training for these young men, and great as a geography lesson. It would interest the readers to know that the boys slept in "sleeping bags" in the open air throughout the entire trip, only staying indoors for some five nights on the coast when the fog made outdoor sleeping damp and dangerous. There was not one case of sickness on this trip, and the general improvement in



DRILL AND GYMNASTICS ARE NOT NEGLECTED DURING THE VACATION WALKS.

health and spirits was marked. Such work can only be done with boys who have been trained and worked with for years, and I have built up this walking party by taking old members and mixing in each year a number of new and vigorous recruits.

But what of the other one hundred boys who belong to this club? How did we provide for their vacations? Again we have taken a most charming way to solve their vacation problem. Last summer we maintained for one month a camp of seventy-two boys, located in a beautiful pine forest near the old Spanish town of Monterey, one hundred and sixty miles from the city of San Francisco, and here the boys lived as citizens of a miniature Republic, called the "State of Columbia." The President was

Mr. John Brewer, a man intimately associated with me in this work; the other officers of state, the Cabinet, the Senators and House of Representatives, were chosen from the boys of the Club; and here, under the most stringent laws, these seventy-two boys lived in charming companionship without one falling by the wayside or seeking his home before the time arrived for them all to go. It is a wonderful testimonial to the quality of our work to be able to say of the one hundred and six boys who were members of our vacation parties, that all spent their time happily and contentedly and with a spirit that made the work of their masters one of great pleasure. It is also possible to add that the boys of my walking trip nearly earned, through their



"COONS."

splendid theatrical entertainments, the cost of maintaining these two large and expensive camps.

I have spoken of the theatre and the theatrical work, and it would be interesting to explain how we train the boys in this manner. In the Club-house there is a combination meeting-room where the various clubs hold their parliamentary meetings, and where, later in the evening, a curtain falls in the little proscenium and a play is given before the boys depart for their homes. These plays are of vast interest. They are given impromptu. The plot is arranged, perhaps, by the men, or perhaps by some boy; the characters are assigned to those present who are best adapted to take them, then all repair to the costume room and dress themselves suitably, and then proceed down stairs to give the play. The dialogue is supplied during the progress of the act; the



THE BATHERS.

repartee and general finish are quite remarkable. This condition of affairs has continued through eight years of constant association in this work, and it is one of the most valuable trainings that the boy of the Columbia Park Boys' Club gets. It gives him at an early age a spirit of independence and insight into his ability in the presence of an audience, and a necessity for thinking quickly and speaking distinctly that has led to very remarkable results, as far as the work on the theatre stage has been developed. We had last summer a vaudeville evening which represented every conceivable side of stage play. There were athletic numbers, a dancing sextette, "coons," whimsical Dutchmen, musical numbers, comic vaudeville, ending with a chic farce in which two of the boys took the part of women. It was a complete performance. The boys have established a reputation by their excellent work in every city of our state, and wherever they go they are recognized as delightful entertainers.

I could speak of many other interesting efforts within this club of boys. We maintain a library where the boy will find the



PRACTICING "STUNTS" DURING VACATION.

current magazines and the best books, which he may take to his home. We have maintained for years a commercial bank where the members can deposit and draw their few cents or their dollars, as they may desire to save. There are many beautiful celebrations which have been developed within the club house, the most interesting of which is what is known as "Christmas Night." For weeks, the boys of the club, skilled in the use of their hands, come during the winter vacation to cut out the many Christmas lanterns, to wind paper blossoms upon twigs, to make autumn leaves of paper, and to decorate the club-house so that it becomes a place of entrancing beauty. Christmas Night brings out the entire membership, and on this evening a large chorus of boys sing the beautiful carols appropriate to the occasion, and later Santa Claus in all his winter raiment arrives and distributes a stocking filled with good things to each member of the Club. On the following evening, the boys arrange some fancy costumes and attend what is known as a fancy-dress party, again amidst

the beautiful decorations. Christmas is looked upon as the crowning glory of the Club year.

The success of this whole institution lies in the fact that I have been able to develop this work for boys along lines which are frowned upon, as a rule, by those who have given their time and attention to the supplementary training of youth. I have eliminated, for instance, in every feature of the work the question of money, or dues, and I consider this above all other things one of the most positive necessities in the conduct of work with boys. Everything in the Club is given "free." The military uniforms are provided from the club's treasury; the band instruments are procured little by little for the members of the Club



UP THE GRADE.

as they develop and grow in proficiency; the summer camps are entirely free to the members of the Club, who deserve such a summer. The conditions surrounding the use of all these privileges are most severe. The standard of manhood, the standard of personal giving are rigid and inflexible. It is expected that every member give his service to the Club at any and all times that the Club demands, and that the attendance in every department of the Club be as rigidly lived up to as the compulsory attendance at the school. The membership is voluntary, and every effort is made to limit the membership to those boys who are getting something from the Club. The hangers-on and the drones have been either reformed or eradicated. The effort in

the work has been to make the Club-house a busy, seething hive of industry, peopled by an active, earnest and devoted set of young boys who appreciate the value of the training given. I look upon this side of the work as being absolutely essential to successful work with boys. The money question must be eliminated, for the sake of creating a spirit of personal giving and personal work.

The music, according to the dictum of scholastic standards, is



LINED UP.

unscientific, but it has never been denied that it is beautiful, entrancing, and of a quality quite unique in its way. It is good because of the fact that it has been given to the children simply and naturally, without any assumption of the fact that they are students of music. The boys sing a song because it seems a pleasure to them, and, following this method, it is just as easy to sing a Schubert song as it is to sing a common, popular one. It is an almost universal thing in the Club for a boy to think that he can sing, and from this knowledge of their musical ability we have been able to interest the older boys in taking up band instruments, which their cultivated ear has made a most simple

task. It is a fact that eighty-two of the two hundred and forty boys are at the present time engaged at work upon some musical instrument, and the proportion grows larger with each month of the year.

While the spirit of the Club is that of the most charming companionship and the most perfect brotherhood, caused by the host of associations which every Club boy is compelled to create in his own memories, the discipline of the Club, not only as given but as desired, is of the most stern and rigid character. It is not so much given, but, as I say, it seems the desire of the older Club boys, and of all the Club boys, to be rigidly disciplined and to be handled without gloves. It has been part of the method of work to follow the public-school standing of each boy and to demand improvement where improvement is necessary, and the life of each boy during the time that he is outside of the Club's jurisdiction has long ago been established as part of the Club's curriculum. Where he goes and who he goes with is a live subject. I would say that all this splendid result has come from the fact that we have given the boys exactly what they would have done in their own common way, only with a refinement and finish that men demand.

The whole spirit of the work is one of bright companionship. It has taken boys who would spend their days idling upon street corners and taught them the value of the association and the pleasure to be derived from "doing something" when they are young, and it has given them the opportunity to meet men and women of culture and talent in their early life. It has, above all, formed ideals in their minds that have had the most vital effect upon their whole careers. It has created in the average boy of this part of the city a love for school, and for a long school life. It has made him feel that his salvation lies in the culture of his brain, and in the living of a studious life. We have seen, in the course of our work, boys born in surroundings that make their lives hopeless, go even through the University of California and attain to distinction and high position in the beginning of their young career.

Above all the educational thought which has been so predominant, because of the fact that our work is with children, the most beautiful result which we have shown here is the fact that the young can be taught the value of association, charming comradeship, kindness to their fellows, and a brotherhood that is near perfection. We live the most happy and vigorous life. There are no idle moments in these Club hours, and in this particular way I believe eventually that this Boys' Club will teach men how to improve their Clubs, and their Club lives, how to bring forth

the talent that lies dormant within them and make it an entertaining force during their free hours. It has been a privilege for me to live with these dear boys and to bring out of them all that life makes most dear; to hear them sing the songs I love so well; to infuse into them the moral standards which I have valued as the standards of my life; to lead them from out their little alleys and their narrow home atmosphere and show them some of this beautiful world, the fine men and women of our civilization and the vast possibilities in their lives beyond. More than a Club, it is their home of light and life; where they find a sweet sym-



CLASS IN INDIAN BEAD BELT MAKING.

pathy for their little troubles and that caress and advice which means all to the wandering spirit of childhood.

The story of the upbuilding of the Boys' Club work reads like a charming tale, yet from its earliest inception it has not seemed to appeal to the philanthropic public as an effort worthy of support. Perhaps it is difficult for those who are used to giving towards benevolence to conceive of a work whose aim is to create good, useful members of society, but it is nevertheless a fact that the work has been so purely educational as not to appeal to the public for support.

It has been a very severe struggle to finance the proposition. It has consumed too much of my energy which could have been better used in fostering the underlying principles of the work. The giving of alms in this country has been mainly devoted to

two distinct purposes—to the support of benevolent institutions for those who have fallen by the wayside, and to the support of the established educational institutions of the country. It is urgent, however, that the time should approach when true education should be made to begin amidst the young children of the land, so that they may be given the privilege of association with honest, sincere men, and taught to play their games and seek their employment amidst pure surroundings and under the proper direction. Too much money cannot be spent in this line of work, and the time will come when every town and every city will deem it of importance to have its Boys' Club, with its organized work to enlist the interest of its coming citizens.

There is urgent need in my work for a great amount of money. I need, first of all, scholarships which would allow young men to come to me to take up this as a life-work and to learn at the fountain-head the methods that have made this such a beautiful and complete experiment. I need also the means to create other Clubs in this city, so that not only can the Club that has been developed be studied, but Clubs that are in their infancy, that are peopled by untrained boys, can also be a part of this educational demonstration. I am not exaggerating this question when I claim that \$5000 a year, spent by any community in the State of California, would be a cheap investment to possess such a work as I have had the honor to explain in the foregoing article. And I know, having walked into and out of almost every large and small community in the coast counties of California, that the boys of these cities and towns badly need, aye, even long for, such an institution as they have seen come and go from among them.

A Boys' Club, as we have learned to know it, is a worthier monument and a nobler work than the most richly adorned library in the land.

San Francisco, Cal.



ON THE STAGE.

IN PURSUIT OF A GRAVEYARD

Being the Trail of an Archaeological Wedding Journey

By *THERESA RUSSELL*

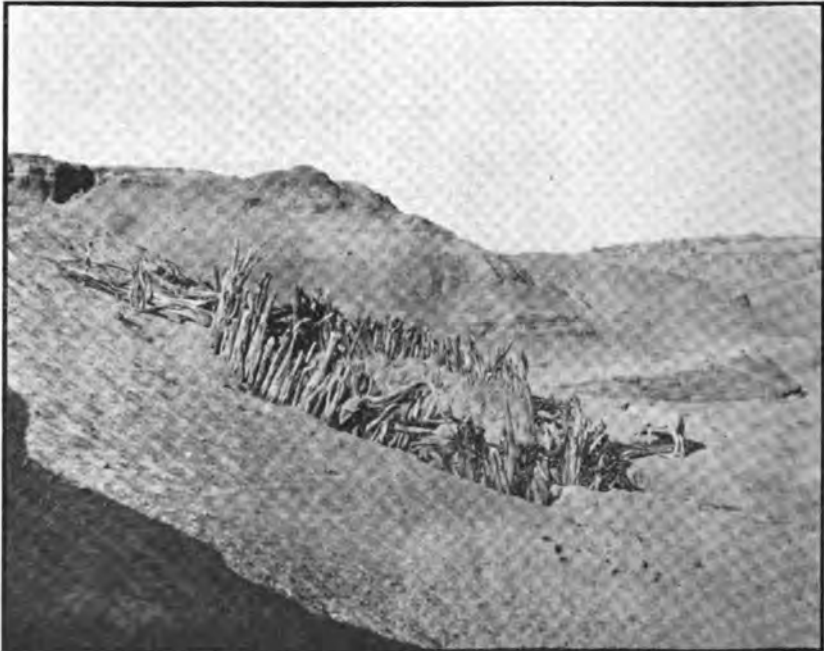
CHAPTER IV.

UP AND DOWN THE CHINLEE VALLEY

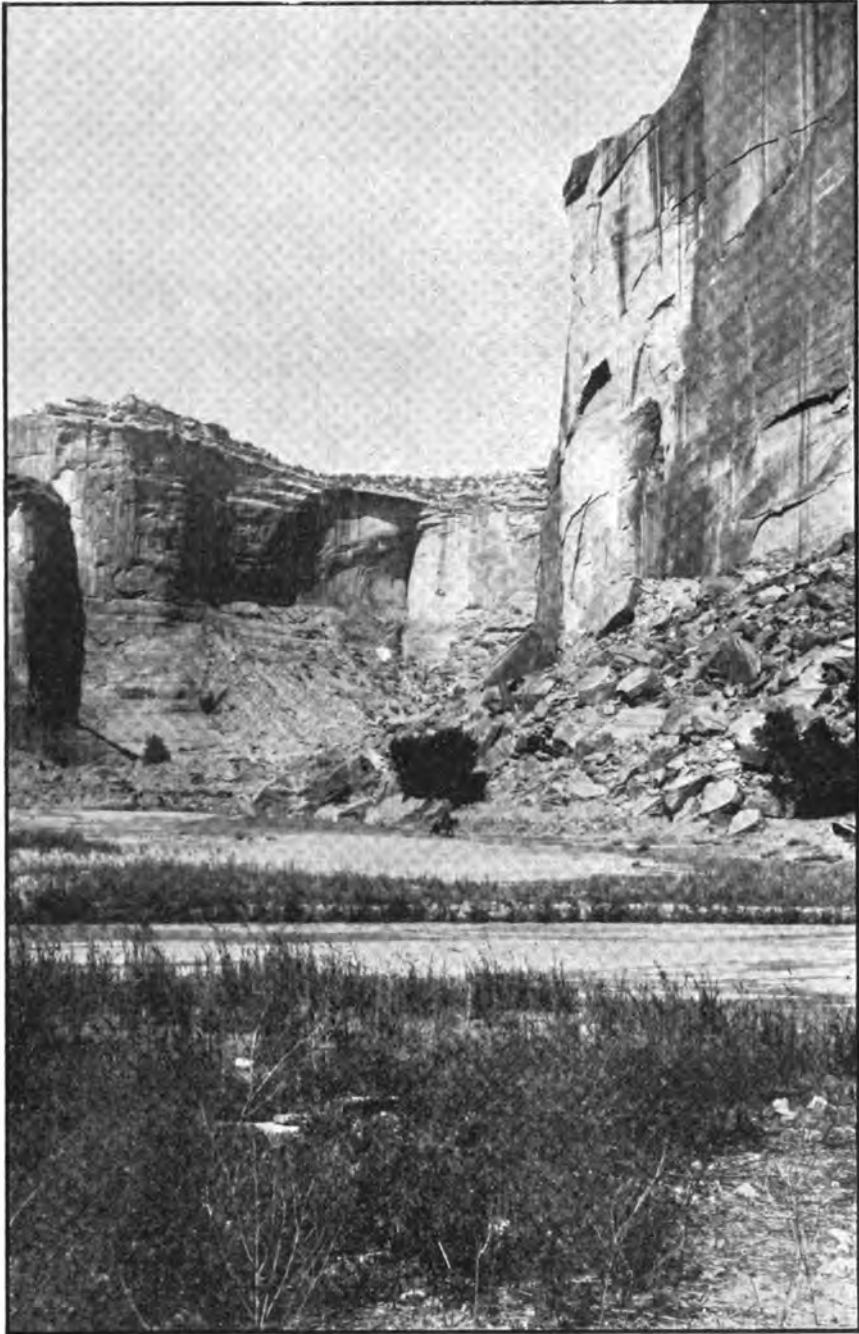


NOTHING to do but ride, all day, except when you climbed out and walked. In the beginning you saw far to the north the southern slope of the Black Mesa, and your attention became riveted to one distant spot, where, thrown into distinct relief against surrounding somberness, shone in the morning light a Temple of Ivory. Entrance to a transfigured Parthenon you thought it must be, and half expected to glimpse a clear-eyed Athene—you recognized her ægis hanging by the door—attended, perchance, by a silver-footed Thetis. The white, fluted pillars, the Doric columns, with mystic blue shadows lurking among—it all looked so clear and so near.

At noon, when you halted for a wayside luncheon, it looked just the same—so clear and so near.



"A REAL WET SPRING."



"A TEMPLE OF IVORY."

At night, when you camped opposite, it still looked just the same—so clear and so near.

One thing, however, was nearer—a real, wet, spring of water. It dispensed its moisture graciously but charily, like the entertainment of a reduced gentlewoman; and its poor-but-proud offering was partaken of in a corresponding spirit of gallant appreciation.

And one thing was clearer—the intimation that the hitherto smoothness of our way was about to become distressingly rude and rough. No one seemed to welcome the rebuff, at least, not



"NAVAJOS—FOR DINNER GUESTS."

with a Browningsque enthusiasm, so we made a cisalpine camp. It's also good philosophy, you know, to keep something to look forward to. It wards off ennui. Wherefore, we were obliged to initiate activities next morning by the precipitous descent of a hill, not long but steep, and the deliberate ascent of another, not steep, but long, and very soft with sand.

But by and by, in the hot by-and-by, we arrived at a place that had some sense. There were scrubby cedars for shade, there were cliffs and ravines for artistic effect, and there were Navajos by the family for dinner guests.

The old squaw finished up the cherries out of the can and discoursed volubly with many gestures.

"What is she talking about?" I ask.

"She say," replied the ready Nosifor, "she plant these cherry seeds in the ground, sometime tree grow high, she sit in heap big shade and eat 'um plenty."

"Good for you, Auntie," commended the Anthropologist. "We'll put you down for a speech at our next Arbor Day celebration."

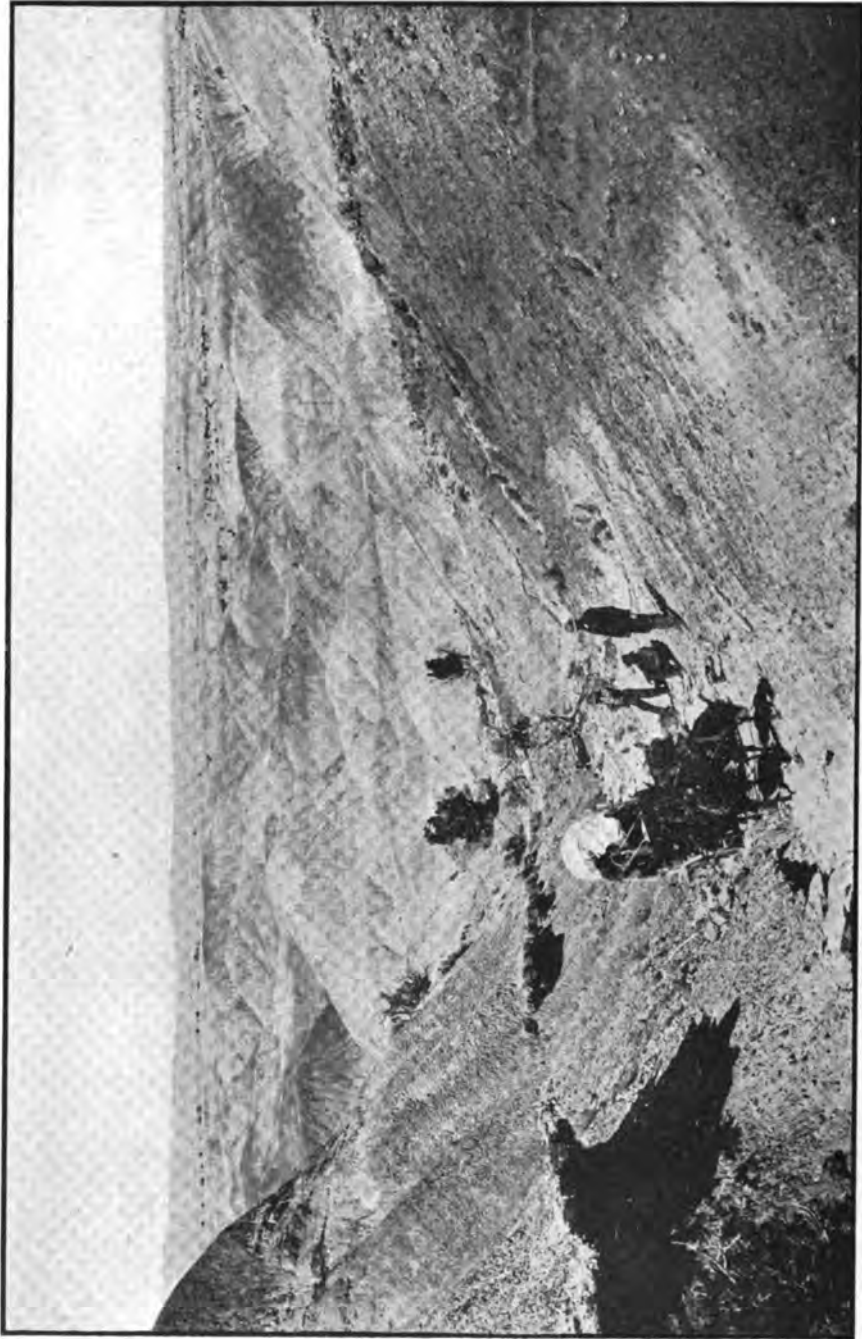
Auntie did not manifest any flutter of excitement over the proposition, but consented to have and to hold the sack of sugar we gave her as barter for using the water from her spring.

After that she and I had to be quiet while the men talked. For

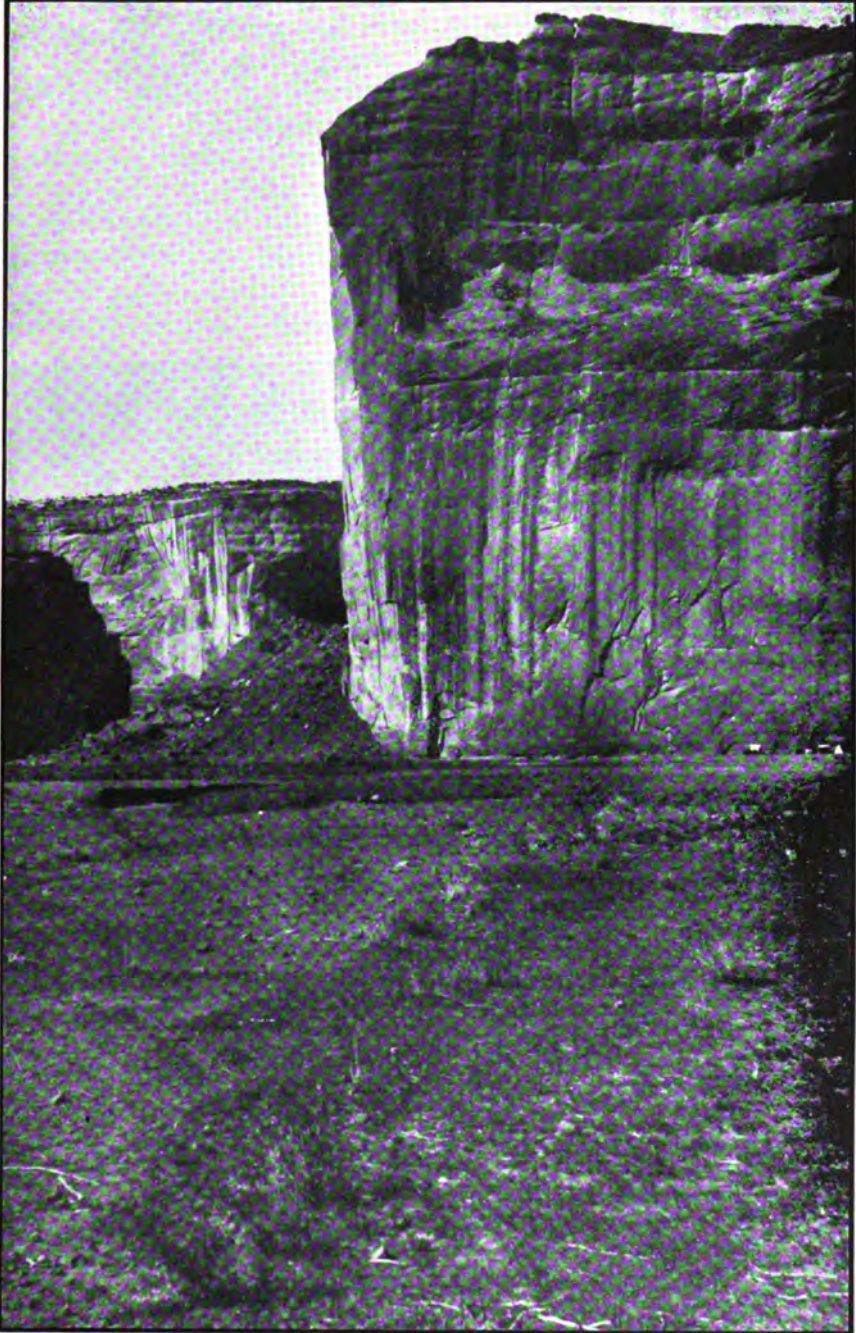


"BY THE FAMILY."

the assemblage had resolved itself into a Committee on Ways. We had come hither by and with the advice and recommendation of one of the oldest inhabitants, who had spoken magnificently of large ruins, "heap big casas, plenty wesos, ollas, mucho every-thing." Now it seems to be true that a great blaze of imagination may be kindled from a few insignificant chips of facts. And it appeared to be due to this interesting phenomenon—interesting, if you are a psychologist and not a mere archæologist—that our grand potentialities had shrunken, under the light of investigation, to actualities that were undeniably chiquito. Moreover, this place was to be directly en route to the real objective point we had in mind. Now, it developed that the road across was



"THE DELIBERATE ASCENT."



"So CLEAR AND SO NEAR."

impassable. There was plainly nothing to be done but to sound a retreat to the end of the mesa, round that point, and head northward on the west side of it instead of on the east.

That sounds easy, but, bless you, what a pow-wow it involved to corral all the scattered evidence and brand it as conclusive! What a prolonged session of the contemplative crescent under the cedars! What a drawing of maps on the sand! What a meditative rolling and puffing of cigarettes! What queries and arguments bandied like tennis balls from speakers to interpreters! What free-handed gesticulations to all points of the cosmos! What slow and conclusive shaking of heads!



"FINISHED UP THE CHERRIES."

It was finally agreed, however, that we had better do the only thing to be done, and right-about-face orders were given. To the stoical Sliver, the volatile Nosifor, the non-committal Erminio, one kind of order was as good as another, being all in the day's work. But the Instigators had hard work to look happy. It was evidently desirable to make up some joyful conversation.

"Which do you think is the hottest?" I asked, by way of beginning, "the sun or the sand?"

"We'll excuse your use of the superlative degree," equivocated the Man of Science, "for in this case there is no comparison. But you are not getting your money's worth of experience. Just feel of the sand with your hand."

We were trudging on in the van of the retreat, and I stooped down obediently and patted the pathway.

"Oh, but you are shirking yet! Take your glove off. There, is that hot en—"

"Beware! That question is ruled out of the Etiquette Book, even in Hades."

"Indeed? And why must the poor firebrands be so punctilious?"

"I'll not vouch for it, but I've heard it reported that it is due to an amendment put through by the Delegation from the Hub, declaring it to be 'a violation of the canons to mention meteorological conditions, particularly with interrogatory reference to



"UNDENIABLY CHIQUITO."

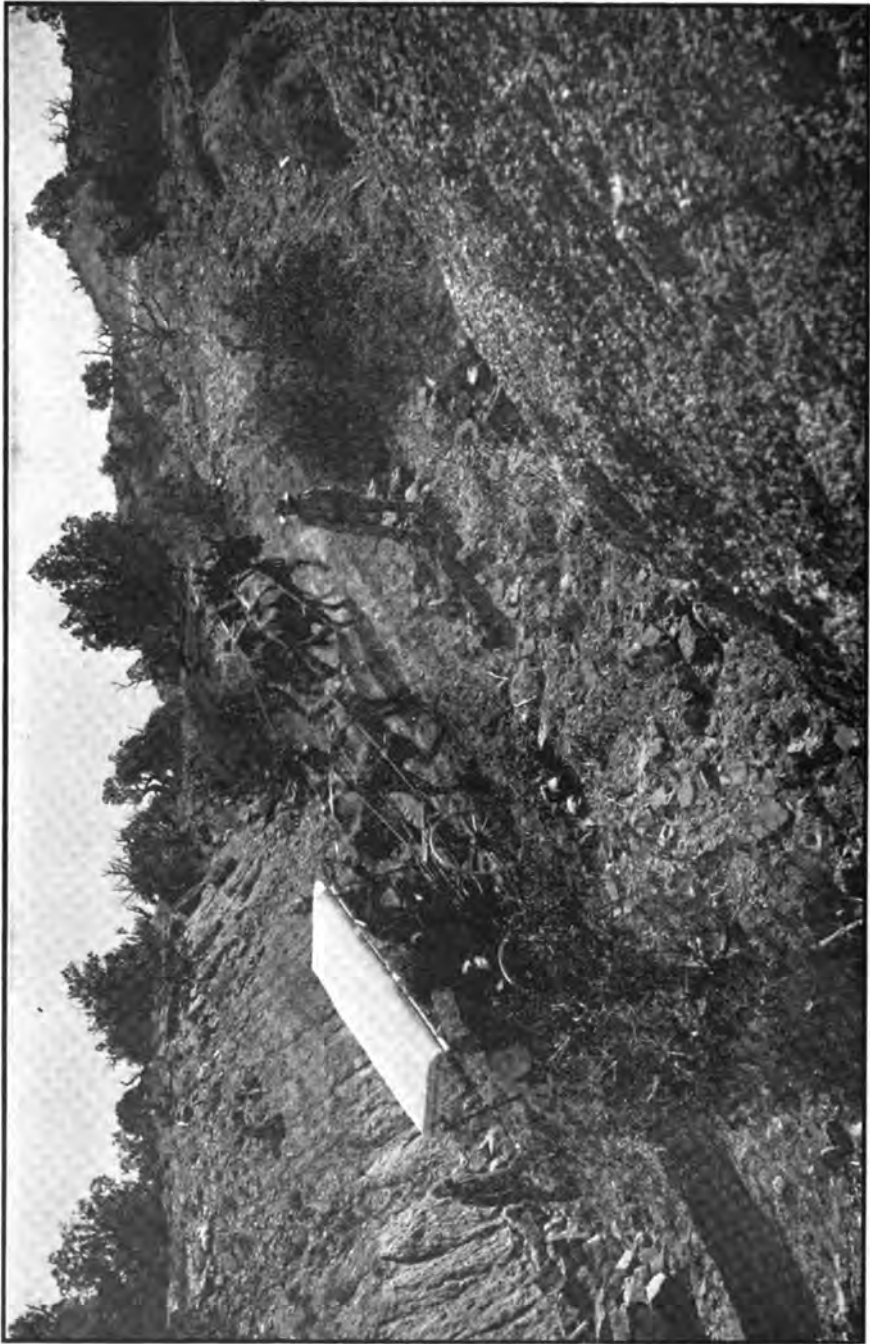
their effect upon the temperature of the questionee.'"

"Can't blame the Bostonians. While the atmosphere of their native environment is admittedly of precious quality, the climate they've been brought up in is not a suitable subject for polite discussion. For my part, I should rather be toasted in a nice, clean oven than put to soak in a mouldy, old rain-barrel."

"Even rain-barrels have their mission. If I should happen to meet one right now, I know where there would be an awful splash. There is vast superfluity," I continued reflectively, "in Some Definitions I Have Known."

"Apropos of what?"

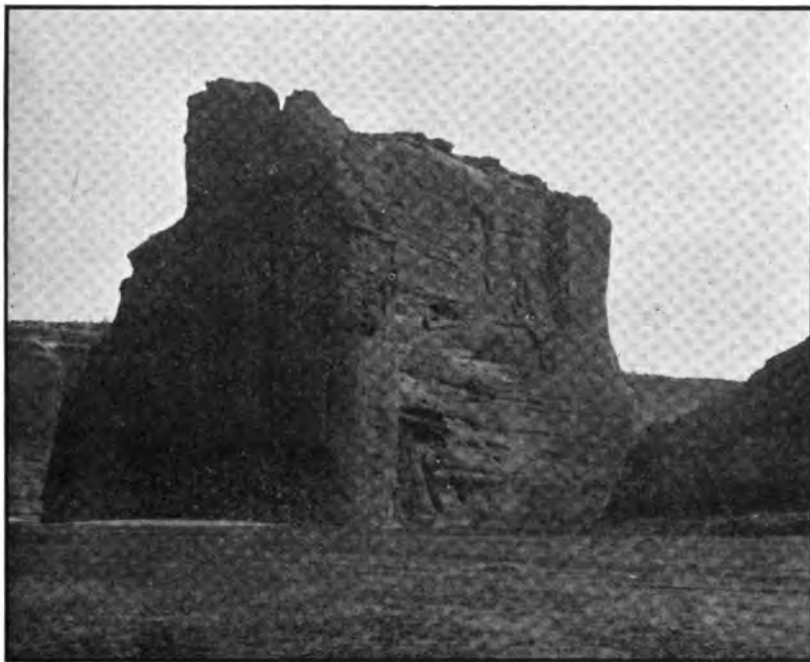
"What you tried to ask me awhile ago. Some one has cleverly described this country as 'Hell with the fires burnt out.' It's correct enough up to the end of the first word. But it's a judg-



"TWO DOWN AND A YARD TO GAIN."

ment by sense of sight only, and that left the deluded judge under an hallucination. If some one had made him take his glove off, he would have left the phrase off, of his own accord."

Thus discoursing, Fair Heart and Faint Lady came anew to the hilltop of painful memory. Over it rolled the wagon with the easy unconcern of one anticipating an unbroken career of down-grades. But having reached the nethermost point, Easy Unconcern butted right into Trouble. It never means to, but it always does, someday. And Trouble has such an unfortunate penchant for requiring attention and entertainment. In this case,



"HELL WITH THE FIRES BURNT OUT."

the demand was that we rid the load of all human freight and some other, and do battle with an unpardonable hill.

Crack of whip, yells and cries of drivers—the hoarse Erminio on one side, the shrill Nosifor on the other. To this vocal stimulus the faithful beasts respond with all that is in them, the mules stolidly, the horses sensitively. Every muscle is strained, tense. Utmost effort is exerted without apparent effect. Crack, scream, a desperate plunge, white Bill fairly leaping from the ground in his frantic endeavor, breathless pull, and gain of five yards. Down, and a rush to block the wheels and apply the brake. A pause for the hard, quick taking of breath, and the lines are reformed for another rush. Two downs, and a yard to gain! But

the goal is creeping nearer, and at last the visiting eleven (counting the dog) score a triumphant touchdown, and kick everything in sight in order to finish the game with a good punting effect.

Retiring from the scene, however, did not mean leaving the gridiron. The entire field of operations was raised to the boiling point. But we went on far enough to get out of sight of our vanquished opponent, and made a dry camp for the night. (A Dry Camp is the kind where it is superfluous to ring for either hot or cold water, unless your own kegs or canteens can supply the demand.)

By the next afternoon we had completed our detour and were again headed north, and this time on an up-to-date thoroughfare. Not to advance at once, however, for this camp proved to be another of the dry variety, and the regiment was obliged to mark time for the rest of the day while a detachment was sent back to the Post for water. After the detail had departed, it was discovered to have included everybody but the Instigators, who were thus left to keep house by themselves.

To the Tenderfoot, the weather seemed hot, really hot, even intensely hot. The sun bent down close to the earth in order to shrivel it with his fiendish breath. The earth was a wilderness of wind-blown, drifting impertinent sand. Between the two conspirators, poor humanity was caught and flayed to a frizzle.

"Wouldn't you like to go to the matinee this afternoon?" I inquired.

"Where shall we go?" replied the Anthropologist, in the soothing tone one uses toward the demented.

"Let's try 'When Knighthood Was in Flower.' Anything in flower would look good."

"Just my thought. How would 'The Good Frau in the Flour' do, for a substitute? We need some biscuits for supper."

"I fear the Frau wouldn't know how to act, never having made any biscuits in her present incarnation."

"Oh, well, she might make a bluff at it. We'll call it a dress rehearsal."

So the Frau made herself up for the part, pattered about on her sanded stage, accumulated a number of ingredients, mixed them together, and tucked them up in the Dutch oven. Although in the time to come she was to be on familiar and affectionate terms with this indispensable adjunct to camp cookery, and to coax it to turn out for her many a delectable loaf, her initial acquaintance with it cannot be truthfully designated as auspicious. It was consoling to reflect, however, that it was unquestionably by the grace of Providence—that enigmatical Lady who so loves to

interfere in our affairs, but reciprocates by permitting us to put on her the responsibility of our blunders—that the greasy, gritty mess was saved from consumption by being burned to a crisp beneath while it was yet in a raw state of nature above.

The Instigators tried to conceal their terrible secret before the boys should return, but Sliver came in time to catch them at it. He comprehended, and gravely explained in his eight-by-ten vocabulary about the use of concave lids and baking powder and coals of fire and things. And the Man of Science, who had somehow contrived to have this disquisition directed to himself, as gravely listened and promised to remember, hypocritically insinuating that he, and he alone, had been the perpetrator of the culinary joke.

“Well, it was quite a dramatic play,” concluded the Leading Lady, “and one is very proud to discover that knighthood is still in flower.”

[TO BE CONTINUED.]

THE FAITHLESS ONE

By NEETA MARQUIS.

THE night-blooming cereus opened her eyes,
 And dreamily cleared them of dew.
 'Twas the hour for her bold lover-moon to arise,
 That rover, so fond—so untrue.

“Love’s trysting is sweet,” said the moon when he came,
 And the flower, to her petals’ pale tips,
 Was suffused with the flush of a maidenly shame
 At the touch of his amorous lips.

She bloomed in his love with a virgin delight,
 Till a pallid star told them of dawn,
 Then, faithfully folding her face from the light,
 She prayed while her lover was gone.

But the moon sought the land where a lotus flower waked
 For his kiss in a passion of pain;
 Deep she drank from his lips, yet her thirst was unslaked,
 And she died when he left her again.

Los Angeles, Cal.



A REAL TEACHER

By ANNA DAVIDSON

ALFRED JAMES McCLATCHIE was born in the Province of Quebec, Canada, May 25, 1861. He was of Scotch descent, one of his maternal ancestors being the founder of Yale University. His childhood was spent in the country in Western Michigan, and his intimate acquaintance with the life of the fields, woods, and streams contributed much to his early education. The funds for his college training he earned by teaching. He studied at Olivet College, and at the University of Nebraska, taking his degree of B. A. at the latter institution in 1890. His association here with the eminent botanist and teacher, Prof. Bessey, strengthened his natural interest in biology, and made evident his remarkable aptitude for laboratory research. It was when still a student that he worked out a method of preparing vegetable tissue for sectioning on the microtome that has been widely adopted by histologists.

In the autumn of 1890, Mr. McClatchie came to Los Angeles and was soon engaged in teaching in Southern California. From 1892 to 1896 he was professor of biology at the Throop Polytechnic Institute. His four years' work at Pasadena will be long remembered by his pupils, by botanists and teachers in Southern California, and by the general public as well. For his pupils he published a laboratory "Guide for the Study of Plants." He was a pioneer exponent of laboratory methods. His paper on "Biological Work in the Secondary Schools," prepared for a California State Teachers' Institute, was, at President Jordan's request, sent to the Popular Science Monthly and was promptly published.

But Prof. McClatchie's work with plants was not confined to laboratory experiments with them. During these four years, he did an almost incredible amount of field work, which his pupils and others interested in botany often shared. His interest and labors extended to plants of every degree. The obscure green slimes, pond-scums, rusts, mildews and the like, were collected as thoroughly as the more attractive sea-mosses, the larger fungi and the better known mosses, ferns, and flowering plants. His eyes were always open to the varied forms of animal life, and he incidentally discovered a new and interesting species of fresh-water shrimp which was subsequently named *Caridina Pasadena*.

From the plant collections, with the help of his wife, he prepared a comprehensive and valuable herbarium, which is now at Stanford University. There are also many drawings and colored plates, still in his wife's hands, that should be of much value to future students of the lower forms of plant life. In recognition of the work of this period, Olivet College conferred upon him his Master of Arts degree.



ALFRED JAMES McCLATCHIE.

The publications growing out of this period were: "The Flora of Pasadena and Vicinity," and later on "The Seedless Plants of Southern California," articles in botanical journals, and many popular articles in current periodicals. He had an ever-increasing interest in living plants and their relation to their environment, and he left a large amount of manuscript which he had hoped to elaborate into a comprehensive volume on "The Life Histories of Plants."

"The Flora of Pasadena" is a list of 1056 plants, with practical information to collectors as to habitat and period of flowering and fruiting, and with some illustrations. It has already been of much service to collectors and to the botanists who have published fuller accounts of some portion of the flora of Southern California.

"The Seedless Plants of Southern California" was published by the

Southern California Academy of Sciences in 1897. In addition to the lists, there are descriptions of groups and artificial keys to the genera that render the work particularly valuable to amateur collectors of seedless plants as well as to monographers and specialists.

In his laboratory, during this period, Mr. McClatchie did much work with bacteria, and many of his popular articles and addresses deal with this topic. He was most happy in his methods of popularizing scientific fact and methods. There was always the enthusiasm of the man who deals with knowledge at first hand. His ideas were systematically arranged, the expression was simple, clear, and vivid, and there was always a list of practical conclusions or applications. He gave, during these years, series of lectures in university extension courses, before Teachers' and Farmers' Institutes, and at the Chatauqua and other summer educational assemblies. He also addressed many of the leading clubs and associations of Los Angeles and vicinity. The topic on which he most frequently spoke was Bacteria—bacteria as the cause of disease, or bacteria in relation to the home or to agriculture. The need for popular lectures of this sort was much more urgent a dozen years ago than it is today; and to the marked advance of popular intelligence in these matters Mr. McClatchie's work has largely contributed. He also put in popular form the results of some of his studies of the native flora.

Very characteristic of the man was his work with the mushrooms of the region. He collected, identified and preserved them in his herbarium; he drew or painted many of them; he also tested them as to their edible or poisonous qualities. He said: "There are no rules to guide one in deciding between an edible and a harmful mushroom any more than there are rules for deciding whether a person you meet is a dangerous character or not. In the case of the human being you must know the individual; so in the case of the fungus you must know the species. * * * How do I decide whether a mushroom is edible or not? That is simple. A specimen of the species to be tested is first tasted raw. If the flavor is not disagreeable, one is fried and eaten. If I live until the next day, I fry and eat several. If I still live, I eat them freely and pronounce the species edible." Mr. McClatchie found a score of edible species in the vicinity of Pasadena, and but one that was virulently poisonous.

In 1896, Mr. McClatchie became botanist and bacteriologist in an Experiment Station in Los Angeles, conducted by the Southern California Academy of Sciences. Although this terminated his work in the class-room, his interest in educational work continued throughout his life-time, and he frequently addressed educational bodies. In his new position, Mr. McClatchie could command time to carry out lines of work already begun, his most notable achievement being the testing of the water- and milk-supplies of Los Angeles. The bulletins issued on these topics were much appreciated by those who are intelligently concerned with the sanitary conditions of the city, and his popular

lectures and articles on pure water and pure milk reached many who do not read bulletins. Says Prof. E. J. Wickson: "I remember his work in the examination of milk in Los Angeles as constituting a foundation upon which great reforms in milk-supplies have since arisen. In fact, I believe he is entitled to rank as a pioneer in the very wide and important exposition of the relation of bacteria to the public health."

In February, 1898, Mr. McClatchie became agriculturist and horticulturist of the Arizona Experiment Station, conducted by the University of Arizona, one of the very few stations of this sort in the arid regions of North America, and a station whose experiments are carefully noted by cultivators in the interior valleys of California, in Mexico and in other similar regions. Every one in the Southwest can point out marvelous examples of regions "reclaimed from the desert;" but any one who has watched the contest of man with the desert, knows that many a valiant struggle ends in defeat, and that the successes have often been built upon a series of failures. To minimize these failures by a series of intelligent, scientific experiments, conducted through a term of years, with results accurately and honestly recorded, is indeed a worthy achievement. To this enterprise Mr. McClatchie devoted his remarkable ability and his tireless energy.

The experiment-farm is situated in the Salt River Valley, two miles from Phoenix—a typical semi-tropic, arid, inland valley. In his bulletins, Mr. McClatchie has always in mind the new settlers to whom the climatic conditions of arid regions are utterly strange, and he frankly and clearly sets forth the difficulties of the situation. After noting the sharp winter frosts, the excessive summer heat, and the aridity of the atmosphere, he states that though water be supplied artificially, "Crops sensitive to cold cannot grow in such regions during the winter, those sensitive to heat cannot be grown during summer. Crops sensitive to both heat and cold have only a short period during which they can grow." He notes that the aridity of the atmosphere alone often checks or prevents growth, but on the other hand there is usually immunity from insect pests and fungus diseases. He concludes: "On the whole, therefore, conditions in arid regions call for much perseverance and a careful study of the situation on the part of farmers. Nowhere is greater intelligence and more alertness demanded; and nowhere will efforts directed along proper channels be more substantially rewarded."

Much of Mr. McClatchie's early work in Arizona was concerned with sugar-beet culture. Thorough experiments were continued during a series of seasons, and the best methods of culture, the amount and quality of the yield were pretty accurately determined. The results did not meet the expectations of the more sanguine, but those were found who considered that the data warranted the erection of a beet-sugar factory. He also helped to carry out experiments already under way with date palms, and the results led him to believe that date-growing will be some day an important industry in this region.

From the first, Mr. McClatchie instituted systematic observations in the growing of vegetables, fruits, grains and forage-plants. He issued bulletins from time to time concerning these experiments, and at the end of six years' work with some different crops, he carefully

summarized results. Some of the conclusions were easily reached, others represent long-continued and skillfully conducted investigation.

He demonstrates that many vegetables can be profitably grown in these regions, if they are planted at the right time, and are properly irrigated and cultivated. Growing potatoes is not easy, but he devotes much time to determining the best way to meet the difficulties. Some fruits that he finds can be successfully grown are grapes, peaches, apricots, plums and almonds. Olives, like dates, he considers especially well adapted to the climate. Melons he regards as a staple product, and he gives many details as to the best varieties and the methods of culture. After several seasons of most careful work with strawberries, his final verdict is unfavorable. Alfalfa, he was led to believe, should continue to be as in the past, a leading industry of such regions. Mr. Dwight B. Heard, a man thoroughly acquainted with agricultural conditions in Arizona, speaks of these publications of Mr. McClatchie's as "the most practical and thorough studies that have ever been issued on the subjects handled * * * a safe guide for future generations."

It goes without saying that these experiments were carried on by means of irrigation, and that the best methods of utilizing the limited water-supply were always under consideration. Mr. McClatchie was an ardent advocate of winter irrigation, followed by much summer cultivation, for orchards, and several bulletins and popular articles give very fully his grounds for this conclusion. Bulletin No. 41 deals with the details of irrigating at the experiment farm. "Bulletin No. 42, on 'Utilizing Our Water-Supply,'" says Mr. Heard, "is today regarded as a reliable guide in the study of our water problems." Mr. McClatchie was conversant with the irrigation laws of the West, and exerted his influence toward securing better ones. Some of his experiences in studying irrigation led to the story, "An Arizona Water-Right," in *OUT WEST* in 1892.

Mr. McClatchie's last Bulletin, No. 48, entitled "Relation of Weather to Crops," and already referred to, is a most notable achievement. The main theme is worked out in a masterly way. The methods by which he determines the actual temperatures that affect growing crops, his method of recording the amount of evaporation, the combination of these records with those of the Weather Bureau at Phoenix in tabulated form, the discussion of these data in their bearing on the weather, constitute a fascinating chapter in physical geography. The discussion of the effect of these weather conditions on the various crops grown on the experiment farm is a work that will be far-reaching in its results. To few men is it given to bequeath so valuable a legacy to the region in which he has lived.

During the entire time of his residence in the Southwest Mr. McClatchie was greatly interested in that remarkable family of trees, the eucalypts. He believed most thoroughly in their great economic importance to this region, and from the first he labored to promote a practical knowledge of the different species and their adaptation to various localities.

While residing in Los Angeles he had become thoroughly acquainted with the species of the vicinity, and had taken many photographs illustrating their characteristics.

In 1899 he became collaborator in the Bureau of Forestry, con-

ducted by the United States Department of Agriculture, and in 1902 he contributed to this department Bulletin No. 35, "Eucalypts Cultivated in the United States."

This work is fully and beautifully illustrated and furnishes means of identification of species to those unacquainted with technical terms as well as to botanists. There are also chapters on soil and climate requirements, on the propagation and care of the trees, detailed statements of the economic value of different species, and valuable groupings of species. The book is most attractive and will serve the double purpose of promoting a general appreciation of these trees in their proper place, and of becoming a practical guide to the tree-planter. A compact, brilliant and beautifully illustrated treatment of "Eucalypts in the Southwest," by Mr. McClatchie, appeared in *OUR WEST* for April and May, 1904.

While in Arizona Mr. McClatchie was constantly experimenting with many species of eucalyptus, and he succeeded in finding several species that are well adapted to the climatic conditions there, and that are also of much economic value. Upon his return to California in 1904 he took up the study of new and little known species of Eucalyptus and resumed his connection with the Bureau of Forestry. In spite of rapidly failing health, he enthusiastically planned for further study of these trees in Northern California, in the Southeastern States, and in Australia. In the midst of these labors and plans his death occurred, at Montebello, Los Angeles County, February 11th, 1906.

Many of Mr. McClatchie's traits of character, as well as his unusual talents and capacity for work, are evident from this account of his life—his absolute integrity, high ideals, steadfast purpose and tireless energy. He took always a keen and intelligent interest in public affairs, and gave a generous portion of his time to them. To his personal friends are known his personal tastes, his ideal domestic relations, his delight in the best literature, and his religious faith preserved in spite of the rejection of much of his early creed. Of the permanent value of his life-work to the Southwest, many testimonials from co-workers are at hand. I quote briefly from two of these.

From E. J. Wickson, Acting Director of the College of Agriculture, University of California: "Professor McClatchie's horticultural work in Arizona stands as one of the most important contributions yet made to successful plant-growing under the trying conditions of heat and aridity in interior California and Arizona, and his monograph on the Eucalypts will be a classic. The nature of his work, the acceptability of his manner and address, and his most sincere interest and desire to be helpful to all who appealed to him, will cause his memory to be long cherished and honored, and the farther we advance in the development of our new country the better we shall appreciate, I think, the importance of his early demonstrations and suggestions."

From R. H. Forbes, Director of the Arizona Agricultural Experiment Station: "The work Professor McClatchie left behind him here will be influential throughout this region for many a year to come, and the loss is keenly felt by those who appreciate the remarkable attributes of mind which made that work possible."

Hollywood, Cal.

THE PASSING OF THE FORTY-NINER

By GERTRUDE DIX



THE first great rain had come, roaring down with fierce yet friendly onslaught on the fawn-colored grasses of the ridges; piercing into the secret crannies of the cañons; lashing the face of the American River, and turning the white of its pebbled bed to grey. High on the crest, overlooking the phenomenal twist in the stream known as Big Bend, a man, hunting cattle, seized the trunk of a pine to steady himself against the sudden frenzy of the wind.

Craning forward, as one who, from an incredibly high gallery, should look down into a cockpit, he glanced toward the river. Under his feet was a sharp descent of the stupendous wall for two-thirds of its height. Then it thrust out a brushy spur, like the outspread paw of a lion, forcing the stream out of its course, into a tortuous, serpentine curve upon itself. To right and left it was invisible, lost in the immense folds and draperies of the cañon. All he saw of it was a bend of the semi-circle rounding the promontory. Throughout the summer it had lain there like a torpid, blue-green snake, catching the light upon gilded scales, quiet and leisurely, ah, so leisurely in the eternal sunlight. Now it had turned to a leaden monotone, and seemed from that vast height an inert and sullen thing, without voice or motion. Beside it, like a smudge of black upon the river bench, was a solitary cabin. For a moment the man's attention was caught by a speck of white that seemed to flutter on its wall. Then a flying rift of cloud, blown suddenly beneath him, blotted everything out. The cloud-wreath was split into fragments. The white speck had disappeared, and, exonerated to himself from further speculation in the matter, the cattle-man hastened on his way.

Down below, the river, so quiet from the heights, was beginning to hasten under the lash of the rain. It ran and shouted as it ran, calling to all the sister-cañons, big and little, to pipe shrill voices in response—first to tinkle and to sing with tiny rivulets and darting gushes; then to echo and augment with swollen torrents the roar of the vast mother-cañon. And here the speck upon the cabin wall streamed out like a snowy flag—eloquent of distress, till the wind, tearing at it with an excess of fury, wrenched it from whatever held it and sent it flying up the stream. It dipped and fell. For a moment wind and stream contended as if for prey. Then a swimming log entangled it, and it was carried down the tide, at first spreading and floating, then sucked under by the current.

A mile further down, an old man, dipping water from the river, saw the log come past. The river had already begun to rise. He dropped his pail in a fright. Something like a white-clad arm gripped and strained on one of the broken branches. Wading in, he stopped the log with his staff and disentangled the folds of drapery, which he drew after him to land. He examined the thing carefully in the fading light. It was a cloth of fine weave and texture, such as women in tight, comfortable houses spread upon their tables under fine food and silver and painted dishes. The poor refugee of the mountains carried it reverently into his broken-down hut. He had been prospecting for gold all the summer, content with the sunshine and the wretched pittance the river yielded to its untiring devotee. Now that the rain was pouring through the roof, there was not a dry place in which to spread the cloth. Yet, in contemplation of it, he forgot the miseries of the first day of winter and the dreary prospect of months of bad weather. How such a fine thing should be in the river he could not understand, but it must have come from the cabin yonder—the cabin of Featherstone, which to his mind was a palace, replete with every luxury. He had never been inside. Featherstone was one of those men who seem to possess the earth, with cold eyes, with an instant scrutiny of rejection for unfortunate wretches like himself with nothing but the shoes they stand in. Only when its owner had been away, had he dared go near the cabin, peering between the folds of the window-curtains with respectfully curiosity. But now, with the cloth for a passport, he would knock at the door like an equal, and Featherstone would let him in and give him shelter. For one night at least he would have comfort and a dry skin. He folded the cloth and placed it on his chest, buttoning the two remaining buttons of his coat across it, and, taking his staff, waded the icy river.

The rain poured upon him, drenching his poor rags and soaking him to the skin. The wind plucked at his beard like a mocking enemy, and night followed swiftly now on the long twilight of the grey afternoon within the cañon walls. It was almost dark when he turned the Bend. No light shone from the windows of the cabin. No voice answered his feeble knocking as he leaned exhausted against the door. So Featherstone had gone. There was no fire, no shelter. He would have done better to cower in the corner of his own wretched cabin. He beat petulantly on the woodwork. Truly there was no gratitude in the world. Perhaps Featherstone was another member of the conspiracy against him; for, with that magnifying of his own importance which is the consolation of the worthless and unconsidered, he imagined himself a victim of the innumerable plots with which the world

beyond the cañon was bristling. If only Featherstone had forgotten to lock his door!

To his surprise the latch yielded to his touch, and in a moment he had shut out the storm and was standing in a warm and comfortable atmosphere, smelling faintly of tobacco. The glow of embers guided him to a fire. He cowered over them rapturously, then finding some wood stacked close to hand, placed a few sticks over them. Oh, the leaping flames, how good they were! He hugged himself and chuckled at the thought of his luck. He had the place all to himself. He was glad that Featherstone had gone. He was never lonely, so long as he had sunshine or fire-light. They are full of the gold that makes the body warm and fills the mind with dreams. Hypnotised by the glancing shapes of light, he began to mutter to himself, "Millions of dollars! Millions of dollars!" and lost himself in a half-drowse.

All this time the rain had thundered with a ceaseless roar upon the unceiled roof, while the wind buffeted the house. Suddenly there was a lull in the storm, and he was aware of the stillness as of something unnatural. He rose to his feet at the sound of a labored breath, and saw, by the light of the fire, a face like a faint mask, held up against the shadows. Terrified, he began to move toward the door, but the face, from which he never took his eyes, arrested him with compelling spots of darkness where the lids had been.

"You've come!" said a faint voice. "Thank God! you've come."

It was Featherstone, and Featherstone thanked God he had come! That was sufficient miracle to stay the man whom the cities hounded out, and the mountains, when they had left him in peace a little, pelted with merciless fury. Here at last was one not senseless and cruel like the rest, and he should not have to go out into the storm again—at least, not immediately. He lit the lamp to which Featherstone again pointed, glad to be of use. It was quite a matter of secondary importance when he heard that his host was seriously hurt; that a mass of rock had fallen on him from the roof of the tunnel where he had been working, and that he had only just been able to crawl into his cabin. The great point was that he had shelter for the night; and that this man, whom he had hitherto regarded humbly from a distance, treated him with welcome and respect. Smiling, but trembling still, he muttered to himself, "What a fright he gave me! What a fright!" That face that had at first seemed so terrible in the darkness he only dared look at in furtive glances as he piled logs on the hearth for more warmth and cheer. Looking over his shoulder, he saw it reflect some of the rosy light and was no longer afraid.

As Ropes lighted the lamp, as the glow struck upon the claw-like hands, on the ragged wisps of his damp beard, and on the face above it—like the reflection of a face in swaying water, with his wandering eyes and loose-lipped mouth—Featherstone had already recognized him as the same old fellow whom he had seen, without any desire to decrease the distance between them, bending over his pan close by the ruined wire bridge—the wastrel, the social pest whom he had despised. And now he had need of him—not only for fire and light, but for a greater service that was to give him peace at the last. He had seen Death face to face and deep waters had gone over him, not because he was afraid of death, but because his great desire—something near and dear to him as his own soul—was in jeopardy till he could confide it to some other man's keeping. Could he trust this man, unstable as water, like water running into any shape, but staying in none? And what had he done for him that he should ask a kindness at his hands?

He bade him take off his drenched coat, and exchange it for one of his own which was hanging on the wall. He pointed to the cupboard where a good supply of food was stored. Ropes set out plates and cutlery for them both, then sat down and ate ravenously. Featherstone, sipping his wine for strength, thought of the old days when many a fine fellow had been his guest. And now they were all gone—all but the outcast of the river and himself. The people at Yankee Jim's would not miss him for days. They would not come till it was too late; for, though he managed to sit there, sometimes gripping his chair in a spasm of pain, he knew that only for a little longer his will might master his sinking body. That morning, when the rock had fallen, striking him down, an invisible wound from an old, internal injury had begun to bleed afresh. He had thought to die alone in the dark. But God had been good to him. Again he saw the warm light leap upon the walls; on his beloved books on the shelf; on the little daguerreotype of his wife above the mantel. Ropes was taking off his wretched foot-gear, and he looked down at his own heavy miner's boots. With a kindness of intuition that seemed wonderful in this creature he had despised, the elfish old man unfastened the laces till they dropped noisily to the floor.

"I'd do more for you than that," Ropes answered his sigh of relief. "You've treated me like a white man."

"When I'm gone," said Featherstone, "you can have this cabin. There'll be no one to prevent you."

Ropes sat down and nervously brushed the crumbs off the table. "I don't want you to go," he said. "Sometimes on wet nights I'll come in like this."

"Will you stay here with me till some one comes?" Featherstone asked.

Stay with the fire and the light! He assented eagerly.

"I love this place," said Featherstone. "I've lived here nearly all my life. I want to stay here even after I'm dead."

Ropes nodded. "It's the same with me," he answered. "I know. Ever since I first came to the mountains I've had to come back again and again. They've never scowled at me like men have."

"I've never been away for long," said Featherstone. "More than fifty years ago, I came, and the mountains were the same, though everything else was different. Ah, those were great days! Men came from all the world to the valley of the Sacramento. Those foothills were full of work, and life, and hope. I've seen men thick as flies along this river-bank and the trails—there were scores of them leading in and out—alive with men and mules all day long, summer and winter. The best were the pioneers that came first. One by one they dropped out. All the white men went, and only Chinamen were left. But I stayed on even when the Chinamen had gone."

"You knew there was gold here still—more gold than was ever taken out," said his listener, wisely. "That's what I say, too."

Featherstone shook his head. "No, no," he said. "Sure as the sparks fly upward, that's all gone. I didn't stay for the gold. I stayed because my wife was buried here, under the oak tree at the back of the cabin where the white stone lies. And that's why I want you to tell them, when they come, that I didn't want to be taken out."

"But they won't come," said old Ropes, nodding with sagacious reference to his enemies. "Don't I know them? They've robbed me of a million and a half of dollars—these Copts—these men from Egypt—but they won't come down here. It's too steep. Don't be afraid."

"No," said Featherstone. "The people who come will be my friends—good fellows. And they'll call in the Coroner."

The Coroner! Ropes clutched the arms of his chair, beginning to understand.

"Yes, he'll come to see how it was I died. And it's him you must tell that I want to be buried there by my wife; for I shall not live till morning." He stretched out a hand and touched the tense fingers of the other on the arm of the chair. "You'll be good to me—you won't leave me till he comes."

Old Ropes was staring at him with a fearful fascination, and trembled as he stared. In all his wanderings he had been afraid of Death, going out of his way many times lest he should meet it.

Once, it is true, at a "wake" in the mountains, he had sat up all night. But there had been good company with plenty of conversation. Now his instinct was to flee, but a sort of elementary gratitude restrained him, and when Featherstone asked him to help him reach his bed, and to sit in the chair beside it, the eyes of the sick man held him where he was. Even when the lids fell over them, he was afraid to move, lest they should open upon him suddenly. In the stillness of the room, that chained him to his chair and that he dared not break, Featherstone began to talk, in snatches, of the old days and their gold—of marvelous finds in this place and that; of astounding successes; of no less astounding failures. He mentioned the names of old, worked-out claims—Lone Star, Black Oak, Brown Bear. He went back to the days of the roaring mushroom camps. He saw them grow in a night, and the history of an almost forgotten epoch lived for a moment in his speech. He spoke of hidden treasure. Ropes listened intently.

"I've heard tell," he said, taking courage in a pause, "that there's treasure buried under the big oak at the head of the cañon where the Indians used to meet."

"Hush!" said Featherstone, "You mustn't talk of Indians. She can't forget the Indians of the plains, nor how she lost her baby. She'll turn pale if she sees one on the river. Ssh—don't let her hear us, and I'll tell you why. Lean closer! She came across the plains with me, day after day, month after month, with her baby in her arms, with never a murmur and never a fear."

He began to wander, forgetting time and place. He lived again the most dreadful moments of his life, and Ropes, who reflected everything like a looking-glass, saw and felt it all. He, too, was in the wagon, delayed that the young wife might wash her baby. Following the main train at some distance, they looked down and saw it in a hollow half a mile away, surrounded and attacked by Indians. They began to make a detour. Ropes, too, imagined himself crouching with his revolver ready. Then the man who drove—Isaacs, he was named—cried that one of the mares had her leg over the trace, and, pulling up, leaped down to right it. Their eyes were on the plain, and two tiny moving dots upon it, till at the woman's shriek they turned and saw Isaacs riding off on the mare he had cut loose. Featherstone cried out to him to stop, covering him with his revolver. But it was Isaacs who shot, and at the report of his gun those dreadful dots upon the plain wheeled and steadily grew larger. It was the woman who drove now—the woman with the child on one arm, while the men kneeled waiting at the back. They went furiously over stock and stone, swerving to right and left. Just in time the

sally came from Fort Denver and the Indians were driven off. Ropes, too, was marching into the fort, his gun in his hand, when Featherstone interrupted his thoughts. "Never talk of Indians before her," he was saying, "for when we got inside the baby was dead. She sat there, weeping and weeping—she who had been so brave—and I, thinking to comfort her, took the veil from its face, and knew then what she knew. You Isaacs! Cursed coward!" His voice rang out loud and clear. "This was your fault. If I ever meet you, I will shoot you like a dog!"

He was staring at Ropes. The little man, like one accused, sat there trembling, wanting to explain that such cowardice was impossible to him—besides he had come across the plains in a train in the late seventies. But Featherstone did not heed him. He sank upon his pillows, forgetting his momentary fury, and was talking quietly under his breath. Then, rising a little, he spoke to some one standing near the bed. "Why are you so pale, my girl? Why are you so pale? It's safe in this cañon—so quiet, with the sunshine all day long. Try and forget, my love, try and forget. You'll cry your pretty eyes out, if you weep so."

He was looking toward the window. And something stirred there—something long and quiet like a woman's gown. Ropes could not bear it. He slipped from his chair to the ground—then crawled—then ran to the door. He was going away. He felt the fresh air on his face. But here outside—there were other perils. Close to the trail under the oak, the stone on the dead woman's grave glistened, wet with rain, and his knees trembled so that he could not pass it. The night was full of mist—wreathy, moving whiteness from the river. A stricken, swooning moon tottered over the black wall of the cañon, and the river, unnoticed within doors, was shouting and calling with its thousand voices; deep, bass voices in a swelling undertone; voices that babbled, sang and laughed; voices of shrill complaint, lisping, sinking, crying. Oh, the river with its voices, and the shapes that were gliding from the river! He must shut them out.

He turned back into the room, rushed to the fire, threw paper and wood upon the dying coals. "I'm no coward," he kept saying to himself. "I'd never run away, though all the Indians in the world were after me!" The leaping flames made a visible picture of his fiery courage. In their triumphant brightness he was not even afraid of the dead woman. And there in the corner, leaning against the wall was a gun—just the thing he had wanted to possess for so long. He sat down at the end of the bed with his new treasure. Featherstone opened his eyes and knew him again.

"Ah," he said, "you're there. I was afraid you were going."

"No, no," said Ropes. "I'm no deserter. I will stay here with you."

The other thanked him with dry lips. "Till they come," he whispered.

"Yes, I'll show them that white stone out there and tell them all you said. And after that I will shoot the first man that tries to take you out."

"Good!" said Featherstone, "that's good!"

There was an emphasis about this that satisfied him. They would never take him out of the cañon now. He should lie by his wife. And that was well—that was as it should be—as he had wanted it all along. Now he could sleep in peace, for he was very tired. He drowsed; and whenever he opened his heavy lids his armed sentinel was always constant. He could lie quiet and not trouble to open his blurred eyes any more. In the stillness he could hear the endless burden of the river. He had heard it all his life. Before men came to the cañon, it had sung the same song. After they had gone, it would go on singing for a thousand years. He remembered how once it had called him when he had come home from a long journey—first in a faint whisper; then with a louder voice that became a song of welcome, as, reaching the level of the stream, exhausted in every fibre and parched with the fiery solstice, he had fallen almost fainting into its embrace, letting it flow over and into him till he had seemed to lose himself, to become a part of that irresistible flowing. Now again, very tired, he was slipping and falling into the kind river. It laved him; flowed over and into him; carried him down—down into darkness—darkness.

After the rain came a frost, and the morning was crystalline in its clearness, so that the room was bright with sunshine. Ropes, who had slept at the foot of the bed, bent forward as he woke, to recover his gun which had fallen to the floor. Featherstone was very quiet upon the pillows—so quiet that he moved stealthily, afraid to make the slightest noise, though he knew no sound would wake him. He stayed at the other end of the room, munching his breakfast, and then went out into the sunlight, and, with his gun upon his shoulder, marched to and fro before the door. By and by two hunters came down from Yankee Jim's. He went into the cabin with them and told them everything, forgetting even his own importance at the thought of how he had found a friend only to lose him. Although they listened respectfully to all he had to say, he still held his gun. He did not relinquish it, even when the Coroner had come, and he had pointed out the white stone under the oak and repeated over again Featherstone's message. His work was not quite done, but on the following morning he listened with immense satisfaction to the sound of spades cleaving the rocky ground of the river-bench. He looked down at the white boulder and remembered the coward who had cut loose the horse.

"But I stayed," he muttered to himself. "I stayed as he told me to. I was no deserter."

Weimar, Placer County, Cal.!

THE PINTO'S LAST RACE

By LANIER BARTLETT



HEY tell about it yet in Isleta—the pinto's last race. Such a race as that would, indeed, be enough to raise the sporting blood of a desert tortoise—and without question that is the most difficult thing in all the world to do.

“How the little devil of a Manuelito did ride that blind carcass! There was a boy! There was a pinto! And there, also, were two brave men—Antonio the old, and José el Platero!”

So will cry these picturesque villagers of New Mexico to this day—that is, such of them as witnessed the memorable contest and still survive; the younger generation will listen to the story, open-mouthed, whenever it is told.

The great event happened on *El Día de los Muertos*, the “Day of the Dead,” one November. This feast-day is always the occasion for the finest pony races of the year, out on the plain beside the Rio Grande, just on the edge of the pueblo.

This particular race came about thus: Old Chino, the fat and miserly Indian who lived on the other side of the river, where he owned much prosperous bottom-land and many head of horses and cattle, was the richest man of all that quaint, primitive community. Though rotund and jolly enough, he was an arrogant, taunting fellow. Little, wrinkled Antonio, who lived in a mere hut and owned nothing else in the world worth speaking of except a blind pinto pony, was the poorest man.

That very feast-day morning, as Chino, mounted on one of his sleek horses, passed the bent old man's tumble-down home, he vaunted the worth of his well-known sorrel mare until the poorest man was unable to stand the richest man's mouthings any longer.

“I'll show you! I'll show you, you sandstorm of talk!” squeaked the little man from the roof of his tiny dwelling, where he was collecting strips of melons that had been laid out to dry. He fairly shook with resentment. For Antonio had himself been a man of no mean position in the village once, and a great horse-racer; and arrogant Chino had taunted him more than enough of late about his ugly blind pony and about himself, too. He had gone so far as to taunt him with being too poor to put a dollar, or even a *ristra* of chile, on a race, and not sport enough, anyway, to risk what little he did have. But worse than all this, he had declared, in the hearing of several worthy persons, that Antonio's motherless little grandson, Manuelito, could not ride a horse full speed the length of a village street without falling off in fright. *That* was unbearable, even to the

poorest man, and the race between the blind pinto and the sorrel mare was set for that afternoon. Manuelito was to ride the pinto, and Chino's son of the same age—ten years—was to jockey the vaunted sorrel. Poor Antonio staked his all on the result—yes, staked the five silver dollars that had been hoarded up in the adobe for so long, and his one little field—the living of himself, Manuelito and the old grandmother—against double value put up by Chino.

If Manuelito and the pinto won, the poorest family in the pueblo would be comfortably rich; if they lost, the family would starve. Who can say that the wrinkled little man was not still a "true sport?"

Now, while it is evident that the odds were greatly against the pinto, still the blind pony was not without his fame as a runner. In his day he had been considered by the Mexicans of the surrounding country as the surest winner in that region, and it was from them that Antonio had procured him for a few strings of chile and some dried peaches. True, they had disposed of him because they had thought his racing days were over; but then, who could tell but what there was just *one* more race left in his lean little legs, just one more victorious determination behind his glazed eyes?

At heart nobody really liked Chino, because of the spirit in which he flaunted his riches. But in his presence they did not express their dislike openly, because they really admired his business talents; and they did not dare wager anything on the poor man's pony, even to encourage him, for they were all sure that the well-fed and shining sorrel must win.

Only José el Platero—José the Silversmith, who was considered almost as well-to-do as Chino; for his fame as a worker in silver had placed him above the common plane—dared champion the poor man, his grandson, and the pinto. His house stood right where the racing course finished; indeed, the corner of the adobe wall that surrounded his place marked the line where the pinto or the sorrel would win or lose. Thus his house was the grandstand, and on his roof were the choicest reserved seats—very much reserved, for only the silversmith's chosen few were allowed to mount the long, ancient ladder that leaned against the mud house.

The crowd that gathered was turbulent in the good-natured pueblo way—for Indians are good-natured among themselves, and not the stolid creatures they are sometimes imagined to be.

On the "Day of the Dead," native wine flows freely from the great skins that hang in the dark back rooms of the flat houses, and free wine creates free speech. But, on a feast-day, it is no harm to get mildly drunk. Indeed, it is only right that when the dead make the long pilgrimage home to procure a little of their native food and drink, they should be shown that there is still provender and good cheer in their old-time abodes; and thus they will not return to their

Invisible Country sad at heart because of any famine and sorrow in their white city beside the river.

So, on this memorable afternoon, the villagers gathered around the silversmith's house on ponies, on burros—two or three youths astride of one poor little beast—on foot, and in wagons that held whole families, tightly packed. The horsemen lurched from side to side as they galloped madly about, and the burro-mounted came poking in, beating the shaggy beasts with resounding thwacks. Revelers walked arm in arm, whooping and joking, while the old men, wrapped in their bright blankets, squatted against some sunny wall and gravely smoked their corn-husk cigaritos.

Interest was at a high pitch as the time for the strange race drew near; betting was not slow. Even way back in the pueblo, women could be seen standing on the housetops to catch a glimpse of the start. Poor Antonio—if he lost! But Manuelito could ride—aye, like a Comanche! Everybody knew that, and it made the race less one-sided than it would otherwise have been. It was the apparently worthless blind pinto and the born jockey, Manuelito, against the superb sorrel and the careless rich man's son. Oh, what would n't every one of them give to see Chino humiliated by Antonio's ragged brat! Yet the money went the other way, as money will. Truly, the queer, long-haired people in leather breeches and moccasins, in loose cotton tunics, in mixed white man's garb, were divided, each against himself.

Chino and his outfit had already arrived, and he was pacing up and down for the admiration of all the people—very resplendent in costly blanket and silver-buttoned moccasins—when the shout of "El Pinto!" went up from the edge of the crowd, and stillness settled down as the men gave way.

It was a strange little procession that appeared. First came tiny Manuelito, naked save for a cloth about his loins and a red band that bound the hair back from his forehead. He was leading the bare-backed pinto. Behind him came the old grandfather, his eyes upon the ground and his money in his hand; and in the rear the decrepit grandmother tottered along with her long staff, her back bent almost double. Everyone wondered greatly at seeing her, for she had not been out of the house for years. But she was struggling along to see the race which would make them rich or set them to starving.

The crowd wondered still more when the portly and wealthy silversmith descended and invited the poor old woman to his housetop. Chino turned up his nose and stalked a little more heavily at that, while the people looked on almost in awe as José championed the seemingly losing side. That he was in earnest was soon evident; for just before all was ready, the silversmith called Manuelito to

him and said something in his ear. "Remember, the toes in the scars when I speak!" he finished, and with a wise opening of his deep black eyes the wee jockey sprang upon his mount and started off with Chino's son and the sorrel for the starting-point—a clump of cottonwoods a mile down the river.

For the love of show, the rich Indian had dressed his son in the best he possessed, and had strapped upon the sorrel's back his brightest *sarapita*. But the poor man was wiser, and not even a cinch encircled the blind pony. Manuelito's slim, naked body shone in the sun, and he scorned any blanket on the back of his mount.

As the boys rode away, the crowd looked up in astonishment as they heard the mysterious José shout: "I put my best blanket that the pinto boy wins; if he does, it is his." What could the shrewd *platero* mean, thus staking valuables on a lost cause? The people crowded around excitedly, waiting for the racers to appear down toward the clump of trees against the horizon.

In time, they began to surge out onto the course, betting, arguing; while the younger element wrestled and ran independent pony- and foot-races. Suddenly José el Platero stood straight up on his housetop, big and clear against the sky in his red blanket; and the crowd instinctively broke to either side of the finish, silent and expectant.

"They come!"

Down against the russet-leaved cottonwoods swirled a great cloud of dust, now and then revealing two black dots. It swept on toward the pueblo as if caught in a whirlwind. Not yet could the beat of hoofs be heard—just the silent sweeping nearer of the cloud and the black dots. Who was leading? Everyone asked that, and none could answer.

When the crowd melted away to either side, it left one eager, bent figure standing squarely in the middle of the course. With head thrust forward, one hand shading his eyes against the immense sinking sun that had descended squarely behind the racers, and his five silver dollars slowly clinking in the other, old Antonio watched, all a-tremble. Chino stalked up and down, bragging. Manuelito's grandmother, who squatted on the edge of José's roof, was weeping, and brushing the tears away as fast as she could, that she might see the race.

Now the women in the wagons began to rise and shade their eyes against the sunset, and the youths stood straight up on their horses among the spectators, like circus-riders. The grandmother crawled still nearer the edge and leaned far out over the coping, in piteous eagerness. Antonio, still shading his weak eyes, knelt down, the better to peer—perhaps he could distinguish his pinto's thin bits of legs below the dust.

Already the finish was near. Now and then an arm could be seen

rising and falling in the cloud. The beat of hoofs broke on the ear, and the pinto and the sorrel emerged from the veil. They were coming wondrous fast, but one came faster than the other. The sorrel was leading well, and no rider could be seen on the pinto. Chino laughed aloud as he looked toward the crouching figure of old Antonio, peering out onto the plain.

"Did I not say that fool boy could not ride the length of a street? Look how mine sits his matchless animal! I am richer today, my friends—though at worst I am a very rich man!" The people looked at him with that admiration which inevitably goes to the victor, however grudgingly, and at Antonio in sincere pity. Again it was clear that the people were divided against themselves; the most money was on the one horse, and the most sympathy on the other jockey.

"Antonio was a fool, anyway, to try it," murmured the crowd. "But the boy, he is a good one—he is not as Chino thinks," and the spectators fell to watching again.

The race was almost over. The sorrel led by a length—by two. The pinto's glassy eyes stared wildly, but he struggled bravely on. Suddenly the people shouted, as a ray of the setting sun gleamed on Manuelito's naked brown back. They could not believe that he had been dismounted—and now there he was, lying flat on his belly on his beloved pony, his wee legs wrapped tight against its thin sides, and a defiant look on his pinched face. But what could he avail against such odds, *pobrecito*? What could the little man do with nothing under him? Yet he was fine—O, so fine!—he was worthy of the pueblo, was this child of the people, naked and free and business-like, as an Indian rider should be, not flaunting himself for the public gaze! Look at that other fool, all heavy with clothes, sitting so straight to show off. He was no racer! If the people's own son only had something to ride. *Lastima!*

Plainly, the people were no longer divided against themselves—they had forgotten money, and their human sympathy, their love of pluck, their natural admiration for the harder struggler of any two, had swept them at the losing moment—to them the winning—to the poor man's side. Oh, if Manuelito could but dig three quick lengths out of the pinto, it would take the confident rich man's son by surprise—two lengths to put them even, and the third to win on! So thought the people, and instinctively they turned their eyes up to José el Platero. He stood with his gaze riveted to the wee naked jockey, and suddenly, when all seemed lost, he bellowed in his great voice: "I put another blanket, son. Now!"

Ah, at the last moment the good *platero* was not mouse-hearted, but was staking more! The crowd murmured its approval—and then all eyes were drawn suddenly to Manuelito.

Reaching forward at the cry from the *platero*, the brown tot put his mouth to the ear of the laboring pinto. At the same time he slipped his feet back and dug his bare toes into the pony's flanks. Nobody could tell what the boy uttered in that ear—though one might have imagined it ended in a sort of snarl—but with blind eyes almost popping from his head, the pinto laid back his ears and lunged forward so suddenly and fearfully as almost to shake off his little rider. The legs wrapped safely again about his ribs, though, and the people held their breath for a wonderful moment—the most wonderful, breathless moment a Pueblo horse-race ever caused, on the Day of the Dead, or any other day.

The spectators thought surely the blind pony had become enchanted, for he seemed to take wing and fly. One length nearer the sorrel he shot, then two—they were neck and neck. Just one length lay between both of them and the finish. The grandmother's wailing ceased, and Antonio clinked his dollars faster and faster in the stillness of the crowd. The rich man's son suddenly realized, and lashed the sorrel; but he had already been waving his hand over his head victoriously, and now he was too late. Manuelito straightened up as the pinto dashed past the fence corner in the lead, turned to smile up at the silversmith—and then his shining bit of a body shot through the air to the ground as the pinto staggered and fell dead. The boy landed like a cat, unhurt, and soon the crowd of Indians, who had lost most of their money, but didn't care, because the fight had been worth it, were almost beating the brave little jockey down under congratulatory slaps.

"We will eat, we will eat now, bless the little man!" cried the grandmother, beginning her wailing again, in delight this time. Every one except old Chino, paid his loss willingly for the pleasure of having seen the naked son of the people win against the odds of the rich.

That night Antonio, with jubilant face and trebled fields, made his way to the house of his champion, José el Platero, clinking ten silver dollars now in his wrinkled fist. Anyone listening to the subsequent talk beside the *platero's* cheery fire would have heard the good smith say to the old grandfather:

"*Tonto!* It is easy to see—anybody with sense understands. Has not the pinto long scars drawn along his back and off his flanks? Well, they are the marks of the mountain lion's claws—he was attacked when a young horse. Never does a horse forget the leap, the snarl, the clutch of his first lion. All I did was to tell the little son to snarl well, like our cat-brother when he hunts, and to follow the scars with his sharp toes. The pony was blind, seeing only through his ears, and thus easily deceived. The fright killed him, but you are richer by the loss, *compadre*; you have proven the boy before the people. Shall I beat one of those bright dollars into a bracelet for the little man's maiden when he takes one to wife?"

THE DESERT

By *THERESA RUSSELL*

"God must have made thee in His anger, and forgot."

NOT in His anger, no, but in a mood
 Of pure creative power, by any need
 Or law unfettered, uncompelled to heed
 Necessity, by Beauty wholly woo'd.

In other portions of His earth He placed
 Fair gardens, teeming fields, abounding streams,
 Deep sombre forests lit with mellow gleams,
 Song-filled and fragrant, panoplied and graced.

In wisdom and in sympathy He made
 These things for men, His children, that they should
 Be clothed and nourished, dowered with every good,
 And never feel their lives mocked or betrayed.

This gracious deed accomplished He was free
 To fashion what He would for His own joy,
 To wield Infinite power without alloy,
 To please Himself—then, Desert, He made thee.

He made thy sands and flooded them with light—
 Thy sun's hot-hearted passion never faints;
 With brush of fine and jeweled hues He paints
 Thy skies and rocks and blossoms—e'en thy night.

So dost thou glow and quiver; yet the spell
 Of Silence is upon thee, for He willed
 The voice of pain and anguish to be stilled
 And mirth hushed. Smites His ear nor chime nor knell.

Thus all thy life is silent. Here the snake
 And lizard glide; slow circle birds of prey;
 The scorpion crawls; wolf and coyote grey
 Move stealthily—and none that silence break.

In silence and in mystery thou'rt made,
 But thy God loves thee; in thy spaces shrined
 He has His dwelling where who seek may find,
 Though thy still vastness makes the heart afraid.

Stanford University.

UNIVERSITY OF CALIFORNIA—ITS FINANCIAL CONDITION AND NEEDS

By PRESIDENT BENJAMIN IDE WHEELER

THE total property of the University in conservative estimate is now about \$7,750,000, of which somewhat over \$3,500,000 constitute its endowment. Harvard's endowment is about \$16,000,000, and it also receives \$800,000 in tuition fees (an item denied to us by our free tuition), which, if capitalized, denotes a further endowment of \$16,000,000 to \$20,000,000.

Our net receipts for the year, including moneys for buildings and gifts for endowments, somewhat exceeded \$1,100,000. Of this 49 per cent. came from the State, 32 per cent. from private gift and income of endowments.

The large expenditures on the Hearst Mining Building are not yet included in this or any other of our figures.

Deducting from the \$1,100,000 mentioned above, the amounts going to capital rather than income, we find the gross income to be somewhat over \$800,000. Of this, \$308,000 is the result of the 2 per cent. tax, \$100,000 the annual outright appropriation of the State, \$85,000 State appropriations for agriculture, \$40,000 United States government contribution, \$201,000 net income from investment, and \$71,000 gifts for current use.

Deducting the amounts assigned to permanent improvements, administration, the \$25,000 belonging to the Wilmerding School, and \$42,000 for maintenance of the Lick Observatory, etc., there remains for the educational work at Berkeley approximately \$500,000. Herein lies the crux of our difficulty. The amount is far too small for the kind of work we are trying to do. We have too much sail for our hull. It means \$175 for the education of each student—a figure far below the experience of other universities, which expend \$250 to \$450 per student. It means over-crowded classes taught by underpaid professors. In the year of California's greatest prosperity, the University is suffering its acutest poverty. This is certainly not intended, and reasonable indication that it could not be intended may be found in the fact that a university supported by all the families of the State pays its teachers much less than our sister university supported by the bounty of a single family. Most of our buildings are out-grown, over-crowded, ill-equipped, flimsy, and altogether unworthy the name of the State they herald; but all that is of small matter compared with starving the men upon whom the vitality of the institution depends. We are paying instructors, who have

From Pres. Wheeler's annual Charter Day address, delivered March 23, 1906.

added to their college course three or more years of graduate study and several years of experience in teaching, less than \$100 a month, and expect them to provide the very bread of life to our students.

The mechanism of the higher education, as it adjusts itself more and more to the direct practice of life, is becoming more expensive. The modern equipment of instruction, for instance, in the various branches of engineering is out of all relation to the demands of the old class-room in literature, which was satisfied with sundry benches and a map of Greece; or that in mathematics, with forty feet of blackboard and a box of crayons. We spent last year on agriculture \$82,000—a sum equalling about one-fifth of all the money available for all the other departments at Berkeley. And yet the variety of the demands and the millions at stake claim double that amount, and we should not begrudge it, if we had it.

The time has now come—it is here today—when this university has a right to ask of the community a radical amendment of its condition; it is a right grounded in the service it has proved itself capable of rendering in multifold ways to the community; it is a right established in its position at the gateway of the West, in its relation to the State whose name it bears, in its association with the community's prosperity of every form, whether begotten of mine or railway, field or market-place.

It has a right to appeal to the community at large; its needs far exceed any present possibilities of the treasury of the State. The State is substantially doing all that it can be fairly expected to do. More than half its revenue is today absorbed in the maintenance of education. The State was obliged to refuse us last year an Agricultural Building, the need of which was so patent that no man in any wise informed could question it—a need that glares upon us stronger every day that passes; but generous as was the will, the money was not there to give. And yet we need six other buildings today practically as much as we need this.

The State will steadily increase its support with the years, but this increase lags upon the swift advance of our needs. The way of relief is pointed out by the honored names of California families, ineffaceably inscribed upon the enduring structure of the University by deeds of beneficence which yield their unerring output of blessing to the State as the years and generations pass for time without forecast of end—names such as Hearst, Doe, Sather, Flood, Mills, Reese, Bacon, Harmon, Crocker, Herzstein, Tompkins, Whiting, Spreckels, Lick, and a score of others. Every distinguished California family may well have satisfaction

in associating its name with the higher service of a State in which all have such pride and under the shelter of whose laws they have enjoyed so large an opportunity.

It is one thing to accumulate skilfully, but a totally distinct exercise to distribute wisely what has been gathered. The very common method of distribution by the haphazards and litigations that follow death, or by entailing upon heirs possessions they were better without, will not always appeal to sensible men. There must be a recognizable comfort in the assurance that after one's life is done, the accumulations of that life go on to do good and not harm. There is no form of the assurance quite so certain as that the university can give. No form of human institution touches more widely the various needs of human society. No form has equal guarantee of permanence. Nowhere has a fund equal assurance of perpetual administration as a trust, especially when the university is incorporated into the body of a State. Every separate fund is now with us merged in a general investment pool and given thereby the insurance of the combined millions; the dividend upon all the moneys in the pool amounted last year to 5.8 per cent., an income made possible under the most rigid limitations to first-rate mortgage security by the freedom from taxation. I believe confidently that the only reason why more have not availed themselves of this opportunity is that we have not told them of it.

In my first report (1900) I enumerated fifteen pressing needs of the University; nine of these have since that time been fairly met. Accepting the omen as good, I proceed now to state the present needs of the institution in terms of opportunity for private benefaction.

We need a million dollars for a University Hospital; that is, half a million for building and half a million for endowment. Until we have this, our Medical School will not be able to make such provision for the development of medical education as to save our young people the necessity of crossing the continent and perhaps the ocean in order to obtain a proper training.

Seventy-five thousand to one hundred thousand dollars will endow a professorship of the type of the Mills Professorship of Philosophy, or the Flood Professorship of Commerce, or the Tompkins Professorship of Oriental Languages.

Twenty thousand dollars will endow a lectureship which will bring some distinguished men annually to Berkeley to lecture on a designated subject.

Ten thousand dollars will endow a fellowship, by means of which a graduate student can fit himself for a career as a scholar

and investigator. We ought to have today not less than thirty such fellowships.

We want an endowment for the University Press. Special publication funds in special subjects, such as Hebrew, Greek, Medicine, Astronomy, California History, etc., may be provided in amounts of from twenty thousand to twenty-five thousand dollars. But the University Press should not be named as a whole, like, for instance, the Clarendon Press, after one man, unless an endowment of half a million were provided.

We greatly need funds for the support of the library. Mr. Charles F. Doe has already made a bequest of twenty-four per cent. of his great estate for the building of a library. A building such as we need will cost not less than a million dollars. Separate book funds for separate departments may well be provided—thus we need a fund of twenty thousand dollars for California History, twenty-five thousand dollars for Architecture, ten thousand dollars for German, ten thousand dollars for French, etc.

We need a loan fund, whose income can be used to aid needy and deserving students. Any sum that is provided for this purpose can be efficiently used.

The creation of special investigation funds of from ten thousand dollars upward will enable professors to undertake special problems involving travel and other expenses. Special funds of ten thousand dollars would be very useful toward this end.

There is need of a Model School or Practice School in which shall be illustrated the best methods of teaching from the kindergarten to the University. The type of this school is found either in the Blain School at Chicago, or the Horace Mann School at Teachers' College, New York. The nucleus of a building would cost thirty-five thousand, but one hundred thousand dollars should be ultimately provided. The School will be in part self-supporting, but a special fund of fifty thousand dollars is desired.

An organ for the Greek Theatre would cost ten thousand dollars. The Great Organ for the permanent Auditorium should cost twenty to twenty-five thousand dollars. The Auditorium itself, which will dominate the whole scheme of the proposed buildings, looking down the present sweep of the Botanical Garden, will cost a million dollars. It can serve also to shelter a School of Music. An endowment of one hundred thousand dollars for a Professorship of Music should be provided; and an endowment for five different assistants, representing the different forms of music.

The Campanile, to stand where the tower of the present library stands, will cost one hundred thousand dollars, a chime therefor ten thousand dollars, a clock five thousand dollars.

Gates at the main entrances of the grounds, such as the one already provided by the wisdom of Mrs. Sather, should cost fifteen to twenty-five thousand dollars each. There should be, beside the one now provided at the Telegraph Avenue entrance, one at Dana street, and others at Center street, University avenue, Euclid avenue, Bonte avenue and College avenue.

Bridges, of which no less than ten are needed on the grounds, range in cost from five thousand to thirty-five thousand dollars.

Sections of the wall eventually to surround the Campus could be built by individual classes providing, say, three to five thousand dollars. Besides this, there are to be thought of seats on the grounds, chairs in the Greek Theatre, drinking fountains, or out-of-door lecture rooms or loggias.

A gymnasium for the men such as we need would cost four hundred thousand dollars; one for the women students the same amount; a swimming pool for the men students one hundred thousand dollars, and as much for the women students. Tennis courts, costing from five hundred to one thousand dollars each, are needed. The great Stadium, embracing the athletic field, will some day be built, and has, indeed, its place upon our plans. The estimated cost is three-quarters of a million.

A Student Infirmary, where students can be taken care of when ailing as well as when seriously ill, and which should include a Dispensary, would cost one hundred thousand dollars. Twenty-five thousand dollars would supply ample equipment. Beds can be endowed with five thousand dollars each. Maintenance would in part be provided for by an annual hospital fee to be paid by all students.

The College Observatory must some time be built on the top of the hill back of the Campus, and for that two hundred and fifty thousand dollars would be a proper sum.

A University Commons, as a Dining Hall for students, will soon be needed when dormitories begin to spring up on the hillsides, and these dormitories each provide a way of beneficence.

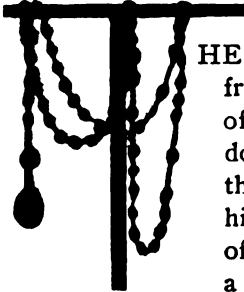
The great Museum of Archæology and Anthropology should be built with a central portion costing five hundred thousand dollars.

Fifteen or sixteen buildings, each costing from one hundred thousand to two hundred and fifty thousand dollars, are parts of our total plan of building. These are the buildings for Agriculture, Botany, Zoology, a group of three buildings for the Science of Medicine, a building for Commerce and Economics, one for Philosophy and Education, or possibly two buildings closely united, a building for Law, a Hall of Languages and Literature, a Hall for Fine Arts (where should be housed Architecture, Sculpture, Painting, and Landscape Gardening), laboratories for Chemistry and for Physics, a building for Geology and Mineralogy, a building for Electrical and Mechanical Engineering, and one for Civil Engineering.

The field is large. There is work enough to do, but it is work that will be done.

THE FORGIVENESS OF SINS

By LEWIS D. FORT



HE morning air was cool and crisp, and Ward's mount was fractious as he stepped forth from the corral after a night of confinement. He snorted as he looked with wild eye down the long cañon unconfined by fence or rail, and then he leaped forward and upward with intent to unseat his rider. The firm grasp of the bridle and the clinch of sharp spurs in his sides told him, however, that he had a determined antagonist with whom to deal. So with grim purpose he gathered all the force of his wild nature and began to buck with an abandon that was only exceeded by the calmness of the bronco-buster, who sat his saddle with graceful certainty throughout the impromptu performance.

At the doorway of the 'dobe a man with a tin plate and a dish-rag paused to watch the scene with a smile, and when Ward was fairly started called after him:

"Better get the Blackburn stud this morning, Bill, and that bunch of mares that's watering at Rosebud."

The man in the door was Bert Nelson. He was one of the few who deemed it worth while to stake a homestead claim in the San Andreas mountains. He established his ranch in the loneliest and seemingly the most inhospitable portion of that silent, gray group, that crouches in forbidding array on the plains of Southern New Mexico, a monument of loneliness in God's solitudes.

Bert built his corrals in Bear Den Cañon, and he built them after his own ideas. It might be well to state that Bert Nelson's ideas were usually at variance with those of everyone else. As an illustration, folks declared when he first began to string a drift fence across the cañon, that it would be rank foolishness to attempt to raise horses on those bleak hills.

"Why," advised one old ranchman, "there's nothing there for horses to eat; nothing in God's world, Bert, but rocks."

"Well," answered Bert with a laugh, "maybe the horses will learn to eat rocks," and he continued his meager improvements.

And they did learn; for in ten years Bert Nelson had the finest bunch of horses in Donna Ana county. There were five hundred in the bunch, and he devoted his time and that of two employees to breaking them to the saddle, after which they were sold for cow-ponies.

There was always a demand for K. X. horses for there was not a better bronco-buster in the county than Nelson. Twenty-eight years of age, and he had been thrown twice. He was proud of his record.

The other two men of the outfit were Bill Ward and Johnnie Elton. Nelson topped off the broncs. Ward, being the next best rider, rode the second and third saddles, in addition to his duties as "wrangler." Elton cooked, shod the broncs, and instructed the broken ones in the mysteries of the bridle and lead-rope.

As Ward continued on his way, the horse quieted by degrees, and, before the first mile was covered, he was loping with a docility that was born of submission. In token of his victory Ward awoke the echoes of the cañon with a rollicking song that was suddenly broken by the appearance of a man in the distance riding toward him, slowly, silently. A figure in brown, dull and listless. The slow trot of the horse was changeless. The man sat inert, fixed, stolid. Ward could hear the brown sand crunching beneath the hoofs of the beast with precise regularity, and now and then loose bits of rock clattered under foot.

The horse was a small wiry bronco, the man large and strong and bronzed to a dull red. The brim of his big sombrero of gray felt was bent back to the crown above his forehead. At the sides and back, it flopped lazily as he rode. The face of the man was thus exposed. A rugged life had left its telling lines there. Only the quiet blue eyes and the gentle curve of the mouth saved the face from hard ugliness.

There was something in the stranger's demeanor that caused Ward to check his horse suddenly, although he could not have told why he did so. As he halted, he saw a covert movement of the stranger's right hand hip-ward. The stealth of the action licensed and emboldened Ward to flash swiftly his own Colt's in the morning sunlight. Seeing which, the stranger drew forth his gun with deliberate precision.

In the ranch country, where there is similarity in each man's bearing, together with an absence of regard for personal adornment, it would be difficult to learn by mere observation what manner of man is the chance acquaintance, were it not for the inevitable mount. A saddle of standard make, a hand-forged bit and shop-made spurs are the invariable signs of the thoroughbred. And the horse itself contains a varied fund of information relative to his rider's estate, that is as an open book to the inquiring mind. In the present instance, before the man was well within speaking distance, Ward was aware that he was neither ranchman, cow-puncher nor bronco-buster, and, further, that he had ridden through two counties; for the W-bar-7 brand was owned by Tom Kerlew over in Bernalillo. It was evident that the stranger had ridden hard and was now carefully saving the remaining strength of the tired little animal he rode.

There was neither fear nor anxiety on Ward's face, as he

awaited the advance of the stranger. His appearance was rather of the soldier at attention as he sat his horse with quiet dignity, the barrel of his Colt's resting lightly upon the pommel of his saddle.

The stranger drew rein a few feet in advance. His manner was pleasant as he called out: "Good morning! You're abroad early."

With a drawl Ward answered: "Yes, and yourself?"

The other answered somewhat flippantly: "I like the morning air."

"So I see! And your horse?" With which inquiry Ward nodded toward the little bronco.

The stranger did not look down at the animal; instead he looked clearly into the eyes of Ward. There was reserve in his tone, and his words conveyed finality as he answered evenly: "He shall rest soon."

For a moment both men eyed each other intently, then simultaneously they smiled.

Ward looked down at his gun, turned it over slowly and then replaced it in his holster. The stranger did likewise. The parley was at an end.

The stranger's tone was pleasant. "Do you live near?"

Ward pointed over his shoulder with his thumb. "Back there two miles. There's a 'dobe there, and corrals and two boys. Adios!" and, touching spur to his horse, he passed the stranger and shortly renewed his song.

On his arrival at the ranch, the stranger stated that he was Ned Bailey, a deputy sheriff of Bernalillo county, and was in pursuit of Lem Clark, a member of a band of outlaws who had made a recent haul on the Santa Fé railroad. After describing his man and asking if he had been seen in the neighborhood, he made minute inquiry of the roads and trails thereabout and concluded with a request for lodging for the night.

Nelson was not a man to protect crime in any form, yet he possessed more than the ordinary distaste of the average ranchman of the hills for an officer of the law, such as the one who now stood before him. It was with a bad grace, therefore, that he extended his hospitality.

Bailey noted Nelson's reticence, but was seemingly unconscious of the scant welcome. He proceeded at once, however, to win the friendliness of the three men with a good-natured fellowship that soon brought him his desire. He offered his assistance in the corral and proved himself not only a good hand with horses, but an expert in handling a rope, which won for him the instant respect of the trio.

He was a man well on in his fifties, but his agility, strength and erect bearing were arguments against his gray hairs, that brought him, within the hour, the familiar address of "Ned" from all three men. And before the work of the day was over, the outfit were agreed that he wasn't such a bad sort of a cuss after all, and it was a low-down pity for a fellow like that to be a bloodhound.

When the men had unrolled their "tarps" and spread their beds for the night on the ground in front of the little shack, aided by the stars and the night, he drew them closer to him, as he awakened memories of baby days and the mother voice, with those simple melodies that linger in the storehouse of childhood recollections. He sang them with an ease that hid the undercurrent of his yearning for their good will and friendship, and yet with a tenderness that seemed difficult to associate with the stalwart, uncouth sheriff, who trailed and hunted men. When he had finished singing, there was silence. Ward was sleeping, and his bedfellow Elton turning softly drew his "necking" closer under his head and closed his eyes. Nelson was lying on his back gazing up at the stars in silent reverie. For a long time the stillness was broken only by the regular breathing of the two sleepers.

"Bert," said Bailey finally, "I suppose you noticed my mount today."

"Yes," answered the other, "and I'm thinking it's a durned poor one for a sheriff that's hunting an outlaw."

"And it would be about as poor a one for an outlaw that's trying to get away from sheriffs, don't you think?" asked Bailey, good-humoredly.

"Yes, I guess it would."

Bailey sat up in bed and looked across at the other two men. They were sleeping soundly. Then he settled back under the cover and remarked:

"Well, it happens to be an outlaw that's riding him; for to tell you the truth, Bert, I'm 'watering at night!'"

"I've just been doing a little thinking," coolly answered Nelson, "and I just about figured who you was; and if I ain't powerful mistaken you're Lem Clark."

"Just so," answered Bailey, "and——"

"And you want me to give you a horse and help you to get away from the hands of the law," interrupted the bronco-buster.

"Well, not just exactly that," responded the other. "But I thought as perhaps you might want to make a trade for that horse of mine."

"And it's a durned clean bill of sale goes along with him," said Nelson, sarcastically.

"Well, I guess I might give you a bill along with him, if you want it," answered Clark; "but it might not be just what would be called a court document."

"I guess I ain't making no such trades," said Nelson, sharply. "That ain't Bert Nelson's way of doing business. If I can't come by a horse fair and square, I ain't after owning him. And so far as the law and that sort of shindig goes, I might say I ain't never been taken up with that way of settling things. But that don't make me no friend of them that lives by killing and robbing instead of leading an honest and square life that's open to every man that acts on the square. It ain't that I'm grudging you food and bed, for there ain't no one ever went away from Bert Nelson's that wasn't treated right in that line. But I ain't never lent no hand to an outlaw and I ain't going to begin now."

Having delivered himself thus, the bronco-buster turned over, as a sign that he wished to discontinue the conversation.

One of the most formidable outlaws in the Southwest had met with, not only a direct refusal of aid, but the added affront of a rebuke. And, strange as it may seem, he received both in passive silence. A man's mood, however, is often responsible for his conduct, and tonight Lem Clark entertained no feelings of resentment. It was with a calm voice that he answered his host.

"Your sentiments is all right, Bert, so far as they goes, but the trouble is they don't go far enough."

Nelson turned over again and faced the outlaw.

"What do you mean?" he asked.

"Just this," resumed Clark. "There happens to be some men that's outlaws who wish to God they'd never been born; men that's gone up against this game of living square, and lost. It ain't always choice that makes a devil out of a man. It's pretty often luck, and damned hard luck at that. I was once one of your peaceful citizens, as they calls them. I lived along like other men, making an honest living and flying at the gals now and then. One day of course I gets stuck on a gal, builds me a stack to her, and ups and marries her. I had me a nice little bunch of cattle in them days, down in Llano county, and I took the gal out to the ranch. I guess we was pretty happy for awhile, 'specially when the kid came along. She named him after me—but it ain't worth while to tell you it warn't Lem Clark she called him. Well, as I was saying, things was moving along pretty easy like, until some one took to stealing my cattle. I found out pretty soon that a fellow named Kid Quay was doing the stealing, and—well, to cut it short, I caught him in the act one day, and I done what nine men out of ten would have done. I shot him. He was a pretty bad sort, and folks around said I

done right to kill him. But in spite of the fact that I had the evidence on my side, the court sent me to the pen for a year. When my time was up I went home, thinking I would live along pleasant and happy, as I done before the trouble, but pretty soon I found out that Fred Heket, the county clerk, had taken to building to my wife while I was locked up. He was about the most popular man in them parts, and when things come to a head, there warn't nothing left for me to do but kill him and quit the country. I done it, and God help me, I had to shoot an innocent man, the sheriff, afore I could get away. Of course, the whole county took after me, and I didn't dare show my face again where a man could see it. And when the whole world's agin a man, Bert, he don't generally turn saint. He somehow turns outlaw, like I done."

"And the woman, your wife?" questioned Nelson.

"They give her a divorce, and I heard afterwards she married some chap and then died. They give my boy his name, but I ain't never heard what it was. It's a better one, though, I guess, than the one his mother and dad both disgraced. If he's alive, I hope to God he's a better man than me. I guess it's a pretty bad life I've led these twenty-five years since then, and there ain't much left to me but a ticket to hell, and I'll get that soon enough. But I didn't begin it because I wanted to, for, as I was saying, a man ain't always an outlaw because he likes it."

For answer Nelson sought 'neath the coverings the outlaw's hand and gripped it hard.

At the K. X. ranch, preparations for the day's work were made by starlight, and on the following morning all had as usual begun their morning labors before the sky began to brighten overhead.

As Ward saddled the "night horse," preparatory to riding forth to "wrangle," Nelson said to him:

"Bill, I wish you would bring my Bay Boy up with the other horses today."

Bay Boy had been a motherless colt that Nelson had found one day neighing piteously around a bunch of mares. He brought the little "dogie" to the house with him, and fed it from a bottle. From that day there was nothing on the K. X. ranch too good for Bay Boy. The K. X. horses were all for sale, but Bay Boy was not a K. X. horse. No branding-iron had ever seared his glossy coat. He was the one horse on the ranch that was a forbidden mount to Ward and Elton. No saddle other than Nelson's had ever rested upon his back. He was sacred property. In the mind of Bert Nelson he was the finest saddle-horse in the territory.

Clark, or Bailey, as he was still known to the outfit, went with Nelson to the corrals after breakfast. He did not renew his offer

to trade horses. To his remark that he must be moving on, Nelson made no reply.

Ward and Elton came into the corral on their way to the saddle house to repair some harness.

"Did you see Mr. Bailey's mount in the pasture this morning, Bill?" asked Nelson, in an off-hand way.

"Yes," answered the other, and I thought he might be wanting to ride this morning, so I brought the horse up with the bunch. He's in the outer corral there with the others."

Ward went on to the saddle-house, and Nelson crossed the corral and opened the gate.

Bailey was leaning against the fence whittling a stick. He had not lifted his eyes during the conversation.

Nelson stood for a moment regarding the horses in the outer corral.

Bailey stopped whittling and watched him closely.

"Come here, Bay Boy!" called Nelson, to a splendid-looking bay horse that stood well toward the center of the bunch. At the sound of his name, Bay Boy, who at the moment was rubbing his neck over the back of another horse, pricked up his ears and looked toward Nelson, but made no movement to obey.

"Come here, Bay Boy!" repeated Nelson coaxingly.

The horse continued to gaze at him, but did not move a muscle. Nelson's tone changed.

"Bay Boy," he called, sternly, "come here, sir, this minute!"

The horse's ears drooped; he lowered his head, edged his way through the bunch and walked slowly toward Nelson, pausing a pace in front of him.

"Why didn't you come, sir, when I first called you?" Nelson asked with mock severity. For answer the horse lowered his head still further.

"Well," continued Nelson soothingly. "we won't quarrel about it, old fellow." He reached up and stroked the horse's neck gently. Bay Boy lifted his head and rubbed his nose against Nelson's shoulder. Nelson turned to the inner corral and walked forward. Bay Boy followed closely. Ward and Elton, standing in the saddle-house door, were smiling as the pair advanced. Bailey read in the faces of the three men their affection for the horse.

"Johnnie, hand me Ned's bridle out of there, please," Nelson asked.

"What!" exclaimed Elton, with a start of surprise.

"I want Mr. Bailey's bridle," said Nelson, calmly.

Elton reached mechanically for the bridle, but when Nelson stretched out his hand for it, he held it at his side.

"Bert," he began, "you are not going to—"

"Give me the bridle, Johnnie!" sharply interrupted Nelson.

Elton obeyed.

Nelson quietly bridled the horse. Then he turned toward Bailey. The latter stepped back, and held up his hand, as though to ward off a blow.

"No, Bert!" exclaimed. "Not that! I can't—"

"Ned," began Nelson, "you asked me last night if I had a horse I could trade with you." He felt suddenly a restraining hand on his arm. He turned; it was Ward. There was a look of silent appeal in his eyes.

"Jar loose, Bill!" said Nelson impatiently, then continued: "This is the only horse I'm willing to trade with you, Ned Bailey. If it's a trade, say so. If it ain't, then we are quits."

"Haven't you some other horse?" asked Bailey, falteringly.

"I've done told you this is the only one I'll trade," Nelson answered doggedly. "There's no use your acting this way. You can't ride that horse you rode here yesterday, and it's time you're moving on from here."

Bailey laid his hand on Nelson's shoulder, and looking him in the eyes said quietly:

"Bert Nelson, I ain't no hand at religion, for I don't know much about it. But I'll say that—if there's a God up yonder, he's been looking down here on you today, and I believe he'll reward you for what you've done, for I never can."

Nelson turned away without replying.

Bailey went for his saddle, and in silence saddled the horse. Ward and Elton looked on with an expression of dazed incomprehension.

Bailey climbed slowly into the saddle. His eyes were glistening when he turned and faced the three men.

"Boys," he said, huskily, "Bert Nelson has given this horse to Lem Clark, the worst man in this territory." Then he wheeled about and rode out of the corral. Nelson watched him dully as he rode away.

"Don't talk to him about it," said Elton to Ward in an undertone.

"I see you've got the blue roan in the bunch, Bill," said Nelson, as he turned toward the outer corral. "I guess we had better give him a turn or two and see if he is as good a saddle animal today as he was yesterday morning when you rode him down the cañon."

The blue roan was roped and the work of the day began.

That night, after Ward and Elton were both asleep, Nelson got up quietly from his tarp, and went into the little cabin. He lighted a candle and closed the door. From his "war-bag," hanging against the wall, he took a little package, and, seating himself

at the table, opened it. The contents were three or four letters, a lock of hair and a tin-type photograph. He held the photograph close to the candle-flame. It was the picture of a man and a woman. They were both young. The face of the man was frank, and his eyes looked fearlessly out at the world. The expression of his face was confident, happy. One big hand was clasped over the little one on his knee, his wife's. His new clothes hung about him with the general looseness of an ill-fit. The woman, a mere girl, was smiling with shy pride.

It was a photograph of Bert Nelson's father and mother on their wedding-day. He looked at the faces intently for some time. Then he put it aside, and laid his head wearily down on his arms.

The man in the picture was the outlaw, Lem Clark.

Roswell, New Mexico.

MERCHANTMEN

By VIRGINIA FAUNTLEROY FOX

I WATCHED them into the offing loom
 Across the late dawn's cheek of bloom,
 And saw their clustered sails unfurl,
 Smoke and dove and mother-of-pearl.

Into the harbor overhead,
 With gliding prows and queenly tread,
 They swept, a gracious company,
 With every canvas swelling free.

All day, beside the mountain pier,
 Unburdened they unto the year
 Freight of gladness, a thousand-fold,
 From gleaming deck and silver hold.

Rose and amber and indigo—
 Outward bound in the sunset glow—
 The waftings of their tinted sails
 Made odorous the evening gales.

When the harvest gilds the plain,
 And cattle dot the hills again;
 When on the bended orchard boughs
 Pear and apricot dream and drowse;

When brown leaves house the swelling grape,
 And like queens' robes of emerald crape
 The distant cornfields shimmering lie
 Beyond the breeze-beloved rye;

When toddling childhood plucks alone
 His first wild rose, by roadside blown,
 Then let us pause, with prayerful lips,
 And bless the coming of the ships.

Los Olivos, Cal.

THE JUSTIFICATION OF APPOLLONIO

By HELEN EDWARDS RICHARDSON



“ALL BET dollars to doughnuts it’s that dago potato peddler that gets away with our things,” said Thayer Waldron, as he drew his chair up to the breakfast table and helped himself to a raised biscuit.

The cook had retired in high dudgeon, having reported the rolling-pin as the latest article missing. The week before it had been the kitchen clock, and the week before that an iron spoon and some steel knives.

“Oh, I don’t think it can be Appollonio,” said his wife, as she lifted the coffee-pot, a frill of white lace and blue accordion-plaited silk falling back from her arm. She was a small woman, with innocent blue eyes and a fluff of light hair. “He’s always as honest as can be in his dealings with the potatoes. He always gives full measure, and just as good at the bottom as they are at the top. Once Maggie gave him too much change, and he gave some back to her.”

“I’ll bet it’s he, all the same,” Waldron maintained. “I notice it’s always on Friday the things are missing, and it’s Thursday he comes.”

They talked no more of the peddler. They went on to speak of the best route for the new road from the gate to the stables and whether it were best to have it oiled or not.

It was not until Thursday of the following week that Waldron thought again of the petty thefts. He was sitting at his office desk, deeply engaged in the preparation of a brief, when there came up from the street the long, sonorous cry,

“Po-ta-toes!”

Waldron sprang up and went to the window.

Yes, there was Appollonio, in a blue-checked jumper and a wide, black felt hat, riding along in front of his load of potatoes, his broad body swaying from side to side, as it unconsciously adjusted itself to the jolting motion of the wagon.

Waldron hastily closed his desk, took his hat from its hook, and, telling his stenographer that he would be back in an hour, hurried down the street.

He saw the potato wagon turn into the street on which his house stood. He hurried a little faster lest he should be late, but at a green house a Chinaman in white blouse came out toward the gate with a granite sauce-pan in his hand, and Appollonio brought his wagon to a stop. This gave Waldron the advantage. He hurried by on the other side of the street; then, crossing to his own house, went in the front gate and around the side of the house.

He went up the back steps and looked into the kitchen. There was no one there. He went back, and descending the steps, secreted himself in the basement. He removed his shoes.

Presently he heard the steps of the peddler coming around the side of the house, then the tramp of his coarse shoes as he ascended the stairs. Waldron heard the screen door shut. He came out and crept softly up, peeping cautiously in at the window.

Appollonio was inside the kitchen, looking about him. Presently he walked to the sink, and, glancing stealthily about him once more, opened the closet door underneath. He reached in and took out a gem-pan. He hastily unbuttoned the front of his jumper, and, secreted the pan inside, buttoned his garment again and started quickly out.

Waldron opened the screen door at the same moment.

"Look a-here, Appollonio," he cried, "this is enough of this now. Out with that gem-pan!"

Appollonio halted, surprise and terror in his face as he met Waldron's eyes. He began a denial, but broke down, and, unbuttoning his jumper, slowly extricated the gem-pan.

"And where's the clock, and the iron spoon, and the knives, too, you thieving rascal? I've a notion to send you over the bay for this. I suppose you have been looting every house along the street the same way!"

"No, I not take-a from nobody else. I take-a from you because you have-a much. I have-a da clock, an' da knives at home—I bring-a dem back. You not send-a me jail?"

His eyes, brown and pleading like a dog's, were full of entreaty.

Waldron stood regarding him for some moments. Something humorous in the situation struck him at last. It was hardly worth making a complaint about, but he would satisfy his curiosity a little, anyhow.

"Well, why the deuce," he asked, "do you steal rolling-pins, and gem-pans and steel knives? If you are going to steal anything at all why don't you take something valuable?"

"Well, I no need-a da valuable. I not to have a grand house."

"Oh," said Waldron, a slow light breaking in upon him, "Going to set up housekeeping, eh? Going to get married, I suppose."

"Yas," responded the culprit.

Waldron regarded him for a few moments more in silence, then he said:

"But you make money selling potatoes. These things don't cost much—why don't you wait till you can buy them?"

"Oh, but I no can wait. Rosa she ees een a bad place. She ees seek; she have-a no one to take care of her. I make-a da home; I take-a her there."

Rosa—the name brought a dim recollection to Waldron—a recollection that made a faint flush creep into his cheek. He had known a beautiful dark-eyed girl by that name, but it was far away, up on a cattle range, a hundred miles back into the mountains. He saw her now as she stood at the fork of the road, a look of appeal and distress in her eyes. Once, half a mile down the road, he had half a mind to go back, and hesitated a moment, but he decided not to, and went on. It had taken him eight years to forget that look.

"Rosa, you say her name is? Does she live here?"

"Yas, she live-a in Carara street. Carara street no ees good."

No, Carara street certainly was not good.

"And Rosa—she is good?"

"Yas, she ees good," said the peddler, after a slight hesitation. "She not good once. She have un Americano once. He bad; he treat-a her no good. He go away and leave-a her. After a little time she an' da niño come an' live-a in Carara Street. She love me now. She say she be true to me. Yas, she ees good."

A lump rose gradually into the American's throat while the other spoke.

Presently he thrust his hand into his trousers pocket, and bringing up a handful of silver and gold, pressed it into the peddler's hand.

"For the—the niño," he said, and then added, "You can keep the things, too; you don't need to bother about bringing them back."

Appollonio stood regarding Waldron in mute astonishment, then, a spasm of gratitude overcoming him, he seized the man's hand, and pouring out incoherent phrases of thankfulness, covered it with kisses.

"Don't, man!" he said. "Don't, for God's sake! You haven't any reason to be grateful to me!"

The peddler looked up and stood dazedly, not knowing what to do.

Waldron stepped closer and laid his hand on his shoulder:

"Appollonio," he said, "I am not worthy to unloose your shoe latches."

"Eh?" said the other, still mystified, glancing down towards his shoes.

"I said," Waldron repeated slowly, "that your shoestrings were untied."

Appollonio bent over and fastened them.

As he mounted his wagon and drove off, Mrs. Waldron fluttered out of the dining-room.

"You have been talking with Appollonio?" she asked. "He didn't take the things, did he? He's all right, isn't he? Do say he is!"

"Yes," said the man slowly, still gazing at the point where Appollonio had disappeared, "he certainly is—all right!"



“What is the cause of the grave changes that are coming over the American Republic—the extraordinary inequality in the distribution of wealth manifested on every hand; the growth of the aristocratic idea; the lapse from morals in business and private relations among the very rich; the growth of elements of physical, mental and moral deterioration among the working classes; the appearance of militant trade-unionism; the perversion of the injunction principle and the use of soldiers in strikes; the corruption of Federal, State and municipal politics; the deterring of press, university and pulpit from an open expression; the centralization of government; the advances in foreign aggression?”

With this question Henry George, Jr., opens his investigation of *The Menace of Privilege* (Macmillan; \$1.50 net) and gives prompt answer that all these evils have their root in “privileges granted or sanctioned by government,” specifying “the monopoly of natural opportunities, heavy taxes upon production, private ownership of public highways and other lesser privileges.” To the exhibition and demonstration of this theorem, “in a brief, suggestive way,” Mr. George devotes 376 pages of his volume, leaving himself 37 pages in which to propose and argue appropriate remedies for these diseases of the body politic. Since the private ownership of natural opportunities is the underlying and most baleful form of privilege, the discovery of a specific remedy for it is of corresponding importance. Mr. George finds this, as did his father before him, in substituting for every other form of taxation the Single Tax upon land values—“land” being taken to include not only agricultural lands and city lots, but forests, mines, water-rights, in a word every form of “natural opportunity.”

Now this is not the place, nor am I the person, to discuss the merits of the Single Tax, considered solely as a simple, just and efficient method of securing the money necessary for the proper administration of government. It may be true, as is claimed, that the burden of necessary taxation can thus be most fairly, surely and easily apportioned to the shoulders which should of right bear it. But in Mr. George’s argument, as in that of every other “Single Taxer” with whose thought I am familiar, this purpose of raising the funds necessary to defray the expenses of government sinks into a comparatively insignificant place; and the argument in favor of the Single Tax upon which the most stress is laid is that by its means the entire net value of every natural advantage may be sequestered into the public treasury. Upon this aspect of the question I am constrained to offer a few such simple comments as would naturally arise in the simple Western mind.

Mr. George proposes that the entire potential, or economic rent of all land shall be absorbed by taxation. “Economic rent” means the entire value of product beyond the cost of labor and capital employed in producing it. “Potential rent” is even more sweeping, since it includes not only the value of the actual product, but the highest value which could be produced under

the fullest and most skillful administration. "Consider the volume of revenue," says our author, "if *all* land having value, exclusive and regardless of improvements—all urban and suburban land, all agricultural land, all forest land, all land bearing minerals or oil or gas in its bosom, all grazing land, all land that would sell for anything on the open market—should turn that value over to the public tax gatherer!" This statement has at least the merit of being frank and easy to understand.

I do not intend to enter upon any ethical questions involved in such a wholesale confiscation—for taxation so applied would be nothing other than confiscation. I am, indeed, quite prepared to admit that there is no divinely ordained property-right; that the validity of all our laws or customs of ownership must finally be determined by reference to the common weal, not to any individual claim; nay, more, that when mankind has been sufficiently developed and educated, no man will be much concerned about his rights, but each will concentrate his attention upon his duties. But there are certain practical difficulties in the way of such taxation as Mr. George proposes as seem to make it impossible if it were desirable, and undesirable if it were possible.

Consider first the method by which the rate of tax should be fixed. There seems to be no alternative but the arbitrary judgment of some official or officials, or the highest rental value which any person or persons were willing to pay to the State. The first of these would offer such a premium to official "graft" or favoritism as has never yet been dreamed of. The second would utterly destroy that "fixity of tenure and assurance of a permanence of holding" which, Mr. George himself insists, "is necessary for the advancement of civilization;" and would fan the flames of competition to a height never yet reached. For, to take the simplest case, no man could retain possession of the plot of ground upon which his home might stand except by paying in taxation its full potential rent. In other words, if some capitalist could see his way to making the land now occupied by my home and garden or yours earn a hundred dollars a month or a thousand as a net ground-rent, by covering it with a six-story apartment house, why a hundred dollars a month or a thousand we must pay in taxation—or find another home. The tendency of such a plan would be to increase continually and enormously the burden of rent, and to reduce, therefore, the portion of product available for labor and capital. I am aware that this statement traverses directly the assertions of Mr. George and his confreres, but I see no logical escape from it. To be sure, this enormous rental charge would go to the public treasury, instead of individual pockets; the result of this I will return to a little later on.

Again, it would seem quite impossible to disentangle fairly the economic rental of land from the economic value of the improvements made upon it by man's patience, self-sacrifice and ingenuity. Consider a few cases—and these not among the most difficult. Not so very many years ago the land where Redlands now stands was worth what it would bring for a sheep-pasture. Very likely one dollar per acre per year would have been regarded an exceedingly extravagant estimate of its potential rental value. There came along men with prophetic vision and imagination and courage, who built irrigating canals and planted orange groves. The newspaper of this very morning tells of six-and-a-half acres near Redlands set to Valencia oranges; for this year's crop the owner has been offered *eight thousand dollars net* as it hangs on the trees. What is the just economic rent for that little grove?

Down in the southeastern corner of California there lies a tract of land of hundreds of thousands of acres which less than a decade ago seemed hope-

lessly sterile—the Colorado Desert. No man would have taken it as a gift. There, too, came men with foresight and courage and imagination, who married the waters of the Colorado with the Desert—and behold, today there are leagues of fertile fields. From the standpoint of the would-be settler of today, each acre has an economic rental value far beyond the average of agricultural lands in the United States. How far should confiscation go in this case?

Over in southeastern Arizona there are great copper deposits which have been profitably worked for years by a mining company. A few years ago there came other mining operators who studied the situation and said to themselves, "By going outside the limits of the present company's property and sinking a shaft 800 or 1000 feet, we can probably catch this vein and get rich returns." They did it, spending hundreds of thousands of dollars on faith—and now they are getting their rich returns. How much of the present economic rent of this property would Mr. George escheat to the State?

Passing over with the barest mention the tendency of such "free competition" as Single-Taxers assert would result from their plan to promote the rapid exhaustion of every form of "natural opportunity," and leaving unmentioned many other interesting results, let us see what its inevitable effect would be upon "government." Mr. George says: "It is conservative to say that the revenue for municipal, State and Federal purposes would far exceed the present needs of Government economically administered." Conservative, indeed! It would in fact mean a governmental revenue enormously in excess of proper governmental requirements and tending steadily towards absorbing the entire product of the nation beyond the actual requirements for subsistence. This, in turn, could have only one of two results. Either the inequalities of wealth would be even greater than under the present order, but with the office-holders in possession of the gigantic fortunes; or government must be administered as a mighty communistic device for appropriating all surplus wealth and distributing it equally or fairly. That is, the much-vaunted "free competition" would soon destroy itself utterly, and the real burden of both production and distribution rest upon the organized State.

Having said so much by way of criticism of the Single Tax program, I am bound to say further that I do not believe any other plan of forcing a legislative curb into the mouth of greed will prove any more effective, call it socialism, compulsory arbitration, public ownership, or what you will. To change the figure, no dam can ever be erected against the stream of self-interest strong enough or high enough to hold it back for more than a little while. The only possible remedy is to dry up its source—to make uttermost service to humanity the goal of life instead of striving to seize the largest possible return; to believe truly in the brotherhood of man, and to act on that belief; to realize the Sermon on the Mount not as a mere counsel of perfection to be sadly admired as an unattainable ideal, but as the law of everyday living. If this civilization can learn these lessons and apply them, there will no longer be any Menace of Privilege—nor any other menace. If it will not learn them, then it will surely perish as every civilization of the past has perished.

How much of Jack London's *Tales of the Fish Patrol* is unvarnished transcript of his boyhood experiences on San Francisco Bay and what part of it is the sheer product of the story-teller's art I cannot say. At any rate it is throughout interesting enough to be credited wholly to the skill of the practised romancer, and as convincing as a ship-log. Recommended for boys of from seven to seventy. The Macmillan Co., New York. \$1.50.

The story which Elma A. Travis, M. D., has undertaken to tell in *The Pang-Yanger* is almost as impossible as the title. This is not to say that it is not interesting—even stimulating to serious thought, at times. But the author piles one impossibility on another, in her plot, with cheerful recklessness—and adds for good measure a conversational style of which the following is a fair specimen:

“What on earth are you talking about? Where is Miss Hurst?”
 “God knows!” ejaculated Abijah. I left her in the middle of my ten-acre meadow, with Giuseppe Giacoso; they were strawberrying. It didn't seem to faze her to be caught red-handed in the act, though I cut loose and invoked some lurid penalties on trespassers; skinning was the mildest thing I think I mentioned. You see, there was nothing visible in the high grass but a derby hat beside Giuseppe's old straw sailor, and I didn't happen to know he was pals with your girl.”

The doctor lay back and chuckled fatuously.

Other subjects more serious than strawberry-poaching are treated, but generally after much the same slap-dash fashion. McClure, Phillips & Co., New York. \$1.50.

Ben Blair is certainly fully supplied with thrilling situations. Most of them are set in South Dakota, but when the ranchman who plays the title-role goes to New York, he takes his capacity for getting into trouble and out again with him. Here is part of what happened on the fourth floor in a “joint” into which he had been inveigled:

Until then, Ben had been silent as death, silent as one who realizes that he is fighting for life against overwhelming odds. Now of a sudden he leaped backward like a great cat, clear of all the others. From his throat there issued a sound, the like of which not one of those who listened had ever heard before, and which fairly lifted their hair—the Indian war-whoop that the man had learned as a boy. With the old instinctive motion, comparable in swiftness to nothing save the passage of light, the cowboy's hands went to his hips, and as swiftly returned with the muzzles of two great revolvers protruding like elongated index fingers.

And then, with set jaw and blue eyes flashing like live coals, he proceeded to shoot up the place. Will Lillibridge is the author, and it is a first book. A. C. McClurg & Co., Chicago. \$1.50.

For several reasons *The Farce of Master Pierre Patelin* is of interest to students of either literature or manners and morals. It is held by competent critics to represent the highest development of medieval comic drama. Renan calls it not only the wittiest and most finished piece “de notre vieux théâtre comique,” but one of the two most precious records of the moral condition of the end of the Middle Ages. It seems to have been the first modern comedy to reach the printing press (about 1486 A. D.), as well as the first to receive appropriate illustration. Its popularity may be judged from the fact that some thirty editions appeared during the next hundred years. And a blundering adaptation of it was produced in New York so late as 1863—though probably neither actors nor “author” had ever heard of the original. It has been made accessible to the English reader for the first time by Dr. Richard Holbrook, of Columbia University. The translation seems admirable, the Introduction and Notes are scholarly and interesting, and the woodcuts of the edition of 1489 are reproduced in facsimile. The volume is altogether creditable, both to Dr. Holbrook and to the publishers. Houghton, Mifflin & Co., Boston. \$2.00, net.

Disclaiming any intention to satisfy the requirements of the collector or connoisseur, but offered merely to “those who require an introduction to a

field of art hitherto little explored but which will well repay further study." Stewart Dick's *Arts and Crafts of Old Japan* is a beautiful and worthy little volume. It considers successively painting, color-printing, sculpture and carving, metal-work, ceramics, lacquer, and landscape gardening and the arrangement of flowers. The treatment of each subject is illuminated by carefully selected illustrations. T. N. Foulis, Edinburgh; A. C. McClurg & Co., Chicago.

The stories gathered under the title, *Leaves from an Argonaut's Note-Book*, are based upon the observations of the author—Judge T. E. Jones—during a residence of forty-nine years in a single mining county of California, and were originally written for publication in a newspaper of the same locality. Naturally, therefore, they have the flavor of the genuine thing. Stories of pioneer mining life would hardly have passed muster with the pioneer miners themselves, lacking that flavor. The Whitaker & Ray Co., San Francisco. \$1.50.

Animal Snapshots and How Made, by Silas A. Lottridge, is an agreeable addition to the list of Nature-books. The title was not well selected, as only a very small part of the text is devoted to the taking of photographs. A more descriptive title would have been, "Chats About My Acquaintances in Wood and Field; with Illustrations from Photographs by the Author." There is little effort at "style," and even less imaginative license. The book is a record of the observations of one interested student—and is valuable accordingly. Henry Holt & Co., New York; C. C. Parker, Los Angeles. \$1.75.

Far Eastern Impressions, by Earnest F. G. Hatch, is a record of observations made by a British M. P., who is also a business man—or perhaps he would be more correctly classified as a British business man who happens to be a Member of Parliament—during a trip to Japan, Korea and China, some four years ago, and of the author's opinions on the commercial and political situation. It is well enough in its way, but of no particular consequence. A. C. McClurg & Co., Chicago.

With the benevolent purpose of leading "Christians to grant to the possession of the Jew, the mental, moral, social and spiritual qualifications which history affirms," Rev. Dr. Madison C. Peters has written *The Jew in America*. It is an appreciation of what the Jew has done for America, and is commended to the attention of any anti-Semite who may read these lines. The John C. Winston Co., Philadelphia. \$1.00.

For Each Day a Prayer begins with "Our Father," ends with "Now I Lay Me," and contains between them 366 of the noblest brief prayers in the English language. They were selected and arranged by Elizabeth Hamill Davis. Dodge Publishing Co., New York. \$1.25.

The third in the series of "Lives of Great Writers," by Tudor Jenks, is *In the Days of Milton*. Mr. Jenks aims at imparting a fuller understanding of the subjects of his biographical study by paying special attention to their environment. It is a useful series. A. S. Barnes & Co., New York. \$1 net.

New York's 400, and those who would fain enter that charmed circle, supply one of the most alluring marks for the shafts of the would-be satirist. *Mrs. Radigan*, by Nelson Lloyd, may be defined as one of the shafts. It is mildly amusing. Charles Scribner's Sons, New York. \$1.00.

Chronicles of the Little Tot—in verse, with color-illustrations—are simply delightful, whether the particular chronicle be comic, serious, humorous, pathetic or philosophical. Edmund Vance Cooke is the author. Dodge Publishing Co., New York. \$1.50.

In *Mrs. Tree's Will*, Laura E. Richards aims at being cleanly amusing—and scores a center-shot. Dana Estes & Co., Boston. 75 cents.

CHARLES AMADON MOODY.

FRESNO COUNTY, CALIFORNIA

The Synonym for Opportunity

By A. A. MARTIN.



FRESNO County, California, today offers great opportunities for home-making, or for investment with a view to increase in value.

The development of California has been phenomenal, but its growth has only begun. It needs men and capital to best develop its vast resources. Men of intelligence and energy, with but little money can get a foothold and make themselves independent.

It offers advantages that will not repeat themselves. A period of marvelous development has begun, and the homeseeker and investor should make a note of it. Young people, willing to work, will find themselves in a few years released from drudgery and living comfortably in a land where the kindly climate and fertile soil reward man for his labor.

General farming and intensive farming are coming in. The low price of grain makes its cultivation unprofitable. Fruit-growing, vine-planting, stock-raising and dairying are inviting attention. Large land holdings are being broken up and the land sold for small farms. Irrigation has proved the death-blow to large holdings. An irrigator cannot handle thousands of acres. Where one man formerly farmed a section of land, you will now find thrifty farmers making a comfortable living on from forty to sixty acres.

This is the land for the farmer, with all the conditions which make farming or horticulture both attractive and profitable. The very sparseness of the population insures this. The excellence of the soil and the superiority of the climate guarantee this. The time will soon come when Fresno lands will have unheard-of values put upon them, for there is but one Fresno, and there won't be enough of it to go around. Today there is room. Room



A Typical Ranch House in Fresno County.

means opportunity, choice of location, low price of land, profit by increase of value. Tomorrow these may all be gone. The situation is unprecedented, and the wise man will think it over carefully.

The climate is everything that can be asked for; winters short and mild, rainfall at the county seat ranging from ten to eighteen inches annually; snow unknown; frost infrequent, and the fact that the vast fruit and grape industries of Fresno County are safe and profitable year after year attests the mildness of the winter climate. This has a value to the outdoors worker; it means less expenditure for the home and the barn and the outbuildings on the farm. It costs less to care for stock, and less for fuel to warm the house. There is less loss of time. There is no hibernation. Men do not "lay off" until the winter is over. Every day in field or orchard, shop, barn



Date Palm Drive Near Fresno - Planted 12 years ago.

or dairy may be a day of productive labor. It should be reckoned among the worker's assets.

Then the soil in such a kindly air is vastly productive. Then, too, climate means variety of production, which fosters the growth of all plant life and makes possible a greater variety of crops than in any other country of the world. Here, will be found successfully growing the wheat of Minnesota or the orange of Florida; the apple of Michigan or the lemons of Sicily; the peaches of New Jersey or the olives of Spain; the corn of Kansas or the melons of Persia; the barley of Russia or the vine of France; the potatoes of Ireland or the peanuts of Georgia; the sugar-beets of Germany or the figs of Smyrna; the raisins of Spain or that king of forage plants, the alfalfa of California. Everything grows, and with such a range of choice he must indeed be a poor farmer who cannot find an industry suited to his tastes or ability, or who cannot, in this land where growth is almost continual, "make farming pay."

Even more remarkable than temperature distribution is the rainfall of

California. There are two well-marked seasons, the dry and the wet. The former covers the period from May to October, inclusive; the latter the rest of the year. The average rainfall is from eight to fourteen inches, which is sufficient for raising crops of grain; but for the growth of vineyard, orchard, or alfalfa irrigation is resorted to. As summer approaches, the snow melts on the high Sierra Nevada mountains, lying on the eastern boundary of Fresno County, and feeds the great Kings River. Here you are in a second Yosemite, the splendid cañon of the Kings River. This is one of the scenic regions of the state, not so well known to the general public because off the main line of travel, but the highest mountain of the range is here, Mt. Whitney, the second highest mountain in the United States. From Kings River comes the water that supplies Fresno County with its system of irrigation.

Irrigated districts have many advantages over non-irrigated. A cheap and plentiful water supply is an absolute insurance against drought. Dependent



Kings River Near Fresno.

upon rainfall, one must take and use water when it comes, and not when it is wanted. Much time is often lost in a country having summer rains, in postponing necessary work because of the rain. Under the magnificent ditch system of irrigation, the farmer is enabled to use the water on his crop at the time when it will do the greatest amount of good, at the low rate of 62½ cents per acre per year. Why, this is almost cheaper than rain.

Fresno City ranks third in shipping importance in California. It is the county seat of Fresno County, the metropolis and business center of the San Joaquin Valley. Fresno is a railroad center; there are eight lines radiating from it, with two transcontinental railroads, the Southern Pacific and Santa Fé. Present population is 22,000. The banks of Fresno are among the strongest of the state, five banks in the city with five million dollars deposits representing principally farmers' accounts. Churches and societies of every name and creed are represented. A Carnegie library, costing \$30,000; a high school; nine large grammar schools, mostly of brick, over 100 teachers; two large commercial schools, giving tuition to over 300 students; modern electric railroad system; gas and electric light plants; modern water works; good hotels;



The Kearney Boulevard, Fresno—11 miles long, 140 feet wide.

fine public buildings; modern and up-to-date stores; beautiful homes; broad streets, well paved and lined with shade trees, make "Fresno," the metropolis of the San Joaquin Valley, a name to conjure with.

Think of a principality with 3,600,000 acres of land and a population of only 50,000, 22,000 of them living in the City of Fresno, shipping annual products of \$18,500,000, which if figured out on the ratio of the income per capita for the 28,000 people living outside of Fresno, would bring the marvelous average of \$660 per person.

Fresno County produces annually a total of \$18,512,500, divided as follows:

	Value.		Value.
Live stock	\$5,000,000	Brandy	\$ 250,000
Butter fat	1,000,000	Wool	250,000
Wine	1,500,000	Crude oil	1,250,000
Raisins	2,500,000	Eggs	100,000
Olive oil	30,000	Almonds, nuts	7,500
Poultry	750,000	Honey and beeswax	50,000
Melons	100,000	Gold, silver, granite, etc....	400,000
Oranges and lemons.....	75,000	Dried and fresh fruits.....	1,500,000
Alfalfa hay	750,000	Wheat and barley.....	1,000,000
Lumber	2,000,000		

The public school system of Fresno County is unexcelled anywhere. The buildings are all modern and well equipped. The high school of Fresno is an imposing structure. The county has 132 public schools of the highest grade, five schools being accredited to the State University. There are seven high schools in the county.

Alfalfa, "The King of Crops," is to this locality what corn is to the Middle West. Alfalfa grows luxuriantly and is the basis of success of the dairy industry. The yield from an alfalfa field is very large. Alfalfa is the most valuable forage plant that we have. In the irrigated land of Fresno alfalfa finds a natural home. Raising alfalfa provides the surest and quickest means



A Fresno Alfalfa Field—Planted April, 1905; Photographed October 27, 1905, after third crop had been cut.

of obtaining an income, as it enables you to make money during the time required for trees and vines to come into bearing. To those not familiar with alfalfa it is a revelation. It is of the clover family and is sometimes called Chilean clover. It grows very rank and makes the finest feed for beef cattle and dairy cows. Alfalfa may be planted as late as March, and by the first of July the first crop will yield from a ton to a ton and a half to the acre. After coming to full maturity with proper care, it will produce year after year. Alfalfa does not impoverish the soil. Its roots will penetrate to the depth of twenty feet or more, reaching for moisture. On all the irrigated land or lands subject to sub-irrigation, where moisture is near to the surface, after the plant is once started it becomes strong and independent and requires but little care. A yield from a good stand of alfalfa is from one to two tons of hay per cutting. With five cuttings per year, this means from five to ten tons of hay to the acre every year. This sells readily in the stack at \$6.50 to \$7 per ton, and is shipped in large quantities.

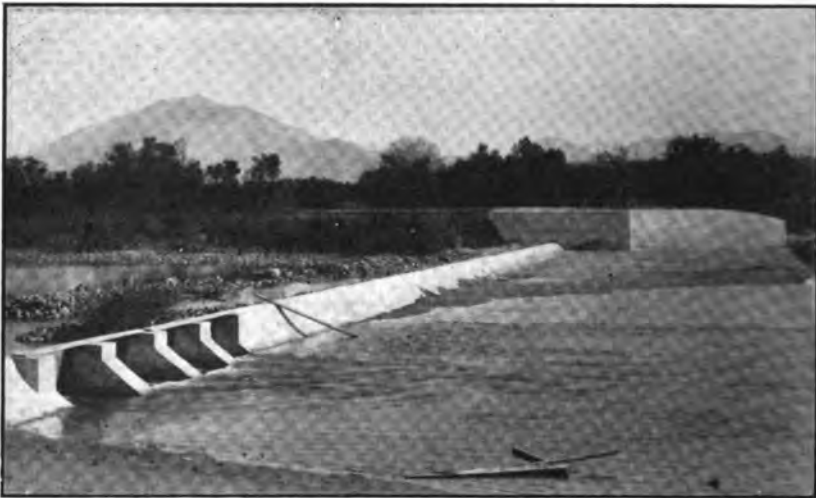
To the cattle breeder: We have a substitute for the green meadow of England, the succulent turnip and other roots of England, or the blue grass of Kentucky, in our broad acres of alfalfa. Alfalfa is equal to any of the



Hogs Fattened on Waste from Fruit Drying and Raisin Curing.

above in food value, and in some respects to all three, for it is primarily a bone and muscle producer, rich in protein. Fresno County is particularly adapted to alfalfa, abounding in rich, sandy soil, warm climate and abundance of water, thus containing all the elements that are most conducive to successful culture.

The importance of dairying has not been generally appreciated, and until a comparatively recent date was not carried on under profitable conditions, but today, along the new lines of development in this industry, together with the acknowledged importance of alfalfa as a food basis, the dairyman of today is in an entirely different position from the dairyman of the old country, or even the East. A few figures will demonstrate the importance of the cow to the alfalfa field. Young alfalfa planted in February will produce three cuttings, of four to five tons per acre, at an average valuation of \$7 per ton for the first year; and the second year will produce five cuttings of seven tons at \$7, or \$49 for the year. If you sell your hay baled, this is the extent of



Main Weir on Kings River, 300 feet long This weir impounds 2,500 cubic feet of water per second for Fresno County Irrigation System.

the profit that can be made on your land, and you have taken all of the fertilizer off of it.

On the dairy or cow basis, you can run three cows on two acres of alfalfa. Each cow should produce in butter fat \$60, one calf valued at \$8, two hogs that will fatten on the skimmed milk and alfalfa to about 200 pounds each, and sell at 5 cents per pound, or \$20 for the two, making a total of \$88 per cow, or \$264 for the three cows that run on the two acres of alfalfa. You have fed these cattle your \$98 worth of feed, but you have made a profit of \$166 on two acres of land, as well as enriching your soil by reason of the fertilizers that you have left on it. There are at present in the dairy business in and about Fresno about 5,000 cattle, which produced in 1905 from 700,000 to 800,000 pounds of butter fat, which finds a ready market at from 18 cents to 30 cents per pound, averaging 25 cents per pound during the entire year. The daily output of the creameries in Fresno alone is now about 6,000 pounds of butter per day, but this does not equal the demand.

Over 3,300,000 pounds of butter fat, worth 20 cents per pound, or \$660,000, was imported into this state this year, and no effort has been made to supply

the continually increasing demand for canned butter to be exported to Alaska, the Hawaiian Islands, Japan and the Philippine Islands. Here is an opportunity that should be taken advantage of immediately.

Horticulture is a science and agriculture is also becoming scientific. This is a land where a man can farm with brains; where he can own the soil he tills and spend his substance upon it; and where the life-giving waters under the dust of the long and opulent summers will make the harvest certain and abundant. All kinds of deciduous fruits thrive and the orchard business is one of the best that can be engaged in.

The increase each year in the shipment to Eastern market of fresh fruits and grapes, under the perfect system of refrigeration as practiced now by the fruit companies of Fresno, together with the effective routing of cars, so as to distribute the fruit in the East and prevent the over-loading of any one par-



Intake to Main Canal from New Weir, Kings River, at Low Water.

ticular market, has made fruit growing one of the principal industries of Fresno County. The long dry summers, with their days of pure, warm sunshine, make an ideal condition for drying all kinds of fruits, as well as proper preparation of raisins.

The canneries of Fresno are ready to contract entire fruit crops at fair market prices for five years in advance. The orchardist is thus assured that a profitable market awaits him at all times.

The Smyrna fig is easy to grow in these lands, and deserves special mention. It is independent in character, asks little attention, sending its roots down for water and yields two crops yearly of delicious fruit that is easily dried in the open air. As a result of the efforts of prominent horticulturists of Fresno, the Smyrna fig is now produced here, superior in flavor, size and cleanliness to the imported, an achievement not accomplished any place else in America.

Many other fruits, such as pears, apples, nectarines, cherries, pomegranates, quinces, prunes, oranges, lemons, and in fact, as stated by Professor Elwood Mead, in his report to the Department of Agriculture, "Every product of the temperate and semi-tropical zones which I could call to mind," growing here and thriving, should each have a page devoted to them, but space does not permit. It is a common occurrence to find a family orchard containing a dozen varieties of citrus fruits, and the same number of varieties of table grapes, all devoted to the family use.

The almond and walnut are profitably raised here, almonds particularly being sensitive to good treatment, and when properly cared for producing good results. The pecan, and Italian chestnut are also very profitable products.

Since the advent of the Mission Fathers, olives have been grown in California, one hundred and thirty-five years; commercially, since Elwood Cooper set out his groves thirty-five years ago. At present there are over two million trees in the state, and the industry is rapidly growing. The fruit is the finest grown, and as the method for preparation is scientific and cleanly, there is



Camp Life Under the Umbrella Trees—Whole families find work in the orchards and vineyards, living after this fashion.

no longer an excuse for using the imported olive or olive oil. The California olive is on the market in three forms, ripe pickled olives, green pickled olives and olive oil. Olive trees are becoming extensively used along the sides of public roads as ornamental trees, and are a source of profit as well, because no one will pick the green fruit. A conservative return is \$80 net per acre in olive trees.

Strawberries, blackberries, loganberries, Burbank berries, and all the berry tribe, flourish well in the warm, sandy soils of the Fresno Irrigated Farms Company, and produce from two to five thousand dollars per acre in net results when given proper attention.

All kinds of melons are successfully grown on these lands, and the Fresno melon is shipped as far north as San Francisco and Portland. During the melon season there is great fluctuation in price, which ranges from \$20 to \$100 per car. Melons are a very profitable crop to plant between the vines of a young vineyard or the trees in a young orchard, and it is safe to estimate will return enough profit to pay the planting and cultivation of the orchard or vineyard. However, we would not suggest planting melons two years in succession in a young orchard or vineyard, but would rotate the crops and plant corn or pumpkins for the second year.

Alfalfa honey is very fine and ranks with the clover honey of the East. The large fields of alfalfa in Fresno County make bee culture an additional source of profit. The demand for honey is constantly increasing, and the small farmer can make the honey a splendid assistant as a producer, and actually increase his income many hundred dollars yearly. This county produced \$50,000 worth of honey last year.

The raisin district of Fresno is known as the only one in the United States where the raisin reaches perfect development. The country is of that class of soil whose particular qualities are essential to the production in large quantities of high-class raisins.

For the production of raisins alone, therefore, this county is worth the most careful consideration and investigation. The art of seeding raisins has been perfected by the use of modern machinery, and the cost of manufacturing reduced to the minimum. The care used in placing the product on the market at a low price has brought the raisin now within the reach of every family. The increased consumption of seeded raisins is almost beyond belief. For the season of 1905 over 4,000 carloads have been produced, valued at \$2,500,000, one company alone at Fresno giving employment to over 1,000 people. The



Palm-Thatched Summer House Near Fresno.

intelligent advertising of the raisin by the Raisin Growers' Association and its campaign of education as to the uses of the raisin in cooking has been productive of a rapidly increasing demand for the product. The varieties of raisin grapes include Alexandria, the Muscatel, Gordo Blanco, the Malaga, which is also a delightful table grape, as well as the seedless varieties of Sultana and Thompson Seedless. As for the shipment of deciduous fruits under the system of refrigeration, so with table grapes. Many varieties of table grapes are annually shipped East, such as the Malaga, White Muscat, Black Hamburg, the Emperor, Black Prince, the Tokay and other grapes of similar character. Under proper arrangements for picking and packing, the shipment of fresh grapes for the Eastern market is destined to become one of the principal industries of Fresno County. Profits realized from matured vineyards range from \$100 to \$400 per acre. As in fruit culture, a mixture of a fair amount of brains with the soil is necessary.

A premium is offered the man with ability and the desire to work. Prior experience is not so necessary, if the industrious citizen, who will study and learn, will come to Fresno, determined to use the same care, economy and industry that he used in his former home. He can be assured of permanent prosperity in a community of able and cultured men, if willing to intelligently follow advice and gather wisdom from the results of those who have learned the industry here on the ground.



Ukiah, From the West.

UKIAH

By J. C. RUDDOCK.

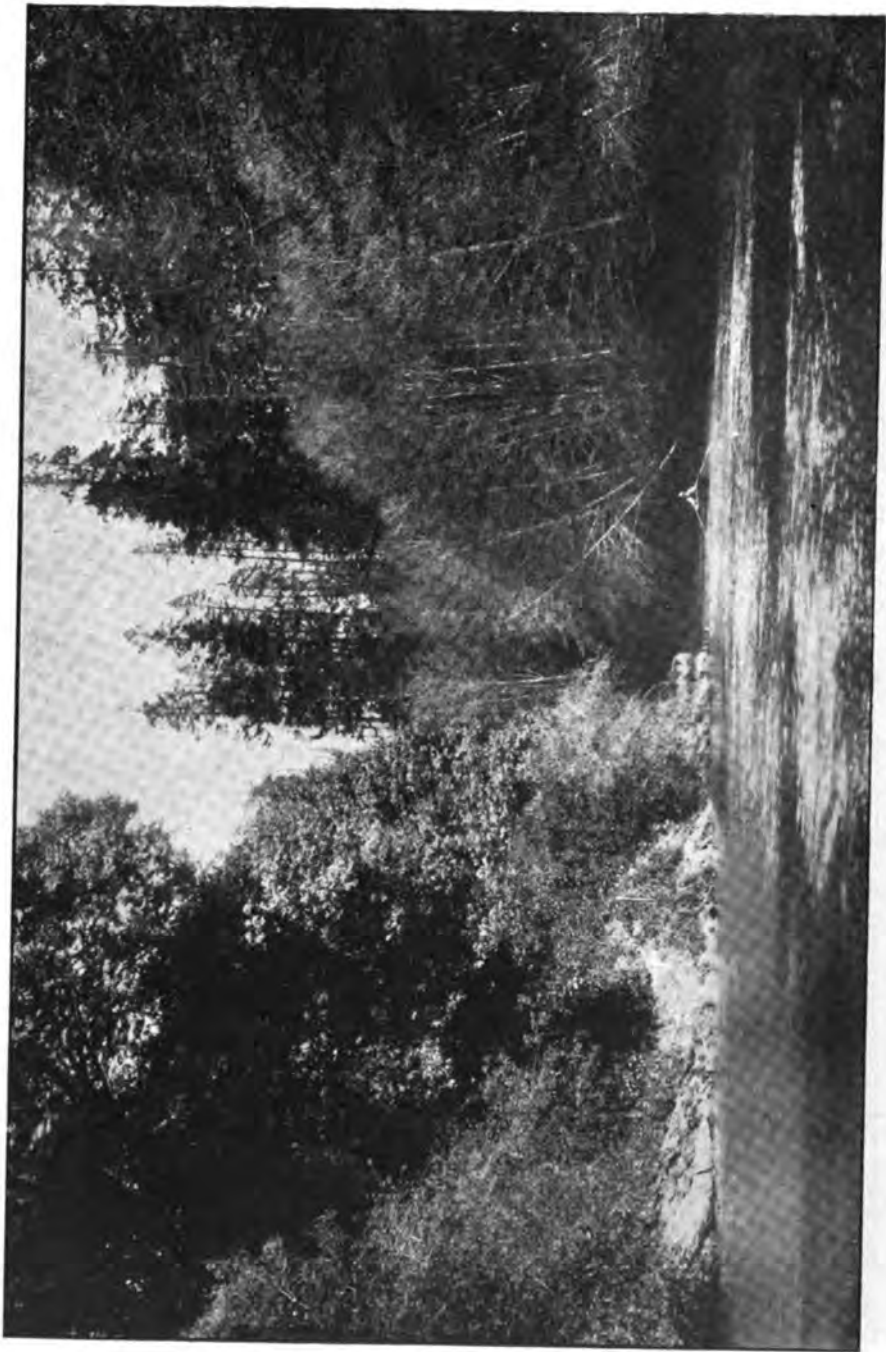
UKIAH is the county seat of Mendocino County, situated on the right bank, or west side, of Russian River, twenty miles north from the southern boundary line of county, and 113 miles from San Francisco.

The name is a corruption of the Indian word, "Yo-kia," which means "deep valley," and was originally applied to the valley in which the town is situated. The town was made the county-seat in 1859, when its population numbered about 100. It was incorporated in 1872, and at the present time (March, 1906) has a population of 2700. The valley in which it is situated contains about 4000 people. It is estimated from the tide of homeseekers coming into the county that the population of the town in ten years from now, will be 5000. Northern California, of which Mendocino County forms a large part, has been somewhat overlooked, by reason of the attractions offered by city life around San Francisco Bay, the great wheat valleys of the interior of the State, and the extensively advertised orange groves and climate of Southern California. This town is not a city of the plains; she is a chaste maiden of the beautiful valley—her namesake—where the sun rises a trifle later in the morning, and sets a little earlier in the evening, because of its mountain setting, east and west. It nestles just inside the great belt of redwood on its west, which stretches forty miles to the shore of the Pacific on the western confines of the continent. The assessed valuation of the town for 1905 was about \$1,200,000. The city owns its own lighting plant, and electricity is furnished to its own citizens at a minimum cost, about equal to operating expenses and repairs. The town has also a good supply of street lights.

It has also a fine sewer system. The town was bonded to the extent of \$25,000 for sewers, and \$18,000 for electric lights; as the bonds run for a period of 40 years, the tax for the payment of interest and principal on these bonds is not severe. The bulk of the taxes within the corporation is for these indispensable utilities. The near future promises an effort to own its own water works, and to make the area of the city larger by annexing adjoining territory, which at the present time is a well settled suburb. Ukiah is one mile square, with the county court house on a square plaza—after the Mexican style—in the center.



A Ukiah Home.



In the Redwoods North of Ukiah.

The public school grounds consist of a ten-acre tract—donated by the late Daniel Gobbi, a pioneer of the valley—and has two commodious modern school buildings, which accommodate the eight grades of the grammar school, and eight industrious and efficient teachers.

The Ukiah High School is within the city limits on a slight eminence, and is accredited as a part of the State University system. Six teachers look after the training of the students.

Besides the public institutions of learning there are a business college, a normal training school, and the Albertina Orphanage, a Catholic school which receives day pupils.

Arrangements are at present under way by the city to establish a public library, and new municipal buildings.

Eight religious societies have organizations here, and all have church edifices—the Advent, Baptist, Catholic, Christian, Episcopalian, Methodist, Methodist South, and Presbyterian. All the substantial fraternal and benevolent organizations have flourishing branches in Ukiah, and many of the fraternal insurance organizations are established here.

The town is well drained, and the water, supplied by a private corporation, is pure, cold and healthful. The climate is not harsh at any season of the year. June, July, August and September are considered the warm months, yet during these summer months the nights are cool and deliciously pleasant. Snow is a very rare thing, except to adorn the summits of the mountains on



Mendocino County Court House.

the horizon. The thermometer never gets despondent, and lower than 18 degrees above zero has never been experienced. What are alluded to as hot spells, during summer, are of brief duration, and such a thing as sun-stroke is not known.

Ukiah is on the line of the California Northwestern Railway, the trip to San Francisco being usually a five-hour trip. The terminus of the railroad is at Willits, 26 miles north, but a line through to Eureka, in Humboldt County, by the extension of the California Northwestern Railway, is said to be not very far away.

Good wagon roads connect Ukiah with the coast, all towns of the county and with Lakeport, the county seat of Lake County, 30 miles by wagon road east.

Russian River valley is perhaps without an equal for its size, in the fertility of its soil and the variety of its products. Its best alluvial bottom-lands are devoted chiefly to hops and alfalfa—the crops that give the largest returns for the outlay—although grapes, corn, potatoes, all kinds of garden vegetables, hay and the cereal grains are among its staple products.

Eggs, poultry, butter and milk are among the industries and find a ready market and a good demand. Berries and fruits of all kinds, adapted to this latitude, are produced in abundance. The town has built up with a steady growth, without the exciting booms under high pressure incident to places more extensively advertised, but when the boom arrives it will come to stay.

PETALUMA

By FRANK H. SNOW.

WHEN General Vallejo built his now historic adobe fort on the first slope of Sonoma mountain, he was guided in his choice of a site by its proximity to a noisy little fresh-water stream which promised abundant water for his herds of cattle and horses. That was of more importance in his eyes than the tide-water slough along the western side of the valley. But now that salt-water slough is a commercial highway, and the fresh-water stream is dammed far above the fort and its waters are conveyed across the valley in pipes to supply the residents of the opposite hills. When General Vallejo's light-hearted vaqueros amused themselves with chicken fights and horseback feats, including the recovery of a buried fowl while riding at full gallop, they troubled themselves very little with any thought that chickens would ever supersede cattle as a product of the hills and gentle slopes where a man on horseback could hardly be seen through the luxuriant wild oats. Those were joyous times. With but little care, the cattle grew fat and multiplied and brought easy money to their owners.

But the pushing, prying gringos with white-sailed schooners and puffing steamers disturbed the thousands of wild ducks and followed the salt-water channel on the west side of the valley to the point where vaqueros and travellers used to cross on their way to General Vallejo's hospitable home.

At the head of navigation, the town of Petaluma gradually came into existence. Then dairying and farming became important industries. That was another era. The plow and the steady draught-horse took the place of the riata and the dancing mustang. And Petaluma grew. It became the shipping point for a wide territory. The stages and the freight-wagons started from Petaluma for other points far up the coast, and the rich valleys parallel to it. What vast amounts of the finest butter and cheese were sent from Petaluma to San Francisco! And what strings of wagons brought in the famous "Bodega Red" potatoes! By and by San Francisco wanted basalt blocks with which to pave her streets. Petaluma furnished them from the ledges among the hills across the valley. San Francisco, Los Angeles and Sacramento wanted heavy truck-horses for business and the finest trotters and runners for pleasure. Petaluma came forward with animals which rivaled their ancestors in Europe and Kentucky.

And so one industry after another was developed. The town grew in size



A Petaluma Home.



Whitney Falls, Petaluma.

and wealth. Singularly favored in its location, it had nothing else to do but grow. The fact must be admitted that Petaluma's growth has been comparatively slow, the locality never having been boomed abroad as a paradise for the dying or a place where fortunes can be accumulated without exertion. But Petaluma's growth has been solid and substantial. There is wealth of the permanent kind in Petaluma.

With all of Petaluma's sources of prosperity, the latest is the biggest and the most prominent. The poultry industry is now the one that outranks all the rest. It is Chickaluma now. Little white chicken houses, unlike the larger structures of the East, dot the slopes and gleam among the trees on every hand. What a queer place it seems to a stranger! He has heard of Petaluma as a great poultry center, but he is hardly prepared for the reality. He finds chickens everywhere. In the back yards of the city residences are flocks of busy hens, happy and productive in their well-kept quarters. In the orchards, a valuable accessory to the equipment of the horticulturist, there are the hens; though the fact is that in point of profit the hens outdo the trees. On the dairy ranches there are also hens, each flock with its complement of little buildings forming a miniature village, and many similar villages are scattered over the hillsides. The hens rival the cows in profit to their owners and in many instances have entirely superseded them. Statistics are dry reading and really convey but little to the hurried reader, and so only a few figures will be introduced here. Petaluma's output of eggs and poultry for 1905 was 3,827,061 dozen eggs and 39,392 dozen poultry, a gain of 333,740 dozen eggs and 6,106 dozen poultry over the year 1904, which shows how rapidly the industry is increasing. These amounts are not estimates, but are from figures carefully gathered by the Petaluma

"Weekly Poultry Journal," and printed every week. They are the shipments to San Francisco and do not include the many thousands of eggs used in the incubators here to supply the home needs, or the other thousands of little chicks sent away right from the incubators. From this it can be readily seen that the hen population of Petaluma and vicinity is immense, and so it is, though an accurate census has never been taken. Having attained its present proportions, the poultry industry is much benefited in that very fact. The consumption is so great that the feed dealers are justified in buying in much larger quantities and wider variety and can sell at lower prices than could be done were the poultry population less. So the novice has much in his favor when he begins to establish himself in poultry farming here.

The favorable location and climate have had much to do with building up Petaluma and her varied industries, but greater than all else is the fact of having a free salt-water highway to San Francisco. By this route, steamers, schooners and barges carry immense quantities of freight at low rates between Petaluma and the metropolis—an inestimable advantage.

As the need has increased so have the transportation facilities been improved. From a beginning of one small steamer from Petaluma to San Francisco and stages to the interior, have grown two modern railroad systems,



Some Petaluma Chicken Houses.

one steam and the other electric, bringing the surrounding country into close touch with Petaluma, and giving Petaluma quick time to the metropolis.

The excellent advantages existing here for the manufacturer have attracted many factories to Petaluma. The only silk-factory west of the Rocky mountains is here. This and the shoe-factory give employment to many of the young people, and five tanneries add substantially to Petaluma's exports.

Where there are so many chickens, one would naturally expect to find incubator-factories. They are here—four of them—and their artificial hatchers and mothers are sent to all parts of the world. Along the same line are the Golden Eagle flouring-mill and the poultry-feed factories, where thousands of tons of food for man, beast and chicken are turned out annually. Three lumber-yards with two big planing-mills handle millions of feet of lumber and afford modern facilities for the building which is constantly going on. Six banks pay $3\frac{1}{2}$ per cent interest to depositors and offer cheap money to the borrower.

The streets are kept in good condition, the sidewalks are of cement, the stores are large and modern, with stocks that make it a waste of money for the resident to go to San Francisco for either necessities or luxuries, and everything is favorable to the business man or the producer.

In the rush of business and swift pursuit of the active dollar, the matter of rest and recreation is not forgotten in Petaluma. An energetic Ladies'



Dinner Time.

Improvement Club has transformed two waste spots into beautiful parks that are kept in perfect condition. The Hill Opera House, built for no other purpose and on the ground floor, is a source of surprise and delight to the better theatrical companies which visit this place for the first time, and to the stranger who attends the performances therein. Those of literary inclinations find pleasure in the free public library, to house which Andrew Carnegie contributed \$12,000, and the people of Petaluma have just finished up a \$20,000 building. In the racing season the horsemen find here one of the best mile tracks in the state, with accommodations for hundreds of horses, a big grandstand and all the rest of the accessories to a first-class racing park. Lovers of football and baseball find their favorite amusement at Recreation Park. An open-air promenade concert is given by Company C band on one of the business streets every Saturday night during the summer, and there is a dance afterward. While many Petaluma people who want an outing in the summer go just across the valley to Sonoma mountain or coastward to Bear Valley, Inverness, or Dillon's beach, there are San Francisco people who come to Petaluma for the same purpose, which would indicate that it is no hardship for those who are compelled to live in Petaluma the year through. So many fraternal societies have lodges here that the stranger who belongs to almost any fraternity is sure of falling in with brethren, and nine flourishing church organizations speak well also for the reception of the stranger. An active Chamber of Commerce is on the alert for the stranger who makes things on a large scale, and is looking for a favorable location.

The natural center and shipping point of a rich and productive region, where crops never fail, Petaluma is a cash town. The commercial travelers, who are well calculated to give a competent and fair verdict on this point, say Petaluma is the best town on the coast. Petaluma merchants buy goods and pay for them. The location and resources of Petaluma have placed the town in a most enviable commercial position and one that is becoming better all the time. There has been no mushroom growth. The people of Petaluma, while progressive and enterprising in many ways, are at the same time conservative and have never spent much money heralding abroad the advantages of their city and inviting the stranger to come in and be done for. They have never advertised Petaluma as a winter resort and a sanitarium for all the diseases that man ever inherited or contracted in the usual way. Hence the town has grown by force of its commercial merits and is populated by sturdy, active people with sound lungs and bright eyes. Petaluma is a most desirable place to live in, and when the Petaluman dies his remains are laid away in Cypress Hill Cemetery, one of the most beautiful in the State.

ORANGE COUNTY, CALIFORNIA

By *SAMUEL ARMOR.*

IN THE year 1867 two attorneys of Los Angeles, A. B. Chapman and Andrew Glassell, bought a portion of the Rancho Santiago de Santa Ana, laid out the town of Richland—afterwards named Orange—near the center of the tract, subdivided the remainder into small farms, and put the whole upon the market. It took about three years to get the preliminary work done and to bring water from the Santa Ana river to the land so as to make it habitable; hence the settlement dates its beginning from the year 1870.

The topography of this tract and adjacent territory shows a comparatively regular mesa about five miles wide and ten miles long, descending gently from an elevation of about three hundred feet above sea level at the foothills north and east of Orange towards the Santa Ana river on the west and the lowlands on the south, with the San Bernardino range of mountains in the background, some seventy-five miles distant. This plain is considered a delta of the Santiago creek and the Santa Ana river, and was formed by the sediment brought down by these streams from the mountains and foothills. The soil is a sandy loam, many feet in depth and of practically the same quality throughout, rich in plant food and pervious to water and the roots of plants and trees, thus becoming a great store-house for vegetation to draw its food and moisture from.

The rains in this section usually descend during the winter months upon the mountain, hill and valley slopes, sink into the ground, and then drain out at lower levels into the streams during the summer months. The average annual rainfall at Orange for a long term of years was 13.72 inches; but in



A Home Place in Orange.



A Tiny Fraction of the Water Supply of Orange.

the mountains, where the Santa Ana river takes its rise, the rainfall is more than double that quantity. The water thus provided is taken from the river by the Santa Ana Valley Irrigation Company, a co-operative company formed of the land-owners themselves, and is distributed to each at cost. This cost has averaged from seventy-five cents to one dollar per acre per year for several years past. An abundant and cheap water supply for irrigation is an absolute insurance against drouth. The city also owns the water-works for domestic supply and furnishes water to its inhabitants at reasonable rates.

The maximum, minimum and mean temperature at Orange for the past five years have been as follows:

	1901	1902	1903	1904	1905
Maximum	100.	97.	97.	97.	102.
Minimum	29.	30.	28.	31.	28.
Mean	64.5	63.5	62.5	64.	65.

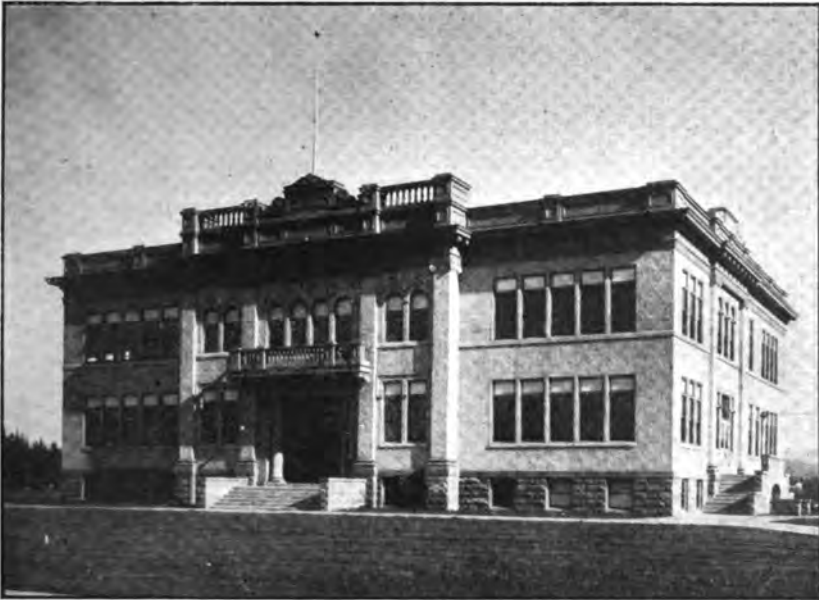
Of course, the maximum and the minimum temperatures quoted above were but for a day or two in each year; nine-tenths of the time the atmosphere was pleasant and agreeable, the temperature ranging from 60 to 80 degrees in the daytime and from 40 to 60 degrees in the night-time. The territory between Orange and the foothills is about as free from frost as any part of the State, and makes a specialty of raising winter vegetables. During the past winter the shipment of green peas by express from Orange approximated one hundred sacks per day for many days.

In a territory thus favored with fertile soil, abundant water and an equable climate, nearly everything that can be grown anywhere is grown to a greater or less extent; but only such products as will pay to ship to a distance are raised in excess of the home demand. As an indication of the kind and



Irrigating Canal near Orange.

quantity of surplus products raised, the carload shipments from Orange last year, reported by the packing-houses, were: Oranges, 718 cars; lemons, 68 cars; dried apricots, 13 cars; walnuts, 5 cars; while the less-than-carload unclassified shipments reached nearly two million pounds, not including the shipments by express. A great many farmers raise such animals as they need, while a few raise a surplus to sell; many also go extensively into poultry raising. A number of bee-ranches are maintained in the cañons east of Orange. Thousands of rose bushes are propagated every year northeast of the city for the Eastern market. A large flouring mill at Olive, operated by water power from one of the water company's canals, puts out about \$135,000 worth of mill-products every year. Several pipe-works are doing a thriving business in this vicinity, manufacturing cement water-pipe and artificial stone.



Orange High School.

These various industries might be more particularly described and others might be mentioned, did space permit.

The City of Orange, incorporated in 1888 as a city of the sixth class, has an area of about three square miles and a population of about 2000 inhabitants. Its railroad facilities are excellent, with the usual express, telegraph and telephone service. A beautiful little plaza, with its fountain and flagpole, marks the center of the city; about four miles of the streets nearest this center are bordered on each side with cement walks and curbs. One firm reported having furnished lumber for 75 new houses, which were erected in Orange and vicinity during the past year, and there were others furnishing materials in this section. Three two-story brick buildings, costing \$4,000, \$7,000 and \$14,000, were added to the business houses during the same period; a couple more, to cost \$4,429 and \$5,800 respectively, are under contract.

In addition to the material advantages claimed for this section, citizens of Orange and vicinity find plenty of opportunities for cultivating their esthetic tastes for the rational enjoyment of the blessings of life. Here are excellent



The Plaza at Orange.

schools of all grades, from the primary to the high school, churches of nearly every denomination, societies galore, lectures and entertainments, and one of the best public libraries and reading rooms in the county. There are many charming drives in the vicinity of Orange, and attractive pleasure resorts may be found at the seashore or in the mountains.

Oh! Orange is the place, and "seeing is believing."



OCEAN PARK

What, Where and Why

By E. R. JILLSON.



TURN the hands of Time back a short six years, and standing upon the highest point of the bluff rising from the Ocean to the south of Port Los Angeles, and looking southward beyond the city limits of Santa Monica, one could see the waters of the Pacific sweeping the shores of a beautiful bay, extending southerly for several miles, with the Island of Catalina rising dimly to the far south.

The sand upon these shores, gleaming silvery white in the sunlight, with only here and there a human habitation, seemed to beckon and lure to a nearer view, and, following the shore line for about two miles, the center of this attractive spot was reached. Let us suppose then, that lying here upon the warm, clean sand, lulled by the music of the waves softly breaking, one had fallen into a Rip Van Winkle sleep of six years' duration. What, on waking, meets the view? A fair city of beautiful homes, of pleasure attractions, fine public buildings and well-kept streets, with a population of 5,000,—Ocean Park, the wonder of the Southland, and the beach resort par excellence of the Pacific Coast. Where is it? Located at the very center of that beautiful crescent known as Santa Monica Bay.

A ride of nine miles from the city limits of Los Angeles via the Los Angeles-Pacific Electric Railroad, through a beautiful and fertile country, brings you to Pier Avenue, the principal business street of Ocean Park, today.

Here, on your left, as you leave the car, is the Ocean Park Bank, the pioneer bank, and on your right the Casa Del Mar, the pioneer hotel of the town. First-class stores of every description are on either hand as you walk down Pier Avenue toward the ocean, where the new "Horseshoe Pier" invites you to a promenade. Following the broad curve of this unique structure, which



The Beach at Ocean Park.



Pier Avenue, Ocean Park.

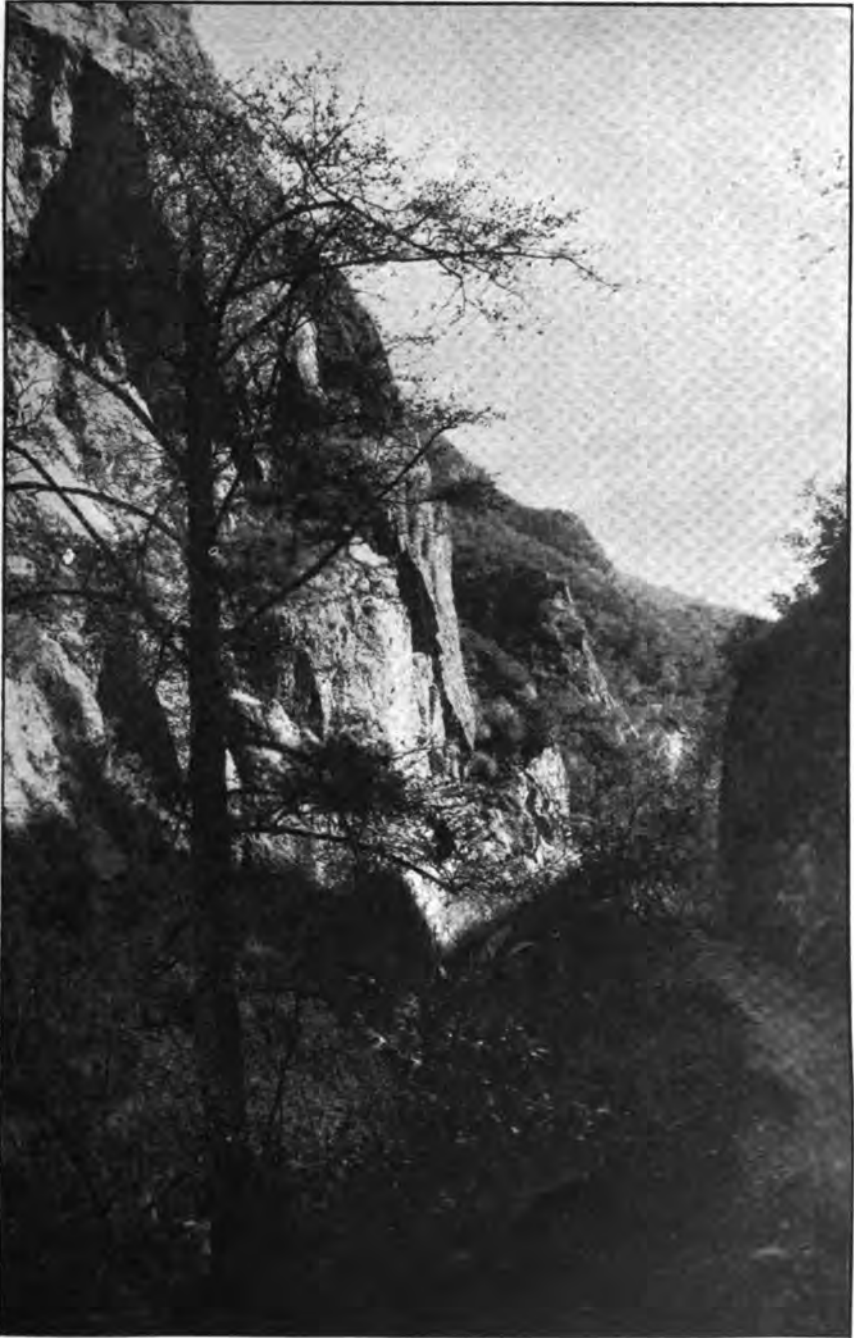
extends 2500 feet oceanward and affords you a fine view of the entire town and its background of snow-capped mountains, you step upon land again at the foot of Marine Street, on which is located the Journal Building, and the handsome new Masonic Temple, on the ground-floor of which is the Post-office. To your right, along the Ocean Front, as you leave the "Horseshoe Pier" at Marine Street, are two buildings which cannot fail to engage your attention. The first is the Hotel Decatur, occupying the entire second and third floors of both the Fraser Block and Decatur Building, with office and café on the ground floor, the other rooms on the first floor being occupied for other business purposes.

The Hotel Decatur, one of the handsomest and best-equipped beach hotels in Southern California today, was thrown open to the public on New Year's Day, 1906, and has been filled with guests ever since.

The second building, which occupies an entire block on the Ocean Front,



Fraser Avenue, Ocean Park.



The Topango Canon Trail—A favorite with Ocean Park horseback riders.



Hotel Decatur, Ocean Park.

extending from Navy to Ozone Avenue, is the Ocean Park Bath House, next to the largest, and truly the finest and best-equipped of its kind in the United States. The large swimming tank, or plunge, is 65 by 130 feet, filled with salt water heated to a temperature of 83 degrees and changed daily. The house contains 60 dressing rooms and 40 tub baths, is open the year round.



A Cozy Corner in the Hotel Decatur.

and during the winter months the dressing rooms and corridors are heated by steam. There are parlors beautifully fitted up for those who care to watch the swimmers. Over 100,000 people have availed themselves of the privileges of this fine bath-house since it was opened, July 2, 1905.

The principal residence section of the town extends southward from Marine Street to Windward Avenue, where we find Venice, the big playground of Ocean Park. Here may be found amusements and entertainment to suit the taste of every one, from the music-lover, listening rapturously to the strains of Ellery's Royal Italian Band, with its classical repertoire, to the awe-struck rustic harkening to the "spielers" on the Midway. Lovers of aquatic sports find here twenty miles of canal-way, suitable for row-boats, canoes, launches or the romantic gondola, and all of these are very much in evidence.

The Venice Miniature Railway, with its nine-year-old president and four-

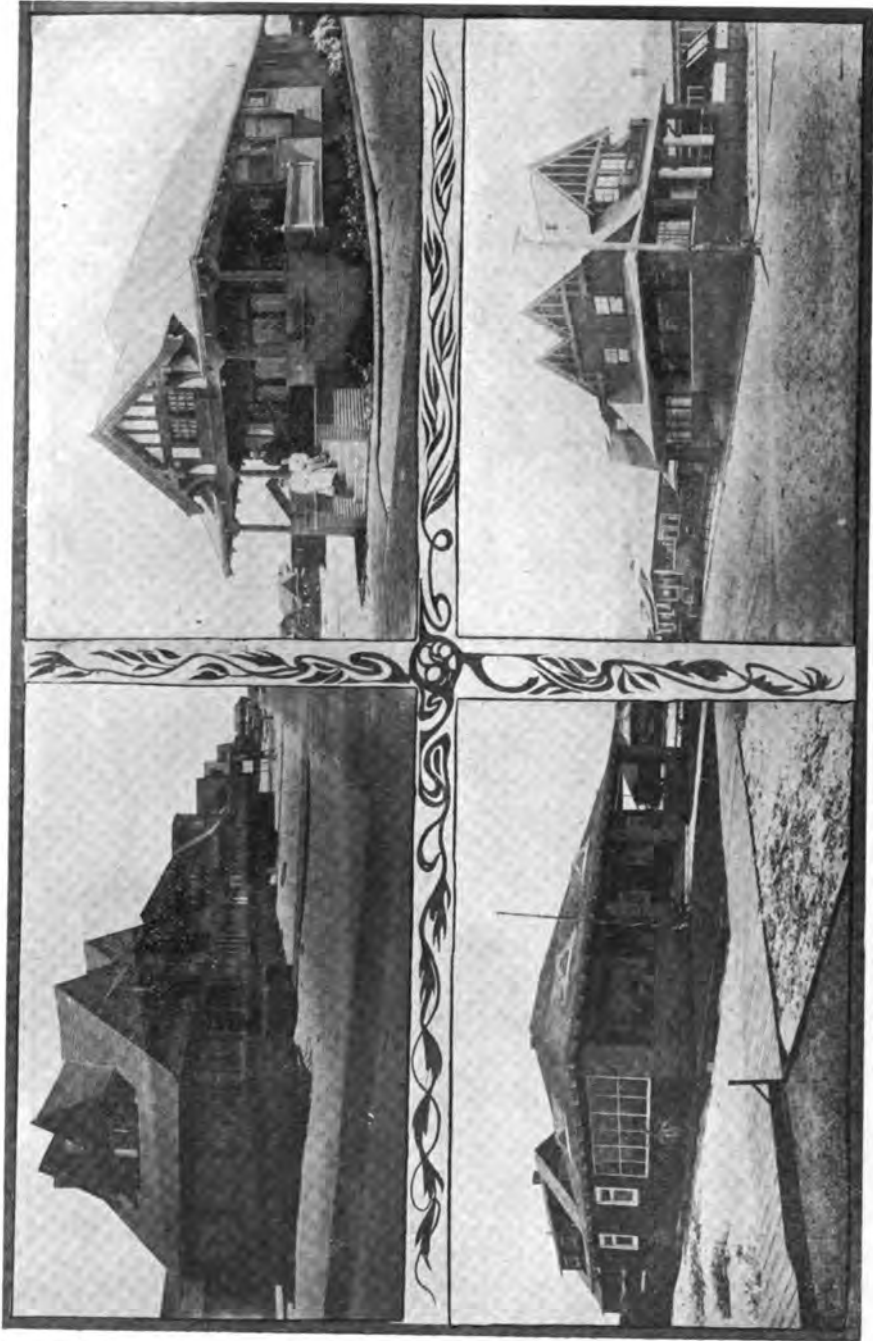


Inside the Ocean Park Bath House.

teen-year-old chief engineer, is another striking novelty in the amusement line.

One of the strongest and most attractive features of Ocean Park is its home and social life, in consequence of which the town is filled with beautiful and attractive dwellings, which are homes in every sense of the word. It is a mistake to suppose that Ocean Park is just "a summer resort" or "a winter resort" or anything but an all-the-year-round, up-to-date, permanent beach-resort, where people go and stay and make their homes, and if called away, get back as quick as ever they can. If you doubt this statement watch the cars at the Fourth-Street station of the Los Angeles-Pacific Railroad, in Los Angeles, any afternoon after four o'clock, as they start for Ocean Park, and your skepticism will speedily vanish.

Why has all this come to pass in the space of six years? Because here the public finds what it seeks. The invalid, the tourist, the pleasure-seeker, the



'Some Ocean Park Homes.



Guaranty Realty Building, Venice.;

busy man of affairs, the capitalist, the fathers, the mothers and the children, all find here conditions to suit. Climate, location, environments have all combined with the enterprise of those at the head of affairs to bring to pass everything desirable and to eliminate all undesirable elements.

Because Ocean Park goes ahead and does things while others are planning to do them, and finally because of the prevailing progressive spirit of good citizenship which will never permit retrogression or a standstill until Ocean Park, joining hands with Santa Monica on the north and Playa del Rey on the south, presents a magnificent and unbroken front along the entire shore of the most beautiful bay in America.



A Venice Business Block.



Ocean Park Bank.



Arch Rock -Near Ocean Park.



Strenuous Life on the Kautz Glacier



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MAY, 1906

THE SIERRA CLUB IN THE NORTHWEST

By WILLOUGHBY RODMAN



IN THE summer of 1905, leaving familiar paths, the Sierra Club wandered afield, taking its outing among the great mountains of the Northwest.

A few days were spent at the Portland Exposition, but our hearts were in the highlands, and we were restive under the restraints of cities and conventionalities.

A trip to Mt. Hood gave "sweet foretaste of immortal joys." I shall not attempt a description of our ascent of this peak, as our mountain experiences may be summed up in speaking of our climb of Mt. Rainier.

Returning to Portland, we joined in a steamer excursion up the Columbia river, and were charmingly entertained by our affiliated mountaineering club—the Mazama Club of Portland.

Not till we had left the railway terminus at Ashford and found ourselves in a magnificent forest with our faces turned toward the mountains, did we feel at home.

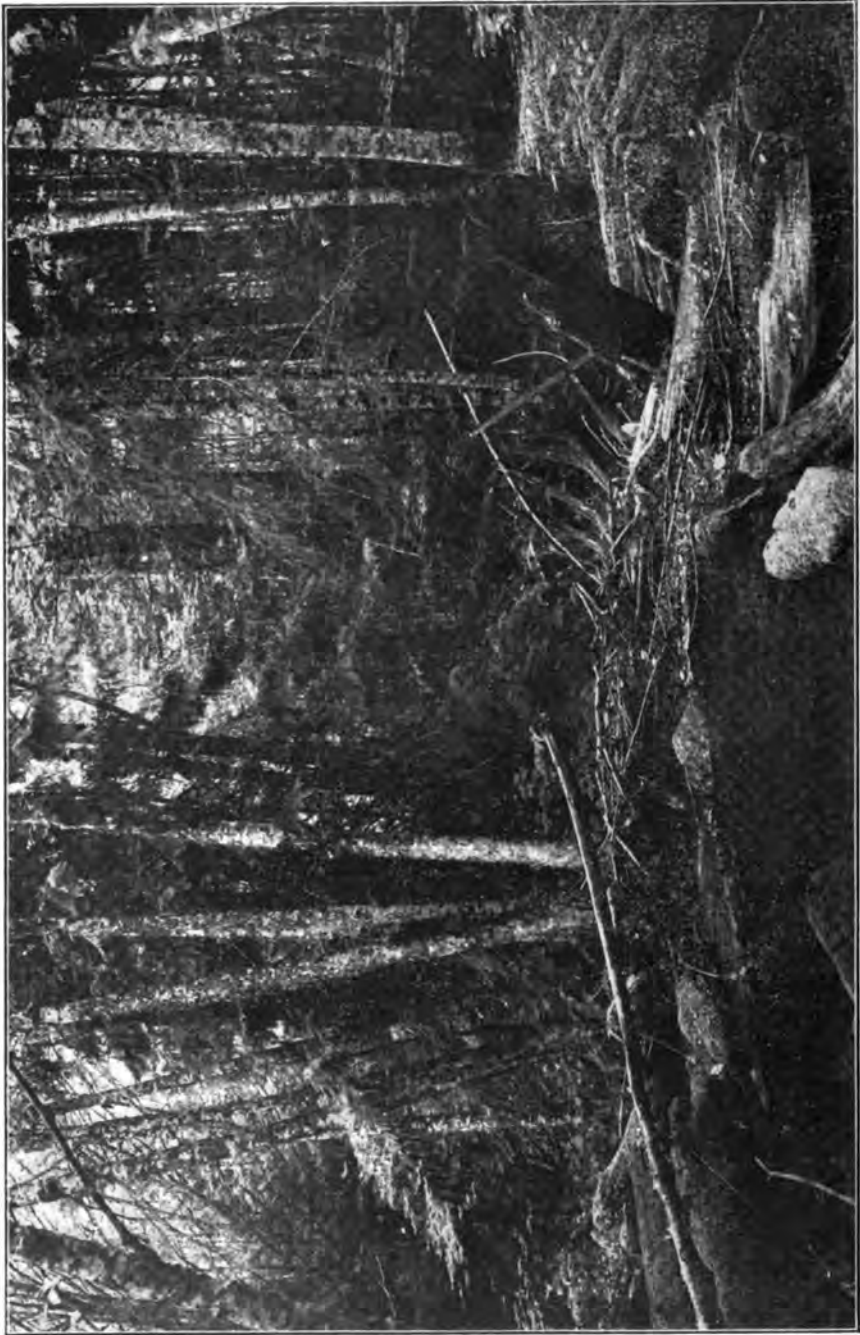
Our first night out was passed at Longmire's Springs, where a summer shower dampened parts of our outfit—but not our spirits.

Next morning a seven-mile walk over slippery trails, past the beautiful Narada falls, brought us to our main camp in Paradise Park. No place could be more appropriately named, for if groves of symmetrical trees, myriads of wild flowers, foamy mountain brooks and the presence of majestic peaks can make a paradise, it is there.

The park lies upon the flanks of Mt. Rainier between the

OUT WEST prefers—and with reason—Tacoma to Rainier, as the mountain-name. But since it stands Rainier on the Sierra Club records, the author of this article has preferred to use the official designation.

All illustrations not otherwise credited are from photographs by Dr. W. H. Johnson.



A Washington Forest Stream



Narada Falls

Photo by A. Curtis

Cowlitz and Nisqually glaciers and rivers. On its easterly boundary lie the Tatoosh mountains—a range which would be famous anywhere else in the United States, but which is dwarfed by its mighty neighbor.

Paradise river, which drains the glacier of the same name, flows through the park, which is well policed and cared for, government rangers exercising close supervision over explorers and

campers. So strict are the rules and so vigilant the guardians, that members of our party feared even to gather flowers, while the cutting down of a tree ranked as a felony. An eminent botanist did not venture to collect specimens until a telegram to Washington assured immunity.

Our camp was made about half a mile from where the westerly wall of the plateau makes an almost vertical plunge to the Nisqually glacier.

As the last hour of our tramp had been made through a drizzling rain, the sight of the familiar "Commissary," "Headquarters," and "Assembly" tents of a Sierra Club camp was very



Sierra Club's Camp in Paradise

cheering. Our advance guard extended a welcome made warm by kindness, hot tea and soup.

Here, as at all times, the admirable organization and effective management of the Sierra Club, and the energy and forethought of its officers were apparent. As each one left the train at Ashford a bag of lunch was handed him. At Longmire's a warm meal awaited us. The main camp had been prepared and provisioned and provided with firewood days in advance of our coming.

Our first afternoon was passed in pitching tents—a necessity unknown in the Sierras—and in the numerous occupations incidental to getting settled. The camp commanded a view of the

upper reaches of the Nisqually glacier, long vistas of park and the ragged sky-line of the Tatoosh.

We looked in vain for Mt. Rainier. We knew it was near. We knelt on the steps of the throne, but the monarch vouchsafed no sight of his face. All day was his majesty veiled by obscuring clouds.

But on the morning of the second day the clouds drifted away, revealing the snowy crown of the King of the Northwest. As the clouds lifted, we turned to the mountain with feelings of admiration, awe and reverence. Most of us had seen and climbed high mountains, but none like this mountain. Rainier has a dignity, a majesty all its own. Standing alone, its enormous bulk is not dwarfed by surrounding peaks. The great mountains of the Sierras stand in groups. No peak is isolated. Surrounded by lofty neighbors, the giants of the south do not produce such an effect of great altitude. Mt. Whitney, although higher than Rainier, does not appear so high, rising as it does near Fisherman's Peak ("Old Mt. Whitney"), Mts. Williamson and Tyndal—all lofty peaks.

Towering ten thousand feet above the country at its base, Rainier has full advantage of its altitude. In isolated majesty robed in ermine, it dominates the landscape. It is impressive not alone by reason of its position or altitude, or the snowy splendors of its summit. It has a quality, an impressiveness, of its own.

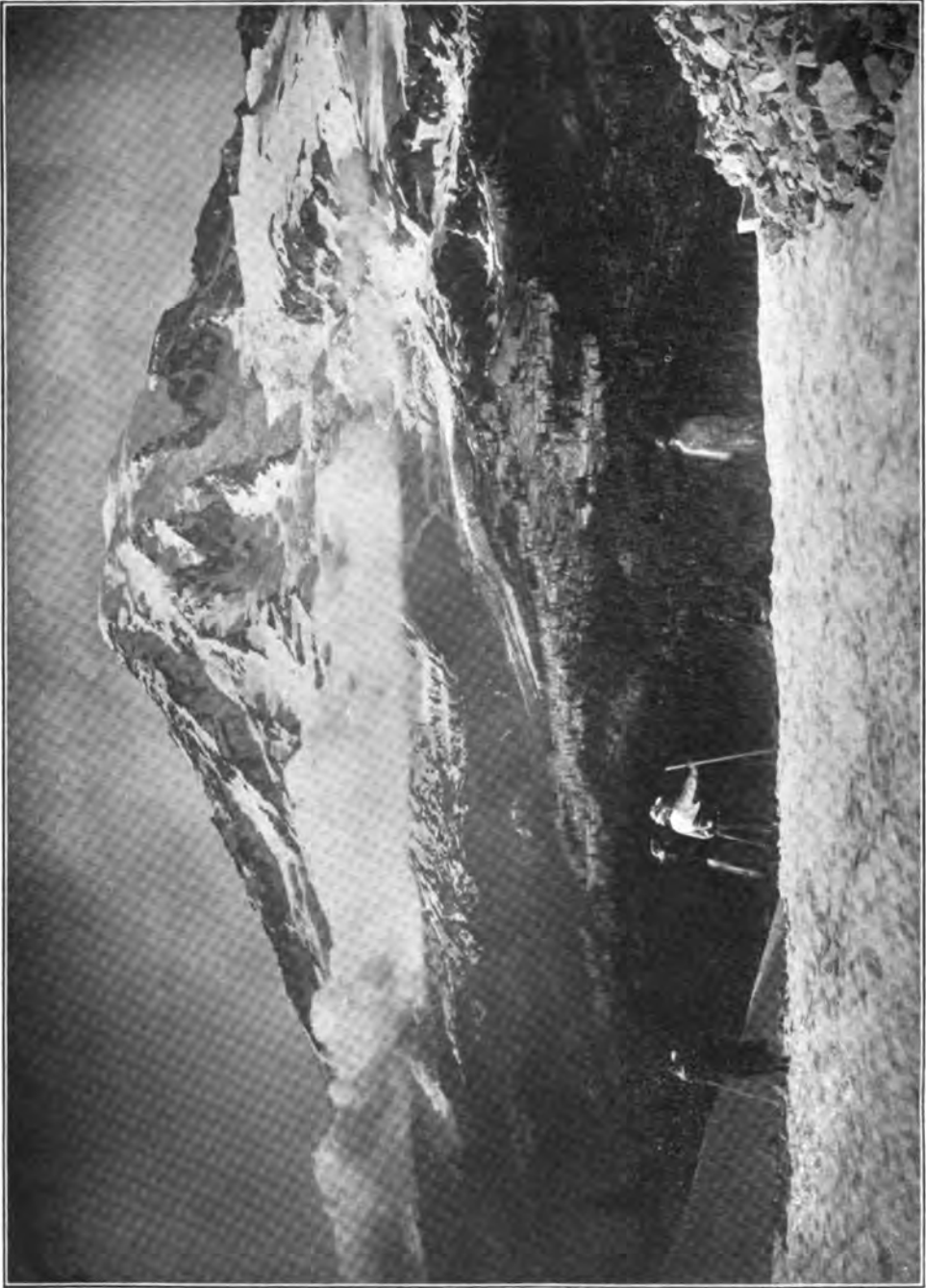
With calm, silent force, it captivates the mind, dominates the will. It does not win or fascinate, nor does it impel. It simply seems to absorb your strength into its own.

Whitney, a good-natured giant, says, "Come and have a good time with me." Brewer apparently ignores you. Lyell says, "I am hard of approach, but come." Dana says, "You can conquer me, but I will give you all the trouble I can." The North Palisade defies. Ritter seems actuated by positive malevolence. But Rainier is different from all. He seems to say: "I am terrible, but you must love me; mighty, but you must try my strength. Come to me, if you will. For your fate I care not."

The Indian name of the mountain, originally Tahoma, is said to mean "the nourishing breast." If this be so, it is well named, for its rounded, billowing whiteness from which flow nourishing streams make apt the metaphor.

I fear that many of us took entirely too "technical" a view of the mountain. With the passing of the first flush of wonder and delight, we began planning the conquest, seeking means of approach. With eyes and glasses we scanned stretching snow-fields and frowning crags for the most practicable route.

As viewed from camp, Rainier does not appear to be diffi-



Mt. Rainier, from Snow-field Below Pinnacle Peak, of Tatoosh Range

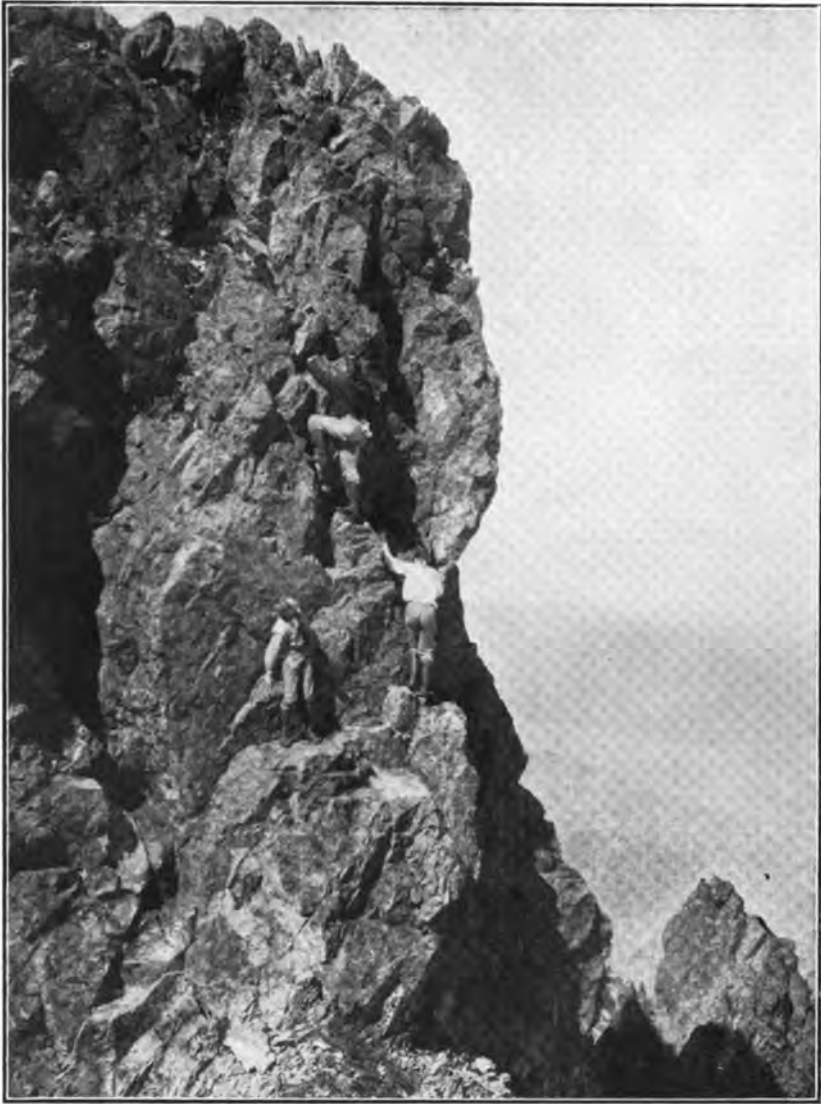
cult. But to one accustomed to climbing, this signified little. Many a climb, appearing from a distance to be easy, becomes, when attempted, difficult and dangerous. Rainier has a bad name. It is said that seventeen lives have been lost in attempting its conquest. But we were not deterred. Others had climbed it, and we were willing to make an attempt. Several days were passed in exploring glaciers and climbing the peaks of the Tatoosh range, from which we derived much pleasure and hardening of muscles. Members of our party made the first ascent of Unicorn—a peak of the Tatoosh. This peak and its neighbor,



Mt. St. Helens, Mt. Rainier and Mt. Adams, as Seen from Mt. Hood
Mt. Rainier is only very faintly visible on the plate, a little to the right of the centre-background

the Lion, offer some pieces of rock-climbing as interesting and difficult as any I have ever seen.

Pleasant as we found these excursions, they were considered as but preliminary to the climb of Rainier. For days we had scanned the summit for the cloud-cap which heralds storms. The outing committee exercised extreme care in the selection of the party and its outfit. Only those whose strength, nerve and endurance had been proved on other mountains were taken. Many were disappointed, but the safety of the whole party could not be endangered by the presence of any unequal to the task. Having started on such an ascent, all must go to the top, or all turn back. One person could not be permitted to return alone, and to wait by the wayside in the snow means death.



The Pinnacle on Unicorn Peak, the Highest Point in the Tatoosh Range *Photo by A. Curtis*

Each member was required to carry a stout alpenstock of ash or hickory, ending in a sharp iron point, and to provide his shoes with steel calks. These calks screw into the sole of the shoe, and project half an inch. Walking on smooth snow-slopes without them is impossible. Each shoe was inspected by the committee. The party was divided into companies of ten, each with its captain, and all being under the leadership of Mr. E. T. Parsons, of the Outing Committee.

Before starting we were drilled, and each member made an

agreement to obey his captain and the leader. The requirement most rigidly insisted upon was to keep in line, and halt at command. Each member was given a number indicating his place in line, and was not permitted to change his position. The line was maintained even in resting. It is to this enforcement of strict discipline that the Sierra Club owes its fine record of enjoyable outings without an accident.

As the morning of July 24 showed the summit free from the ominous cloud-cap, we lined up, answered to our numbers and started, escorted for some distance by those who were to be left in camp. An early start was not necessary, as the ascent must be broken, in order to pass Gibraltar cliff before sunrise.

Gibraltar is a lofty cliff—one of the few remnants of a rim of volcanic rock which once encircled the mountain, but which has disintegrated under the influence of volcanic action and the



The "Whistling Marmot"

elements. As it lies in the only practicable route to the summit, its vertical face must be crossed.

The face and top of the cliff are composed of loose, friable rock, easily broken or moved. As the snow melts under the morning sun, loose rocks and fragments of the cliff are surrounded by water. At night the water freezes, lifting the stones from their beds. As their retaining ice melts again in the morning, these stones are released, and plunge down the cliff. As the process is going on constantly, the foot of Gibraltar is subjected to a vigorous bombardment by stones ranging in size from a pinhead to a street car. To avoid the consequent danger, it is necessary to cross Gibraltar before the sun releases the imprisoned rocks, and to reach the cliff in time, camp must be made as near it as possible.



Mt. Hood, from Cloud-Cap Inn

The only available stopping place—one could not call it a camp—is Camp Muir, than which a more uninviting resting place could not be imagined. It is simply a sharp ridge of loose rocks ten thousand feet above sea level, five thousand feet above timber line, and surrounded by snow-fields. Exposed to all the winds of heaven—or other places—with no trees to provide shelter or fuel, no level spots for sleeping, the sight of it would chill the ardor of any but ice-wild, mountain-mad Sierrans. From time to time campers have laboriously scooped out flat places among the rocks—a convenience which the snows of the next succeeding winter proceed to spoil.

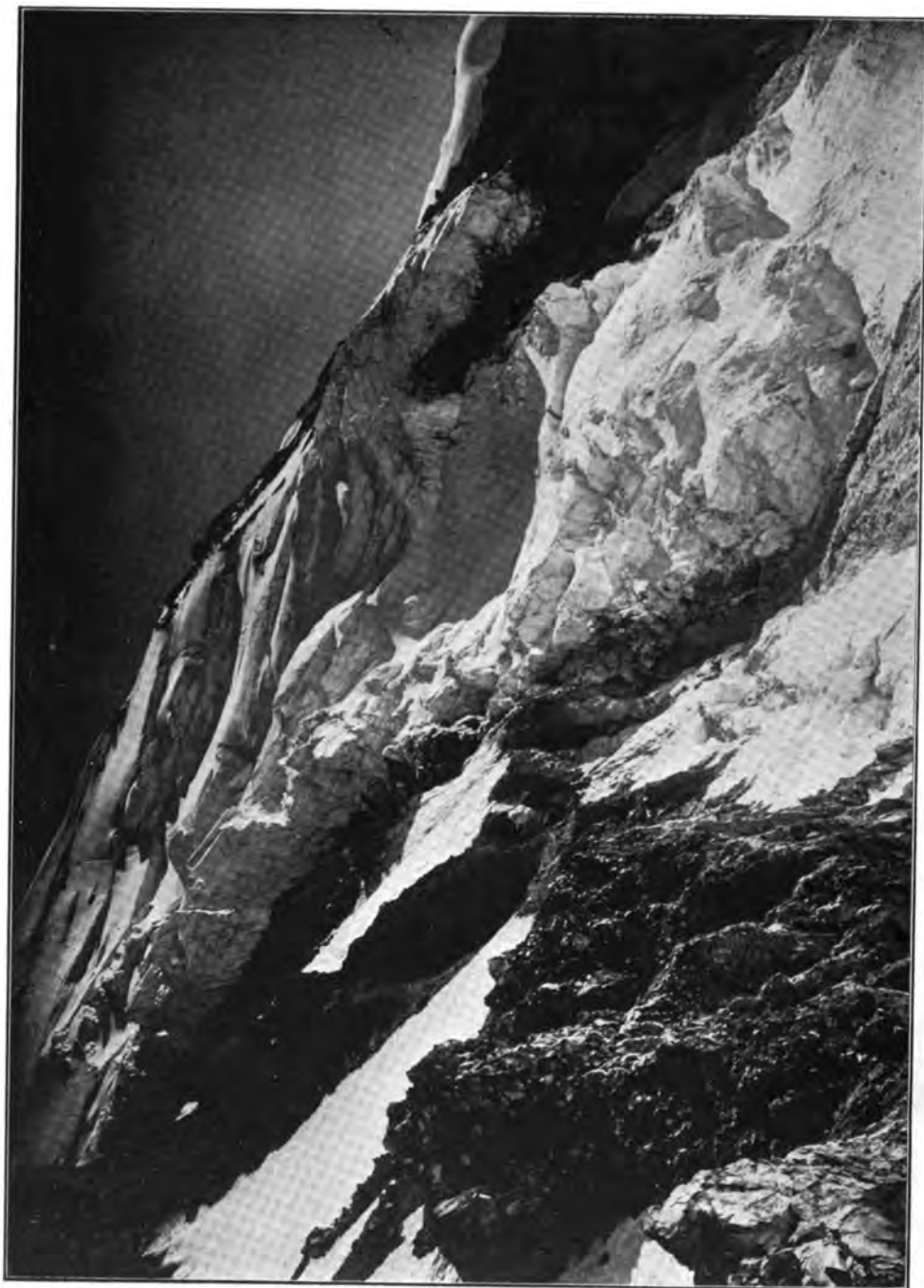
Arrived at Camp Muir in good time, we proceeded to make ourselves as comfortable as possible. Sleeping-places were scratched out and bedding spread. The forethought of our leader had provided us with two Khotal oil stoves, which we had lugged up the mountain, and while our tea and soup were heating we were forced to dance to the music of our own songs to keep warm. But we were not depressed. The songs were hearty, if not musical; the dancing vigorous, if not graceful. Our evening was short. Supper dispatched, we disrobed—i. e., took off our hats—and crawled into sleeping bags to escape the cold.

Owing to our elevation, twilight lingered with us long after the lower lands were shrouded in shadows. Indeed, it seemed that the night never became entirely dark. The light seemed to be not of sun or moon, but an ethereal radiance which softened the outlines of crag and peak, and gave the snow-fields a peculiar bluish tint.

We were surprised by passing a comfortable night. Prepared to lie awake shivering till morning, many managed to sleep in spite of cold and the sharp rocks of our beds. There was no wind, and the cold was not nearly so severe as we had expected.

Two o'clock was the hour for rising. Soon our oil-stoves were at work, and four o'clock found us in line and in motion. Judging by the nip of the air, we felt sure we should reach Gibraltar before the snow had melted. All baggage was left behind, each carrying only his luncheon and a sweater or other extra garment.

From Camp Muir to Gibraltar, the climb is a steep scramble, partly over snow, mostly along a narrow ridge of loose rocks. At one place, where shifting snow-fields had made a gap in the ridge, we were forced to retrace our steps and descend to the snow. Regaining the ridge, one more sharp ascent brought us to the easterly edge of dreaded Gibraltar. The cliff did not seem nearly so formidable as we had expected to find it. I had imagined a narrow shelf leading across a sheer wall of rock with a



Upper End of Coe Glacier, North Side of Mt. Hood

iall of thousands of feet at its edge. Instead, I saw a recessed passage offering a footway of from one to four feet in width. The cliff was undercut to such an extent that part of our passageway was roofed over.

But these conditions do not always exist. Gibraltar being composed of soft, friable rock, yielding easily to the action of snow, ice and cold, the face of the cliff is constantly changing. At times the shelf is very narrow, at times missing entirely. Our "roof" was an unusual feature.

We had reached the cliff long before it felt the sun. Not a stone fell.

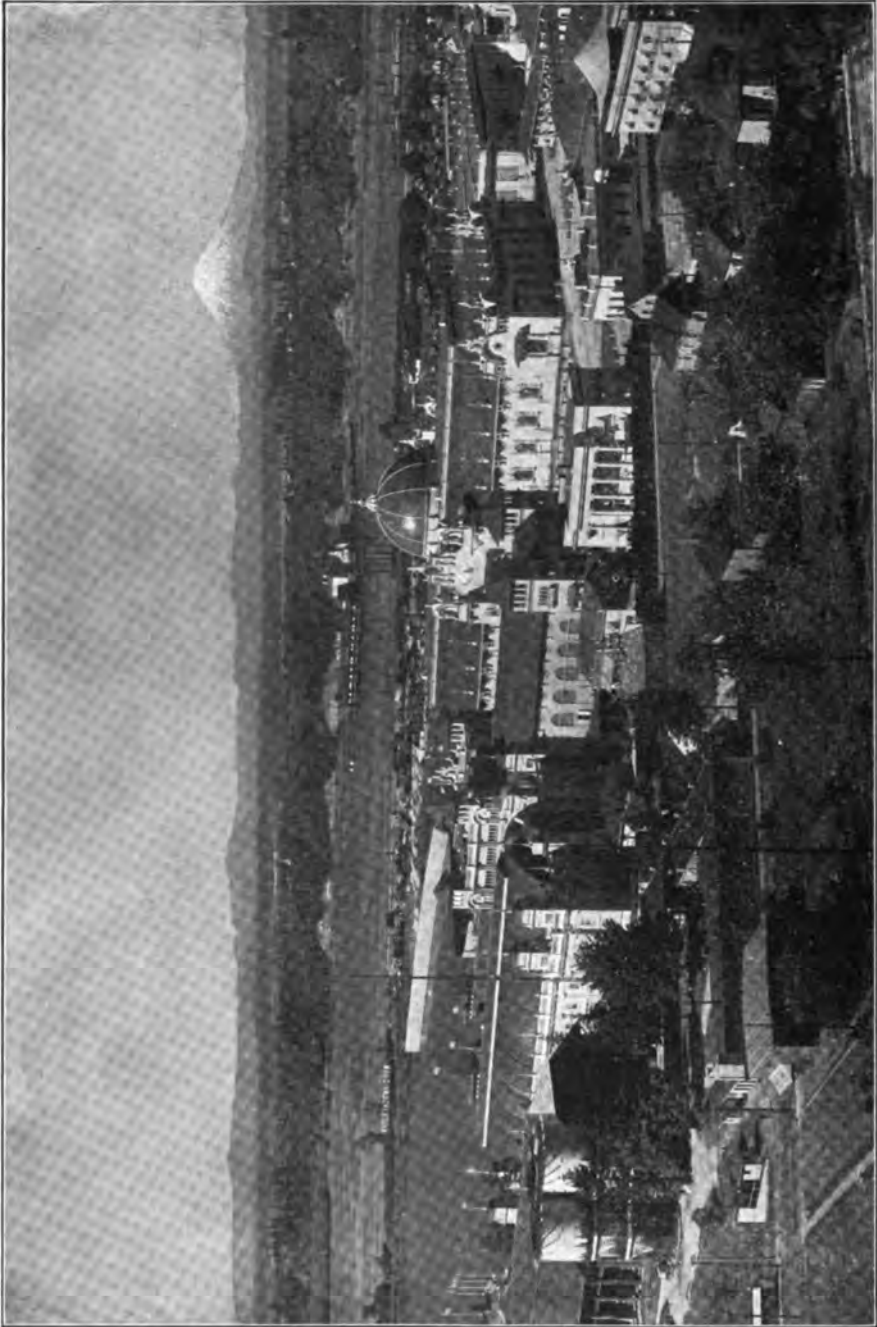
Gibraltar passed, we came to what was, in my opinion, the one really dangerous portion of the ascent. To reach the top of Gibraltar, it is necessary to pass from the shelf to the snow, and round the westerly edge of the cliff by climbing an almost vertical incline. Passing from rocks to snow is hazardous. The incline was covered with smooth, hard snow, except where it joined the cliff, and there the ground was covered with hard ice as smooth as glass. I viewed this place with apprehension, knowing that on our return we should find the snow soft and mushy, and the ice-slope slippery mud.

Slowly and carefully we began the climb. A misstep would have sent one down two thousand feet to the Nisqually glacier.

Utilizing the steps made by the feet of small parties which had preceded us (but cautiously, for the edges of such steps are likely to give way), we made our way upward. Our long calks served us well, taking firm hold on the snow. At one place a rope had been stretched, which to many afforded assistance and a source of security.

From the top of Gibraltar to the summit, the way presents no dangers. A strong, hard pull is all that is required. The ascent is not very steep. We found the snow in good condition, hard enough to afford a footing, but not so hard as to cause slipping. A gale of wind rendered the climb uncomfortable, chilling us to the bone. Many found the long, hard, upward pull very fatiguing. The wind produced in some a peculiar feeling of nervousness.

While thinking we had yet two thousand feet to climb, we came upon the black rocks which mark the rim of the ancient crater, and stood upon the top. We were surprised at reaching our goal so soon. We arrived about half-past nine—a remarkably quick ascent for so large a party. Most of us at once sought warmth and rest. The black rocks of the crater's rim absorbing the heat of the sun were warmer than the snow, and broke the force of the wind. In company with a friend, I sought a place



Portland Fair Grounds, Mt. St. Helens in Background. Mt. Rainier is faintly visible at the left of St. Helena

still warmer and more interesting. In several places within the crater jets of steam from the old volcano have melted out caves or chambers in the snow. We stood in one of these, receiving abundant heat from the escaping steam. Fearing to remain long, lest moisture from condensing steam accumulating upon our clothing should freeze upon exposure to the outer air, we left our comfortable refuge to explore the crater.

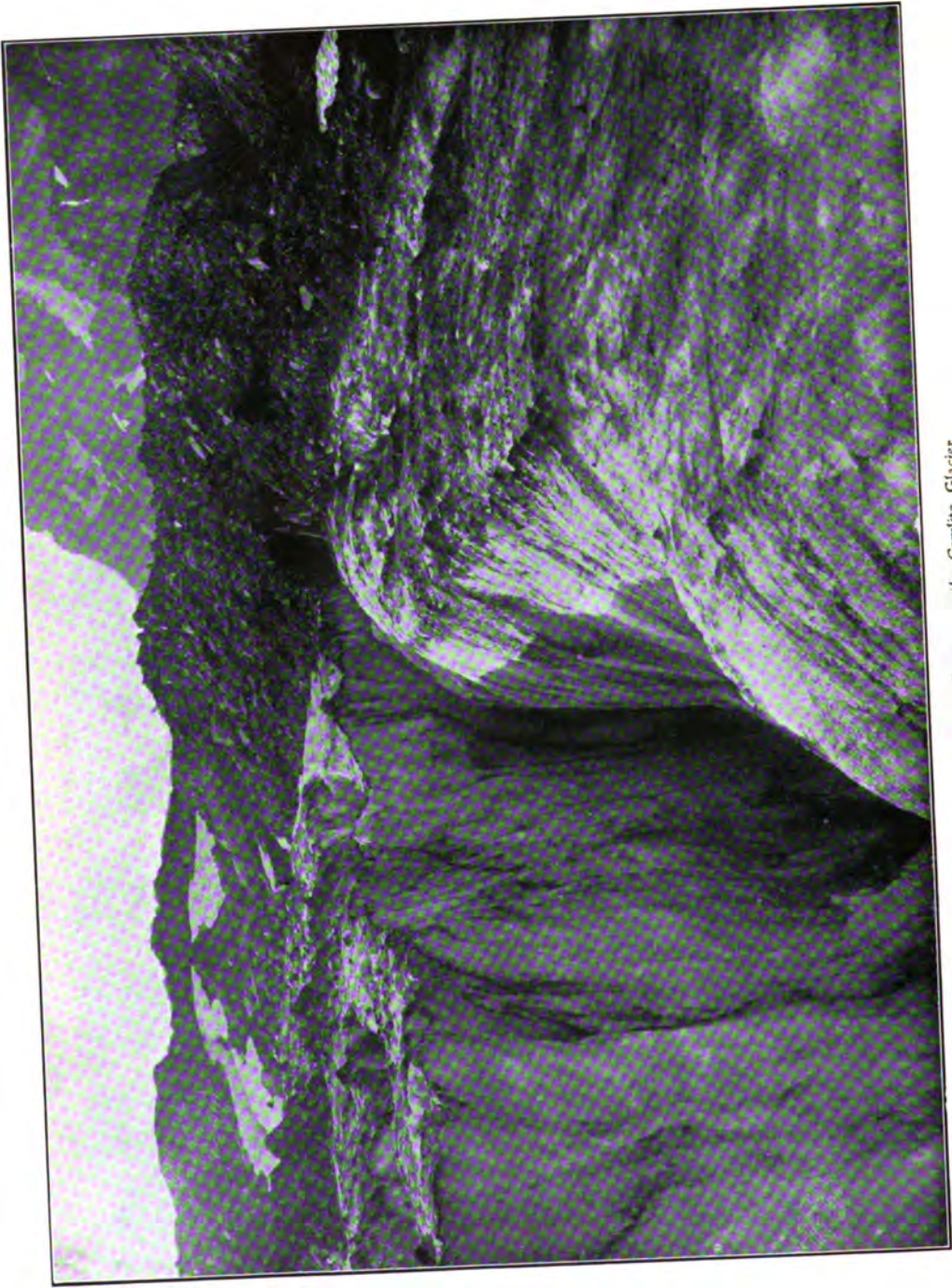
This crater is about one-quarter of a mile in width. The debris of ages has filled it nearly to the top. Its rim is symmetrical, rising to a uniform height, except at one point. At one place on the rim, where imprisoned gas or steam had warmed the ground, we found a bare space a number of yards in extent. Lying down to enjoy the warmth, a rapidly increasing drowsiness warned me that the vent hole of volcanic gases was not the most desirable spot for a nap. But a kick in the ribs from my companion was necessary to a complete realization of the situation.

Gaining the rim, we reached Columbia Crest, a vast dome of snow, the tip and summit of the mountain, and, as we then thought, the highest point in the United States. Crossing the crest twice, we made the circuit of the rim, enjoying a magnificent prospect. Tacoma is a mountain of such enormous bulk, of such grandly swelling lines, that no one point on its summit commands a comprehensive prospect. To view the entire landscape, it is necessary to make a complete circuit of the crater.

The smoke from forest fires obscured the horizon. Still the view was grand beyond description. To the northwest could be traced the outline of Puget Sound. Darker blurs of smoke indicated the location of Seattle and Tacoma. Other towns were visible. A thread of mist marked the valley of the Columbia. In the distance loomed the mighty masses of Adams and St. Helens and the graceful spire of Hood. Nearer at hand were seas of green forests, and range beyond range of mountains and hills. At our feet were stretching snow-fields and mighty glaciers.

Completing our circuit of the crater, we sought protecting nooks in the rocks. After luncheon and a short rest, we assembled to register. Adding our names to the list of those who had preceded us, we consigned the register in its iron box to a crevice in the rocks, and prepared to descend.

We made short work of the descent as far as Gibraltar. Our leader tied around his waist a long rope, at the end of which two heavy men were stationed as "anchors." Grasping the rope with our left hands, and with alpenstocks in our right, we prepared to make good time. The anchors prevented a too rapid descent. At the top of Gibraltar we paused. Our leader had been almost



Crevasse and Moraine on the Cowling Glacier

cut in two by timid persons pulling back on the rope. Leaving him to rest, we were sent in companies down the dangerous slope leading to the ledge. To my mind this short descent was the most dangerous part of the trip. The snow, which had been firm and hard in the morning, was now soft and mushy, giving way under any but the most careful steps. The ice-sheet of the morning was a bank of slippery mud. Stones which had been held in place by the frozen snow of night, were now free, awaiting only a touch to dash downward.

By the exercise of extreme caution, sending down a few at a time, we made the descent in safety. Then came the second passage of Gibraltar. We were now not free from danger from falling stones, the ice and snow of the cliff having melted. But we knew the ground, and could make a more rapid passage. As we crossed the ledge, I began thinking that the stories of stone-showers were bugaboos, when a freshly fallen block of about twenty pounds weight in my path convinced me of my error.

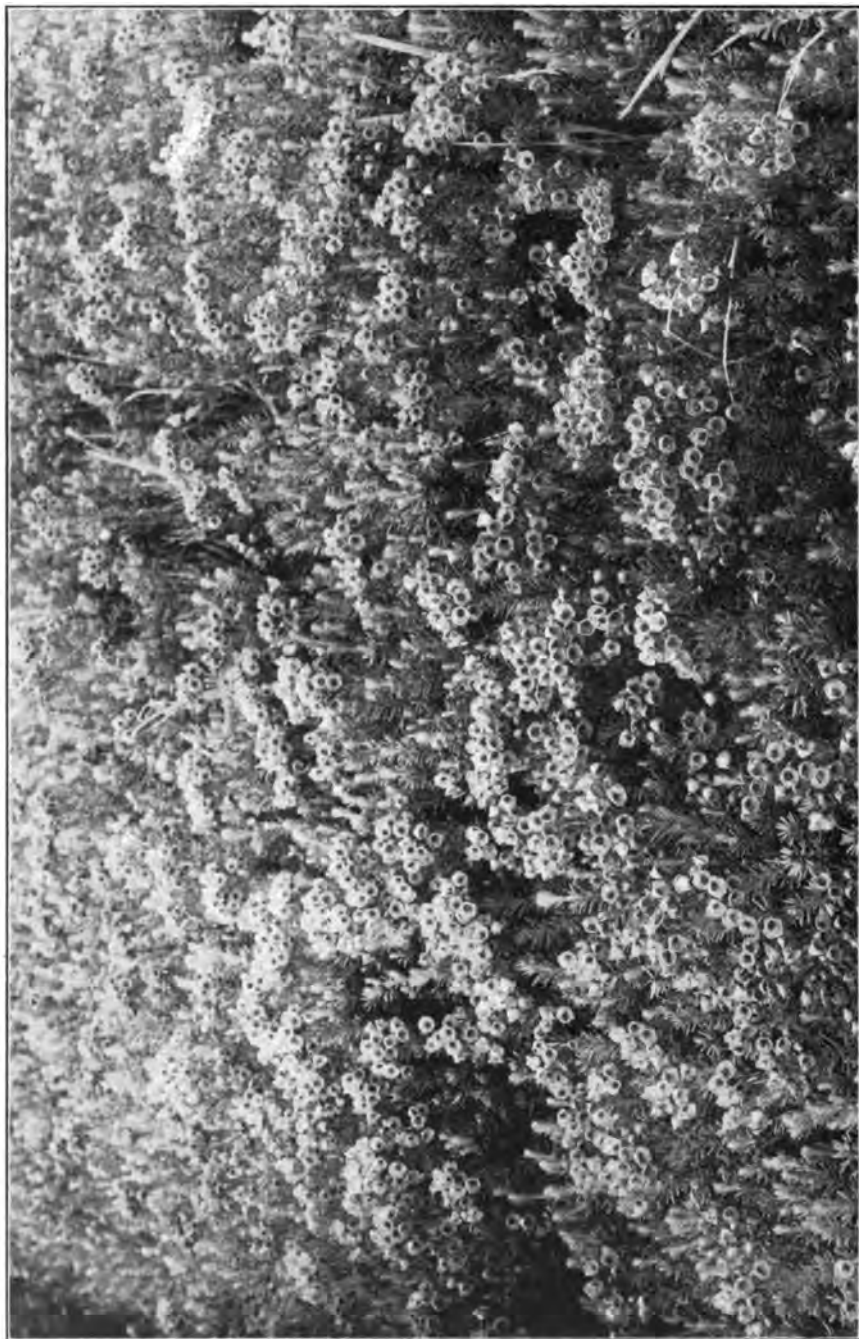
The advance company reached Camp Muir about three in the afternoon. It had been thought we might have to spend another night here, it having been determined that, unless we could make the entire passage to our main camp by daylight, we must remain at Camp Muir, as the descent from there to Paradise Park is very dangerous at night. The snow, freezing at night, is too hard for footing. Moreover, in the uncertain light it is impossible to determine the slope of the fields. What appears to be a level stretch may fall away at a sharp angle. It was in making this descent that Professor Edgar McClure met his tragic death in 1896. The exact nature of his accident is not known. He attempted the descent at night. The next day his body was found, the head crushed against a projecting tooth of rock.

Fortunately, we were not required to descend at night or remain at Camp Muir. Our entire party reaching the latter place in time, we lined up, hastened down over the snow-fields, and arrived at headquarters at Paradise Park in the same order as we had left in the morning, all safe, well and happy.

A number of people have climbed Rainier; but to take a party of sixty-two to the summit and return them all without an accident is an achievement of which the Sierra Club is justly proud. We had beaten the record for large parties. We had not endeavored to do so, as the club discourages attempts at making speed records, but had kept to our steady pace. The record of which we are proud is the safe conduct of so large a party.

Forming a circle around the campfire, we gave the Sierra Club yell, three cheers for our leaders, and disbanded for dinner.

Although a dangerous mountain, Mt. Rainier is not, in my



Paradise Heather. Photograph taken in a mountain park at about 5,000 feet elevation

opinion, as black as it is painted. We did not find it nearly so formidable as we had expected. It is said that we saw it under most favorable conditions; that it was safer during the summer of 1905 than it had been since the first ascent, in 1870. We have no reason to doubt this statement. At times the passage of Gibraltar must be made by means of a narrow, crumbling ledge. We found a firm, broad ledge, partly protected. Where in other years have been broad sheets of smooth ice, cut by crevasses, we found fields of snow sufficiently hard to support our weight, and not too smooth for footing. I could readily see that under certain conditions, such as a thaw followed by a sudden drop to zero temperature, the mountain would be inaccessible. But we found it not extremely difficult.

Shortly after our ascent, an experienced mountain guide, in crossing a crevasse, fell in, breaking both legs. One "bumped knee" and two frozen hands made the list of our injuries.

In my opinion, any person of nerve, strength and endurance, and accustomed to mountain climbing would be able to climb Rainier. I cannot think it as dangerous as reported. I would rather lead three parties of fifty persons each up Mt. Rainier than one party of ten to the summit of Mt. Ritter or the North Palisade, in the high Sierra.

Having accomplished our *magnum opus* in the ascent of Rainier, we devoted the remaining days in camp to easier excursions. Numerous short picnic walks were taken. Several parties visited the Tatoosh range, and much plain "loafing" was indulged in.

Most interesting of all were the explorations of glaciers--new ground to all but very few of us.

I was so fortunate as to be able to make a thorough examination of the great Nisqually glacier, and one almost as complete of the Cowlitz. The general characteristics of the two are the same. The terminal point, or "nose," of the Cowlitz is more impressive, but the Nisqually is more rugged and more interesting.

Not being versed in scientific lore, I am unable to present the history or describe the process of the formation of a glacier. It has its beginning in the snowflakes which fall gently upon the mountainside. As the snows of years accumulate, increasing pressure hardens the lower strata. As the mass increases in weight, it slips along the mountainside. Constant pressure from above and behind causes the stream to solidify, until the hardened snow, or névé gives place to glittering ice. As the mass of ice slips along the mountainside or over the floor of the cañon, inequalities in the surface of its path cause it to break, forming



Serac on Elliott Glacier

fissures or crevasses ranging in depth from twenty to many hundred feet.

The different strata of snow, each probably representing the fall of a year, are distinctly marked, each being beautifully colored. The lower strata are green, giving place to blue; the upper levels being pure white.

At one place on the Cowlitz glacier we estimated the thickness of the ice at 1000 feet. It was with peculiar sensations that we gazed hundreds of feet down into deep crevasses, hearing far below the roar of unseen torrents.

In the upper reaches of the glacier the breaking of the névé forms what the Swiss call "seracs"—columns and walls of fan-



Stream Issuing from Snout of
Nisqually Glacier

Photo by J. N. Le Conte

tastic shapes. One group of seracs gleaming blue and white, forming grottoes and recesses, a member of our party well named "The Fairy Palace."

To witness the process of mountain architecture one has only to study the glaciers. Stones falling from the cliff upon the soft snow are deeply imbedded, then frozen in and borne on a long journey. As the ice stream passes the faces of cliffs, fragments are torn away; or, as the stream cuts into the lower portion of the cliff the upper part falls upon the surface of the ice. The supply of stones and gravel is replenished by frequent avalanches. Enormous quantities of stones and gravel are borne down by the glaciers. In many places on the lower portions of the Nis-

qually glacier the surface of the glacier is not visible, so thick is the covering of debris.

At one place, looking up the course of the glacier, you see what is apparently a rocky hill about five hundred feet in height. Scrape its surface with your alpenstock, and clear, solid ice appears.

Rocks are everywhere, from tiny pebbles to boulders weighing many tons, lying alone or in cyclopean piles. Some are imbedded in the ice; others, resting on the surface, are ready to move with or without notice. I have distinct recollection of one day when, crossing a hollow in the ice, hearing a grating sound. I looked up just in time to see two or three large fragments slid-



A Rock-covered Portion of Elliott Glacier, Mt. Hood

ing toward me. I can confidently assert that I broke the glacial record in leaving that hollow.

Stones borne by a glacier are deposited at its sides in lateral moraines, or at its ends in terminal moraines, a succession of these terminal moraines marking the gradual recession of the ice.

Silent, resistless, terrible the glacier goes its way. Brooking no opposition, it rends opposing cliffs, bearing their fragments away in triumph. Slowly, confident in its might, it goes its own way. But the end comes. Rocks and cliffs must yield to it; but to gentler influences the conqueror yields. The rays of the sun sap its mighty strength until, in meek surrender, the giant dissolves in tears.

The glaciers end in abrupt cliffs of ice, that of the Cowlitz being more than 200 feet in height. Under summer sun the ice melts rapidly, many streams pouring over the face of the cliffs, while from beneath it flows a stream of considerable size. As the day advances, these streams increase in volume, to shrink during the colder hours of night. The glacial streams rush with great velocity, bearing along huge lumps of ice and boulders, the grinding of which produces an ominous sound. The water is thick and almost white, on account of the stone dust held in suspension. During the winter the glacier freezes hard, and the streams shrink to mere threads, or disappear. But the harvest



Crevasse on the Cowlitz Glacier

of winter cannot replace the waste of summer, and the glaciers are gradually receding, each year marking a loss.

At the foot of the Nisqually glacier the recession can be easily traced. For a number of yards below the ice the banks and floor of the cañon are bare. Then comes a stretch of weeds and grass, then small bushes, then saplings; farther down full-grown trees of the forest. As the once mighty victor retreats, those who once feared him rush in to claim his abandoned conquests.

As the ice melts, the glacier lightens its burden.

Watching the unloading of the glaciers is fascinating sport. Streams of gravel and pebbles slip gently away as though seeking

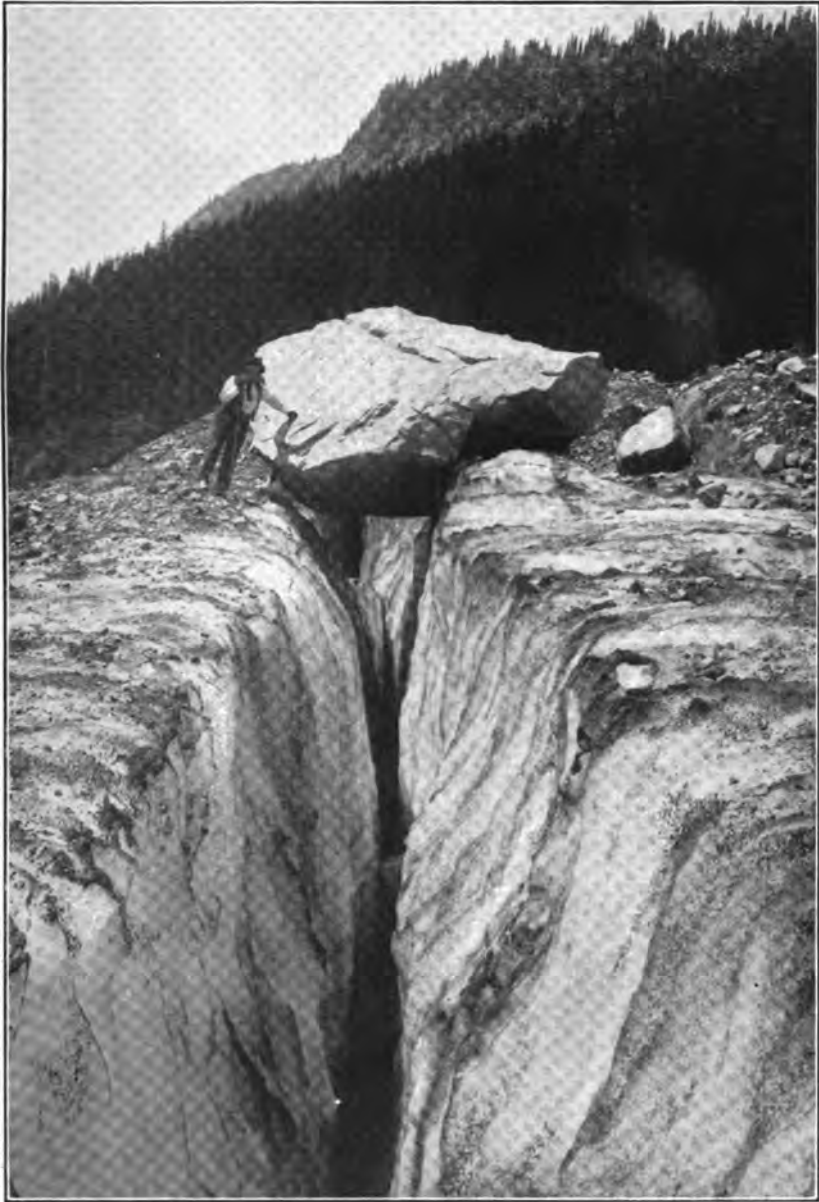


Crevasse at the Junction of the Van Trump and
Nisqually Glaciers

Photo by A. Curtis

to escape unnoticed. Great boulders and fragments leap high in the air, returning to strike one last vicious blow at their captor, then plunge to rest. Rocks imbedded in the ice gradually come into the light, then make a wild dash for freedom, exulting in liberty after age-long imprisonment in their icy dungeons.

Professor J. N. Le Conte, of the University of California, conducted an interesting series of observations and measure-



Crevasse in the Nisqually Glacier *Photo by J. N. Le Conte*

ments of the motion of the Nisqually glacier. Stakes, each bearing a bit of red cloth, were placed at regular intervals upon the glacier. These stakes were inserted in augur holes. Some stakes froze into the ice, others melted out. From a transit upon the banks of the cañon sights were taken at the stakes, the position of each being noted with reference to established marks. It was



Crossing Nisqually Glacier, in the Bottom of a Crevasse *Photo by A. Curtis*

found that the glacier moved more rapidly in the center than at the sides. The average motion of the ice was about eleven inches a day. Professor Tyndall's measurements of Alpine glaciers show a motion of about fourteen inches a year.

As a souvenir of the measuring process, I have a piece of one of the stakes, bearing its tiny banner of red, and having its rate of progress marked upon it.

Our scientists rendered other valuable services, the most interesting being the measurement of the altitude of Rainier. Professor Le Conte, Professor McAdie of the United States Weather Bureau at San Francisco, and Professor Franklin of Stanford University, assisted by four lawyers, respectively designated as "first assistant," "second assistant," "theorist" and "liar," carried their instruments to the summit and obtained data for calculating the altitude by barometer and boiling-point observations. To allow sufficient time for its work, this party was sent on ahead of the main body. Their company yell was:

"Barometer, thermometer, boiling-point or bust;
The scientific party got there fust."

On their return to San Francisco, the observers completed



Profs. J. N. Le Conte, Alex McAdie and Dudley
Making Observations on the Summit of Mt. Rainier Photo by A. Curtis

their calculations, the result showing the altitude of Rainier to be 14,394 feet. For two years it had been supposed that Mt. Rainier was higher than Mt. Whitney. But observations by the same men using the same instruments show the height of Whitney to be 14,515 feet, Rainier as above stated. For some time the relative altitude of these mountains was in dispute. To be sure of having climbed the higher, the Sierra Club climbed both.

As usual, the social side of the outing was enjoyable. Songs and stories around the campfire, lectures from various scientists, exchange of visits with the Mazamas made the evenings pass pleasantly.

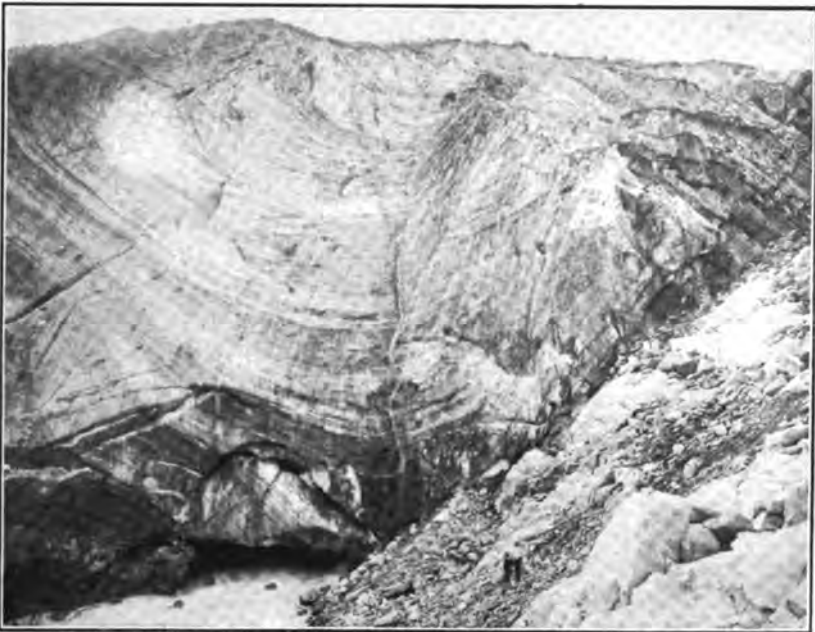


Flotation Down the Elliott Glacier, at the Speed of Nearly One-quarter Inch Per Hour

The Mazama camp was about a quarter of a mile from ours, rendering exchange of visits easy.

About twenty-eight of the Appalachians made their camp with us, and chummy companions they proved. Accustomed to the short tramps and lower mountains of New England, they were astonished at our long journeys, and impressed by our magnificent mountains. They adapted themselves admirably to novel conditions, and seemed to enjoy themselves thoroughly.

One incident will illustrate what kind of people partake in our mountain trips. One evening when about one hundred Mazamas, Appalachians and Sierrans were gathered around a camp-



The Birth of the Cowlitz River

fire, it was suggested that the names of different colleges be called, a graduate of each responding with his college yell. Twenty-two colleges responded. Several others were silent, because they had no yell or their representatives had forgotten it.

All good things must end, and on July 30 most of us bade farewell to Paradise Park, the rest following the next day. A trip to Indian Henry's Happy Hunting Ground and the great Tahoma glacier consumed the last day. Then came a night at Tacoma, a steamer excursion on Puget Sound, Seattle, Portland again, and, finally, the ascent of Mt. Shasta.

Every member of the Shasta party regretted that we could not spend a number of days in the neighborhood of that most attract-



Mombrae Falls, Near Mt. Shasta

ive mountain. Its surrounding country offers every attraction to an outing-party. The McCloud river is literally alive with trout, while other streams offer fishing-grounds nearly as good.

The Sacramento river, for many miles below its source, is a beautiful stream. Mossbrae falls are unique; foamy sheets of water, falling through a mass of green ferns, produce a charming effect. The village of Sisson, the starting point for Mt. Shasta, is a delightful resting place. The trout-hatchery maintained by the United States Fish Commission, is interesting. The town commands a fine view of Shasta, Cinder Cone, and other mountains.

The ascent of Shasta itself, while not involving the dangers and difficulties encountered upon other mountains, is very interesting,



Mt. Shasta, from Fish Hatchery near Sisson's

while the view from the summit would repay any exertion or inconvenience. A month could be pleasantly and profitably passed in this region. But our time was limited, and we were forced to content ourselves with two days.

With the ascent of Shasta our outing ended. It was a complete success. Two 14,000-foot mountains in two weeks should satisfy the most exacting mountaineer.

We had seen noble views, wandered through luxuriant forests, climbed grand mountains, but we of the Sierra Club are pleased to think that nowhere are sunlight so bright, skies so blue, cañons and valleys so entrancing, rivers so fascinating, peaks so inspiring as in our own beloved Sierras.

Los Angeles.

THE MAKING OF A SIERRA CLUB CAMP

By MARION RANDALL



THE Strong Man spoke impressively:

"I don't want you people to be disappointed; so I warn you that we've got the worst camping-place I ever saw."

We sat upon the grass—the Fearless Ones, the Doctor, the Big Man, and the Galley Slaves—and listened with unwonted attention.

"There's one big snow-field with a little island on it," pursued the Strong Man. "On that island there are three living trees and four dead ones. That's the commissary. Across the stream (only you can't see the stream for the snow) there's another island where you girls can camp. A little farther down there's a swamp where we'll put the men's tents." He paused, turning his hat in his hand and meditatively adjusting the red bandanna that adorned it. "There are bumble-bees up there as big as humming-birds and more kinds of flies than you ever saw in your life before—and they all bite."

The Fearless Ones glanced dubiously at one another.

"The truth is not in him," they agreed. "He's trying to frighten us."

"Wait and see!" prophesied the Strong Man darkly, and rising, we resumed the march.



Paradise Phlox

We had left Tacoma, Ashford and Longmire's Springs behind us and were making our way up the cañon that leads to Paradise Park and Mount Rainier. The previous day's walk had been along an idyllic forest-road with tall ferns reaching out to touch us as we passed. Now, with countless white lilies blooming all about us, with violets in the bottom lands and pink heather-bells opening on every hillside; with the continuous chatter of the stream below us, and the happy promise of the blue sky above the pines, it seemed impossible that there should be a single bad camping-place in all Washington.

But a few hundred feet can make a vast amount of difference in conditions in the mountains. As we climbed onward the trees grew thinner, patches of snow became more frequent, and long stretches of brown, rotting grass, just free from its winter-covering, and bar-



Dog's-tooth Violets

Photo by A. Curtis

ren of all promise, took the place of the flower-gardens, till at last we crossed a ridge, plowed through a snow-field and found ourselves at our destination.

The camp lay on a crest between Mount Rainier and the Tatoosh Range. A high green ridge, dotted with patches of snow and edged with storm-beaten pines, concealed a small portion of the lower slopes, but the great bulk of the mountain rose clear against the sky; cold, austere, majestic, in glittering raiment of ice and snow.

The Strong Man had spoken but too truly; our habitation was literally an island in the snow. There were a few more living trees than he had mentioned, likewise more stumps and fallen trees piled

up in discouraging confusion; one tent had been erected to protect the boxes and sacks of provisions that had already arrived; three stoves stood near by, chimneyless, rusty and forlorn; but, blessed and relieving sight, our dunnage-bags lay on the ground beside us. Bedding, provisions, fire and water—all the essentials were ours; we sat down on our belongings and discussed the situation.

There, the Strong Man opined, was the place for the table, here for the stoves; there two dead trees must be cut down, the assembly tent erected here, the Sibley tent yonder.

The Big Man lighted his fifth cigarette.

“Come, ye huskies, get the axe and hustle some wood for dinner,” he commanded, and the Galley Slaves rose, reluctantly, at the word.

Meanwhile the Fearless Ones crossed the snow-bridge to their own domain. They were not official members of the advance-guard. Encamped on a remote hillside popularly known as the outskirts, they had neither duties nor recognized position. Venturesome spirits, they came to the wilds of Washington at the bidding of the Littlest Girl, armed with a small private stock of provisions and a tent, and prepared to waste a golden week in idleness.

But woman is gregarious and early learned the proverb, “Better a Cook in Company than a Queen in Solitude;” so they effected a combination and became cooks and scullions to the advance guard. She who washed dishes one day was cook on the next, and what she lacked in experience she made up in marmalade from her private store. There were difficulties in the way even for more learned cooks. In the kitchen were neither frying-pans nor covers for the kettles; twenty-five pounds of popcorn and six gallons of syrup were in the commissary tent—but salt was lacking. The stove, moreover, left much to be desired, for the smoke poured impartially out of every crack and cranny, as well as from the hole designed for that purpose, and once it had escaped, showed a decided preference for the eyes of the cooks. Snow-goggles, however, saved the day, and as, at a pinch, bacon is an excellent substitute for salt, dinner proved welcome enough to the hungry pioneers.

The next morning work began. If anyone imagines that a comfortable camping-place for a hundred people just happens, let him start out to look for one. Here, first of all, the ground had to be cleared of the tangle of dead wood that cumbered it, the toughest sort of knotty, cross-grained, stubborn pine. This had to be sawed into stove-lengths and split into small sections. Profanity being restricted to the sign-language, and the hands of the amateur wood-choppers being otherwise engaged, the ultimate effect on the character of the repressed passion of those silent and awful struggles with the wood-pile is terrible to contemplate. The climax was reached one afternoon when three laboriously-hewn stakes that the Big Man

was driving into the ground, splintered in succession, beneath the impact of his mighty blows, and the Fearless Ones were graceless enough to laugh. For a moment the overflow of a week's dammed (or spell it the other way, if you like) torrent shone in the Big Man's eyes, but custom prevailed, and with a cabalistic wave of the hands he fetched the fourth stake and drove it triumphantly, if less energetically, home.

From the same tough dead-wood, tent-poles and stakes for a score of tents had to be shaped; for we were in a National Park where the cutting of living trees is strictly forbidden. A few days of perfect weather had made us a trifle skeptical about the presaged Washington storms and the necessity for tents, but we were soon to learn. One afternoon a cold fog gathered on the glaciers, stole over the intervening ridge, and swooped down upon our camp. The ghostly gray skirts of the fog-wraith swept across the meadow, and veiled



"Those Silent and Awful Struggles
with the Woodpile"

Photo by T. d'Estrella

the tops of the pines, while her cold fingers brushed our cheeks and hung little sparkling drops in our hair. Luckily our sleeping-tents were up, but the assembly tent was not, so we spent the evening in a dismal group around the kitchen stove, warming our faces and hands, while the elements had their way with our luckless backs.

It cleared about ten o'clock the next morning and the advance guard made ready to set up the big assembly tent. It was a monster affair, some thirty feet long, and what with the erecting of it, and the cutting of poles and pegs, the working hours were very adequately filled. Under the circumstances, the Fearless Ones hesitated to mention that their particular tent lacked pegs. It so happened

that a strong wind sprang up that night, and when in the morning the Fearless Ones prepared to dress, lo, their domicile was capering about like a mad thing, with skirts wildly flapping and two wide-spread, polar legs giving the structure the appearance of a somewhat inebriated ballet-girl. With the aid of three hat-pins, a pail of water and five pairs of boots, the crazy creature was finally subdued and brought back to earth.

Intermingled with the wood-chopping, trench-digging, tent-erecting activities were many other tasks—carpentry work, the making of a long table, where a merry company was soon to gather at meal-time; the building of a foundation for the three stoves and putting their disjointed chimneys together; axe-grinding, and the unloading and putting away of the stock of provisions that daily came up on



Seed-pods of the Anemone at Close Range

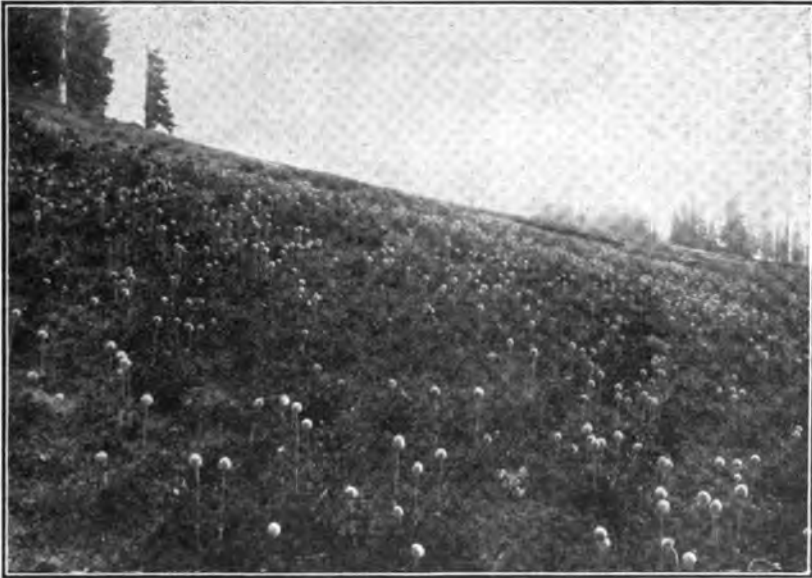
Photo by A. Curtis

the pack-train from Longmire's. A refrigerator was also built by digging a hole under the trees, lining it with excelsior and filling it with snow, and in it were stored the lard, salt pork, butter and similar perishable articles.

Wearying of the gentle art of cookery, the Fearless Ones organized an engineer corps and prepared to clear the stream of the treacherous snow, the melting condition of which made every trip across it include a plunge into the water. With alpenstocks, shovel and ice-pick they loosened big blocks of hard-packed snow and sent them sailing downstream. When all was cleared, they set to work on a dam to make a pool deep enough to draw a pail of water from comfortably. Then, fired by their own industry, they undertook to drain a low, swampy hollow, below the camp, that was swarming with mosquitoes. For a whole day they toiled, scraping, scratching and puttering about with alpenstocks and ineffective little scraps of

wood, but still the place was not drained. In the evening came the Strong Man with a shovel. He dug for ten minutes, a young river began to flow, and in an hour the swamp was gone. The Fearless Ones returned to their dishpans.

The next day it rained. It began as a fog, continued as a drizzle, and ended in a downpour that lasted a whole day. Armed with pick and shovel, the advance-guard set forth at the beginning of the drizzle to dig trenches around the various tents, while the Fearless Ones alternately sat in the assembly tent and dashed out into the rain to cook. The stove, being thoughtlessly neglected after breakfast, filled with water, and it took half an hour of exhortation and prayer and blowing and coaxing to get the fire started again—a task which fell



Seed-pods of *Anemone* on Slope Below
Camp of the Clouds

Photo by A. Curtis

to the Big Man. The firewood had to be kept in the oven all day—which formed an excellent excuse for not baking anything.

Following the rain came a warm, sunny day memorable for two events—the raising of the flag and the arrival of the Man from Boston.

The flag-pole was a long, comparatively slender tree-trunk, the branches of which had been chopped off and the top adorned with a silvery ball—a condensed milk can. When this was made ready, the Strong Man climbed the highest tree as far as its wavering top would allow, and fastened an ingenious, camp-made pulley-block to it; and for more than an hour he clung there while the flag-pole

was hoisted and secured. Then he slid down and the flag slid up amid the cheers of the assembled company.

While we were still admiring the effect and trying to remember the second verse of the Star-Spangled Banner, the Man from Boston appeared, bringing us tidings of our fellow Sierrans down in Portland, newspapers only two days old and a wonderful box of chocolates. The cooks of the day hastened back to the stoves and were soon ready to refresh him with pea-soup and apple-pie.

We gathered about our little camp-fire that evening with the comfortable realization that the camp was practically in readiness. And lucky indeed it was for us that this was so, for following this, for



A Siesta

Photo by J. B. Genld

three whole days, the rain hardly ceased and the great white mountain remained steadily hidden in the clouds. In the mornings we played football with an oblong object constructed of wood, excelsior and sacking, and ran races to get up a circulation; by lunch time, being thoroughly drenched, we retreated to the assembly tent where we sat around the Sibley stove, ruefully watching the wood-pile disappear into its jaws—it was a bigger fire-eater than Saint George's dragon. The wind whistled among the trees overhead, pierced through the walls of the tent, penetrated our heaviest apparel to the marrow of our bones, and passed out again by way of the chimney, carrying most of the warmth with it. The pit-pat of the rain came



"The Strong Man Climbed the Highest Tree" Photo by J. N. Le Conte

to be a welcome sound, for as the falling sparks burned holes in our canvas ceiling, we could have no fire if it were not raining hard. Afternoon was passed away in reading aloud from the magazines brought by the Man from Boston, and the evening hours were spent swapping yarns by the light of one tallow-candle. And then the Fearless Ones tramped through the mud and wet and dark, up the lone hill to their camp, to be awakened next morning by the Littlest Girl singing "Good morning, Merry Sunshine," in a minor key, while

she sat up in her sleeping-bag and looked out on a tempestuous world; and the Tenderfoot sat in her corner dismally prophesying a three week's storm, and threatening an immediate return to California and sunshine.

That morning wood-chopping was resumed under cover of the assembly tent; a few fragments of boxes, floating around in the lake that was once the kitchen floor, made access to the stoves possible, and the affairs of the camp went on much as on the preceding day. The Galley Slaves, grown restive in captivity, took to dark and terrible ways and improvised a roulette wheel by which fortunes in ten-penny nails were made and lost.

Three days of this, and then on the fourth morning came a glimpse of watery sunshine. This was to be our last day alone in camp, for the main party was expected on the morrow; and as we set everything in order, raking the chips from the ground with a home-made rake, putting the last box in place in the commissary tent and running up the great flag, we looked about us with a glow of pride. It was a very different place from the desolate island we had first looked on. The snow was all gone from the meadow; the barren ground had bourgeoned again and a million wild-flowers were scattered among the fresh, tender grasses.

It was good to feel that here, on the very borderland of eternal ice and snow, a comfortable, even luxurious, camp-life for a hundred people was possible and that we had helped to make it so. Of course the Fearless Ones had had little to do with it; but though the credit of the ingenuity, and forethought, and the toil that made the finished camp a success belonged all to the Strong Ones, yet a little of the pride of ownership fell to the lot of the Fearless. And, as we looked around our model kitchen, we thought with a pang of the ruthless heathen hands that might upset all our arrangements and carelessly hang the can-openers on the nail sacred to the frying-pans; or, by some equally unpardonable change, destroy the symmetry of its plan. Sadly we thought that soon the right would no longer be ours to stand beside those stoves or invade the forbidden precincts of the commissary tent; that we, the Fearless Ones, honorary members of the advance guard, would be—merely a part of the crowd.

Even so it came to pass, but, some-way, we found no cause for lamentation. It was too good to meet the friends of former outings again, to feel the joy of finding oneself a part of the great jolly fellowship once more, and to be free to roam the beautiful, unexplored country at one's pleasure, to leave any room for regrets over relinquished authority. Let Charley Tuck see to the dish-pans. Let the Commissary General attend to the fire-wood. The advance-guard were mustered out with flying colors and were well content—for the Rainier camp was made.

AN ARCHÆOLOGICAL WEDDING JOURNEY

By *THERESA RUSSELL*

CHAPTER V.

THE WRITER LADY AND THE MORMONESS

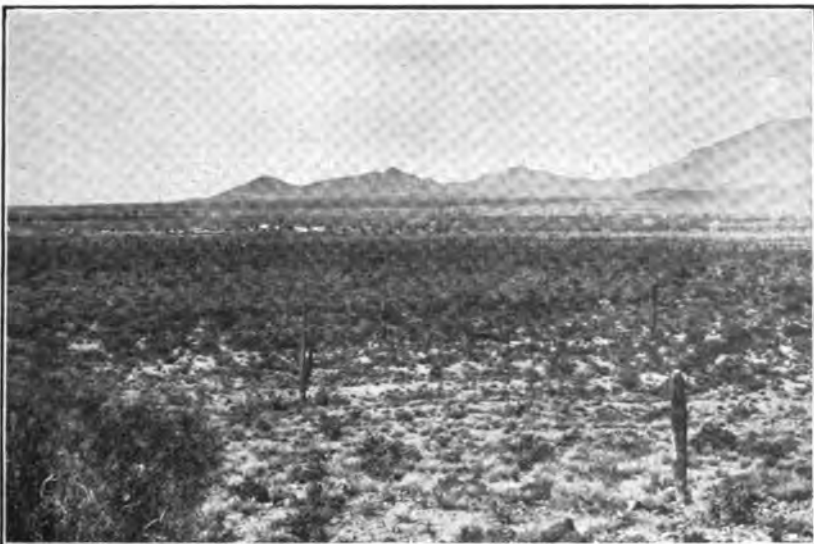
"The's as much human nature in some folks as th' is in others, if not more."



IT WAS ours the next night to enjoy a sylvan camp again, with spring-water, and shade of cedar and piñon—a place to leave with regret, modified, as is the usual way with regret, by anticipation. For were we not to see people today—real, white people?

Sure enough, about ten o'clock of the morning, we perceived evidences of them, distant and enchanting—the waving, beckoning branches of cottonwood trees, all in a nice row, and casting real, green shade. A nearer view disclosed the vista of which they formed one side to be outlined on the other by a corresponding row of whitewashed adobe buildings—the housing of the Government Indian School.

We arrived, and the first thing I knew I had been whisked out of the wagon and was sitting in a large chair surrounded by a small room. It was a cool room, and well ordered—in spite of its overdose of furniture. The lady of the room was rapidly sewing up a diminutive muslin bag on the macline. It would, perhaps, have been interesting to those philosophers who believe that we spin our sur-



"We Perceived Evidence of Them"



"The Beckoning Branches of Cottonwood Trees"

roundings out of ourselves, to have noted that the mind of the mistress did seem to be a counterpart, in a way, of the apartment. "Psychical archetype?" Yes, thank you, Plato! Anyway, the psychical furniture appeared to be of a comfortable, commonplace, more or less useful sort, methodically arranged. When the little bag was finished, it was filled with dry starch and presented to me for my complexion's sake. As a matter of veracity, one feels impelled to mention that its usefulness remained entirely potential until, one day, the Man of Science was making a big map and wanted some smooth paste to stick the sections together. Thus you see, little children, we should never despair if we are not allowed at once to enter the service for which we think we are fitted. It is merely that we are being pre-



"The Housing of the Government Indian School"

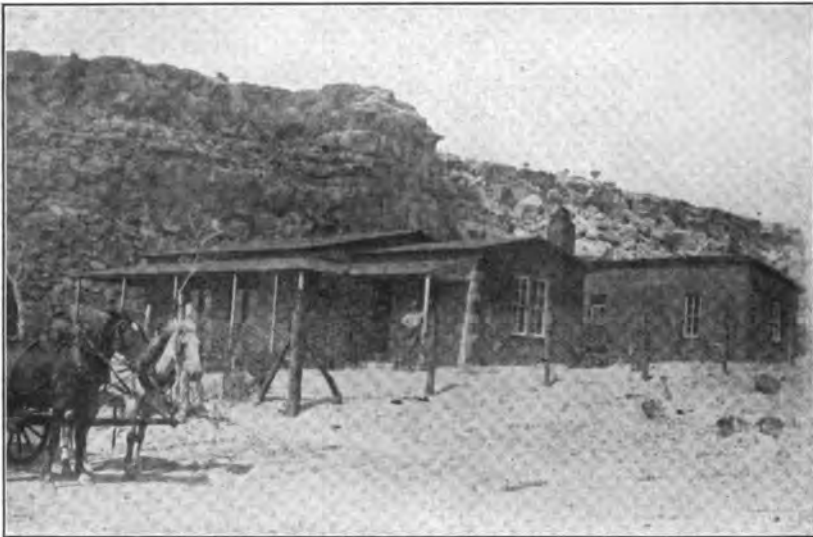


"A Place to Leave with Regret"

served for a more noble purpose—perhaps even for a high, sacrificial career—when the time comes.

Meanwhile, my hostess was instructing me how to construct a chamois-skin mask as a freckle-preventing apparatus. It was on another day, also, that I met her riding to the Flute Dance at Walpi, manifestly a practitioner of her own precepts. She was so completely encased in her color-protective armor that I should undoubtedly have been moved to greet her with a "Speak, speak, thou fearful guest!" had not her proportions been so far from sepulchral.

Now, however, as I drank her delicious lemonade and let her talk to me, the burden of her confession was not of Viking-bold pro-



"His Modern Frame Cottage"

pensities, but of aspiring literary inclinations. She was, in fact, almost an authoress.

"And so you have just sent on your manuscript to be published?" I inquired, respectfully.

"Yes, I've been working on it for nearly a year. Then when the ethnologist from Washington was here, he helped me to get some pictures, and it was all ready. The pictures turned out splendid."

"It is an Indian story, you say?"

"Partly, and partly Spanish. It's very romantic."

"You certainly have had a good opportunity to draw your characters from real life."

"Oh, yes, of course I see enough of the natives, but I did not take any of the characters from life. I made it all up out of my own head."

"Western stories are very popular just now. I suppose you have read some of the recent ones?"

"No. I haven't had much of anything to read since we've been out here; and besides, I think it is better not to. I do not want to be in danger of imitating any one else. That is why I believe my story will be a great success—it is so original."

"There's nothing like originality," I agreed. "And the plot is your own invention?"

"Yes. It goes something like this——"

But ere the narration was brought to its dramatic close, the narrator's audience was obliged to move on, in order to reach the trading post, two or three miles beyond, in time for luncheon.

"I'll just get in and ride down with you," volunteered the writer-



"Down at the Store"

lady, not to be interrupted by a mere exodus, "and I can finish telling you about it as we go along."

"Dear Dame Loquacious!" I sighed, when no one but the Anthropologist was around. "How she did love a listener!"

"No more than you would, probably, if you had been kept as long on as short rations of companionship. She was simply, as some one expressed it, ridding her system of a lot of accumulated conversation."

"It accumulates pretty fast, I fancy, in her system, but it does not harm, so long as she finds it so easy to dispose of. And I doubt if she really minds the loneliness so much as a more repressed nature would. She has more need of telling it out, to be sure; but on the other hand, she is saved by her broad views respecting auditors. She has the faculty, useful if not happy, of making the most of what is, where to be fastidious is often to go without."

"Like the Apache on the war-path, who can find abundant living on the very trail where his pale-faced pursuers would starve."

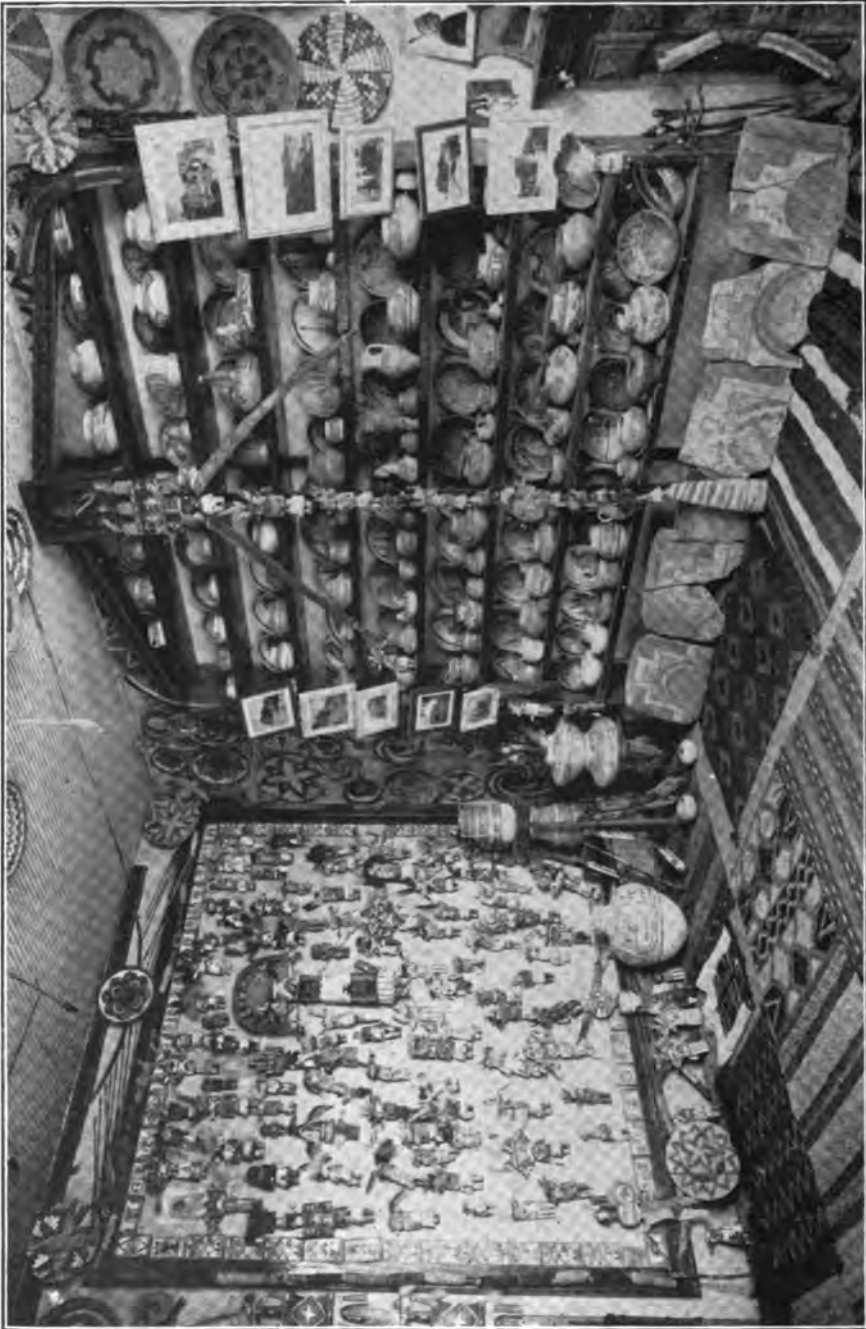


Photo by Froman

'Superb Collection of Strange Curios'

"And what does one gain by being in the midst of the crowd, if the grocer's boy or the ice man can furnish as stimulating companionship as a college president? Hath not each and every one a pair of ears?"

"According to Scripture, the possessor of ears is in duty bound to hear, and the possible advantage of a population is that this duty can be divided up among the several and sundry ears, thus diminishing the individual tax."

The communistic conclusion was reached over our tête-à-tête spread in the Post dining-room, where we had been made as kindly welcome as though we had arrived at the appointed eating-hour. We were served by a faded, elderly Anglo-Saxon named Jim. Jim had a twinkle in his eye, and a way of making a McKinley pie that was simply captivating. I haven't time, now, to tell you what a McKinley pie is like, but if you will ask Jim he will doubtless give you the recipe.

"What a beautiful menu!" I exclaimed.

"Good in itself, and made better by a contrasting experience. It's an illustration of what the poet says about the prerequisite 'to appreciate Heaven well.'"

"'Tis true. But even the Other Place has its compensations. For one thing, you don't have to associate with saints. Our tinned and salted camp fare, washed down by crude coffee, may be purgatorial, but brightened by Sliver's pagan smile and enlivened by Nosifor's naughty songs, it becomes quite palatable. However, as you say, this is not only good but good for a change, and I'll take another potato, please."

"You have never before regarded a plain boiled potato as a luxury, have you?"

"Forsooth, dear sir, what is a luxury?"

"In this case, it's a sort of reincarnation—the unconsidered commonplace idealized by absence. But, in general, I should say it is the butter on your bread."

"The lubrication of life?"

"Yes, and more. As a matter of fact, it is what makes the bread worth eating. Of course, a hungry man relishes a dry crust, a starving man feasts on it, but a steady diet of dry crust will in time cause the appetite to fail. The struggle for the bread is an instinct, knowing neither judgment nor desire. It's winning the butter that calls judgment and desire into play, and adds zest to the fight as well as the reward."

"And when you add marmalade?"

"The strife degenerates into a hunt. A little is good, but more is bad. When it comes to be a feverish scramble to see who can find the most expensive kinds of jam, spread it on the thickest, and

swallow the stickiest mixtures, it were better to chew a crust."

"And eschew sweets?"

"Oh, not altogether. Just pass me the strawberry preserves, will you? But plain bread-and-butter represents the temperate zone—well enough to leave for brief excursions to torrid opulence or frigid poverty, but most desirable as a dwelling place for generations."

"How comforting for those who lack the equatorial purse! But really, you can't pin the word down to a hard-and-fast definition. It's like impaling a butterfly. By the time you get it where you can focus your scientific eye upon it, it's a dead specimen."

"A dead specimen is a good specimen. But, in this case, your butterfly is a chameleon."

"Every fellow's luxury takes its color from himself?"

"Even so. And that implies another thing—that every fellow does have his luxury, or his idea of it. The dry-crust diet is not so common as we suppose. The most pinched and frugal of us manage to get hold of some oleomargarine or molasses once in a while."

"And, our taste being in harmony, we banquet."

"At least, we think we do, and that's sufficient. Every life has some share of color and music and fragrance. Judged by an alien standard, the hues may be tawdry, the strains discordant, the odors unrefined. But his own is every man's treasure."

"And existence unadorned—"

"May be existence, but is not life."

Our host was not a Westerner. He was not even an Easterner. He was an Englishman, and he had brought his accent with him. It was as striking a feature as his modern frame cottage within its woven-wire enclosure that contrasted so refreshingly with the all-prevailing adobe. The two together imparted a civilized flavor to the place that not even the groups of loafing Indians without, nor the superb collection of strange curios within, could render wholly heathenish. In manner, too, one felt the change from the address of the former host. There was no less of chivalry, nor yet of hospitality, neither any more shrewdness. But kindness and calculation alike merged their currents under a more placid surface, a more polished calm, touched with native cynicism and tempered by frontier-trained humor.

These were bachelor quarters; but down at the store, in a room at the end of the long building, I found Another Woman. She was the wife of the new clerk, and they had just arrived. Their household was in as great confusion as could be caused by not much of anything, and their minds also seemed to be of a corresponding type. Yet there was a certain winsomeness about the young woman, with her wistful eyes, spiritual brow and sweetly-shy manner. Her husband, poor boy, hadn't any brow at all, to speak of; his eyes

were pale, and his manner merely diffident. But he was well-meaning, my dear, and he surely had a kind heart, the eternal compensation of the incompetent.

So the little lady and I, we spent the afternoon together, and talked a good deal. She, too, loved a listener, but wisely, and not too well. The lotion of sympathy was necessary to draw out her confidence, but it seemed the better for the relief of expression.

"It is not often," she said, "that any one who is not a Mormon will listen to our side, or believe there is any good in it."

"That may be because they don't understand it."

"Oh, yes, I'm sure that's the reason. Anyone who understood it could not help believing it!" she responded fervently.

"To know all is to pardon all," I thought within me, "but to believe little." Aloud I queried, "The Book of Mormon is your Scripture, isn't it?"

"Yes, but we believe the Bible, too, and we accept all of it, and not just the parts we like, as some of the Gentiles do. And the same with the Book of Mormon. The best thing about that is that you know every word in it is true. You can be sure of that."

"It's from that, isn't it," I hazarded, "that you learn about the Indians being descended from the Ten Lost Tribes of Israel?"

"Yes, and isn't it foolish for these scientists" (she was unaware of treading on any scientific toes) "to waste so much time trying to find out where the Indians came from and all, when it is right there, and proved so plain?"

"How proved?"

"Why, they are a fulfilment of prophecy. It says, 'They shall eat with their fingers and be filthy still,'—meaning those descendants, you know. Well doesn't that fit the Indians exactly, and prove they are the very ones meant?"

In the face of this blinding glare of evidence I could only blink helplessly, and endeavor to turn the searchlight on another point.

"But you don't get your authority for polygamy from the Bible, do you?"

"Sure we do, though the special revelation came later. But Solomon had many wives, you know, and the Bible says, 'The Lord is the same yesterday, today, and forever.' So, of course, what was right then must be right now."

"And you women really like that sort of life?"

"Well," with a visible but reluctant shrinking of enthusiasm, "of course, we are naturally selfish and jealous, and some of us feel that we cannot endure it. But that is because we are not as we should be ourselves. If we would take it right, we might not be any happier, but it would surely make us better. For we know that if we are patient and brave, our reward will be all the greater. Our happiness will come in the future life."

"Oh, Future Life," said my thought to me, "what crimes are committed in thy name! What insults offered to the bounteous Present, what blindness to her beauty, what trifling with her opportunity, what stupid rejection of her gifts. Oh, baffling Life, what fools these Martyrs be!"

To the Lady of Zeal I remarked, "But polygamy is not practised among your people now, is it?"

"No. We are law-abiding citizens, and although we still think polygamy is right, we do not believe it is right to disobey the law."

"Well now, since it is not your fault that you cannot be as unselfish and sacrificing as you would like, you can live happily here on earth and get your reward in Heaven just the same, can't you?"

"Why, yes, I suppose so."

"And you don't mind having it that way, do you?"

"Not very much, I guess."

The arch, tender smile that illumined this Confession of Selfishness would have been puzzling, remembering its adored but unadorable object, had it not been for the reflection that, after all, Love, more than Man, is precious in the sight of Woman; and Love, one of life's luxuries, is an obliging chameleon.

Stanford University, Cal.

[TO BE CONTINUED.]

THE CALL OF THE TRAIL

By AGNES C. KING



HE free, glad days on the road,
 The mountains, the cañons, the plain,
 The sound of the wind in the pines,
 The soft, cool swish of the rain,
 A tent by a spring;

The camp-fire's glow in the velvet dusk,
 The glint of the stars, the forest still,
 The soft, gray coming of dawn,
 And whistle of quail on the hill,
 A wild dove's plaint;

Fragrance of sun on the sage,
 In the drowsy heat of noon,
 The flash of trout in the mountain stream
 Swift running water, a wild bird's tune—
 All these and more.

ON THE LAGOON

By VIRGINIA GARLAND.



HE hollow about this ocean-inundated lagoon is a small circle of transition land. Separate conditions of two regions meet here, overlap, mingle. In some dim day, the hills have pushed the mountain trees down through a cañon gap almost to the edge of the ocean.

In some tidal storm, nodules of cliff-rock have been carried up deep into the hill meadows. The marsh-grass creeps in touch with the fox-grass of the encircling fields. Mountain alders cast their shadows over the brackish water of the marsh. The seeds of the sycamore are sometimes blown quite over the inlet to fall on the crests of the incoming waves. So it is that the birds which frequent pines and alders cross wings with ocean-fliers. This is the home of the grebe and the loon—the home also of the oak-haunting chickadee and titmouse.

About the hollow, the surrounding fields, studded with low-branching oaks, slope slowly down to the glassy water. There is a stretch of dense shrubbery skirting the trail that winds along the bank above the tules, where azalea and toyon, bay and cashew and blackberry vines reach out, clasping the oaks that have ventured down so far; half yielding, half rigidly withdrawing, they arbor the tangled dimness of the trail.

You cannot walk the shadowed path unaware of the song-sparrows. From every bough a pert "fib-fib!" is flung out to you as you pass, and, presently one ripples over into cheery Autumn melody. When you come to the other narrow of the lake, where the rank, crowding rushes cut off the flow of the languid water, go softly if you would hear that fine, liquid medley of the reed birds—Red-winged Black-birds—ringing in unison their sweet, chesty chime, "kong-karee-karee!" If they glimpse you, up they rise in a black, discordant flock. But the undertone of the Tule Wren goes on, liquidly serene.

At the entrance, the lagoon puts up a slope of sand, making pretense of keeping the ocean out. At the edge of the mere, just where I can see the rise of the ocean, the shimmer of a sea-bird's wing float up, I have pitched my tent. On tranquil days, the surf lapses out of sight, far down a wide white beach; but in other mood storms up the shore and flings aside the sand barriers. I see the wrinkled heave of the grey water; the spray is tossed high in air; foamy fingers reach for the shifting sand; the ocean rushes and washes into the lagoon. At times, when the sand-bars are down, the ocean recedes, leaving the bayou dark, empty, muddy—all the sparkle and

liquid life of it dragged through the inlet. But is it empty, lifeless? One pleasure which has come to me in living close to the lagoon, is the knowledge that this sheet of quiet water, so seemingly inert, is constantly making exchange of beauty and utility. No change falls upon it which means surcease of activity. In its rest it is still giving or taking. Underlying all of its variations is the need of some phase of dependent life. And the same vast ebb and flow of the whole Universe comes home to me for having homed awhile on the edge of the marsh-flow.

Behold it now, dark, muddy, the delight of snipe and sandpiper, the meeting-ground, the feeding-place, of curlew and kildee. The mud-grey surface is dotted over with small, earth-colored bodies, running, probing, crouching, teetering, turning a quick-curving, silver wing to the sight; alighting again—at once almost indistinguishably a part of the soil.

But the Belted Kingfisher sulks. His beautiful, glistening fishing-field is swept out from under him. He has little taste for frogs and water-snakes. With a long, distracted rattle, he circles out over the lagoon, down the sea-shore to the river below. Here he must fish surreptitiously; for this is the fishing-ground of another kingfisher. For awhile he lurks low on the border of the stream, silently picking up the food that chances by. But he cannot contain himself for long; his pent-up voice will out. Recklessly he takes the middle of the stream, sweeping up with a resounding rattle; hovers, rises, hovers again, falls head down with a splash. No time has he to fly to a perch, toss and swallow his fish; for the rightful owner, the river kingfisher, is upon him. The fish is dropped, and the sound of two dozen castanets shake the air as the angry birds chase each other up and down the stream. The lagoon kingfisher knows that justice is with the river kingfisher, so is easier vanquished. He wings his way back to his chosen domain. He waits resigned at his own fishing station, looking at the mud-flat before him sullenly, eating a frog or two—a lizard—eking out with grasshoppers that whirl up from the sunny slopes.

At last the lagoon fills up; the yellow foam slips over the bar; a current runs down the middle; then a level sheet of shining water gently stirs the rushes.

What halcyon days are these for the kingfisher, full of calm and easy fishing, full of calm and hazy light. Round the lagoon he circles, and the mellow Autumn days are his. I hear the exhilarant crescendo of his calling, nearer and nearer as he sweeps by my tent, fainter as he curves the opposite shore.

An old driftwood log lies half in the rushes, half in the passive water. This is the hunting-station of a Western Black Phoebe. Hour

after hour it flutters out over the water and back again on its perch to swallow the insect captured. There is a small bit of sand about the base of the log. Here, one day, I spied the Phœbe resting, wings spread out disjointedly on the warm sand, relaxed out of the semblance of a bird, looking like a collection of feathers strung far apart in a loose tangle. I watched it for some time, learning thereby a lesson in relaxing no cult could teach me better. Then, with an upward jerk of the imaginary string, its feathers are pulled into place; again it is the very much alive Phœbe—peaked, dusky-hooded mantle, white vest complete, trim and taut and alert, bright eyes turning to catch the instant motion of insect wings. He flutters out over the rushes—apparently with loose-winged unconcern, but each movement is with telling effect; no half turn of any feather is wasted. Back on the log he takes his stand, and a gauzy, red wing blows away on the air.

Around the shores that encircle the mist-heavy bayou, there is a band of green freshness, kept vivid all the year by the wafting vapors. Here I find stems of pearly everlasting, fresh-petaled when on yellowed land there is left only dusty bunches. Here are patches still of asters and goldenrod and dandelions—golden blossoms marching with their seed-dry ghostly sisters. Delicate lines of thin green stir above the October-laid ground; wind-waved, feathering above the summer stubble, each day coaxed into taller green by the humid atmosphere. There are mints and sages everywhere, mist-dampened and sun-dried daily; they hold up to me their cup of steeped and drawn, their soothing fragrance.

Over the level, swept of the sea breeze, is flung down to me in my tented hollow a glorious rush of pungent perfume, whipping the lungs to deepest breath. Yonder, past the green-brushed slope, lies a field of tarweed; dry—it may be dying; viscid, yellow blossoms curled by the heat into low bronzy bunches. But what so alive as the keen fragrance rising? Incense of myrrh, and all the perfumes of Araby are not more sweet, more heaven-lifting, than this balsamic breath ascending, blown up from the autumn-burned field of tarweed.

The edge of the inlet is heavy, thick with aquatic plants, succulent weeds, wild rice. Flocks of wandering waterfowl swing into the lagoon—Yellowlegs, Phalaropes, Willets, here for an hour, gone the next. Many are the rhythmic beating wings that measure their flight over the marsh-water. The sea- and the shore-birds lack singing voices, but have instead, singing wings. For the basic part of music is rhythm; and these wild wings pulsing through the air, played upon

by shifting shadows and sheen, are making wonderful harmonies, symphonic arias of motion and light.

A flock of Herring Gulls flurry down the air, weaving palpitant wings in and out in meshes of motion you can almost hear, so rhythmic-flashing they go. They settle on the mirroring surface of the water; for a long moment their wings beat on, raised above their bodies, marking a white, blossoming tangle of fluttering time.

There is a solemn, strange music in the down-spiralled flight of wild geese, lowering, when astray, to survey the country below. In a wide, slow circle they swing around, coming down the dizzy depths of the air in perfect rotation, all together turning into shadow, all together flashing into sunlit curves. Then, at some signal given, they stir upward again; the circling movement is broken; a line straightens out across the sky; the leader comes forward from the middle; the flock falls back in spreading lines. "Honk-a-honk!" the signal is given. "Honk-a-honk!" goes down the line, and the wedge-shaped ranks pass over swiftly out of sight.

My tent-flap opens upon a moving picture, ever changing. Just a bit of the silver tarn, a background of water and sky, divided by the shore-line of tules, played athwart by fragments of passing life, upheld to my sight by the meeting arms of framing oak-boughs. A fine, natural Rochelle frame, fantastic but simple, scrolled about in dainty rococo work of twisted twigs and grey-moss filling. A Foster's Tern wavers into the canvas, beating the air with long, swift, velvet strokes—is gone. A flock of Coots slides into view and slips past; a Western Grebe moves next, constantly turning its long bill—dives, and leaves a spreading ripple. A flock of lispig Bush-Tits, too small to take distinct form, are blown like curled, grey leaves in a long-drawn, gusty flock across. Then the mirrored surface dreams unstirred, save by the quiet drifting wings of a dragon-fly, passing and re-passing. As I gaze, it becomes clouded over; the grey-moss arras stirs; I hear a sigh; faint, vague vapors move slowly by in shadowed fantasies—a subtle picture too fleeting to name. My sight is more understanding for the framing arms of the oak; the passing beauty of all expression touches me nearer. The outlook of Nature is mostly too vast for our eyes to perceive. We need the smaller encompassment of humbler things to quicken us. The thing is to learn, ever to learn; so what matters whether it is an old oak or a trained savant which teaches?

As I watch the wreathing mists of the mere-water and the incoming ocean fog, I know that these two are friendly spirits, are happy together, communing in fanciful, conjuring ways, arranging their shimmering color-effects, their fantastic vaporous meetings. Some-

times at sunrise the tarn is a soft blaze of amber light. Over the bar comes the rolling fog, curling down white and close; blotting out the trees, the shore-line; surrounding the shining center of the lagoon. Then a glowing ball of light seems to rise from the lake and projects itself into the thick white of the billowing fog that rolls over it.

Sometimes a sheet of pearly vapor lies over the lagoon, hovering, breeze-shaken, lifting above the glassed surface. It curls up at the corners, drifts to one side, gathers more compactly, sends up a signal of streaming vapor, waits the fast-coming fog. For a moment, before they meet, you see how distinct and separate each is from the other. The breath of the bayou light and reflective, capricious, simulative, glowing; the breath of the ocean masterful, opaque, blotting out, covering, compelling.

At times it is the ocean fog which recedes, the lake fog which follows. Far out at sea the banked mists call to the lagoon, and the opal mists arise and obey, hurrying up from rush and tule, smoking up from fenny borders, gathering, rising, drifting over the bar, caught by the sea-wind, sucked by the ocean-currents into a revelling meeting out at sea. And in the grey dawn I have seen the little lake-spirit creeping back wan and tired, folding itself down over the water, sinking into the lake again.

The lagoon is teeming with life and color—October life full and ample, dreamy, vibrant, golden. The ocean is before me, and faint, opalescent lines of distant shores. Five pelicans move across the water, flap! flap! flap!—then a slow sailing down the path of air. Close to the shore a wide flying ribbon of sea-birds—gulls, brants, cormorants—beat up and down the coast, waving into shallow water panic-stricken schools of smelt that betimes are cast flapping on the shores for the birds' delectation.

Just inside the inlet a sparrow-hawk hangs a-quiver in the air above the marsh. A gull, swift-going, passes above him on his way out. At my feet are the tules, laced together with intricate, swarming water-life. I cling to an alder and lean to peer into the green, sluggish depths. A Clapper Rail gets frantically out of sight. From the brush about me shrills out the eccentric Scale Bird: "Keep it! keep it! keep it!" he calls; another begins a long, quivering, quavering tremolo, which vibrates on and on through the other's calling till the oaks fairly rock with the sound. Then silence; and then the White-crowned Sparrow—dreamy, sibilant singer of October—flutes his indrawn, out-toned, triplet lapse of rapture. Not in Spring did he sing with such insistent wealth of emotion. He is singing now just for October. If I could express my love for the mellow, golden month, I could not find a voice more in keeping than the song of the White-crowned Sparrow.

Soon the film of the dusk hides the tawny hills and the distant mountains, that, a moment before, were tender blue against a smoked-pink sky. Once, at this nightfall moment, I came face to face with a bit of Egypt. Silent and immovable against the shadowing rushes stood a White-faced Glossy Ibis. Until the noon-glade stretched from shore to shore it stood statuesque, one-legged in the shallow water, the pale light just showing its glossy wing, its long curved bill and white face, in relief. Then it rose, silent still, in the deepest shadow, a dark line against the sky, trailing out and away—dimmer and dimmer. All the mystery of the Nile lapsed for me in the lagoon water in that hour.

The shadows deepen, and I close my tent for the night. Now is dawning that other, more silent, subjective, occult space of the earth's revolving, which is day to some. There will be night-fowl in the lagoon, feeding in the safety of the dark. It is the time of stars and half-lights, the hour of the fox and the coon, the moth and the night hawk. Perhaps there will reach me in the night the trumpet of Swans flying over, the furtive step of some padded foot, or the strange cries of migrating birds utterly unlike their usual voices.

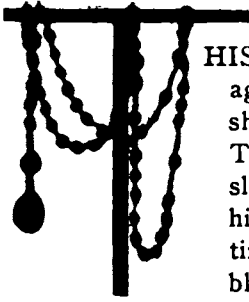
I lie and watch, as the moon rises, the shadow of the oak take form on the taut walls of my tent. First an undefined blur of light and shade—then the long, sprawling trunk—then each night-stirred leaf distinct. A little shadow-owl comes and sits on my shadow-tree. I may put my finger on his tufted ears and he will be unaware. So the moon weaves its magic for me. A soft, trembling note slips down the still spaces—a cool quavering, wraith-like sound—a sound that is shadow also.

The lagoon that I know so well by daylight is now an unknown realm to me, full of plushy depths of darkness, of strange night folk, of moonlight mysteries, of half-revealed stories. I may catch a glimpse of secretive wings which waver over the confines of the dark; a night bird's note comes out of the shadowland—a note I do not know how to interpret or to follow. Then these are swallowed up again in the thick, dense, impenetrable activity of the dark. So much of life escapes our day-sight. Almost all of the night's action goes on unseen. But they are there, the people of the shadows; their wings are beating on; their feet are finding trails; their love and their activity, their hunger and their significance are unceasing. I give the lagoon over into their keeping.

Brookdale, Santa Cruz Co., Cal.

THE PEARL

By DONALD KENNICOTT



HIS story of the Pearl, I heard one night from the lips of an aged shepherd named Matéo, while we were out with the sheep near the west "breaks" of the Great Staked Plains. The herd had been bedded down for the night, and lay sleeping in the sheltered hollow between two low, barren hills. On the crest of one of these, Matéo and I were sitting about a dung-fire, that burned with tiny flickers of blue and green, above red, glowing coals, and sent a thin streak of acrid smoke straight up toward the stars. The old shepherd leaned back against a great withered yucca, his faded zarape fallen back from his shoulders, and his brown, wrinkled hands clasped over his knee. The firelight played in his white beard and long, unkempt hair, and sometimes caught the lustre of his fine, savage eyes, so that they shone with a hard light, like those of a wolf. A mongrel sheep-dog trotted up and down at his post on the opposite hill; the brooding silence of the plains was so perfect that we could hear his soft footfall on the stones, and the little breathing noise of the fire.

On other nights Matéo had told me strange things—of the hideous race of uncouth monsters that have their lairs and take their prey among the dark cañons of the desert San Blas; of the man for whom the mirage that glimmers all day along the desert sky-line, did not fade; and of the ways of the painted savages of the Quemado country. And so to-night I hoped to hear of some other new things, but the old man was silent for a long time, although his eyes were very wide and wakeful, and glowed like coals under the shaggy brows. After a time he began humming a queer, eerie song, all the while staring at the fire in a preoccupied way. The melody was new to me, and I asked him its name, and if he would sing it. He gave no heed to my question for a moment, and then he said, musingly, without looking up:

"*La Perla*. It is a very old song. The women sing it sometimes in the twilight when they are sad; and I have heard a man sing it, too—so!" And he leaned back against the yucca, closed his eyes and sang, slowly, and with a husky quaver in his voice that accentuated the minor cadences:

"The Pearl was born beneath the bitter sea,
Fair as if a child of flame and flower.
My love was born in this dark heart of me,
And dwelt within my dreams and memory,
Many a day, many an hour.

"The Pearl is dead beneath the bitter sea,
Is dead and withered like a flame or flower.

Thy love is dead, in the dark heart of Thee,
Is dead in all thy dreams and memory,
Many a day, many an hour."

We were silent for a little time when he had finished, and then I said:

"What manner of man was it, Matéo, that sang *La Perla*?"

"The best of men," he said, "the best of men. I have told you many tales, *compañero mio*, that run about from mouth to mouth in our country, and you have believed them as they merit. Therefore I shall tell you this, which God gave me to see and know myself. It may be that every man is permitted to take part in some one great venture. This was mine. I do not speak of it often, for it lies very near my heart, and most men would not believe.

"It was years ago, in the south of Sinaloa, where the apples grow wild in the hills, and the rivers run down swiftly through the dark cañons of the mountains to the lowlands and the sea. I was no shepherd then, but a *mozo* on the great Hacienda de Campo of Don Ramon Donato, at the forks of the Rio de los Angeles. Don Ramon had three sons to his name; the eldest rode about with his father, and, after him, was to be lord of the Hacienda; the second went to the military school in the Ciudad and became an officer in the artillery. The third son was Felipe—Felipe the Silent, the peons used to call him, and silent he was; but for all that he had a heart of gold. From the cradle, he was destined for the bosom of Mother Church, and at the time when the things of which I speak took place, he had already been an ordained priest for over a year. At home, I had been his servant, and I followed him when he became a padre. Tall he was, and slender, but very strong, and, as I have said, very silent. All day long he used to read in books, and often at night, too, by the light of his lamp. But for all that Felipe had become a priest at the Catedral de Santa Gertrúdis, he was none the less a man, and there came a time when his priesthood was a heavy yoke upon him.

"The Alcalde in the town of Santa Gertrúdis, was Don Bautista Ginovés, who lived in the great house on the hill beyond the Plazuela. He had sons and daughters, and one of these, it was, that also knew something of the Pearl. Teresa was very beautiful; her hair was not black, but brown like blown leaves, and her eyes were brown also, and big like those of the little antelope that was always playing about their courtyard. Very like, these two were, Teresa and the *berenda*, and both stepped lightly, as if scorning the earth. How it came to pass between this Teresa and my Felipe, I know not, but Felipe was a man, for all that he was become a priest, and Teresa was a woman with open

eyes. He may have seen her at mass in the cathedral, or at her window, or during the paseo in the Plaza. God knows, but it came to pass.

"I knew that something lay at Felipe's heart, for he grew always more silent, and left off his reading, and walked often at night up and down the lonely road along the river bank. One evening when I came in to make his fire, he was sitting in the dark before the table, with his face in his hands. I asked if anything troubled him, but he smiled as if it were a droll thought, and said no, nothing troubled him; he was a priest, and had no heart at all, and therefore could not be troubled. From this, I knew what manner of thing it was that had come to him, but I could do nothing. And in the end this thing conquered the soul of Felipe, even as all men are at one time so conquered—as you may know. He still walked out at night, but not alone along the river bank. Late, after all the lights were out, he would put on a long cloak, and I would follow him silently under the shadow of the walls, up the hill to the great house of Don Bautista Ginovés. There he would leave me to watch at the little gate in the side wall of the courtyard, and he would go in through the tall flowers, and then I would hear low voices from under the little fan-palm beyond. Teresa set her maid Juana to watch at the other end of the patio, but sometimes she would steal around to whisper to me by the gate, and we—but that is another matter, and a lighter one. After a long time, Felipe would come back to me, and we would steal home again, down the crooked path in the darkness.

"For some months this went on, until one night Felipe called me to his room, and lit a candle and barred the door. He bade me sit down, and then he took a bag and some papers from a chest and sat down beside me on the rolled-up *colchon* by the wall.

"'Matéo mio,' he said to me, 'there be those who lead two lives, and are neither holy priests nor honest men. I will not be one of those. I would keep my vows if it were in me to hold to them, but as you know, there is one who holds my heart like a plaything in her hand. I can no longer be a holy priest, but an honest man I can be, and will. My father will never receive me into his house, if I give up my vows. I have long debated with myself what I should do, and to-day I have come upon that which has decided me.'

"Then Felipe took a piece of folded sheepskin from the packet, and spread it out on the *colchon* between us, and held the candle so that we might see. It was yellow and faded, and gave a musty smell; and on it were marked with ink divers lines, both straight and curving, as well as certain letters and crosses. It was a map,

Felipe said, that he had found along with other writings among the scrolls and papers that are kept locked up in the great room above the north transept of the church. A certain desert country was shown thereon, which lies far to the north of Santa Gertrúdis. Mountains and dry river beds and barren plains are there pictured out, and near the middle were markings that represented a great well of sweet water, an ancient house, and a bit of grassland, in the bottom of a great valley, where the rains collect. The writing told more of this place, Felipe said. How in the old time, a Spanish Conquistador, who was wearied of the wars and the search for the gold lands and the great sea of the north, rested at this spring and built his house; and how his sons for many years dwelt there in peace and plenty with their herds, safe from hunger and the *viruela* and all but the wrath of God; and how at last they died and were never heard from, and to this day no man knows the manner of their dying. The spring was called Los Aguas de Verdad. This Felipe told me, sitting there on the mattress in his room. Then he said to me:

“Now, Matéo, I go to find this place—the spring of water and the ancient house and the bit of grass-land in the valley. If I fail, there will be for me no returning. If I find it I will prepare my dwelling there, and come back and bear away Teresa to my own house. Then will we live in peace where there shall be none to call shame upon me for deserting my priesthood.”

“It may be that I cried then, for I could not bear that my Felipe should take up this venture alone, and I begged that he permit me to go with him. For a long time he denied me, but at last he wept, too, and said that I might. Then he gave me moneys out of the bag, and directions for the secret buying of horses and the provision of food. He had no mind to tell anyone of his journey; flies do not enter a closed mouth.

“Two days later I led him through the side streets to the horse-market and showed him the animals I had bought; and after he had seen and praised them—they were indeed brave ones, a black Morisco stallion for Felipe, a square-haunched roan for me, and a gray barren mare to bear the pack—then we started home again around the outskirts. We turned in on the old highroad, and between the ruined monastery and the old Indian Campo Santo, we came on an old hag, with a tray of herbs and drug-flowers, sitting in the shadow of an apple tree that had its roots between the stones of the crumbling wall. There she sat and sang *La Perla* all to herself, like a witch. We stopped and listened, and when she had ended she asked if we wished to buy dried palma flowers, or *rais de calamo*, or saffron; but Felipe told her no, that he only stopped to hear her song. Then she looked through him with her little black eyes, and said that he

had better buy, that one who went on a long journey had need of simples to ease his weariness. I was a little in fear then, for there are those given knowledge by devils; but when Felipe asked her how she knew we made a journey, she only laughed, and, for answer, asked if he thought his sweetheart would be true in his absence.

"Felipe looked at her with wide eyes then, but after a moment he said very quietly that he had indeed a sweetheart, but that only God knew if she would be true to him. *A los muertos y idos no hay amigos.* Then she answered him and said: 'You also may know; see this.' And with that the old devil's daughter drew from her bosom a little leathern bag, and from that a box of some dark, strange wood. She opened it and held it forth for us to see, and there, resting in a nest of some golden stuff like floss, lay the Pearl. The sun had set and the light was growing dim, but even then the Pearl seemed to me a live thing, as if buds and flowers of strange colors grew within it.

"'See now,' the old woman said, 'already it lives, and if a man buy it of me, along with certain charms I offer, and do with it as I shall instruct him, it will be to him always a servant. Thereafter, while his *novia* is true, and her love for him liveth, the Pearl will live also; but if his lady be not true to him, the Pearl will die and be as any little white pebble in an ant-hill. It was found in a deep place of the sea by a man who died in the seeking, and has been brought very far over the deserts. Is it not cheap at a thousand *reales*?'

"I knew it to be too strange and beautiful a thing for other than evil to come of it, and I did not look a second time, and tried to draw Felipe away. Yet for all it was growing too dark to see, the Pearl seemed to hold his eyes fixed and set like those of a dead man, and he shook me off, bidding me hold my tongue. I could do nothing but obey, and had to stand there and hear her talk to him a long time in a faint, slow voice, like that of one asleep. Finally she drew him with her into a little ruined, roofless room of the monastery, saying there was need of making a light for the incantations that must be wrought. I saw them go into the hut together like two shadows, and then in a moment a glow, like some light of hell, showed over the half-fallen walls. For a long time there was no sound, and I had great fear for Felipe. Once, when I thought I could bear it no longer, I called out to him, but there was no answer, and the sound of my own voice was so dreadful to me that I could not again raise it. At last, though, the light died away, and Felipe came back to me out of the darkness alone, and hurried me away toward the town.

"Once he stopped where some great red roses were trained over a wall and looked at each flower. At last he chose one and picked it off. Then he drew out the box from his pocket and made a nest in the heart of the rose and put the Pearl therein; he folded the little sweet leaves about it, and put the Pearl and the rose and the casket back into his breast.

"'It is a strange thing,' Felipe said to me, 'and I may not tell you of what the old woman did there in the hut. God or some devil has given her curious knowledge. There is no doubt that the Pearl lives. One thing more she directed—that I place the Pearl in the heart of a red rose, and that Teresa wear it so in her breast for one night of sleep. Then shall she keep the rose and I the Pearl, and it will live for me as long as she—keeps the rose also.'

"For all that it had grown very late, we went to the house of Don Baltasar, and I watched again with Juana at the courtyard gate. The next day we rested, and at evening I made ready the horses and led them to a secret place under the bridge below the mill. Then I went back, and at an appointed hour met Felipe, all booted and cloaked for the journey. We put our spurs on our arms that there might be no noise, and went again, and for the last time, to the tryst in the courtyard. Juana came to me by the gate, and we waited there. Once I could hear a sound of sobbing from the hidden place among the flowers, and then I heard no more, for my Juana wept also, and it may be that I forgot my watch for a time that I might comfort her. Ay de mi! there were tears at that parting. At last Felipe came out from among the flowers, and I kissed Juana and bade her say prayers, and sent her away.

"'I have the Pearl,' said Felipe to me then, and we went straightway out through the dark streets and to our horses.

"It was a long journey, filled with divers mischances and weary days, but also cheered with strange, wonderful sights and a great hope. We slept in the snow of mountain passes, where the clouds shut out the earth below us and the moon hung close, and in the shade of deep forests full of live running things, and on the hot sands of deserts. Twice we met *ladrones*, but Felipe had a stout heart, and they saw neither the heels of our horses nor the inside of our *alforjas*. Many times we lost our way, and were in famine of water, and once we came out upon the sea—a dreadful place, where there was only barren sand, and bitter water, and a burning sky. Doubtless the Lord holds much of this earth before the scourge of his wrath, for there be many places waste and unpeopled and in ruin.

"It was soon after we turned back from the sea that we came upon the country pictured on the parchment, which Felipe carried along with the Pearl in the breast of his coat, and to a great mountain there shown. Here we rested the horses for two days, and made all things ready, and then we set forth—Felipe leading and looking often at the map—and at the Pearl. For three days we rode, going always downward; the first day down the rocks of the mountains, and the second over hills covered with thorny bushes, and the third across a plain that seemed strewn thick with hot ashes. Madre de piedad, that was a day! The hoofs sank deep, and the fine white dust so blinded our eyes that the tears ran always down our cheeks, and our skin seemed bitten with lye. I lost heart then, and begged Felipe to turn back for his life's sake, but he would not turn even his eyes backward.

"'No, Matéo,' he said to me, 'I have given up Santa Gertrúdis. I will only go back to bear away Teresa to my own home that I

have found and made ready for her. But it grieves me that you should suffer evil because of me. It may be that you had better turn back.'

"Yet he never drew rein, for he knew well enough that I would not desert him at this pass. We did not speak again that day, for the dust and the parching of our lips, but we rode for a time after darkness had fallen. At last we feared to lose our direction, and unsaddled and lay down very weary, but sleepless from thirst and the pain of our eyes. Yet at last I must have fallen into sleep, for when Felipe shook me by the shoulder and I opened my eyes, the sky was like the hollow of a great lovely sea-shell, and the stars were gone. Felipe pointed out across the plains. At first I could see only the gray desert, but then all at once I saw, far out before us, a little spot of green like an emerald.

"We made a short task of the saddling and a quick journeying to that place where the green leaves of the trees were bright in the sunlight of the morning. There a great spring of clear water burst out of the rock and flowed between grassy banks, thick with great golden lilies and small white flowers like stars. After a little way the stream sank again into the ground and the desert dried up the herbage. We bathed our faces in the cool water, and saw the horses drink and roll about on the grass, and drink again. Felipe's eyes were shining when we left them and went to the house in the shade of tall trees at the head of the spring.

"It was no shepherd's hut, but a great house built bountifully of stone brought down from the mountains; and there were many wide rooms and a chapel with a white cross at the peak of the roof. Yet there was no sign of man, nor, indeed, of any life at all but that of the painted swallows about the roof, and the big blue butterflies fluttering among the golden lilies in the grass. We went about from room to room. Here and there were bits of strange crumbled furnishings; the beams of the roof were of red cedar, and curiously carved and wrought. Yet the strangest things were the two apples that grew before the door of the *sala*; not like the little wild apples of Sinaloa, but great red, tempting, fruit, like that brought in ships from Spain. And the trunks of these two ancient trees were thicker than the pillars of a cathedral.

"Felipe ran about the house, talking and laughing and singing for the joy of it. 'Is it not a brave house?' he would say over and over again; and then, 'Here will be her room, and here will she love to sit and sew in the afternoons.' At last he grew grave again, saying:

"I fear I am an evil man, Matéo mio, for I thought only of her kiss that should be again on my lips, and not of the sweet saints that have brought this thing to pass. We will give thanks to them in their own dwelling.'

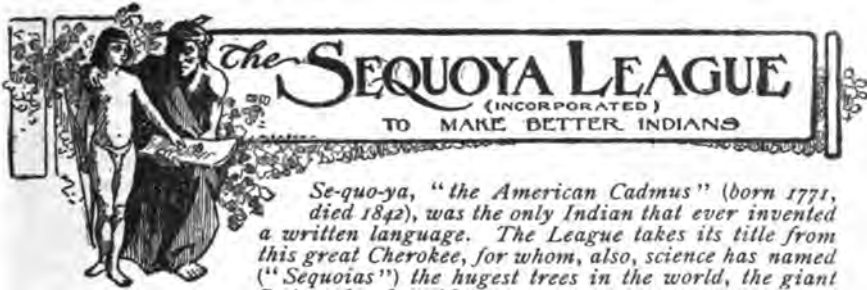
"The door of the chapel was fastened, but it fell before my shoulder like so much scorched paper. The sunlight streamed into the dark of the room, and we saw a dim, holy place. There on the altar was a white Virgin, of carven stone; and behind her a piteous Christ on his cross, with a crown of thorns in wrought silver. And in the peace of their hallowed care, lay the bodies of

those ancient men of Spain that had built this house, and dwelt therein, and died. The flesh had long ago fallen away, and the bones were as dust at the touch, but on the breast of one of them lay a great sword, and about another was rusted armor; and the mien of even their dead limbs was mighty. Yet Felipe had no fear, but strode in between them and flung himself on his knees in the shadow of the Virgin, while I knelt fearfully in the sunlight by the door. He made a prayer to the gracious saints and to Christ, and then came forth again to the door with the little carven casket in his hand. He kissed it with all the glory of heaven in his eyes, and all the joy of earth on his face, and opened it there in the sunlight—full in the sunlight. I shall never again see a man's face like his then. Dead it was, and blind, and dreadful. The Pearl I saw too, and it was like his face, dead and dreadful—smitten blind like the poor stony eye that a beggar turns without pain to the sun. I turned away then, that he might weep if he could, and sat down by the springside. Yet I heard nothing at all from within the chapel, but only the water flowing by my feet, and the drumming wings of the little swallows that fluttered twittering back and forth between their nests in the crannies of the stones. I could not bring myself to go back to Felipe, for the Pearl was dead, and there was nothing that could be said or done—nothing in all the world. But at last I noticed that the swallows were flying in and out of the chapel also, and somehow it seemed to me so strange a thing, that I came back to the door and looked in through the shadows and—saw him.

"He lay there very still on the stones by the feet of the Virgin, and in some manner, I knew even then that he had—had died. Ay, men are sometimes so stricken, although it may be that some deadly crawling thing about the floor had stung him to death as he lay weeping. The Pearl was yet in his hand, and I took that, and his dagger, and cast them together into the water at its source. Then I cleansed the blood from his breast and composed his limbs, so that he lay as decorously as might be, by the side of that dead knight of the great sword. There his body lies to this day, at the feet of the Virgin and before the face of that piteous Christ with the crown of thorns in wrought silver. Though it may be that his soul lies burning in hell, for he sinned—twice he sinned.

"Yet if my Felipe lies damned, there will I lie beside him. For I won back to Santa Gertrúdis for one night, after many bitter days and months of wandering. And I found him that was become the husband of Teresa—found him there with her in the courtyard. And I struck deep, so that I reached his life and he fell on his face among the jasmine. Teresa I struck, too, and it may be that another who was innocent died with her, but I had no pity then, and it must cry unshriven outside the gates. But within, at the heart of the flame, shall Teresa sit, through all the long days of the world.

"Your blanket is thin, *compadre mio*, and the night has set in cold. I had best move the fire, that you may lie where the earth is somewhat warmed—so. And I will walk here on the hilltop for a little where I can watch my sheep, and the stars."



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HE movement to alleviate the suffering of the Southern California Mission Indians progresses promisingly. The Los Angeles Chamber of Commerce strongly backed up the memorial of the Sequoia League; the matter was presented to the President of the United States, the Secretary of the Interior, the Commissioner of Indian Affairs and the members of the Indian Committees of the Senate and the House; hundreds of letters were written; and Senator Flint, who has been, from the outset, deeply interested and effectively active, has been supplied with abundant evidence of public interest.

Mr. Kelsey, Special Agent, who recently investigated conditions, was summoned to Washington; and he and Senator Flint testified before the Congressional Committees. Senator Flint writes that both committees have reported favorably on his bill appropriating \$100,000 for the relief of these Indians. It really looks as though California's half century of shame in this particular regard were about to end with a reasonable atonement.

The following resolutions prepared by the Los Angeles Council of the Sequoia League and endorsed by the Los Angeles Chamber of Commerce are here printed for record:

WHEREAS, It has been for many years notorious that the Mission Indians of Southern California are destitute and suffering, and that these conditions arise not from any fault of these Indians, who are peaceful and industrious,

but because they have been crowded off the fertile lands they once occupied, and have, without compensation, been driven on to worthless desert tracts; and,

WHEREAS, The people of Southern California have many times in the last few years been obliged in common humanity to support these starving wards of the government by private contribution of money, food, clothing, seed, and so on, and for the last two years have contributed some \$4000 for this purpose; and,

WHEREAS, The annual suffering of these inoffensive people by cold and hunger should be permanently relieved, and can be so relieved by the simple expedient of giving them lands, on which, by severe industry and strict economy, they can make a living;

BE IT RESOLVED, That the Los Angeles Chamber of Commerce respectfully but earnestly urge upon the President of the United States, upon the Department of the Interior, and upon the Indian Committees of the Senate and House, that adequate lands be purchased for these people in a suitable location; and that these Indians be given permanent title to such land or lands, without power to alienate them for fifty years.

RESOLVED, furthermore, that in our opinion, the selection of such lands should be made by some person or persons familiar with local conditions; and preferably a commission of citizens of California, serving without pay.

CONTRIBUTIONS TO THE WORK.

Previously acknowledged, \$1589.00.

New contributions—

The Newman Club, Los Angeles, \$10.

\$2 each—Nellie Suydam, Martinez, A. T.; Dr. F. B. Kellogg, Winifred Waite, Dr. Wm. Le Moyne Wills, Miss M. F. Wills, Los Angeles; Hon. C. W. Smith, Pasadena; Mrs. Bertha Carlson, Los Angeles; Rev. Anselm Weber, St. Michaels, Ariz.; Mrs. W. H. Whittingham, 101 81st street, New York; C. L. Partridge, Redlands, Cal.; Mrs. Walter Nordhoff, Redlands, Cal.; Dr. P. S. Dougherty, 2014 Figueroa street, Los Angeles; Jno. J. Bodkin, 937 Hinton avenue, Los Angeles; P. P. O'Brien, 420 W. 22nd; Victor Ponet, Vice-Consulat de Belgique; Arthur H. Fleming, Pasadena; Gardiner M. Lane, Boston, Mass.

INDIAN RELIEF.

Previously acknowledged, \$1602.

New contributions—Homer E. Sargent, Lakota Hotel, Chicago, Ill., \$25; T. A. Riordan, Flagstaff, Ariz., \$5; wealthy unknown, 50 cents; Victor Ponet, Vice-Consulat de Belgique, \$5; Gardiner M. Lane, Boston, Mass., \$8.





When "God made man after His own image," it was a far-seeing job. As we look at ourselves, indeed—barbered, Prince-Alberted, led-by-the-nose of convention—it is become a little hard to trace the family likeness. Our dearest friend in civilization, as we perceive him bent to the grindstone of commerce, seldom suggests to us "how much he takes after his Father." Among all the artists of all time who have tried to depict the Almighty, I believe no catalogue contains the name of one who has painted Him from the model of man with a plug hat and coat-tails. Yet, whether we take it from Genesis or from evolution, the story is no lie; we *are* made "after the image" of whatever power it was that rendered a tremulous footstool habitable for biped parasites—and then supplied the bipeds. Left to ourselves, we tend to the disguises of habit and of dependence; and now and then the Old Man shakes us up to remember and to show—even unto ourselves—that even in civilization the heredity of Human Nature (which is divine nature) is hard to kill. Self-sufficient and forgetful, we drift—till some sudden last reminder of our futility, and of our dependence on something bigger than the tailor, brings us up standing, no longer mannikins but Men. To make us recall and assert the primal strength of our birth-right, now-a-days, it requires a calamity which makes thousands mourn; but it is worth all it costs. Nothing less in all this experimental world suffices to check the Habit of Compliance. With time and numbers, society tends to the line of least resistance, whose ultimate logic is the coral reef. Average civilization no longer calls for courage, for independence, for personality, for manifold development; it distinctly discourages all these. It would destroy them all by atrophy, were it not that the accidents of "special" mortality still outweigh our artificial invention.

The catastrophe of Wednesday, April 18th, 1906, in San Francisco, and the Bay region of California, is worth all it cost. It is worth it to the stricken region, to its neighbors, to the country, to human nature at large. Historically speaking, it is far from being the largest disaster in United States history—that is, in anything except property. On the other hand, it is without

serious question the largest example in American history of the resiliency of the American Spirit—and that merely means that all men have some God in them; that Americans have a particular opportunity to retain this share; and that in the newer, brighter and more growing parts of America the environmental chance to maintain and develop our common birthright is best applied. Three hundred and thirty-three people (figures official to date) died suddenly in San Francisco on that day. As many would have died in the same city, within a few weeks, of “natural causes.” About \$250,000,000 worth of property was destroyed. But many times 300 people will be born in San Francisco within a year; within two years as many million dollars’ worth of buildings will be rebuilt. They will be better buildings—and no worse people. Nature may be heartless; but she is provident.

Every year, in some quarter of the globe, communal disasters surpassing this (so far as loss of human life is concerned) occur, and have occurred ever since history began. In every human catastrophe, human heroism has come up to fill the breach. Allowing for all the better service of the Associated Press, for all our due interest in our own flesh and blood, it is doubtful if the world has ever seen so fine and instant an example of the prevalence of human nature After All. Certainly no other American city, stricken with a comparable disaster—and a great many American cities have had at least as bad—has shown the same instant courage and sensibleness. That is when we do begin to look like gods, even if in Prince Alberts—when, smiling upon the wreck of homes and business, forgetting hunger and hardship and the vision of Sudden Death, men can say to their families and to the world: “Well, *we* are left. Let’s start new—and better.”

* * *

A due forgetfulness is the original Mother Winslow invented by nature for man’s sedative. If we really remembered all our troubles, they would never end. But soothing syrup does not belong in history nor in business. Even newspapers, which affect to educate us, should remember their own files. In property loss, it is quite possible that this San Francisco disaster makes the American record. It is now estimated at \$250,000,000—which is 40 per cent. more than the banner Chicago fire of 1871, and more than three times the financial loss of the Boston fire of 1872.

But in loss of human life it ranks far down the list, even in the United States. If we attribute all the mortality to earthquake, it would still rank lower than fiftieth among historic catastrophes of this one kind. In the incomplete list of great seismic killings, one thousand is a low figure; that of Lisbon, with 55,000 deaths, perhaps the mean.

One theater burned in Chicago on the 13th of December, 1903, and slaughtered twice as many people as perished in San Francisco (exactly 572). One little excursion steamboat in New York, on the 10th of June, 1904, sacrificed more than three times as many lives (exactly 1020). Several single railroad accidents in the United States have equalled the mortality of the San Francisco cataclysm.

The devastation of San Francisco was about 10 per cent. earthquake and 90 per cent. fire. The best estimates now obtainable indicate that the fire was caused by the crossing of electric wires. The blowing down or falling of a single building in any American city might cause an equal damage, if the city were large enough to afford so much food for flames. Sept. 8, 1900, the city of Galveston, Texas was visited by hurricane. In five hours, six thousand lives were lost, out of 37,000 inhabitants. If the same atmospheric disaster had happened to New York, on the same side of the continent, and if the loss of life and property had been in the same proportion, it would have cost 600,000 lives and a billion dollars' worth of property. Thus far in the history of the United States, every great disaster has occurred on the Atlantic Coast; the sorrow of San Francisco is the first crushing calamity of any sort that has ever touched the Far West.

As to earthquakes, North America has never known but one of "the first magnitude" in the terminology of science. This occurred December 16th, 1811, in the Central Mississippi basin—about the geographic center of this continent. It lasted 54 days. No loss of life was recorded, as the region was thinly settled. Had the same convulsion occurred in New York, probably not a soul would have escaped. Square miles of the earth's surface dropped from 30 to 50 feet. This was the only earthquake in North America comparable with the historic ones which have made the *temblor* a name of terror. Every other earthquake within our national boundaries, including the recent one in San Francisco, has been of not higher than the third magnitude. The Charleston, S. C., quake (August 31st, 1886) was of the same third class—and, in proportion to population, was far more disastrous than that in San Francisco. Seven-eighths of the buildings of Charleston were rendered uninhabitable; \$8,000,000 worth of property was destroyed; 96 persons were killed. In loss of life this is more than double the ratio of San Francisco. Charleston had at the time of its earthquake less than one-eighth the present population of San Francisco.

In October, 1871, the switch of a cow's tail caused the Chicago fire. This cost over 200 lives, 17,500 buildings, and \$200,000,000 property loss. At this time Chicago had a population of 300,000, or less than three-quarters that of San Francisco at the present date.

Loss of life and property was therefore much greater in proportion in Chicago.

* * *

When one considers the millions of hours that are wasted on millions of pupils in "teaching them geography" in our schools,—then the lack of any adhesiveness of this geography to the minds of those pupils—one wonders if the school hours might not be shortened in mercy to our infants. The Cockney who strictly charges a friend going to America to look up John Jenkins "somewhere in the United States" is not a greater offender than the average Eastern newspaper. Directly after the catastrophe of April 18th, I had a telegram from Harper's Weekly: "Please wire 3000 words signed personal impressions of the disaster." I answered, "Am not within 500 miles of the disaster. Do you wish my impressions at this distance?" No answer.

California is a rather extensive state. From north to south it is something like the distance from Portland, Maine, to Charleston, S. C. San Francisco is relatively in the middle of the coast line—somewhat north. Los Angeles is pretty well toward the southern end. Southern California heard of the earthquake through its newspapers, and felt a shock which rattled windows. That is all. It is farther in a bee line from the earthquake center than Quincy and Springfield, in Illinois; St. Louis and Kansas City in Missouri; Indianapolis and Terre Haute, in Indiana; Cincinnati, O.; Louisville, Kentucky; Knoxville and Chattanooga, in Tennessee; Birmingham, Alabama; Jackson and Vicksburg, in Mississippi; Little Rock, Arkansas; Burlington, Ia.; and Topeka, Kansas, are from the center of the only first-class earthquake that ever touched an acre within the territorial limits of the United States. Los Angeles is as far from the San Francisco disturbance as Richmond, Va., Atlanta, Ga., Jacksonville, Fla., and Montgomery, Ala., are from the only other American city that ever had a bad earthquake, namely, Charleston. It is not only remote and safe—it knows it is safe. There are not six cities in all the Union where the building activity—even since the San Francisco earthquake and fire—has amounted to as many dollars a day. This same activity in building has continued for years.

Like Nature, history has few compassions. It remembers longer the destruction of one historical painting or one great library than any wiping out of human lives. One of the lasting sorrows of the San Francisco Fire is the destruction of every important library (with one exception) in the metropolis of the Pacific Coast. The Bancroft Library, recently purchased by the University of California for \$150,000, escaped the fire. It is a matchless collection of documents of California and Spanish America. The San Francisco Pub-

lic Library of 130,000 volumes; the Mechanics' and the Mercantile, of about 90,000 volumes each; the Sutro Library, which, if second was only second in the world to the Bancroft Library on Spanish Americana; the Bohemian Club Library of autograph works from thousands of the world's best known authors—all these are wiped in a day from the face of the earth. The Spanish archives of California, which were stored in the Surveyor General's office, are obliterated—and with them the only copy known to the world of Anza's Diary of the most important expedition in the history of California. The Hopkins Art Gallery, with its priceless treasures, is destroyed; the Irving M. Scott gallery—the most important and the most costly collection of paintings west of Chicago—is supposed to have been lost. Keith, the greatest living landscape painter, had in his studio on Pine street, about a thousand canvasses. Many of these were removed to a place of supposed safety, but were pursued by the fire and swallowed up. So far as known, only ten were saved by the heroic personal efforts of the Rev. Joseph Worcester. These are of the things of which history will take account long after 350 lives and \$250,000,000 worth of property shall have been forgotten.

* * *

But San Francisco sits up and smiles. Poor and proud cook on the street-car tracks, since fires and lights in houses are forbidden under martial law. The streets are being cleared of the wreck. Before these lines can get to type, the foundations of a new San Francisco will be laid. The men and the women who made the metropolis have lost everything except the Only thing—themselves. They are beginning anew—and not only anew, but better for the loss. Keith came to town the morning of the earthquake, saw his studio and that whole region in flames; went back to Berkeley, bought paints and brushes, and began to paint a new collection. The same spirit is through all the class that has made San Francisco what it was and what it shall be.

Fancy an Eastern university losing \$5,000,000 by a natural convulsion before breakfast; and by lunch-time arranging its next year on a larger scale than ever! That is what Stanford has done. Thanks to the carelessness into which civilization easily falls, the magnificent architectural plans of the university had latterly been marred by cheap construction. The earthquake rebuked this mistake by a larger penalty than the total cash value of any university in America, excepting possibly three. But Stanford acknowledged the mistake, found the remedy, and went to work.

The State University at Berkeley was fortunate enough to escape with very little damage.

The first official seal used by the City of San Francisco had for its chief feature the Phoenix. The general design has since been

changed; but the phoenix is still dominant. The first seal was adopted November 4th, 1852. It was prophetic enough to be of virtue unto this day; but it was also retrospective. San Francisco had already suffered six great fires, any one of which was in property loss as great in proportion as that of 1906. The story of the conflagrations in San Francisco is curious from many points of view.

The "First Great Fire" was December 24th, 1849. Loss \$1,000,000—in a town about a year old! The "Second Great Fire" was May 4th, 1850; loss about \$4,000,000. The "Third Great Fire" was June 14th, 1850; loss about \$4,000,000; the "Fourth Great Fire" was September 17th, 1850; loss half a million dollars. This was doing pretty well for one year; but, worse than all of them put together was the "Fifth Great Fire"—that of May 4th, 1851. The loss was about \$12,000,000. As if this were not enough, there came on the 22nd of June, 1851, the "Sixth Great Fire," in which the destruction of property was nearly \$3,000,000. No other city in the world ever suffered a comparable loss by conflagration. But for more than half a century San Francisco—though "a city of wood, built up-hill and touching"—never had another serious fire. In 1906 a part of the Latin Quarter was saved by the Italians, who broke open their wine cellars and drenched their houses with claret. In the fire of May 4th, 1851, 80,000 gallons of vinegar were used in saving buildings. In 1851, San Franciscans began official shooting of those hyenas that looted in time of such a public catastrophe; in 1906, under General Funston, the same proper remedy was applied to similar scoundrels.

* * *

Earthquakes happen where God wills. The historic great ones have befallen in Sicily, Syria, Silicia, Italy, Portugal, Chile, Jamaica, Japan, Algiers, China, Peru, Egypt, Persia, Guatemala, Bolivia, The Philippines, The Mediterranean, Turkey, Java, India, Asia Minor, Greece. In the United States, one serious one as to destruction of property and loss of life has happened on the Atlantic and one on the Pacific sea-board. The only "fierce" one was about midway between the two.

California has had in historic times several earthquakes. The first of record was experienced by Portolá's party, July 28th, 1769, on the Santa Ana River, which was named for this reason Rio de Jesus de los Temblores. This was the first overland exploring expedition of California; and there were four violent shocks which alarmed the Indians. In 1808, between June 21st and July 17th, there were eighteen violent shocks felt in San Francisco. In 1812 a shock general to the coast killed thirty-eight Indians in San Juan Capistrano, where an eighty-foot tower fell in on the Mission in which they were assembled for Mass. In 1868 the so-called "great earthquake" in San Francisco occurred. Five persons were killed

by bricks falling on them as they walked on the streets. About a dozen cheap brick structures were wrecked. In 1872 a really severe earthquake in the sparsely inhabited county of Inyo killed thirty or forty Indians.

* * *

Though the San Francisco catastrophe has added seriously to the mortality record, it still remains true that in all the history of California—covering more than 150 years—the total loss of life by earthquake has been less than the loss of life in any average year in the great cities of the East by sunstroke. While the statistics are harder to secure, it is probably less than the annual deaths from cold in the Eastern states in the winter. It is less for a century and a half than the mortality of several single railroad accidents in the East. It is no larger than the mortality from certain cyclonic visitations of the East. The West is filled with Eastern graduates. All of us dislike death. All of us doubly dislike it in a strange form. We are used to consumption, which kills, in Massachusetts alone, fifty times as many persons a year as were ever killed by earthquakes in America. But we learn by experience; and most of us are not smitten with earthquake and most of us are not consumptive.

* * *

“Our remedies oft in ourselves do lie,
Which we ascribe to heaven.”

Likewise in most of the disasters which we call acts of Providence, at least half the damage is our own fault. Smart as man is, he is the slowest of the animals to learn adaptation to environment. For 50 years and more, California has been settling up with the Smartest People in the World; but not 10 per cent. of them have as yet learned the first obvious lesson of their chosen home. They come to it because it is different and better; but they treat it just as they did the lands from which they are thankful to have escaped. An immigration of Apache Indians would have observed that the original inhabitants, for some reason, builded low, thick houses—and without bothering much as to the reason, would have built likewise. But not so the Conquering Race. *We* came from Boston, and New York, and Chicago; therefore we build here the same kind of houses that are in vogue Back Yonder. The architectural device for frozen climes and humid skies, for a time and for places in which real estate was counted by the square inch, because you could not get away; where artificial heat and its conservation by huddling are necessary for half the year to keep tenants from perishing; where walls, roofs, foundations and every other member of a building have taken a special form for local necessities—we come out here and build roofs to shed ice where there is no ice; and erect skyscrapers where there is plenty of room for ten times as many people as we have, and otherwise follow the imitative rather than the reasoning capacities of our minds.

For more than fifty years a large American population has been perfectly aware that California is subject to occasional 'quakes; yet in all that time not one building in 50,000 has been considered with any rational reference to this natural condition. After a larger number of great conflagrations than any other city in the world ever

had in proportion to the population and size, San Francisco in 1906 was still built of nine-tenths wood—and so is Los Angeles today.

Just because skyscrapers "look well" and flatter our childish fondness for bulk, we go on building them in the last place in the world where they have any reason for being—even while we boast of the highest kind of modern transit (by which Los Angeles, for instance, could be forty miles square and still "nearer together" than the little island of New York was with its bob-tailed horse-cars of ten years ago. It is true that steel and reinforced concrete have made high buildings far safer than blocks of half their weight used to be; but God have mercy when an earthquake like that of New Madrid shall strike even the best twelve-story steel building that was ever built! There is no lien on safety against earthquake on any square mile of the globe. The next disastrous quake is as likely to be in Boston or Chicago as in California. And without the earthquake, the commoner disasters make the skyscraper a menace. In a great fire, it becomes a huge chimney. A conflagration catching in a day-light hour such a human beehive as some in Chicago, in which there are 10,000 people, would write a record which we might remember—until next day.

Whatever people may do elsewhere, it is time for Californians to quit the Tower of Babel business. Its inventors were fools 5000 years ago; its followers are no wiser yet, despite their infinite ingenuity in bettering their bricks. There is room in California to live somewhere near the earth that God spread out for our foundation and footing. The selfishness of "material men," the greed of landlords, the thoughtlessness of the unthinking, should not be permitted to jeopardize communities. Los Angeles is building *faster* than any other city in the world. That is some distinction. It would be a better distinction, if it would build *better* than any other city in the world. It has the money to do it; it has the brains to do it—if it will use them.

* * *

When Chicago burned with a loss of 200 million dollars and 200 lives—there was a splendid response from the civilized world. The contributions amounted to \$7,000,000—and San Francisco, by the way, gave its large share. Already more than \$8,000,000 has been raised for San Francisco in its affliction. Amid all our money-making obsession, amid all the artificial excitation of amusement which goes with a commercial age, a shock like this brings us all back to human nature. It was beautiful to read of the swift response of Boston and New York and the whole East to the unspoken need of the city by the Golden Gate. It was beautiful to see in the nearest large population, which is Los Angeles, the dropping of business to organize material relief—to see the busiest men neglecting their banks and stores, and working like navvies to put money, food, and clothing into San Francisco. But finest of all it was to see the San Franciscans—the distinctions of money and of class, all forgotten, the artifices of civilization laid aside, and a great community on a common footing, cooking by the curbstone, smiling over the ashes of their business and their homes, and planning with unshaken heart for a better tomorrow. Between two days, the Heroic Age came back to California.

CHAS. F. LUMMIS.



Jennette Lee's *Uncle William* (The Century Co., \$1.25) thoroughly deserves a place among the "best sellers," nor shall I be surprised to see it reach that distinction, as knowledge of its quality percolates through the reading mass. Light and amusing enough to tempt the seeker for mere entertainment, it expresses withal a sane and sound philosophy of life. It reminds me of a peculiarly delectable dish prepared for this very morning's breakfast by the lady who has sprung delightful culinary surprises on me at intervals for the last twenty years—a concoction of eggs and whipped cream, deftly blended, cooked to the turn, delicate, flavorsome, yet heartily nutritious. Or, if the kitchen comparison seem too gross, I will match *Uncle William* with that genuine classic, Gerald Stanley Lee's *Lost Art of Reading* (these two Lees, by the way, are husband and wife), and say that, though expressed through different mediums, the inspiration of these two clearly springs from a common fountain of spiritual insight. It would be difficult to give to either book or either author higher praise than that.

Which reminds me to speak of the little magazine, *Mount Tom*—little in size alone, immense in content—which Mr. Lee is publishing at Northampton, Mass., "devoted to rest and worship, and to a little look-off on the world." No other magazine—not even this one, in whose preparation I have some voice—brings to me the same certain relish on every page. Here is a sample paragraph, taken almost haphazard, from a six-months-old number which chances to be at my hand:

No one would deny that the idea of immortality is a well-meaning idea and pleasantly inclined and intended to be appreciative of a God, but it does seem to me that it is one of the most absent-minded ways of appreciating Him that could be conceived. I am infinite at 88 High Street. I have all the immortality I can use, without going through my own front gate. I have but to look out of a window. There is no denying that Mount Tom is convenient, and as a kind of soul-stepping-stone, or horse-block to the infinite, the immeasurable and immortal, a mountain may be an advantage, perhaps, and make some difference; but I must confess that it seems to me that in all times and in all places a man's immortality is absolutely in his own hands. His immortality consists in his being in an immortally related state of mind. His immortality is his sense of having infinite relations with all the time there is, and his infinity consists in his having infinite relations with all the space there is. Wherever, as a matter of form, a man may say he is living or staying, the universe is his real address.

I presume that a sample copy of *Mount Tom* may be had for the asking; but (doing as I would like to be done by) I should recommend that ten cents be enclosed with the request—and hereby bind myself to refund cheerfully his dime to any man who follows this advice and then concludes that he hasn't had a dime's worth.

In its own field, there is nothing else which will at all stand comparison with Frederick Haynes Newell's *Irrigation in the United States*. Mr. Newell

is Chief of the Hydrographic Division of the U. S. Geological Survey, Chief Engineer of the Reclamation Service, and had been engaged for a dozen years before the book was written "in conducting investigations of the extent to which the arid regions can be reclaimed by irrigation, ascertaining the cost and capacity of reservoirs, measuring the flow of rivers useful for power, irrigation and other industrial purposes, and mapping the artesian or underground waters." The book into which he has condensed the results of his observation and experience is comprehensive, non-technical, wholly reliable—and good reading, to boot. The revised edition just published is profusely (and most usefully) illustrated. T. Y. Crowell & Co., New York, \$2, net.

LOOKING
INTO
THE INFINITE

The Romance of the Milky Way, published a little more than a year after Lafcadio Hearn's death, contains all of his writings not before collected which will ever be published, except certain personal correspondence. No one of the legions who have fallen under the spell of Hearn's rare genius will choose to leave this volume unread, if only because it contains his final word concerning the profoundest speculations which engage the human mind—an essay called out by Herbert Spencer's "Ultimate Questions." Yet to some, at least, of his most ardent admirers, this essay will bring grievous disappointment. For its dominant note is that of horror; its most vivid picture is of shuddering vision strained vainly into unilluminated abysses of infinite Space, infinite Time, infinite Possibility. Not thus have the great seers spoken; not thus has Mr. Hearn himself spoken in his moments of illumination. Listen to this, from his "Revery":

The light of the mother's smile will survive our sun;—the thrill of her kiss will last beyond the thrilling of stars;—the sweetness of her lullaby will endure in the cradle-songs of worlds yet unevolved;—the tenderness of her faith will quicken the fervour of prayers to be made to the hosts of another heaven,—to the gods of a time beyond Time. And the nectar of her breasts can never fail; that snowy stream will still flow on, to nourish the life of some humanity more perfect than our own, when the Milky Way that spans our night shall have vanished forever out of Space.

No trace of shuddering horror there; nor in such a sentence as this, from "A Drop of Dew":

Life infinite only there is; and all that appears to be is but the thrilling of it,—sun, moon, and stars,—earth, sky, and sea,—and Mind and Man, and Space and Time.

These passages, I believe, show truly the direction of the main current of Mr. Hearn's speculative thought; while the blind groping of the "Ultimate Questions" essay represents only the back-swirl of a momentary eddy. Houghton, Mifflin & Co., Boston; Stoll & Thayer Co., Los Angeles. \$1.25, net.

TRUTH
TOLD
AS ROMANCE

What Owen Wister did in *The Virginian* for one phase of that frontier life which was so vivid and tingling a reality but a little while ago, yet has so soon slipped away, all but wholly into the realm of memory and tradition, Emerson Hough has matched in another field with his *Heart's Desire*. It is the tale of a little mining town in New Mexico, two hundred miles from Las Vegas by freighting wagon or in the saddle, and of the entry upon its peaceful solitude of such disturbing elements as the Law—and Woman—and Eastern Capital—and the Railroad. And more—it is a true and comprehending study of that breed of men who chose and dearly loved that remote and self-sufficing life—"the West-bound, the dream-bound, the malcontents." A most profitable excursion it will prove for any with discriminating vision to join "Curly" and the teller of this tale as they ride along

the winding mountain trail, with the dark sides of the Patos Mountains edging around to the back of them and the scarred flanks of big Carrizo coming farther and farther forward along their left cheeks. For this is what he will presently see:

It was a spot lovely, lovable. Nothing in all the West is more fit to linger in a man's memory than the imperious sun rising above the valley of Heart's Desire; nothing unless it were the royal purple of the sunset, trailed like a robe across the shoulders of the grave, unsmiling hills, which guarded it round about. In Heart's Desire it was so calm, so complete, so past and beyond all fret and worry and caring. Perhaps the man who named it did so in grim jest, as was the manner of the early bitter ones who swept across the Western lands. Perhaps again he named it at sunset, and did so reverently. God knows he named it right.

And the next day he will eat Christmas dinner with Dan Anderson, and McKinley, and the Littlest Girl from Kansas—and thereafter will follow their fortunes to the end, rejoicing. The Macmillan Co., New York. \$1.50.

Whoever has made the acquaintance of Red Saunders in his maturity, through the good graces of Henry Wallace Phillips, will need no further word concerning *Plain Mary Smith* than that it recounts certain adventures of the same crimson-locked giant while he was still but a "leggy kid." To anyone who has not had that pleasure and who likes big, hearty, outdoors stories, with plenty of big, hearty, outdoors laughter in them, I can do no better service than to recommend him to make the acquaintance promptly in either book. Having read one, he will certainly want the other. Just by way of an appetizer, I quote a few sentences from the lad's account of a bit of a ruction with a tavern rough:

THE BOYHOOD
OF A
JOLLY FELLOW

Yet the principal cause for my staying was my anxiety to leave. That big, bellowing Irishman, dragging a half-dozen men to get at me, blood streaming down his face, and his expression far from agreeable, put a crimp in my soul, and don't you forget it. But I understood that this was my first man's-size proposition, and if I didn't take my licking like a man I could never properly respect myself afterward. So whilst my legs were pleading, "Come, Willie, let's trot and see mother—it will be pleasanter," I raked my system for sand and stood pat.

Personally, I have earnest hopes that Mr. Phillips may be able to persuade Mr. Saunders to extend his autobiographical notes to considerably greater length. The Century Co., New York, \$1.50.

Studies in American Trade Unionism is both interesting as an example of university research-work and valuable as a presentation of collated and connected facts bearing upon one of the most important features of our economic life, about which nearly everybody has strong opinions, but about which hardly anybody knows much of anything. It consists of eleven essays prepared by members of the Economic Seminary of Johns Hopkins University as a result of the detailed investigation and study by each writer of some one carefully selected aspect of the trade-union question. The topics selected include the organization of labor in a representative industry, the apprentice system, labor federations, the finances of trade unions, the minimum wage, beneficiary systems, collective bargaining, and employers' associations. The investigations were carried on under the direction of, and the resultant volume is edited by Drs. Jacob H. Hollander and George E. Barnett, Professor and Associate respectively, in Political Economy in the Johns Hopkins University. It is a rich storehouse of information, but is properly offered as marking only a stage, not a goal, in the inquiry. The investigations will be pressed forward, and later on we may look for comprehensive generalizations. Henry Holt & Co., New York, \$2.75, net.

AN EXAMINATION
INTO
THE DETAILS

Bob and the Guides, by Mary Raymond Shipman Andrews, is an altogether delightful series of outdoor tales, most of them dealing with life in a vacation-camp in Canada. The best are those told by Bob himself, in a vivacious flow of language "all wool and a yard wide"—Bob being in his early 'teens, but confident that he has "as good a chance of being a centurion, in time, as any American citizen." The title of the book is too modest by far, giving slight indication of the many entertaining characters who come upon the stage—big brother Walter, for instance, who talks the funniest French you ever heard, in which anything with an "ong" goes; and the two Grandfathers, the Judge and the Bishop; and Cousin Reggie, who scorned Bob once, but won't do it again; and Bill the Trapper, who, at the mature age of eight, trapped his first big game in Central Park; and many another. The stories are wholesome and genuinely humorous. Charles Scribner's Sons, New York, \$1.50.

Louis F. Post makes an important contribution to the discussion of a much vexed question in his *Ethical Principles of Marriage and Divorce*. His conclusions may be briefly stated as follows: That real marriage exists only when one man and one woman are united by reciprocal love abiding in its nature; that this love, though abiding in its nature, may prove to be ephemeral in fact; that if the love ceases, the real marriage no longer exists; that when the real marriage no longer exists, it is desirable, both for the individuals concerned and for society, that the legal tie shall be dissolved; and that society should not interfere with the remarriage of divorced persons. These positions he maintains with forcible and logical argument, insisting the while on the uttermost sanctity of genuine marriage. Public Publishing Co., Chicago, \$1, net.

Those who liked Arthur Henry's *Island Cabin* and who liked still better his *House in the Woods* will find his *Lodgings in Town* still more to their taste. Indeed, I do not see how any one who cares for "the real thing" can fail to appreciate this naive account of the experiences of the young man who, "abandoning forever the wild pursuit of wealth and respectability, as the prodigal left his husks," comes to New York, "with nothing but my ticket, a night-dress, eight dollars, a pipe and a poem." It is, in some respects, the truest and the largest study of life in New York of which I know. The frontispiece is from a painting by Everett Shinn, and there are a number of illustrations from photographs. A. S. Barnes & Co., New York, \$1.50.

"There were no books in Eden, and there will be none in heaven; but between times—and it is of these I speak—it is otherwise," says Augustine Birrell in one of the essays published under the title, *In the Name of the Bodleian*. As to which some literary epicures, smacking their lips over the urbanity, the polished wit and the wide-roaming scholarship of this London barrister, will murmur in reply something to the effect that a Jug of Wine and Thou were Paradise enow. Mr. Birrell may have his peers among living essayists—he has no superiors. Charles Scribner's Sons, New York. \$1, net.

Football Grandma, being "an auto-baby-ography, as told by Tony," begins "when I was one day old" and ends with "my first trousers," at the ripe age of three-and-a-half. The experiences set forth between these dates will interest other youngsters and "football grandmas," and, as suggested by Dr. Thomas Wentworth Higginson, "may justly attract the attention of wise philosophers and even of college presidents." Illustrations are from drawings by Tony himself, while the youthful grandmother who edits the account is Carolyn S. Channing Cabot. Small, Maynard & Co., Boston, \$1, net.

Charles Battell Loomis is at his very funniest in *Minerva's Manoeuvres*—and how funny that is no one can tell who has not read that particular book. Minerva is a cook-lady—"she isn't colored, she was born dat-a-way"—who has been inveigled from New York to preside over a country summer-home, and the things she does and fails to do in her unaccustomed environment keep a gale of hilarity blowing pretty steadily. A. S. Barnes & Co., New York. \$1.50.

The sub-title of *Hawaiian Yesterdays*—"Chapters from a Boy's Life in the Islands in the Early Days"—is fully and sufficiently descriptive. The author is Henry M. Lyman, M. D., born on the islands in 1835, his parents being missionaries from New England. The narrative is simple, direct and entertaining. The volume is well illustrated, from photographs, paintings and old woodcuts, and there are two maps. A. C. McClurg & Co., Chicago.

"A .301-calibre Mauser rifle, brown, stocky, sullen, in the lantern light; and to a bit of excelsior packing about the breech-bolt of the gun, clung—a lady's veil." This is the first sentence of Charles Tenney Jackson's *Loser's Luck*; and from it even a moderately discriminating eye may discern the character of what is to follow—a rattling romance of love and fighting. Henry Holt & Co., New York; C. C. Parker, Los Angeles. \$1.50.

Alice Brown's *Paradise* is a charming story of New England rural life. A girl who has escaped from the guardianship of a traveling conjurer is the heroine, and his efforts to recover her supply part of the plot, but by no means all. Some quaintly humorous characters appear, and some that are merely human, but all are interesting. Houghton, Mifflin & Co., Boston; Stoll & Thayer Co., Los Angeles, \$1.50.

Frances Hodgson Burnett has never done a better piece of work than *The Dawn of a To-morrow*, nor do I think she ever will. I judge it not mainly for its literary quality, excellent as that is, nor for its compelling interest as a story, but for its ethical value. It contains the real secret of salvation—the only secret of the only true salvation there is. Charles Scribner's Sons, New York, \$1.00.

The seventeen short stories published under the title, *The Last Spike*, give sufficient evidence that Cy Warman is still able to hold the lists against all comers in his own field of railroad romance. This volume is as good as the rest of the half dozen that stand to his credit—and that is praise enough for anyone. Charles Scribner's Sons, New York, \$1.25.

Henryk Sienkiewicz's latest historical novel has been translated from the Polish by Jeremiah Curtin, and is published under the title, *On the Field of Glory*. It is a brilliant romance of love and war at the time of the Turkish invasion of 1682-3. Little, Brown & Co., Boston, \$1.50.

The latest volume in the American Commonwealth's series is *Louisiana*, by Albert Phelps. It is a compact, thoughtful and important historical study. Houghton, Mifflin & Co., Boston; Stoll & Thayer Co., Los Angeles, \$1.10, net.

The Larky Furnace, by Hildegard Brooks, is a nonsense book pure and simple—though the nonsense is rather complicated, after all. Peter Newell's illustrations are as illuminating as usual. Henry Holt & Co., New York, \$1.25.

Topical Discussion of American History, by William C. Doub, is an exceedingly compact and useful working manual for teachers of history and civics in the elementary schools. Whitaker & Ray Co., San Francisco, \$1.25.

CHARLES AMADON MOODY.

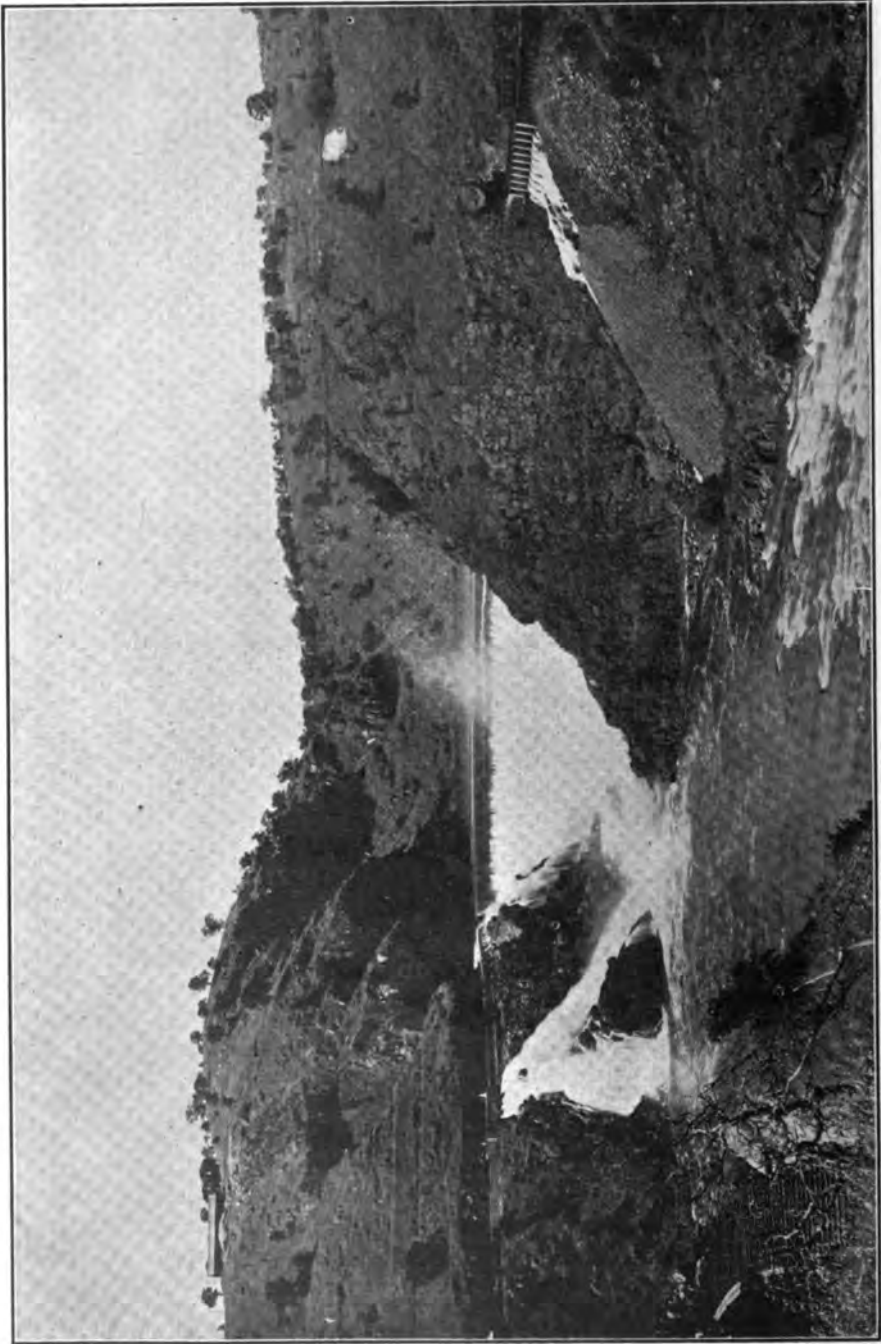


Photo by Hanson

The Diverting Dam on the Tuolumne, 30 miles above Modesto

SUNNY STANISLAUS

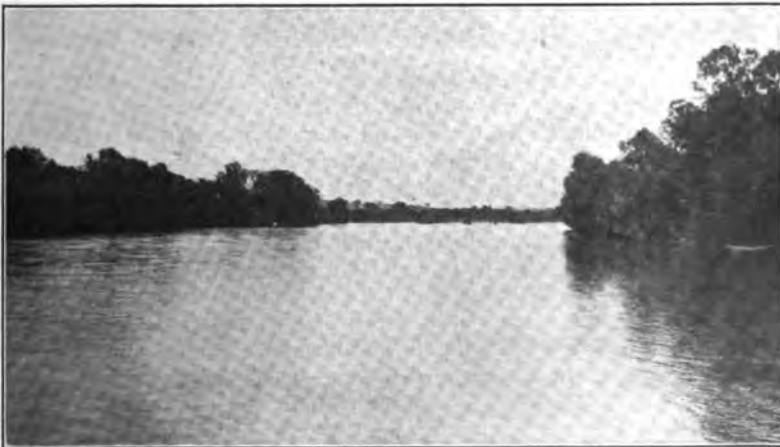
By T. C. HOCKING.



PERHAPS no other purely agricultural county in California has made the advance in settlement and development during the last three or four years that has been the lot of Stanislaus, in the northern end of the San Joaquin valley. It is apparent, too, that her progress is in its infancy, and that, the success of the great irrigation system embracing all the central portion of the county now established and the variety and prolificness of her products under irrigation demonstrated, she will make greater strides from now on, and in the not distant future rank with the most populous and wealthiest of the counties of the interior. She is comparatively wealthy now, her assessment valuation reaching \$17,000,000, though her population does not exceed 15,000.

Stanislaus stretches from the foothills of the Sierra Nevada mountains across forty miles of level and fertile plain to the summit of the Coast range; and, north and south, from the Stanislaus river to the Merced. The great San Joaquin river flows diagonally through her broad acres, leaving a margin of plain from six to ten miles wide between its banks and the base of the Coast Range hills. Through her center, from east to west and ultimate junction with the San Joaquin, courses the Tuolumne, a swift-flowing stream rising in the high Sierras, and of such volume as to be navigable to river steamers as late as July. Its watershed is one of the largest in the State, and its supply of water continuous, though low in the fall.

For many years Stanislaus was the banner wheat county of California, and to-day its production of this cereal, under favorable conditions, approximates \$2,500,000 in value, independent of the not inconsiderable yield of hay, and of barley and oats. The normal rainfall is but ten inches, and to this fact is to be attributed her backwardness heretofore in the production of crops at once valuable, of a more permanent nature and better calculated to the maintenance of a large population. Grain-farming means large ranches operated with the minimum of labor for minimum periods, and hence comparatively scant population. It developed, too, years ago, that the one-crop system, robbing the land continuously of certain elements and replacing none,



Tuolumne River, Source of Supply of the Modesto-Turlock Irrigation District.
Photo taken July 1, 1904, about 30 miles below the intake.

was rapidly tending to the deterioration of the land for that crop, with corresponding decrease of profit. More or less hazardous under original conditions, because of the uncertainties of weather conditions, markets and other factors, this new hazard gave impetus to a proposition to introduce irrigation, and thereby render diversified crops and intensive farming possible and profitable.

From these considerations the Modesto-Turlock irrigation system was born. It comprises a diverting dam in the Tuolumne river at a point 30 miles east of Modesto, and 300 miles of main and lateral canals, the latter covering the land at two-mile intervals. There are 276,000 acres of land in the district, 176,000 on the south, or Turlock, side of the river, and the remainder on the north, or Modesto, side. A main canal leaves the river on either side of the dam, and each is carried twenty-two miles to the district line. One of these



A Farm House in Sunny Stanislaus.

canals is 74 feet wide on the bottom, and is designed to carry eventually the full appropriation, for the Turlock side, of 1300 cubic second-feet of water; the other is 60 feet wide on the bottom, and will carry the full appropriation, for the Modesto side, of 650 cubic second-feet of water. At the district line, canals 40 feet on the floor, distribute the water to the numerous laterals, which range from 30 down to 14 feet on the floor, the average floor-width 20 feet or more. The diverting dam is of concrete masonry, and was completed twelve years ago last fall at a cost of \$543,164.16. It is 127 feet in height, 301 feet in length, 83 feet in breadth at the bottom, and 11 feet in breadth at the top. In its construction were employed 39,652 cubic yards of masonry and 29,111 barrels of cement. Frequently water pours over the crest to the depth of from four to ten feet for days and weeks at a time.

This splendid irrigation system belongs to the land, and is inalienable. The water-right is the first on the river, save for a modest appropriation held by a mining company. The system was constructed under State legislation. It

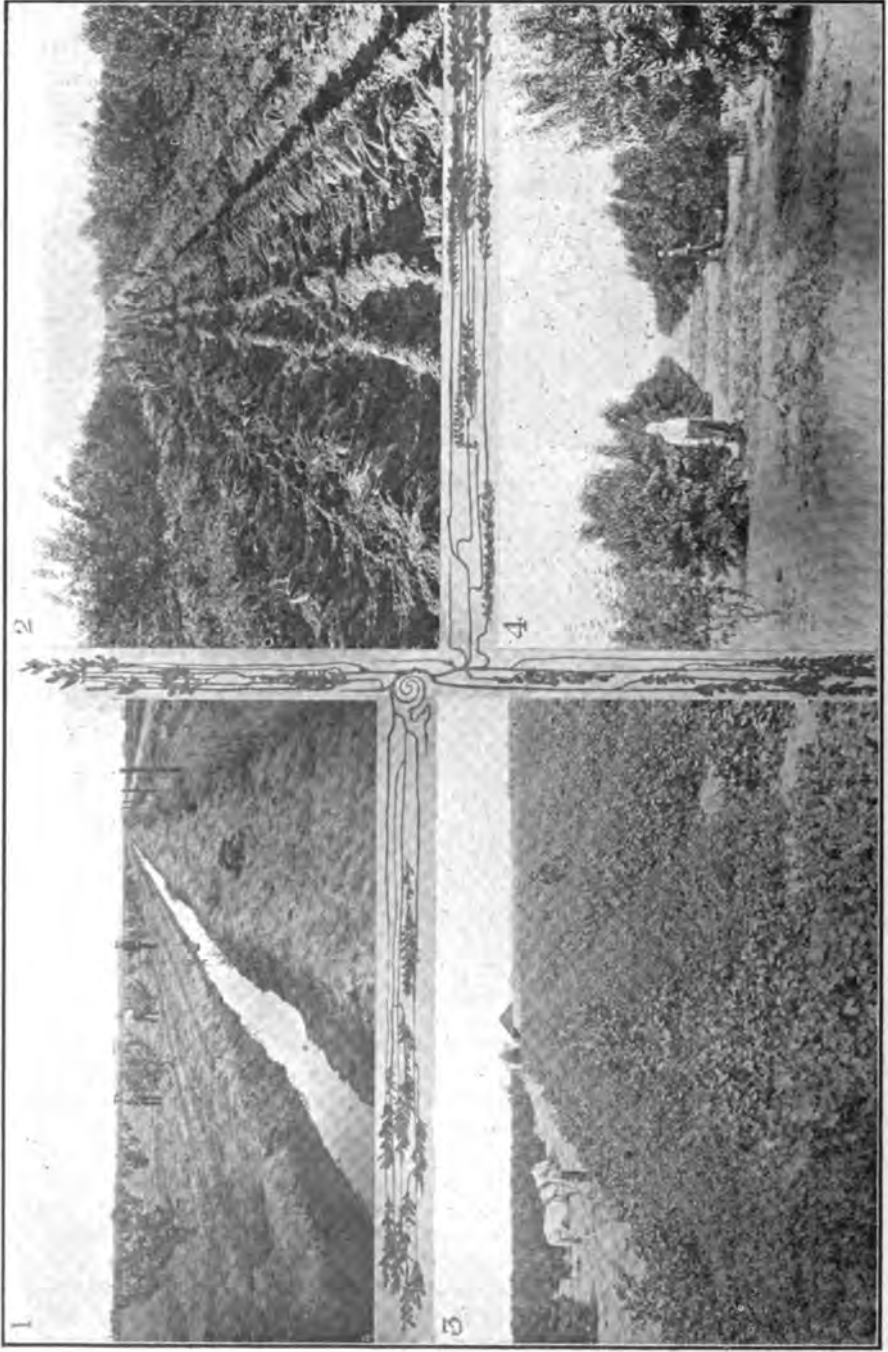


A Stanislaus County Dairy Herd Pastured on Alfalfa.

cost approximately \$2,500,000, the money raised by the sale of bonds that are a lien on all the land, representing an indebtedness of about \$9.00 an acre. The bonds bear 5 per cent interest, and run for forty years, only the interest payable for the first twenty years, the principal then payable in equal annual installments. No part of the principal will be due for seventeen years to come, the original issues of bonds having been refunded three years ago. The interest and maintenance- and operation-charges represent an annual tax of from 50 cents to \$1.00 an acre. This is the total cost to the consumer. He has no water-right to buy, is assured his proportion of the water, and the water cannot be alienated from the land. While the Modesto-Turlock district is virtually one district, divided only by the river—which at Modesto constitutes the southern boundary of the town—it is organized as two districts, each managed and operated by the people themselves through boards of five directors elected from as many divisions. All maintenance-, operation- and improvement-appropriations are and must be submitted to the people for authorization.

The Turlock side witnessed the first irrigation under these systems five years ago. It was not until the following year, however, that much was accomplished in this direction; and on the Modesto side the works were completed only two years ago. In the meantime the population of Modesto has grown from 2000 to nearly 3500; of Turlock from 100 to 500, and rapidly increasing; of Ceres from 50 to over 200. The thriving new town of Elmdale is putting up an \$8000 schoolhouse, and in every direction are growing colonies of from eight and ten to fifty, one hundred and as high as three hundred families. One colony near Turlock, comprised of Scandinavians from the Middle West, a very thrifty and desirable class of settlers, numbers over 1200 people; and there are a comparatively large number more about Turlock outside of this colony.

In and about Modesto, Ceres, Elmdale, Hughson, Claus and Salida, the newcomers are very largely from Southern California, people familiar with irrigation and its value, and rapidly developing profitable dairies, vineyards and orchards. Other parts of California have contributed quotas; many have come from Washington and Oregon, Colorado, Idaho and the Dakotas. The Eastern States are all represented, and a colony of Iowans is the latest



1. One-year-old Orchard. Near Turlock. 2. Same Orchard, Two Years Old. Sweet Potatoes Between Rows. 3. Same Orchard, in Third Year, with Two-year-old Vineyard. 4. Same Orchard, in Third Year, with Watermelons Between Rows.

development. There is a colony of Dunkards, and an extensive movement of Quakers is pending. Wheat-fields of hundreds of thousands of acres, once unbroken, are now dotted with homes.

The growth and development under the irrigation era, hardly yet out of its swaddling clothes, and the character of the settlement, are strikingly illustrated by a few figures relating to the postal service and the public schools. Modesto's first rural free-delivery service, each of which calls for no less than one hundred heads of families who will install boxes and take mail, was inaugurated only a little more than two years ago. Now there are four such routes radiating from the Modesto postoffice; and a month ago Modesto itself came into the limited list of California towns boasting free city-delivery of mail. Ceres, four miles distant, has its postoffice and one rural free-delivery, another pending; and a rural route is maintained in connection with the

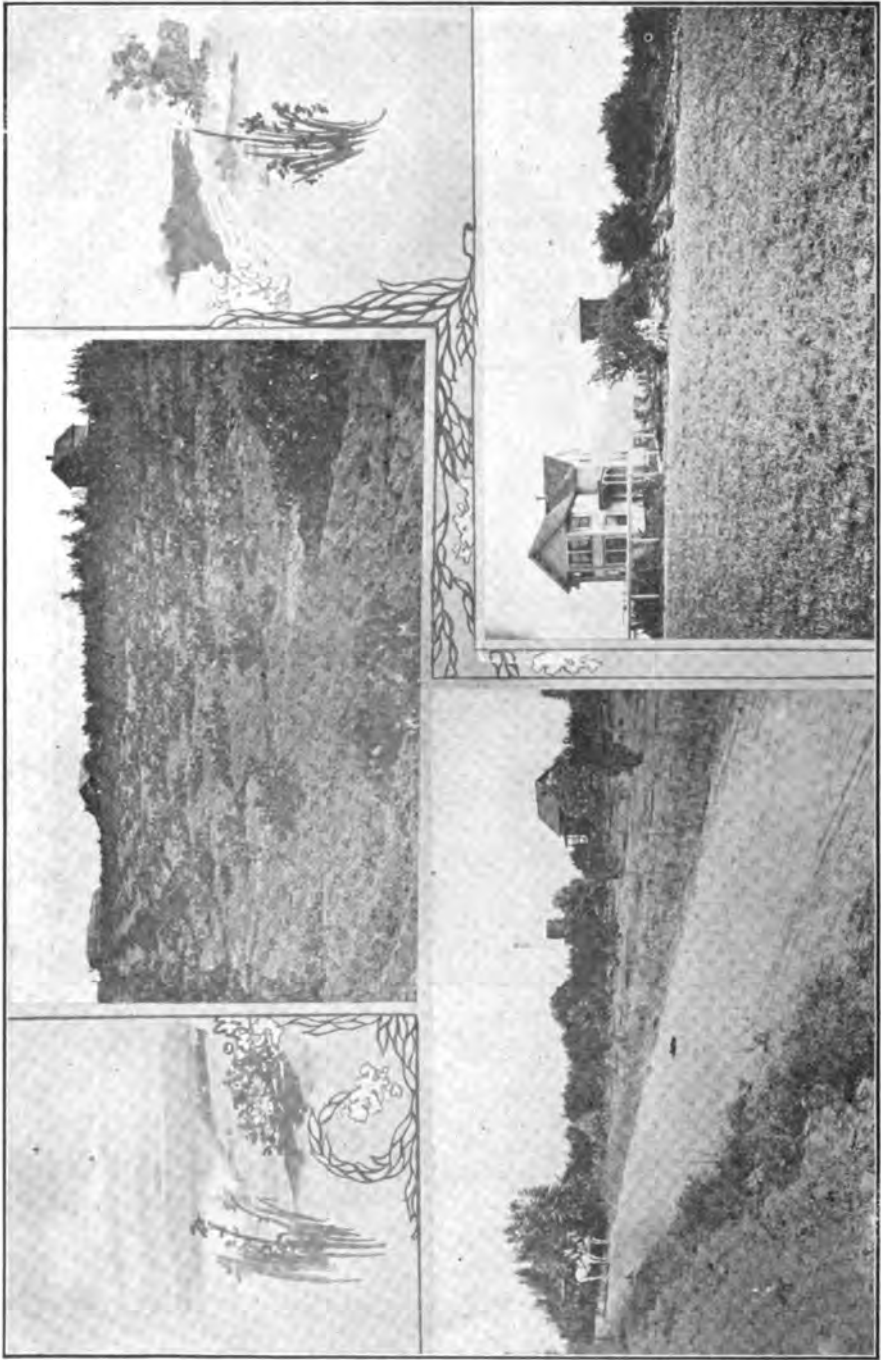


A Modesto Street Scene.

Turlock office, with application for a second under favorable consideration. And there are two other postoffices within six or seven miles of Modesto.

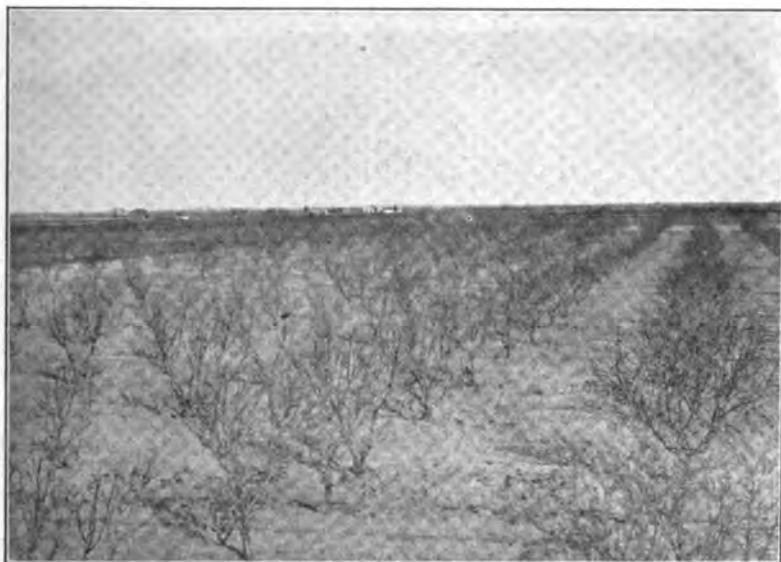
In the last three years nine new school-districts have been established in the Modesto-Turlock district, and in addition Modesto has employed two additional teachers, Ceres two additional, Turlock two additional and Empire school-district one additional teacher, the increase in teachers involving, in every instance but one, additions to school buildings.

A report of the superintendent of Turlock district, based on data derived six months ago, showed 19,795 acres of alfalfa, 2504 acres of trees and vines, 845 acres of sweet potatoes, and 2671 acres of corn, melons, pumpkins, garden truck, etc., under irrigation from the canals on that side of the river. Approximately 1000 acres of this total was sub-irrigated, no water being applied on the surface. Corresponding figures for the Modesto side are not available at this writing, but roughly speaking there are fifteen thousand acres of alfalfa, vines, orchard and garden and field products under these canals at present.



Glimpses of Smyrna Park, 4 Miles from Modesto.
An unbroken wheat field three years ago. Home of fifty families today.

Alfalfa yields from one to three tons to the acre, the average $1\frac{1}{2}$ tons, of a market value of from \$5 to \$8 per ton, and of a value of fully \$10 for dairying, and for feeding sheep and hogs. In fact, alfalfa farmers who have turned their attention to sheep are deriving higher values. So far, alfalfa has received the most attention because it affords a certain and early means of revenue. It is the settler's breadwinner. Planted in the fall, it affords three crops of hay the first year, and thereafter from four to six, the latter on sub-irrigated land, of which there is a larger area annually. With from ten to twenty acres of alfalfa and a "bunch" of cows, the settler is assured a livelihood and profit. The Modesto Creamery, an institution inaugurated four years ago, at a time when there was hardly enough milk produced for home consumption, paid patrons in excess of \$118,000 last year; and the Ceres



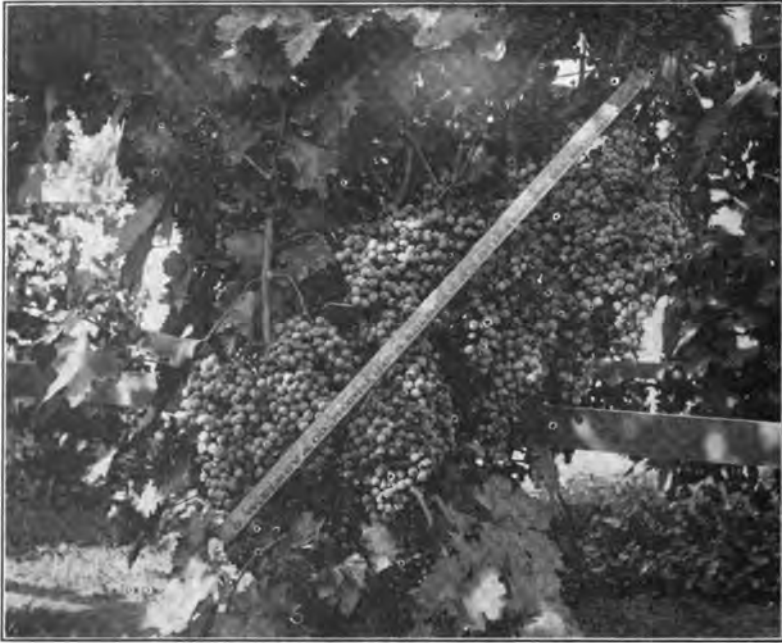
Four-year-old Peach Orchard Near Modesto.
Photographed March 7, 1906. Will pay \$150 to \$200 per acre this year.

Creamery, three years old, and but four miles distant, paid three-fourths as much. On the West Side, in the narrow but old and rich alfalfa belt (under a private canal system), running from Crows Landing on the north to Newman and beyond to Ingomar on the south, the dairy product has an estimated value of nearly \$1500 a day. Two years ago Stanislaus jumped from eleventh to seventh place as a dairy county, and last year moved up to fifth place. With green feed all the year around, the development of the vast area in central Stanislaus under the Modesto-Turlock irrigation system means that this county will within a few years wrest primacy in dairy productions from Humboldt.

Sweet potatoes constitute another profitable crop and early source of revenue. Melons and canteloupes, beans, corn and every variety of berry are money-makers; and "pioneer" plantings of grapes and peaches showing handsome profits, much attention is now being given to these products. Over 1,500,000 grape cuttings were brought in within sixty days this spring, and perhaps a quarter of a million peach trees are being set out, the acreage limited by the scarcity of nursery stock. Almonds and walnuts are receiving

considerable attention. There are over 500 acres of the genuine Smyrna fig of commerce, a portion of which will come into bearing this year, and which promise the pioneer planters profits rivaling those derived by the early growers of the navel oranges. Olives, black figs and the White Adriatic figs thrive amazingly. In every houseyard may be seen oranges, and often lemons and limes. In a comparatively limited way, oranges are produced on a commercial scale by some of our people, and are shipped under private brands and labels, the earlier consignments commanding the Thanksgiving markets. The fruit is of good size and flavor, and is a beautiful, clean golden-yellow in appearance, delighting the eye.

Malaria is practically unknown in the Modesto-Turlock district, and the



A Yard of Stanislaus Grapes.

natural drainage promises immunity from it and from all other serious drawbacks of irrigated sections. Modesto, the center of the district, is the county-seat—a modern, up-to-date town, possessing a complete system of sewers and owning its waterworks and electric street lighting system. It is known as “The City of Roses,” and its homes are correspondingly attractive. It has two very creditable daily newspapers, the Morning Herald and the Evening News, the former carrying press dispatches. There are three banks, several hotels, including one three-story brick structure costing \$40,000; and all church denominations are represented. Its stores rival those of towns much larger. Modesto is situated 90 miles north of Fresno, 30 miles south of Stockton, 90 miles south of Sacramento and 115 miles south of San Francisco. The climate is very agreeable; frosts are few and rarely damaging even to tender plants, snow is unknown and the mean temperature is delightful. There are occasional hot spells in summer, of brief duration, the heat dry and so bearable that harvest teams and crews work under it without shelter right along, experiencing no ill effects. The nights are invariably cool, thanks to a breeze from the ocean, sixty miles distant at the nearest point.

The town of Turlock is twelve miles south of Modesto. It has a bank and a weekly paper, the *Journal*, and numerous well-stocked stores and several good hotels. Ceres has two good hotels, two well-stocked merchandise stores and other business places. Elmdale, too, has its hotel and general merchandise store, and Salida likewise has her general store. Then, too, there is Hickman, another village, in the district, and Montpelier and Waterford on the eastern border. Claus and Hughson, with Elmdale, are stations on the Santa Fé in the course of that transcontinental railroad's line through the district. The main line of the Southern Pacific company traverses the center of the district, via Salida, Modesto, Ceres and Turlock; its eastern branch runs via Waterford, Hickman and Montpelier, and its western branch is on the west side of the San Joaquin, running via Grayson, Crows Landing and Newman, the latter the third town of Stanislaus, with a population of 800, a weekly paper—the *Index*—a bank and large stores and hotels. Oakdale, in the eastern part of the county, on the Southern Pacific company's eastern branch, is the second town of Stanislaus, the population 1200. Oakdale has her bank and two weekly papers, the *Leader* and the *Graphic*, and is a well-

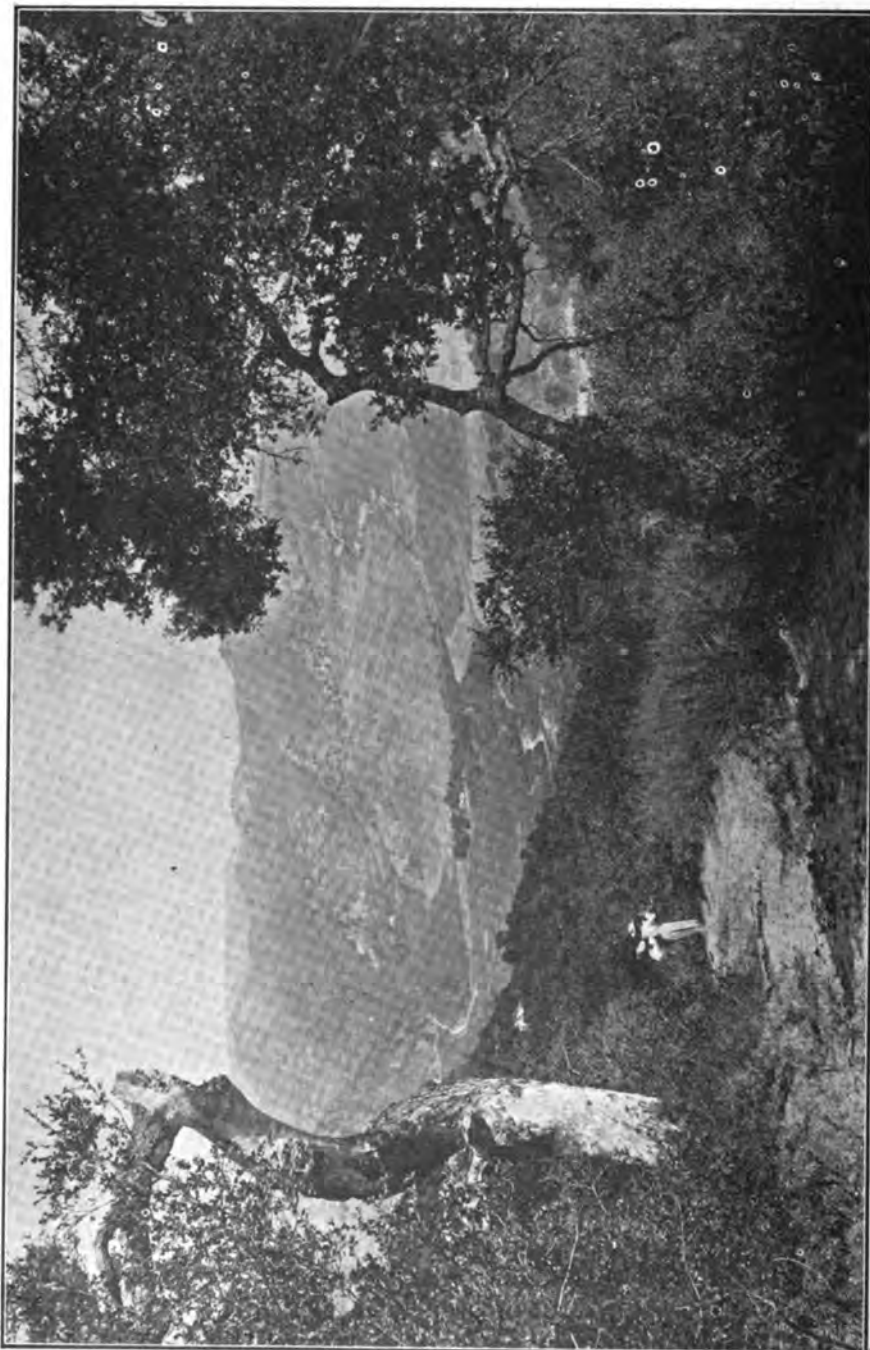


Fruit Drying Near Modesto.

built and prosperous town. A branch of the Santa Fé runs into Oakdale; and the Sierra Railway, from the Tuolumne and Calaveras mines, has its terminus there. Two of the oldest towns of the State, La Grange and Knights Ferry, are situated in the Sierra foothills of Stanislaus.

Land in the Modesto-Turlock irrigation district is valued at from \$40 to \$100 per acre, according to its character and the distance from town. Good land a few miles out may be had for from \$50 to \$60. Land well set in alfalfa and without other improvement to speak of is worth \$120 an acre. The cost of preparing land for alfalfa ranges from \$10 to \$20 an acre.

This is a plain, unvarnished tale of the "pioneer" growth and development of a fertile but semi-arid territory, in the heart of the State, under the stimulus of irrigation, the water and the system of canals alike owned by the land. It is designed to invite further attention to this community and the opportunities presented for business, home-making and investment, rather than for literary effect. We have sought to embody all the information our limited space permits. The Stanislaus Board of Trade, with office at Modesto, will readily afford detailed information in any and every particular, upon application.



The Scenic Santa Lucias.

SAN LUIS OBISPO

By *W. N. ENT.*



FO hundred and fifty-three miles southeast from San Francisco and two hundred and twenty-four miles northwest of Los Angeles, is San Luis Obispo—next to San Jose, the most important city on the Coast Line of the Southern Pacific railroad. Located in an amphitheater formed by spurs of the Coast range of mountains, ten miles from the Bay of San Luis, it has the full benefit of the pleasant trade winds—in this latitude, gentle breezes—and the warm interior air, the combination of the two making a distinctive and nearly perfect climate—one of the most delightful to be found anywhere. A midwinter arrival from the East usually has a tendency to spend his days out of doors lest the magic sunshine vanish. He consults meteorological records to establish the reality of almost perpetual sunshine, and research brings to him expressions in figures, which convey but a poor idea of the matchless conditions he finds, as follows: Mean temperature: December, 52.9; January, 52.3; February, 54.9; July, 65.3; August, 65.4; September, 64.8; annual mean temperature, 58.9; annual average number of partly cloudy days, 87; cloudy days, 69, of which 46 are rainy days; number of clear days, 209; this means a freedom from fogs without excessive heat, to be found at, perhaps, no other point in the State; and an average annual rainfall of over 21 inches.

Taking in connection the fact that San Luis Obispo has neither the cold winds and fogs of most coast sections, the heat and dryness to be found in some parts, nor the extremes of temperature prevailing in interior locations, together with a rainfall ample to produce all classes of crops absolutely without irrigation, and the further fact that there has never been a total failure of crops for any reason, and but two partial failures in forty years, makes it



A Business Street in San Luis Obispo.

Illustrations of this article are from photographs by McCurry.



San Luis Obispo, San Luis

an ideal place of permanent residence, considered from the farmer's viewpoint.

Half way between the two great commercial and residence centers of the State, its geographical position is strategic, and land values—now very low by comparison with other desirable parts of California—must rapidly double and quadruple. There can be no mistake in investing in land in San Luis Obispo. Its population in 1900 was 3,031; in 1906, it is nearly 6,000. The year just past witnessed more improvement, and a larger increase in population and business activity, than any previous one. The banks of this city contain deposits aggregating upwards of two and a half million dollars, all of which came from the land, and three-fourths of which is the savings of the prosperous farmers of the surrounding country. The capitalists of San Luis Obispo are, without exception, farmers.

Shipping facilities are all that can be desired. San Luis Obispo is a division headquarters for the Southern Pacific, and is also the terminus of the Pacific Coast railway, which extends ninety miles into the interior, and also connects this city with the Bay of San Luis—its shipping point on the Pacific Ocean. Both companies employ a large number of men in their shops located at this point. Not being content with two competing transportation companies, the people of San Luis Obispo County, at a special election held last October, voted bonds for the building of three public wharves at different points along the shores of the county, one of them to be at Avila, nine miles from San Luis Obispo, thus insuring, in perpetuity, cheap freights and fares.

Congress has made Port San Luis, now called Port Harford, a port of entry and clearance for vessels carrying oil products to foreign ports.

The mineralization of this section is quite remarkable. A short distance to the west of the city boundary is a deposit of iron ore containing millions of



Mountain, and Bishop's Park.

tons awaiting development; five miles from the city's northern boundary is a body of gold-bearing quartz, which is just beginning to be worked; the hills surrounding, on all sides, are full of chromite; copper ore abounds in the mountains on two sides; quicksilver is produced in large quantities north of the city; splendid building rock is at hand just outside of the city limits; onyx marble exists in large quantities in the mountains southeast; high-grade clays, suitable for bricks, pottery and other products, are readily found; in fact, a list of the possible mineral products of the vicinity of San Luis Obispo would cover a wide range of materials.

San Luis Obispo is reaping a liberal share of the benefit growing out of the development taking place in the Central and Coast oil fields. The latter are rapidly forging to the front in the matter of production, and Port Harford is to-day the most important oil shipping point on the Coast. Two eight-inch pipe-lines were laid there from the oil fields some time ago, and they have since been delivering oil direct from the wells. Now, an Anglo-Californian corporation, known as the Pacific Oil Refineries Co., recently organized to compete with Standard Oil in the refining and marketing of California petroleum, is arranging for the immediate erection on the shores of San Luis Bay of a million-dollar refinery, which is designed soon to become one of the largest in the world, and the laying of a new pipe-line from the Santa Maria and Lompoc fields to the site of this plant, for the transportation of oil for its special supply. The establishment of the refinery is the most important industrial development that has occurred in the county, and its value to the oil-producing region cannot be overestimated.

Port San Luis will become the point of shipment of crude oil for the two pipe-lines, which are to be laid across the Isthmus of Panama by the Union Oil company to supply the European market with fuel oil. The concessions for these lines were recently obtained from the United States and from the



Morro Rock.

Republic of Panama. In addition to this, it will be the port of shipment for the manufactured products of the new refinery to the markets of China, Japan, the South American republics, and the islands of the Pacific.

Though the oil industry in the territory tributary to San Luis Obispo is yet in its infancy, there were shipped from San Luis Bay, during the last five months of 1905, 970,241 barrels of oil. The recent discovery that the oil-fields extend almost to the city limits of San Luis, have given a wonderful impetus to development work, and its effect is felt in every line of business. It is confidently expected that the number of rigs operating within a few miles from the city, will, in the course of a few months, be close to a



Christmas at Pismo Beach.

hundred. This means that an already strong home market for the products of the small farmer will soon become almost insatiable.

San Luis Obispo owes much of its present prosperity to the large stretches of agricultural lands for which it is the business center. As the rainfall at this point is about the same as that of San Francisco—the annual average being upwards of twenty-one inches—abundant crops are produced absolutely without irrigation, and, as a matter of fact, there cannot be found anywhere in the eighty-mile stretch lying between the summit of the coast range of mountains and the Pacific Ocean, a corporation or private individual who sells water for other than domestic purposes. However, if irrigation should



Free Public Library, San Luis Obispo

ever be desired, a world of water can be found in the numberless small streams running from the mountains into the sea.

The portion of San Luis Obispo County lying between the Santa Lucia range and the smiling beaches of the Pacific is an eighty-mile stretch of the most fertile land in all California; inviting, with its richness of soil, wide range of products, mild climate and charm of scenery, the attention of the restless multitude in the East who are just beginning to realize that California's store of opportunities for the making of health, happiness and prosperity is opening wider every day, because of transportation facilities far in advance of population, and of markets that are calling for more of every product which the remarkable resources of the State can turn out.

Owing to the favored climate, and great variety of soils, there is a wide range in agricultural products of this region, and it is no exaggeration to say that there is not a fruit, flower, grain or vegetable that can be produced anywhere in the State which cannot be successfully and profitably grown within ten miles of this city. Single acres of San Luis Obispo County soil have produced, without irrigation or fertilizers, $2\frac{1}{2}$ tons of beans, 20 tons of potatoes, $33\frac{1}{2}$ tons of onions, 60 tons of squash, 70 tons of beets, 100 tons of

carrots, 16,000 quarts of strawberries, 20,000 quarts of blackberries. The weight of single specimens have been: Apple, 24 ounces; pear, 30 ounces; potato, 10 pounds; radish, 26½ pounds; carrot, 40 pounds; table beet, 50 pounds; sugar beet, 56 pounds; mangel-wurzel beet, 156 pounds; cabbage, 93 pounds; squash, 272 pounds. There are no special crops and no special lines to be followed to solve the everlasting problem of keeping the pot boiling, and he is indeed hard to please who cannot here find something to his liking.

For years countless herds of dairy-cattle have added materially to the store of wealth of the coast section of San Luis Obispo County, and the amount of dairy products shipped from different points runs into tens of thousands of dollars, monthly. Ready markets for the results of the dairying industry are found both in San Francisco and Los Angeles.

The glorious stretch of beach at Pismo, a few miles away, is unsurpassed



A Part of the Mission, San Luis Obispo.

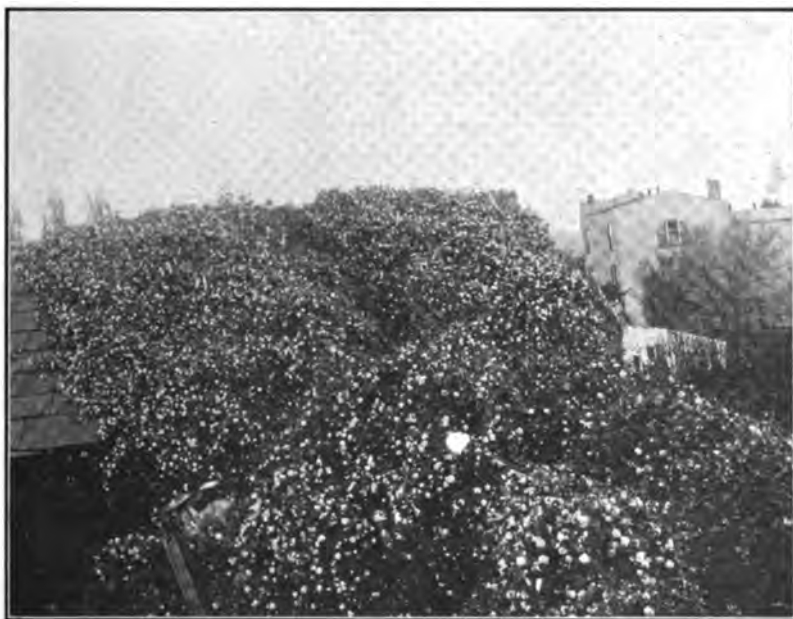
on the American continent. Twenty-two miles of level, foam-fringed sands, where four teams abreast may be driven at any tide, a surf that is seldom boisterous, a safe harbor for pleasure craft, and a mild temperature of water, are features which make for the development of a great seaside resort, extending the whole length of the strand.

The vicinity of San Luis Obispo abounds in beauty spots, and pleasurable drives over well-kept roads. One of the most beautiful is over the Cuesta grade, which commands a view of the best attractions of the Coast Line of the Southern Pacific railroad. Another is the ascent of Terrace Hill, affording a perfect view of the city and the surrounding country. Other attractions are the San Luis Hot Sulphur Springs, Stenner Creek bridge and cañon, Laguna de Los Osos, Lopez Cañon and Chorro Falls, all of which are within eight miles of San Luis Obispo. The singularly impressive beauty of the precipitous Santa Lucia mountains to the east, and the sentinel peaks of

Cerro Obispo and Cerro San Luis, thrusting their gigantic cones skyward to the northwest, contrast strangely within the undulating hills and level stretches of the fertile valleys that radiate north, south and west.

Congress contemplates the purchase of the Henry ranch of many thousand acres, in this county, less than twenty miles from San Luis Obispo, for the establishment of a permanent military camp and training station for the army. This will be one of four camps of like kind to be maintained in different sections of the United States. A joint encampment of federal troops and State militia was held on this tract in September, 1904, and its perfect adaption to this use was fully demonstrated. It has been approved by a commission of army officers, and a bill for its purchase has been introduced in Congress.

Social conditions at San Luis Obispo are good. Nearly all of the different religious denominations and fraternal organizations are represented. The



The Largest Rose Bush in California, San Luis Obispo.

public schools compare favorably with those of any city on the coast. The buildings are ample and commodious, the teachers the best that can be procured, and the excellent high school, which is soon to be housed in its handsome \$30,000 stone building, now nearly completed, prepares its graduates for direct admission to the University of California and Stanford University.

San Luis Obispo is the home of the California State Polytechnic School, the only trades school west of the Mississippi river supported by state aid. Its curriculum embraces three regular courses of study: Agriculture—Soils, crops, and fertilizers; fruit-growing, vines, insect pests; milk-testing, butter- and cheese-making; breeding, feeding and care of animals; irrigation, gardening, and surveying. Mechanics—Carpentry and building; freehand and mechanical drawing; architectural drawing; forging and blacksmithing; applied electricity. Domestic Science—Sewing, dressmaking, and millinery; household economy; housekeeping and laundering; cooking and catering; house construction and furnishing. English, history, economics, mathematics,



Photo by Fitzhugh

Near San Luis Hot Sulphur Springs.



A Typical Coast Valley.

botany, entomology, chemistry, physics and other academic subjects are mingled with each of the above courses. The school is situated in a beautiful valley, surrounded by picturesque hills and mountains. The school farm comprises 280 acres of a variety of soils. Water for irrigation is available by installing a pumping plant, or dams, with necessary flumes. The school is of secondary grade, admitting pupils who have finished the grammar grades and are fifteen years old. It is filling a long-felt want in giving an education, on practical lines of domestic science, agriculture, and mechanics, to the many who cannot attend the universities.

San Luis Obispo is easily accessible by either land or sea; it has a splendid climate, which must become widely known, affording all conditions for right living; it is progressive and is growing rapidly; its land values are the lowest in the State, and must materially advance with the rapid influx of population it is now experiencing; it has splendid shipping facilities and a strong home market for all of the products of the small farmer; its social conditions and educational facilities are among the best, and to the home-seeker in search of a section where farming land investments can be made with safety, where crops are certain, and where failures are unknown, the vicinity of San Luis Obispo offers excellent inducements.



Main Buildings California Polytechnic School, San Luis Obispo.

FERTILE MADERA



ALMOST in the geographical center of California, and also near the center of that immense plain lying between the Sierra Nevadas and the Coast Range, the San Joaquin valley, which rivals in fertility the ancient valley of the Nile, lies Madera County. And, as no place on earth is more fertile and rich in Nature's gifts than is this great valley of the San Joaquin, so is no part of the valley more favored than that section lying between Merced, Mariposa and Mono counties on the north and east, and the San Joaquin river on the south and west—none that responds more quickly and fruitfully to the efforts of husbandry.

In rank of age as a county, Madera is among the youngest of the State, having been organized in 1893. It embraces about one and a half million acres, half of which is a level plain. To the north and east the lower hills rise gradually, the elevation increasing until, at the extreme eastern boundary, the rugged and picturesque summit of the Sierras is reached. Thus the altitude varies, from 200 feet in the lowest part of the valley, to 1,000 to 2,000 feet in the hills, and up to Mt. Lyell's 13,000-foot crest.

Each locality, be it mountain, hill, or plain, has its particular industries to which it is best adapted. In the valley, fruit and grain-raising, dairying, stock-raising and manufacturing are the thriving pursuits which go to make up the industrial life of the county. The hill section is mostly devoted to fruit-raising, stock-raising and mining, while in some localities granite quarrying is an important feature. The mountains are best known for their many varieties of lumber, and for vast mineral deposits which, as yet, are comparatively undeveloped.

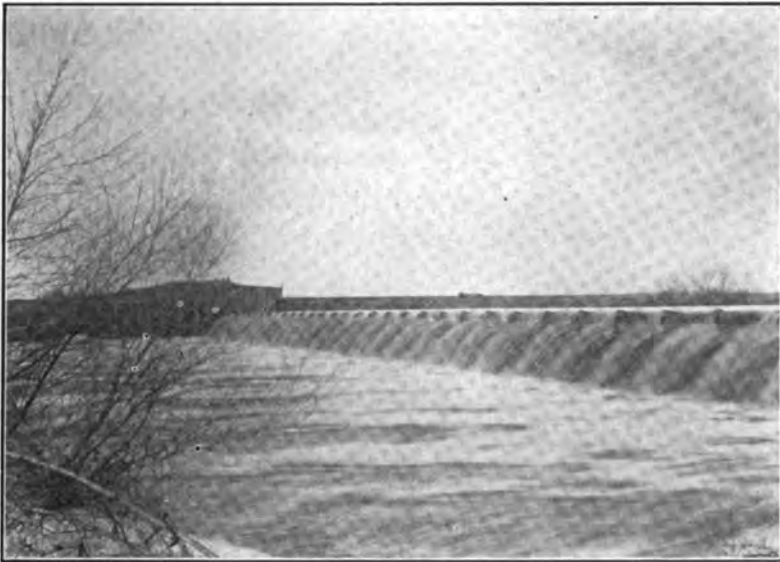
With the various elevations is found a corresponding difference in climate,



A Madera Home.

yet, in all sections, the health standard is very high. In the valley, the Fall, Winter and Spring months are mild and agreeable. The summers are warm, but with a dry atmosphere that is neither oppressive nor dangerous. During the hottest season outdoor work is never interfered with, and sun-strokes and heat prostrations are unknown. In the high mountains, the winters are severe, but the summers there are delightful. Numberless beautiful and picturesque spots offer an ideal existence to those who enjoy the delights of forest-shade and sparkling stream found only in Nature's fairest gardens. Wild game, both large and small, abounds, and the many streams and lakes are the angler's paradise.

While Madera County is rich in the fertility of soil and receives copious rains during the Fall, Winter and Spring, irrigation is essential for the best results. In this the valley is much favored. The watersheds of the San



Irrigation Company's Dam, Near Madera.

Joaquin, Fresno and Chowchilla rivers supply water sufficient for a territory many times its size, and the many natural reservoirs in the mountains and hills give opportunity to conserve these waters, the practicability of such conservation having been demonstrated by the Madera Canal and Irrigation Company. Last year this company supplied irrigation to over 20,000 acres of land by means of its 108 miles of canals and ditches, the water being diverted from the San Joaquin and Fresno rivers. Since that time, two large reservoirs have been added to the system—one four miles northeast of Madera, covering 785 acres, with a capacity of irrigating 10,000 acres, and the other, a few miles farther toward the hills, covering 462 acres, with an irrigating capacity of 7,500 acres.

Another irrigation system is that of the Sierra Vista Vineyard Company, which uses the waters of the Chowchilla for its immense wine vineyard at Minturn, while on the Miller & Lux ranches, thousands of acres are irrigated from the San Joaquin.

The irrigated area has recently been increased considerably by wells and pumping plants, installed at places not having access to irrigating canals and

ditches. The uniform shallow depth at which a seemingly limitless supply of water is found, makes these pumping plants an efficient means of getting the best returns from the land. During the past year no less than fifteen such plants have been installed, and the unqualified success they have proven to be is assurance that many others will soon be put into operation. Their light operating expenses and perfect reliability make them popular and valuable adjuncts to irrigation.

In point of productiveness, it can be truthfully stated that there are very few fruits, cereals or vegetables which cannot be raised here in quantity and quality that equal or surpass those of their native climes.

Orchards and vineyards are among the most prominent enterprises of the county, and the many acres thus employed are being constantly added to



"Mountains of Iron Ore."

Among the large fruit raisers is the Italian-Swiss Colony Company, which has a 1,300-acre vineyard three miles from Madera. Its grapes are those best suited to wine-making, and the company's winery, the second largest in the State, is exceptionally complete. The yield from the vineyard is not sufficient to supply the wine-making plant, which has an annual capacity of 3,000,000 gallons of wine and 100,000 gallons of brandy, hence other vineyards are drawn on to furnish a part of the 15,000,000 pounds of grapes required. The wines have a splendid reputation, both in this country and abroad, and this is conceded to be a superior sweet-wine producing section.

Other large vineyards and orchards are: The Sierra Vista vineyard at Minturn, the Midvale Fruit and Land Company's vineyard and orchard, the Madera Improvement Company, the Freeland and Borden, the Sierra Rancho, and the R. Roberts vineyards, and the Perkins olive orchard. Many smaller holdings add their quota to the fruit supply, and help give the county its prominence as a fruit producer. Raisin-making and fruit-drying form important parts of the fruit industry, and these cured fruits are par excellence.

Grain farming is extensively engaged in, and livestock-raising is a considerable industry.

The wonderful forests of the county make lumbering an immense business. Among the largest lumber producers of the state is the Madera Sugar Pine Company. In the mountains, this company has a large tract of timber lands extending over 20,000 acres, and adjacent to these lands are other heavily forested areas. While this company uses the timber from 1,000 acres annually—its yearly cut being 33,000,000 feet—the almost inexhaustible supply guarantees its operation for many years to come.

The timber is sawed into lumber at the large mountain mills and floated in a flume, 65 miles in length, to the company's Madera yards, where there is a large planing mill and box factory. The output of these mills is shipped to all parts of the world. An army of men is employed, the monthly payroll



A Mountain Trout Stream.

of the company amounting to about \$40,000. The Watkins & Thurman Sash and Door Factory is another one of the larger lumbering concerns of the state, fifty workmen being employed in turning out its products. Several other smaller sawmills add to the county's total in this industry.

Dairying is an occupation to which the county is peculiarly adapted, and the output of these products is rapidly increasing.

Though the mineral resources of the county have been developed only to a very limited extent, there are several valuable working properties. Gold and copper are the most important minerals produced, yet an immense iron region in the eastern part of the county—the Minarets—promises to add considerably to the world's supply of this ore, and the region is also rich in the more valuable metals.

The public schools of a community are recognized as being of prime importance, and are an index to the character of its population. In this respect Madera county, with its thirty-three school districts, is well supplied. The re-

quired qualifications of teachers are based on a high standard of education and training, the resultant school work being most satisfactory. Each district has its comfortable and commodious schoolhouse, while a union high school, at Madera, provides higher education for graduates from the grammar schools. This high school represents a union of eight districts, and is accredited by the State University. The building is a large and particularly handsome structure, of stone and brick, surrounded by beautiful grounds. Its interior arrangement is excellent and well suited for its purposes. It is an ornament to the town.

Considering their productiveness, favorable location regarding irrigation and nearness to railroads, and numerous other features that make them desirable for homes, Madera County lands are held at low prices. The average market



Sugar Pine Co.'s Planing Mill.

values are: Grain lands, \$15 to \$20 per acre; fruit lands, unimproved, \$25 to \$50 per acre; fruit lands, improved, \$75 to \$125 per acre. These figures are supplied by an active Board of Trade, located at Madera, which is pleased to give all possible information regarding the county and its resources.

Of the towns of the county, Madera, the county seat, is the most important. From a straggling village of a decade ago, it has grown to a busy, hustling town of 3,000. Many handsome business buildings adorn its streets, and its large number of beautiful homes and residences make it pleasing alike to resident and visitor. As tree, shrub and flower flourish here, the beautifying of homes is a simple matter.

The county courthouse is a magnificent edifice, built of the excellent granite quarried at Raymond, twenty-two miles distant. The building is elegantly furnished, and is the pride of the citizens of the whole county.

Religious denominations are numerous represented, there being six churches—Episcopal, Catholic, Methodist, Presbyterian, Baptist, and Christian.



Italian-Swiss Winery, Madera.

Also a large number of the more important fraternal societies have lodges here.

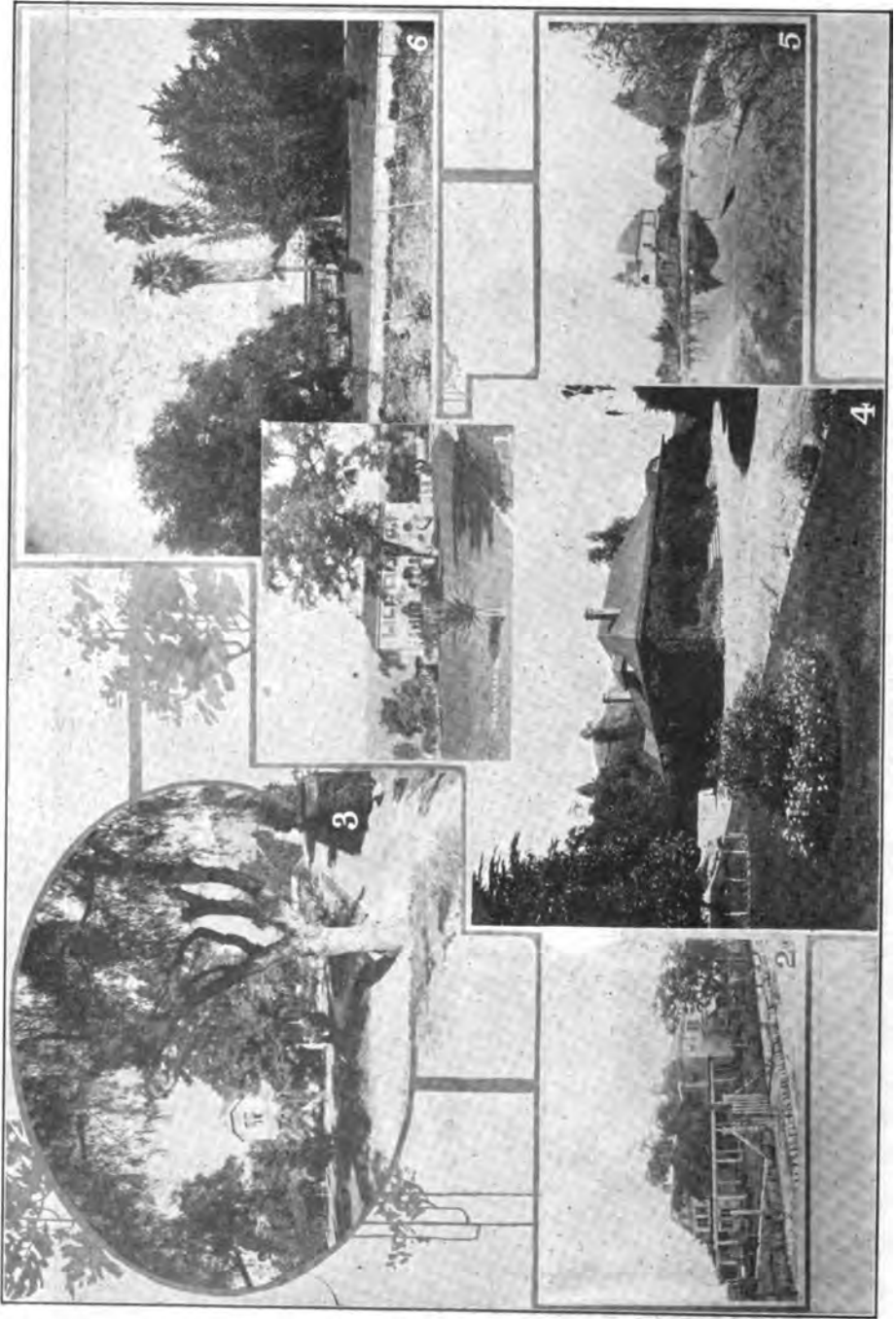
The town is lighted by electricity furnished by the Madera Electric Company and the San Joaquin Power and Light Company. The latter has just installed its power and light service, its electricity being developed in the mountains, fifty-five miles from Madera. This company also makes a feature of supplying power for pumping plants for irrigation.

The second town of importance is Raymond, the terminus of the Southern Pacific branch railroad, over which the greatest volume of tourist travel to Yosemite is carried. The large granite quarries, employing about 600 men, are located here. From them comes the stone for several government and other large buildings.

North Fork, Fresno Flats, Berenda, Coarse Gold and other towns are the business centers of their respective localities.



Union High School, Madera.



Some Monrovia Homes.

MONROVIA

By CHARLOTTE BELL.



MONROVIA is a big orange park that extends from the mountains to the valley, among whose groves many beautiful homes and artistic cottages have been built. The name of a city is bestowed upon it by the incorporation that gives it self-government. But in a sense this is misleading; for smoke, dust, noise and crowds, associated with such a term, have no part in this suburban district that is sixteen miles from Los Angeles.

The picturesque hills at the northern boundary of the town, with variations of miniature cañons, furnish home-sites that are attracting wealthy people who realize the possibility of villas in Monrovia. The avenues near the foothills are rapidly building up with handsome homes which have ample grounds for parks around them.

The approaches to these homes are through districts in which ugliness has no part. No garish architecture, no marring of nature by man's disarrangement of the beautiful offends the eye in Monrovia. The smallest home is softened by vines and framed in shade-trees. The whole region is laid out with a view to preserving natural charms, while furnishing fine streets as a means of access to homes. There are 3,500 people in the town. But the population is not intruded upon the notice of the visitor, because the broad, shaded avenues give only occasional glimpses of the homes among the groves.

There is no tendency of Monrovia to hide its light. When the town was laid out, it was given the name of "The Gem of the Foot Hills." This is a popular title that seems to have made its impress on the people who have so



A Monrovia Orange Grove.



On the Trail to Deer Park.

successfully lived up to the title that in print the name often appears, "Beautiful Monrovia." The people are filled with civic pride, and all public improvements are modern, and all modern improvements are attained. But money

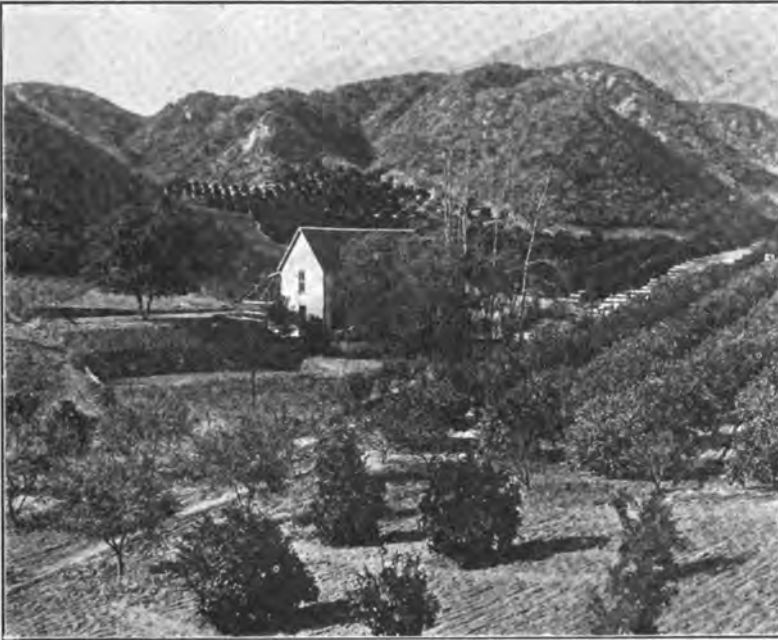


Branch of San Gabriel Cañon. Entered from Monrovia.

is freely expended for features which justify Monrovia's particular claim of the picturesque. It is now building a five-acre park a few blocks from where the Pacific Electric railroad brings travel into its environs.

The city owns Monrovia Cañon and its auxiliary branches. Here 1000 acres of water-bearing land serves its utilitarian purposes and furnishes fresh woodland walks. An automobile road is being built to the very mouth of this park. Deer Park, five miles away, is a second natural park in the mountains, reached by a trail. The park in the city's center will contain the Carnegie library and has on it a fine city-hall built from granite from Monrovia Cañon.

There could be no better recommendation of the class of Monrovia people



Clover Leaf Cañon Ranch, Monrovia.

than the personnel of its governing body and other public officials. Wealthy people accept offices without salary. There is no undesirable element in the population. It is a prohibition town. The standing of the schools is among the highest in the state. Ninety per cent of the voters of the town belong to the Board of Trade.

Climate has played its part in building up Monrovia. It occupies a triangle in the Sierra Madre mountains formed by Mount Wilson and Monrovia Peak, with the apex due north. There are no cañons that cut through to the desert, so that Monrovia is protected from the wind. Storm-water is drained to the west by Santa Anita Cañon, and to the northeast by Sawpit Cañon and the wash that extends from it. Both drain outside Monrovia's city limits. The town has only to take care of the water from the immediate hills, a small amount.

Altogether the homeseeker in Southern California who fails to consider Monrovia and its attractions, misses one of the large possibilities.



A Monrovia Residence Street.



Woman's Club House, Monrovia.



LOOKING TOWARD MARKET STREET, FROM CORNER MASON AND EDDY, 5:30 A. M., APRIL 18 Photo by Chas. Barron
This photograph was taken within fifteen minutes after the Earthquake. The subsequent fire destroyed all the buildings



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JUNE, 1906

WHAT REALLY HAPPENED

By PAUL COWLES

Supt. Western Division The Associated Press



THIS is the story of what really happened in San Francisco during a few days commencing April 18. Early that morning it was reported that there had been an earthquake of unusual severity, and that the earthquake had been followed by fire. These reports were confirmed, and the confirmation has been coming in ever since. According to most accounts, the earthquake came at 5:14 A. M. According to many accounts, the shake lasted anywhere from three minutes to half an hour, but it really lasted only 47 seconds. The people who guessed from three minutes to half an hour were those who escaped from San Francisco by the first trains, and, judging from the stories they told when they were interviewed by newspapers in the East and South, they were very conservative in their estimate of time. The 47-second people were newspaper men and scientists whose first impulse, when they were disturbed, was to look at their watches and note the exact time. The 47-second theory is the one generally accepted in San Francisco.

If there had to be an earthquake, no more desirable hour could have been selected. Even in San Francisco, which was formerly noted as an "all night" town, there are but few people on the streets at 5 o'clock in the morning. It was too late for the night reveller to be abroad, and too early for the good citizen to be out of bed. Consequently, when chimneys toppled into the streets, and cornices and facade ornaments, and portions of flimsy walls came crashing down, but few people on the streets were injured. The loss of life occurred mainly in old ramshackle frame buildings that collapsed and crushed their inmates. The exact number of these unfortunates will never be known. Up to May 19, 389 bodies had been recovered from the ruins



LOOKING SOUTH FROM PINE AND STOCKTON STREETS, 11:30 A. M., APRIL 18

Photo by Char. Barron

and buried. Coroner Walsh estimates that probably 1,000 people were killed, but the fire that swept the wrecked districts incinerated many bodies as completely as if they had been placed in a crematory.

While the fires that followed caused most of the financial loss to the city, it cannot be denied that the earthquake did a great amount of damage. Brick buildings of cheap construction, wooden buildings that were known to be insecure and ancient structures that had outlived their usefulness were the ones that suffered. It cannot be too emphatically stated that the modern steel buildings, honestly constructed stone and brick edifices and



LOOKING EAST ON SACRAMENTO STREET DURING FIRE

strongly braced frame dwellings are practically immune from damage by earthquake. In no instance were buildings of the character noted above seriously hurt. It has also been noted that the buildings erected on made ground, or on soil of a marshy character, were the ones that suffered. The pipes carrying the water supply ran through the marshy section of San Mateo county, and it was only that portion of the line that was broken and thrown out of place, thus causing the stoppage of the water supply.

San Francisco could have withstood and quickly repaired the damage done by earthquake, but it could not withstand the

fire that followed, which could not be successfully fought for lack of water. It was fortunate that the shock came when it did. Had kitchen fires been lighted all over the city, the flames would have broken out in hundreds of places in the residence districts, and people would have been hemmed in with no chance of escape. As it was, the only fires going were those in power houses and manufactories, and these being located mainly south of Market street, the fires that broke out were comparatively concentrated and gave the inhabitants of the city time to move away from the steadily advancing flames.

Within fifteen minutes after the shock, ominous looking



THE FIRE ON THE AFTERNOON OF APRIL 18

columns of smoke could be seen in a dozen different places and it was quickly realized that there was work for the fire department. San Francisco's efficient force of fire fighters, in spite of the fatal injury to their beloved chief, who was crushed in his room, rushed to their duty, prepared to put up a hard fight against their old enemy. Engines and hose-carts rattled through the streets and took their stations. It was then discovered that the water supply had failed, and except in a few districts where there were reservoirs, there was nothing to do but to watch the progress of the conflagration. Recourse was had to dynamite, which was used in blowing up buildings in the hope that the flames would be blocked, but even that desperate measure failed, and by



THE BURNING OF THE CITY HALL.
Photograph taken 9:11 a. m., April 19

noon it was realized that the greater portion of the business and manufacturing districts would be destroyed. The fire had eaten its way from the south up to Market street, and from the east at the water front up to Sansome street north of Market street.

During the early hours of the morning not many people went into the down-town sections. They were busy at home, looking



CITY HALL, MAY 8



LOOKING NORTH FROM

after their families. But about 9 o'clock men began flocking to their places of business. There they found the regular army in control. General Funston, who was in command of the Federal troops in and about the city, quickly realized the necessity for order, and without waiting for a request to be made by the civil authorities, had his men out and placed them at the service of the Mayor. From that time on they have acted in perfect accord with the civil government, and the fact that men like Mayor Schmitz and General Funston were present to direct affairs undoubtedly preserved the people of San Francisco from even worse horrors than those of earthquake and fire. Funston's characteristics were well known before the fire, but many citizens



LOOKING SOUTH FROM CORNER



JONES AND SACRAMENTO

Photo by George V. Welter

who had opposed Schmitz politically, were in doubt as to what the Mayor would do. It did not take them long to find out. Before night on Wednesday they discovered that there was a Big, Strong Man at the head of the municipal government and they were glad of it. It was a big man's opportunity and Schmitz rose to it. He gladly availed himself of the assistance of the soldiers in maintaining order, and one of his first official acts was to issue a proclamation that thieves and looters would be shot on sight. Martial law had not been declared and it took nerve to issue that order, but it had the desired effect. There was no looting. For several days, stories of thieves shot in their tracks and their bodies left to fester in the sun as warnings to



OF JONES AND SACRAMENTO

Photo by George V. Welter

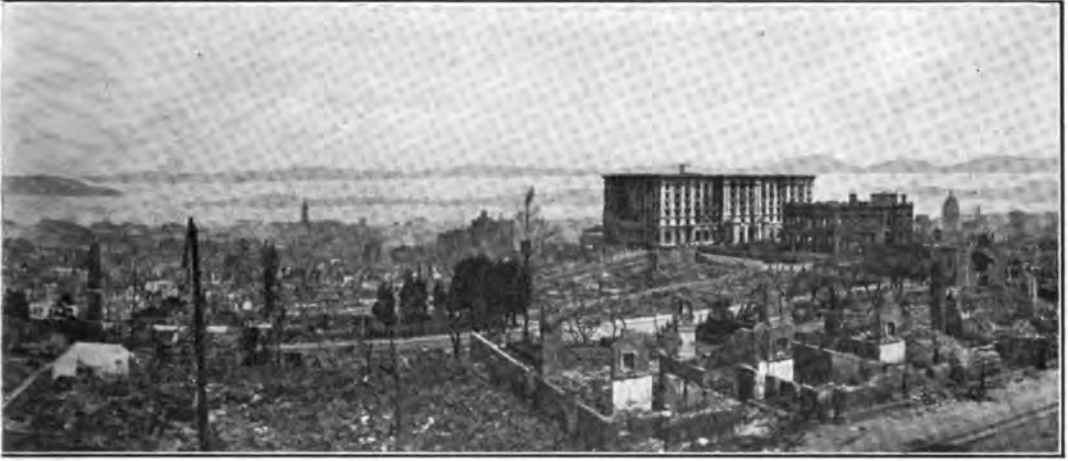


LOOKING EAST FROM JONES AND

evil-doers, were told about the city. Alleged eye-witnesses told most horrible tales of men being compelled to dig their own graves and then being shot by soldiers; of women outraged and the criminals hanged to lamp posts; of the stern measures taken by the Federal troops, the National Guard and the police to prevent crime. When the newspapers investigated these stories, not one of them was confirmed. During the entire month dating from the morning of April 18, but four men died from the effects of gunshot wounds. One of these was H. C. Tilden, a member of the Citizens' Committee, who was shot at night by members



LOOKING DOWN ELLIS



SACRAMENTO, ALCATRAZ ISLAND IN CENTER BACKGROUND

Photo by George V. Welter

of a self-constituted citizens' patrol because he failed to stop his automobile when ordered to do so. Another was Dr. Taggart of Los Angeles, who was killed by a shot from his own pistol, which had dropped from his pocket. Two other men who quarreled with soldiers, and who were not engaged in looting, were also killed.

Instead of being disorderly, there has been less crime in San Francisco than at any time during its entire history. From being noted as an easy-going city where the people were said to do as they pleased and the police had their hands full in taking care



STREET TO MARKET

Photo by George V. Welter

of malefactors, San Francisco has become a most orderly community. The saloons have been closed and there has been no drunkenness and no crime of any kind. So-called looters have been arrested since the fire, but they were mostly curiosity seekers who were poking about the ruins in search of souvenirs. To avoid annoyance from this class, and to warn possible thieves, the police have adopted the plan of putting these delvers in the rubbish at work cleaning and piling bricks. The offenses committed have not been serious enough to warrant arrest and trial.

Refugees who left the city and had themselves interviewed by newspapers, have related marvelous tales of their experiences and of what they saw. They told of awful scenes of panic; of



LOOKING EAST ON MARKET STREET FROM NEAR FIFTH, BEFORE THE FIRE
The James Flood Building near the Center of Photograph

men and women struggling and fighting to get out of the city; of fissures and bottomless chasms twenty feet wide and of unfathomable depth in the streets; of ghouls cutting off the fingers and ears of the dead to obtain jewels; of bodies stacked like cordwood in the streets, and of dodging falling walls and buildings as they ran through the streets on the way to the ferry.

There was no panic. On the contrary the people, while frightened, kept their heads. Thousands of them tried to leave the city, but they did not fight and struggle to get on the ferry boats, as after the first day there were plenty of boats and all could

leave who wished to. It even became a serious problem with the Mayor and his Committee of Fifty to devise means of persuading the people to leave the city and reduce the number of those to be cared for. The fissures and bottomless chasms turned out to be cracks in pavements of streets on made ground where the earth had slipped. Car tracks in some places were twisted, but there were no chasms. One artistic liar saw a drove of cattle run into a hole on Market street and descend into the center of the earth. The earthquake must have closed up the hole, for there is no sign of it now and the pavement is intact. No mutilated bodies minus fingers and ears have been found. The ex-



VIEW FROM ALMOST THE SAME POINT AFTER THE FIRE

cited ones who ran through the streets dodging falling buildings and walls must have been "making a night of it," as the earthquake lasted only 47 seconds, and the falling was all over before respectable people who had gone to bed could possibly get out of their houses.

All day Wednesday the fire steadily advanced and when night came it had eaten its way from the water-front to Kearney street, north of Market. The Fire Department, assisted by soldiers, made futile attempts to block the flames by the use of dynamite. Block after block of substantial buildings were blown up without avail. The rubbish took fire and it was realized that

the greater portion of the city would be destroyed. By Thursday morning Nob Hill, on which were located the Fairmont Hotel, Hopkins' Institute of Art, the Stanford, Crocker, Flood, Huntington and other handsome residences, was reached. From there on the flames swept to the east side of Van Ness avenue. At that broad thoroughfare a determined stand was made, and buildings extending from Golden Gate avenue to Pacific avenue on the east side were wrecked by dynamite. At Sutter street the flames jumped across Van Ness avenue and licked up the buildings on the west side as far north as Clay. All night Thursday desperate and determined men worked to keep the flames from spreading farther west. It looked as if nothing could save the entire Western Ad-



HALL OF JUSTICE AFTER THE FIRE
Portsmouth Square in Foreground

dition, but fortunately Friday morning a brisk wind from the west sprang up and the flames were checked. The fire was still raging in the Mission district and south of McAllister street between Van Ness avenue and Octavia street. On Friday it took a fresh start in the northern end of the city and burned down to the water-front, destroying the immense grain sheds and thousands of tons of wheat. It was not until Saturday noon that it was definitely known that the fire had practically burned itself out.

Before noon on Wednesday Mayor Schmitz had appointed a committee of fifty citizens who were selected from representative men of the community. To this committee, of which the Mayor



CORNER MARKET AND KEARNY JUST AFTER FIRE

was chairman, were delegated all the powers of the Mayor. The members met with him daily and assisted in the administration of the city's affairs. Sub-committees were appointed and by Wednesday night the work of caring for the destitute and homeless was under way. San Francisco did not wait for outside help. Her citizens still had energy and self-reliance. With the exception of the first day, no one suffered severely from hunger. The bakeries were put into operation to furnish bread, and millionaire and pauper stood in the "bread line" together. When



MARKET STREET LOOKING EAST, MAY 8

outside relief came pouring in, the people who came to take charge found a regularly organized system already in operation. The thoroughness with which the system of relief and the housing of the homeless had been carried out astonished everybody from the outside. The Federal forces and the civil government worked together in the most complete harmony. The services of the troops were invaluable in furnishing tents, rations and policing the city. To the Army Medical Corps is due the fact that there has been no epidemic of disease. The splendid organization of this corps and the assistance rendered by the volunteers, together with the intelligence and adaptability of the



WHAT THE EARTHQUAKE DID TO THE SANTA ROSA CITY HALL

people has made San Francisco a healthier city than it was before the earthquake and the fire.

Ordinarily the great 'quakes in the districts of the coast region outside of the metropolis would have commanded the attention of the world for days. But the fire in San Francisco so far overshadowed the damage to the interior cities and towns that for several days but scant consideration was given to the reports of these disasters, that were received in fragmentary details.

Outside of San Francisco, the shock was felt both north and south in the counties along the sea coast and around the bay. To the north, Santa Rosa suffered most severely. In that pretty little city many buildings collapsed and a large number of people were killed and injured. The estimates as to the actual number



A WRECKING TRAIN AT SANTA ROSA Photo by Elite Studio

of killed vary from seventy to one hundred. Fifty-eight bodies were identified within forty-eight hours after the shock. The monetary loss is placed at three millions of dollars.

Situated about one hundred miles to the northwest of Santa Rosa, close to the Pacific ocean, was the thriving little lumber town of Fort Bragg. This place was entirely destroyed by the earthquake and fire that followed the temblor. The loss here was about half a million dollars. One life was lost.

Sebastopol, in Sonoma county, suffered to the extent of a quarter of a million dollars. Geyserville, the gateway to the



THE BUSINESS CENTER OF SANTA ROSA AFTER THE EARTHQUAKE Photo by Elite Studio

famous Geyser Mineral Springs, also suffered severely. The little towns of Headsburg and Napa were considerably shaken, but there was no loss of life in those places, and but comparatively few buildings were seriously injured.

At Vallejo the shock was less severe than the one of a few years ago which damaged the navy yard to the extent of nearly a quarter of million dollars.

At the little village of Bolinas, in Marin County, the shock was particularly severe. Frame buildings were leveled to the ground and the hills are reported to have split open. About thirty miles north of Bolinas on a neck of land extending several miles out to sea, was located the famous Point Reyes lighthouse. This build-



THE MILLS BUILDING AFTER THE FIRE

ing is reported to have been destroyed by the earth's convulsion.

In Oakland, Alameda and Berkeley, on the eastern shore of San Francisco Bay, considerable damage was done to chimneys and weak walls, but with the exception of Oakland, where five people were killed in one lodging house by the collapse of the structure, there were no fatalities. It is estimated that the loss in Oakland as a result of the shock will approximate four hundred thousand dollars. The water mains of the Contra Costa Water Company broke in the vicinity of Lake Merritt, and for two hours the city was without water. These mains were quickly repaired, however, and a water-famine thereby averted. There

was a settling of the earth's surface at various places around the lake—in one instance a three-foot depression being recorded—and much filled land slid into the water, but beyond these disturbances no fissures or sinks were reported from other sections of the city. The new building of the First Baptist church sustained a loss of fifty thousand dollars, which is the largest individual loss reported from Oakland.

To the south, from San Francisco down to Salinas, there was a record of ruin. Burlingame, San Mateo, Redwood City, Menlo Park, Palo Alto, San José, Gilroy, Hollister and Salinas were badly shaken. The beautiful buildings at Stanford University, near Palo Alto, were twisted and torn and many of them will have to be rebuilt. Two students lost their lives there.



LOOKING EAST ON CALIFORNIA STREET FROM KEARNEY
The Kohl Building (formerly The Hayward) on left side, with flag flying;
Merchants' Exchange Building opposite

At San José nineteen people were killed by falling walls and chimneys. The loss to property at the "Garden City" will exceed two millions of dollars. At Salinas the shock was very severe. The immense plant of the Spreckels' Sugar Factory was badly wrecked, and the large merchandise establishment of Sanborn & Ford was reduced to kindling wood. One million dollars will hardly cover the loss to this town. Hollister was damaged to the extent of nearly half a million dollars, but no lives were lost.

One of the awful incidents of the earthquake was the collapse of the Asylum for the Insane, at Agnews, near San José. The

buildings of the institution were constructed of brick and were beautiful examples of architectural skill. When the shock came these buildings were crushed like so many egg shells, the falling walls snuffing out the lives of over a hundred patients. In addition many of the inmates were badly maimed. Included in the fatality roll were several employes and three regular physicians of the State Hospital. All the buildings were ruined beyond repair, and the loss to the State is total. For several days after the shock inmates of the asylum, some of whom were suffering severely from injuries received in the wreckage, wandered aimlessly about in the surrounding country, but all were finally located and returned to the asylum grounds.

That the earthquake shocks were of a severe nature in this



U. S. MINT ON THE MORNING AFTER THE FIRE

section of the State is attested by the records of the Lick Observatory, located on the summit of Mount Hamilton, twenty miles distant from San José. The official figures of the institution show that the shock that created such widespread havoc occurred twelve minutes and twelve seconds after 5 o'clock on the morning of April 18. During the thirty minutes following the big shake, eight distinct additional shocks were recorded on the Observatory seismograph. These disturbances continued daily at intervals, and up to May 7 twenty-four shocks of more or less severity were registered. The extent of the coast region affected by the earthquake is given at approximately four hundred miles from north to south, the disturbances being confined to the

territory two hundred miles south of San Francisco with Arroyo Grande, San Luis Obispo County, as the extreme limit in this direction, and Fort Bragg, Mendocino County, as the extreme northern limits of the 'quake. The shock was also felt at Fresno, in the San Joaquin Valley, but it was so slight that but few people in the "Raisin City" were aware of its visitation.

The greatest concern of the people in the suburban cities and towns on the peninsula side and across the bay was the steps to be pursued in taking care of the vast army of refugees that for four or five days following the 'quake and fire in the metropolis invaded these nearby places. Naturally the greatest work in this direction fell upon the shoulders of the citizens of Oakland, and



HIBERNIA BANK AFTER THE FIRE

right royally did they respond to the colossal task of relieving the distress of thousands of homeless and penniless unfortunates who had fled from the doomed city. Although Oakland itself had suffered greatly from earthquakes, this circumstance was quickly lost sight of and preparations were immediately begun to succor the refugees from across the bay. All the churches in the city were at once turned into improvised lodging houses, as were also public halls, parks and hundreds of private homes. A general relief committee of one hundred prominent citizens was formed to face the problem of feeding and housing the refugees; sub-committees from the different fraternal organizations were selected, and subscription lists started which netted large sums within a very short period. At Idora Park and in the various public squares, there sprang up with lightning rapidity camps,

tents, wooden shacks and other quaint homes whereby the homeless were afforded shelter almost as quickly as they applied for it. Later on as the demands for accommodations grew less, it was decided to concentrate these scattered places of refuge into one great camp in order to thoroughly systematize the work of relief. Accordingly a site was selected on the shores of Lake Merritt near the Piedmont hills, and, within two weeks after the great fire, a vast tented city known as the Point Adams refuge camp was installed. The camp is now being maintained by the Federal and State governments, and is under military control. Most of the tents are provided with comfortable matting; in



POWELL STREET AFTER THE FIRE
James Flood Building on the Right

others a bed of straw will suffice pending the installation of more substantial bedding. Three meals a day are furnished the camp refugees, and altogether the lot of the people domiciled at Point Adams is a happy one.

In Berkeley and Alameda, similar methods of dealing with San Francisco's homeless were adopted, and today there are few, if any, people without food or shelter on the Eastern shores of San Francisco Bay.

In addition to taking care of the victims of fire and earthquake from the metropolis, the Oakland relief committees, with the assistance of the outlying towns, sent daily to San Francisco many wagons loaded with medicines, food and other supplies for the sufferers of that city. An emergency corps was inaugurated and

wagons were dispatched by every boat to bring refugees to the Oakland side, where they were at once taken in charge by the relief authorities.

Governor George C. Pardee established his headquarters at the City Hall in Oakland on Thursday, the day after the great earthquake, and all executive business and relief work were, and are still being conducted at this place. State Adjutant General J. B. Lauck also opened headquarters at the City Hall, and from here directed the work of the State troops.

The Southern Pacific Railroad Company did much to relieve the situation by granting free transportation out of the State to all persons without means. Every train that left Oakland was jammed to its capacity with penniless refugees eager to seek fields anew, and when the railroad announced a return to normal conditions it is estimated that fully 100,000 people from Oakland, Berkeley and Alameda had availed themselves of the company's offer of free passage.

San Francisco

THE TEBLOR

A Personal Narration

By MARY AUSTIN



HERE are some fortunes harder to bear once they are done with than while they are doing, and there are three things that I shall never be able to abide in quietness again—the smell of burning, the creaking of house-beams in the night, and the roar of a great city going past me in the street.

Ours was a quiet neighborhood in the best times; undisturbed except by the hawker's cry or the seldom whistling hum of the wire, and in the two days following April eighteenth, it became a little lane out of Destruction. But nobody having suffered much in our immediate vicinity, we were left free to perceive that the very instant after the quake was tempered by the half-humorous, wholly American appreciation of a thoroughly good job. Half an hour after the temblor people sitting on their doorsteps, in bathrobes and kimonos, were admitting to each other with a half twist of laughter between tremblings that it was a really creditable shake.

The appreciation of calamity widened slowly as water rays on a mantling pond. Mercifully the temblor came at an hour when families had not divided for the day, but live wires sagging across housetops were to outdo the damage of falling walls. Almost before the dust of ruined walls had ceased rising, smoke began to go up

against the sun, which, by nine of the clock, showed bloodshot through it as the eye of Disaster.

It is perfectly safe to believe anything anyone tells you of personal adventure; the inventive faculty does not exist which could outdo the actuality; little things prick themselves on the attention as the index of the greater horror.

I remember distinctly that in the first considered interval after the temblor, I went about and took all the flowers out of the vases to save the water that was left; and that I went longer without washing my face than I ever expect to again.

I recall the red flare of a potted geranium undisturbed on a window ledge in a wall of which the brickwork dropped outward, while the roof had gone through the flooring; and the cross-section of a lodging house parted cleanly with all the little rooms unaltered, and



SAN FRANCISCO ON THE NIGHT OF MAY 18

the halls like burrows, as if it were the home of some superior sort of insect laid open to the microscope.

South of Market, in the district known as the Mission, there were cheap man-traps folded in like pasteboard, and from these, before the rip of the flames blotted out the sound, arose the thin, long scream of mortal agony.

Down on Market street Wednesday morning, when the smoke from the burning blocks behind began to pour through the windows, we saw an Italian woman kneeling on the street corner praying quietly. Her cheap belongings were scattered beside her on the ground and the crowd trampled them; a child lay on a heap of clothes and bedding beside her, covered and very quiet. The woman opened her eyes now and then, looked at the reddening smoke and

addressed herself to prayer as one sure of the stroke of fate. It was not until several days later that it occurred to me why the baby lay so quiet, and why the woman prayed instead of flying.

Not far from there, a day-old bride waited while her husband went back to the ruined hotel for some papers he had left, and the cornice fell on him; then a man who had known him, but not that he was married, came by and carried away the body and shipped it out of the city, so that for four days the bride knew not what had become of him.

There was a young man who, seeing a broken and dismantled grocery, meant no more than to save some food, for already the certainty of famine was upon the city—and was shot for looting. Then his women came and carried the body away, mother and betrothed, and laid it on the grass until space could be found for



LOOKING SOUTHEAST FROM TELEGRAPH HILL DURING FIRE

burial. They drew a handkerchief over its face, and sat quietly beside it without bitterness or weeping.

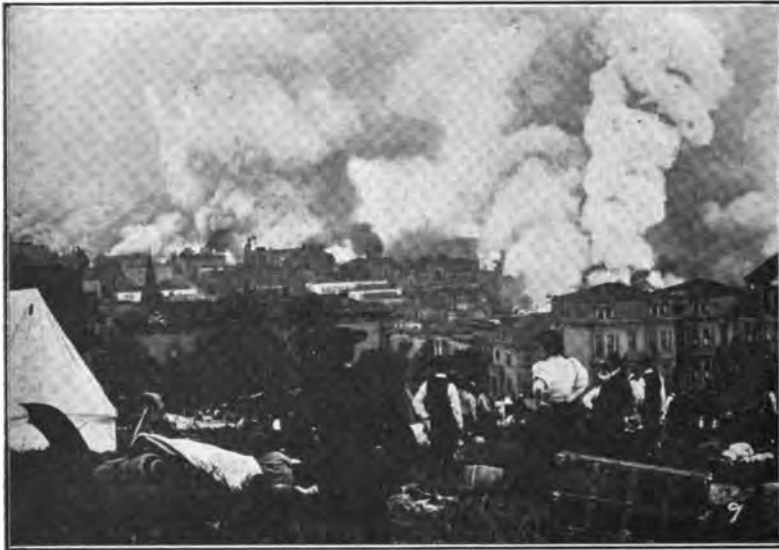
The largeness of the event had the effect of reducing private sorrow to a mere pin prick and a point of time. Everybody tells you tales like this with more or less detail. Two blocks from us a man lay all day with a placard on his breast that he was shot for looting, and no one denied the aptness of the warning. The will of the people was toward authority, and everywhere the tread of soldiery brought a relieved sense of things orderly and secure. It was not as if the city had waited for Martial Law to be declared, but as if it precipitated itself into that state by instinct as its best refuge.

In the parks were the refugees huddled on the damp sod with insufficient bedding and less food and no water. They laughed.

They had come out of their homes with scant possessions, often the least serviceable. They had lost business and clientage and tools, and they did not know if their friends had fared worse. Hot, stifling smoke billowed down upon them, cinders pattered like hail—and they laughed—not hysteria, but the laughter of unbroken courage.

That exodus to the park did not begin in our neighborhood until the second day; all the first day was spent in seeing such things as I relate, while confidently expecting the wind to blow the fire another way.

Safe to say one-half the loss of household goods might have been averted, had not the residents been too sure of such exemption. It happened not infrequently that when a man had seen his women safe



LOOKING SOUTH FROM LAFAYETTE SQUARE, 4 P. M. APRIL, 18

he went out to relief work and returning found smoking ashes—and the family had left no address.

We were told of those who had dead in their households who took them up and fled with them to the likeliest place in the hope of burial, but before it had been accomplished were pushed forward by the flames. Yet to have taken part in that agonized race for the open was worth all it cost in goods.

Before the red night paled into murky dawn thousands of people were vomited out of the angry throat of the street far down toward Market. Even the smallest child carried something, or pushed it before him on a rocking chair, or dragged it behind him in a trunk, and the thing he carried was the index of the refugee's strongest bent. All the women saved their best hats and their babies, and, if

there were no babies, some of them pushed pianos up the cement pavements.

All the faces were smutched and pallid, all the figures sloped steadily forward toward the cleared places. Behind them the expelling fire bent out over the lines of flight, the writhing smoke stooped and waved, a fine rain of cinders pattered and rustled over all the folks, and charred bits of the burning fled in the heated air and dropped among the goods. There was a strange, hot, sickish smell in the street as if it had become the hollow slot of some fiery breathing snake. I came out and stood in the pale pinkish glow and saw a man I knew hurrying down toward the gutted district, the badge of a relief committee fluttering at his coat. "Bob," I



VAN NESS AVENUE, 10:30 P. M. APRIL 19

said, "it looks like the day of judgment!" He cast back at me over his shoulder unveiled disgust at the inadequacy of my terms. "Aw!" he said, "it looks like hell!"

It was a well-bred community that poured itself out into Jefferson square, where I lay with my friend's goods, and we were packed too close for most of the minor decencies, but nobody forgot his manners. "Beg pardon!" said a man hovering over me with a 200-pound tunk. "Not at all!" I answered, making myself thin for him to step over, with an "Excuse me, Madam!" Another, fleeing from the too-heated border of the Park to its packed center, deftly up-ended a roll of bedding, turned it across the woman who lay next to me—and the woman smiled.

Right here, if you had time for it, you gripped the large, essential

spirit of the West, the ability to dramatize its own activity, and, while continuing in it, to stand off and be vastly entertained by it. In spite of individual heartsinkings, the San Franciscans during the week never lost the spirited sense of being audience to their own performance. Large figures of adventure moved through the murk of those days—Denman going out with his gun and holding up express wagons with expensively saved goods, which were dumped out on sidewalks that food might be carried to unfed hundreds; Father Ramon cutting away the timbers of St. Mary's tower, while the red glow crept across the charred cross out of reach of the hose; and the humbler sacrifices—the woman who shared her full



JEFFERSON SQUARE

breast with the child of another whose fountain had failed from weariness and fright—would that I had her name to hold in remembrance!

Everybody tells you tales like this, more, and better. All along the fire line of Van Ness avenue, heroic episodes transpired like groups in a frieze against the writhing background of furnace-heated flame; and, for a pediment to the frieze, rows of houseless, possessionless people wrapped in a large, impersonal appreciation of the spectacle.

From Gough street, looking down, we saw the great tide of fire roaring in the hollow toward Russian Hill; burning so steadily for all it burned so fast that it had the effect of immense deliberation;

roaring on toward miles of uninhabited dwellings so lately emptied of life that they appeared consciously to await their immolation; beyond the line of roofs, the hill, standing up darkly against the glow of other incalculable fires, the uplift of flames from viewless intricacies of destruction, sparks belching furiously intermittent like the spray of bursting seas. Low down in front ran besmirched Lilliputians training inadequate hose and creating tiny explosions of a block or so of expensive dwellings by which the rest of us were ultimately saved; and high against the tip of flames where it ran out in broken sparks, the figure of the priest chopping steadily at the tower with the constrained small movement of a mechanical toy.



"NOB HILL" AFTER THE FIRE
Showing the Huntington, Crocker, and Flood Residences. Fairmont
Hotel in background

Observe that a moment since I said houseless people, not homeless; for it comes to this with the bulk of San Franciscans, that they discovered the place and the spirit to be home rather than the walls and the furnishings. No matter how the insurance totals foot up, what landmarks, what treasures of art are vanished, San Francisco, *our* San Francisco is all there yet. Fast as the tall banners of smoke rose up and the flames reddened them, rose up with it something impalpable, like an exhalation. We saw it breaking up in the movement of the refugee, heard it in the tones of their voices, felt it as they wrestled in the teeth of destruction. The sharp sentences by which men called to each other to note the behavior of brick and stone dwellings contained a hint of a warning already accepted for

the new building before the old had crumbled. When the heat of conflagration outran the flames and reaching over wide avenues caught high gables and crosses of church steeples, men watching them smoke and blister and crackle into flame said shortly, "No more wooden towers for San Francisco!" and saved their breath to run with the hose.

What distinguishes the personal experience of the destruction of the grey city from all like disasters of record, is the keen appreciation of the deathlessness of the spirit of living.

For the greater part of this disaster—the irreclaimable loss of goods and houses, the violent deaths—was due chiefly to man con-



IN THE APARTMENT HOUSE DISTRICT

trivances, to the sinking of made ground, to huddled buildings cheapened by greed, to insensate clinging to the outer shells of life; the strong tug of nature was always toward the renewal of it. Births near their time came on hurriedly; children were delivered in the streets or the midst of burnings, and none the worse for the absence of conventional circumstance; marriages were made amazingly, as the disorder of the social world threw all men back severely upon its primal institutions.

After a great lapse of time, when earthquake stories had become matter for humorous reminiscence, burning blocks topics of daily news, and standing in the bread line a fixed habit—by the morning of the third day, to be exact—there arose a threat of peril greater

than the thirst or famine, which all the world rose up swiftly to relieve.

Thousands of families had camped in parks not meant to be lived in, but to be looked at ; lacking the most elementary means of sanitation. With the rising of the sun, a stench arose from these places and increased perceptibly ; spreading with it like an exhalation, went the fear of pestilence. But this at least was a dread that every man could fight at his own camp, and the fight was the modern conviction of the relativity of sanitation to health. By mid-morning the condition of Jefferson Square was such that I should not have trusted myself to it for three hours more, but in three hours it was



TIVOLI THEATRE

made safe by no more organized effort than came of the intelligent recognition of the peril. They cleaned the camp first, and organized committees of sanitation afterward.

There have been some unconsidered references of the earthquake disaster to the judgment of God ; happily not much of it, but enough to make pertinent some conclusions that shaped themselves swiftly as the city fought and ran. Not to quarrel with the intelligence that reads God behind seismic disturbance, one must still note that the actual damage done by God to the city was small beside the possibilities for damage that reside in man-contrivances ; for most man-made things do inherently carry the elements of their own destruction.

How much of all that happened of distress and inestimable loss could have been averted if men would live along the line of the Original Intention, with wide, clean breathing-spaces and room for green growing things to push up between?

I have an indistinct impression that the calendar time spent in the city after the temblor was about ten days. I remember the night of rain, and seeing a grown man sitting on a curbstone the morning after, sobbing in the final break-down of bodily endurance. I remember too the sigh of the wind through windows of desolate walls, and the screech and clack of ruined cornices in the red noisy night, and the cheerful banging of pianos in the camps; the burials in



FAIRMONT HOTEL AFTER THE FIRE

trenches and the little, bluish, grave-long heaps of burning among the ruins of Chinatown, and the laughter that shook us as in the midst of the ashy desert we poured in dogged stream to the ferry, at a placard that in a half-burned building where activity had begun again, swung about in the wind and displayed this legend:

DON'T TALK EARTHQUAKE, TALK BUSINESS.

All these things seem to have occurred within a short space of days, but when I came out at last at Berkeley—too blossomy, too full-leaved, too radiant—by this token I knew that a great hiatus had taken place. It had been long enough to forget that the smell of sun-steeped roses could be sweet.

Carmel-by-the-Sea, Cal.

THE EARTHQUAKE AT STANFORD UNIVERSITY

By *DAVID STARR JORDAN*



IN THE earthquake of April 18, along the line of the fault which extends from near Glen Ellen in Sonoma county to near Soledad in Monterey county, the buildings in general were affected as follows. All unprotected brick work and feeble structures generally were thrown down. Tall structures, as chimneys and spires, were snapped off as by a lash of a whip. The twisting motion threw off plaster, chiefly on lower floors, that on ceilings generally remaining intact. Well-built wooden buildings, buildings reinforced by steel, and buildings of concrete with steel wires (Ransome's patent) were little harmed.

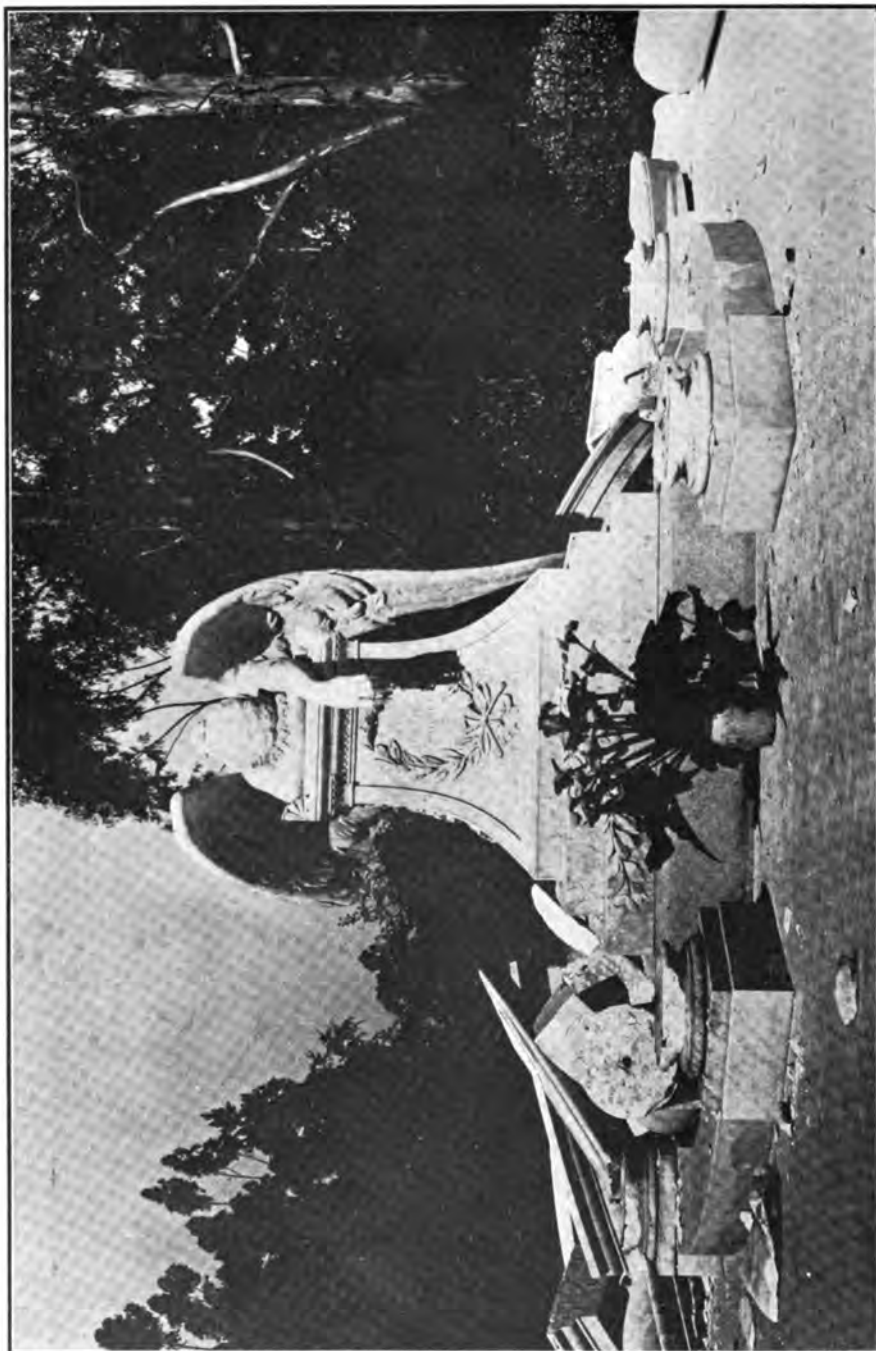
The buildings of Stanford University stand at a distance of about five miles from the line of the fault. In these, the injuries are in brief as follows:

1. The Memorial Church was badly damaged by the fall of the tall wooden spire—tile covered—and by the fall of the flying buttresses of stone. The spire crashed through the roof, the concussion blowing off the roof of the apse and the upper front



INTERIOR OF STANFORD MEMORIAL CHURCH AFTER THE SHAKE

Photo by A. S. Dudley



THE STATUE OF GRIEF, STANFORD UNIVERSITY, AFTER THE EARTHQUAKE

Photo by Frank Davey

wall of the church. The flying buttresses crashed through the transepts. The walls of the church, of steel-brick construction, covered with stone, are intact, as are also the tower, the organ and the chime. Only the face of the clock is destroyed. The interior mosaics and the stained glass windows are little harmed.

2. The unfinished Library was badly wrecked. The great dome and its steel supports are unharmed; their swaying completely wrecked the rest of the building, of brick with stone face.

3. The new Gymnasium, of brick faced with stone, is almost completely wrecked. In this and the other unfinished buildings the soft state of the mortar left the walls weak.

4. Those parts of the Museum which were made of brick



THE LIBRARY, STANFORD UNIVERSITY Photo by Frank Davey

faced with stucco, were largely wrecked. The central part of concrete, strengthened by steel rods, is intact.

5. The Stanford residence in San Francisco, a large wooden structure, heavily built, was not harmed by the earthquake, but was completely consumed by fire.

6. The inner quadrangle and Engineering shops, of heavy masonry and one story high, are almost unharmed.

7. The outer quadrangle contains four large buildings reinforced by steel, the laboratories of Zoology, Botany and Physiology, with the temporary Library and the Assembly Hall. These are virtually unharmed.

8. The Power-house was partly wrecked by the tall stone

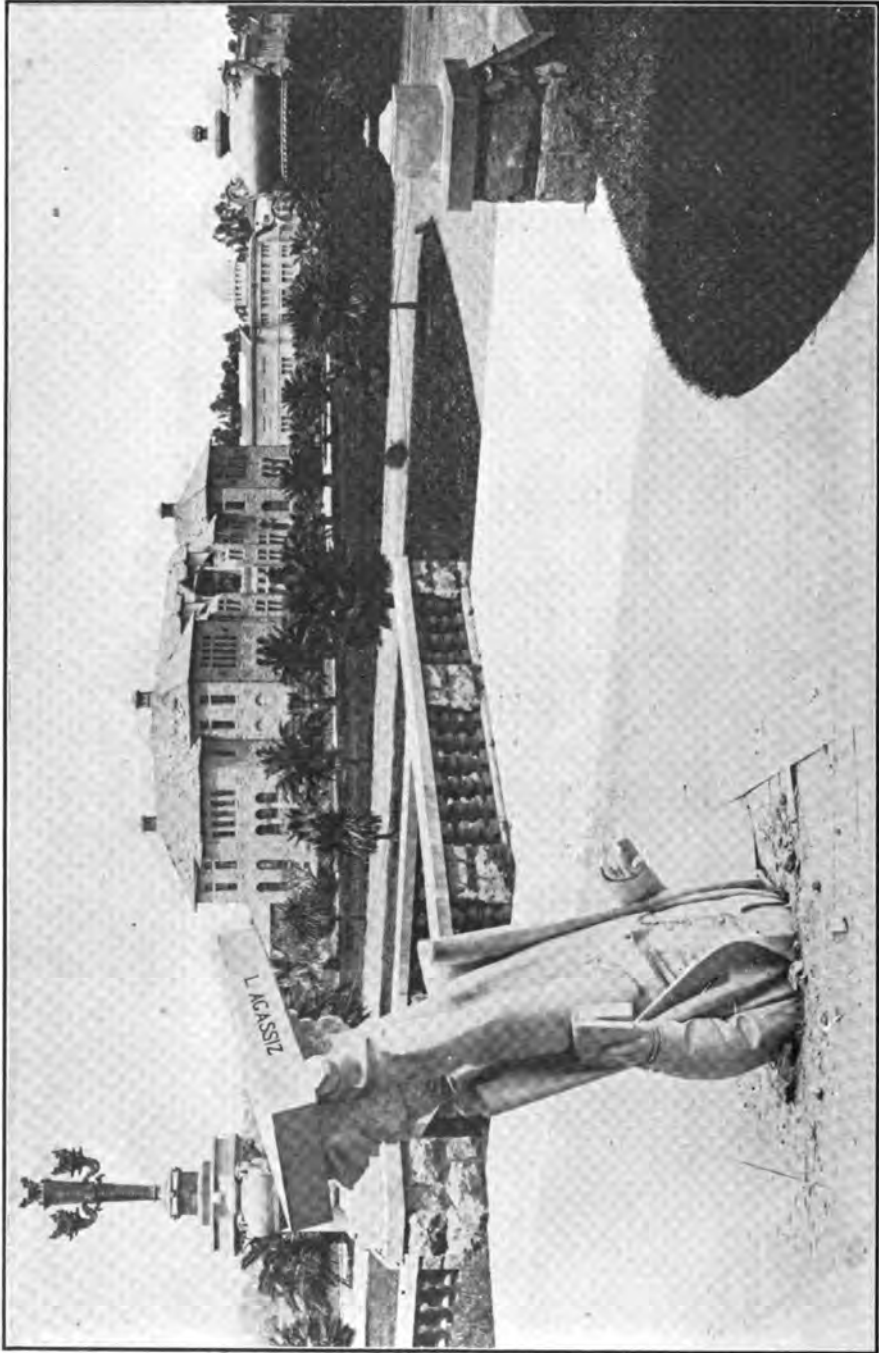


Photo by Frank Davey

A FREAK OF THE EARTHQUAKE AT STANFORD UNIVERSITY
The Chemistry Building is in the middle distance, the Museum beyond it

chimney, which was snapped off like the lash of a whip.

9. The Memorial Arch had its upper part snapped off and is split almost to the base, so that it is largely a wreck. This structure was of brick, faced with stone.

10. The Chemistry building lost all its chimneys and is externally damaged by the fall of part of its stone facing. The building and its contents are little injured.

11. The four large buildings of the outer quadrangle, of brick faced with stone, are somewhat damaged, the History building least, the incomplete Mining building most.

12. Roble Hall, women's dormitory, of concrete with steel wires, is unharmed except for the fall of two ornamental chimneys.



EXTERIOR OF STANFORD MEMORIAL CHURCH Photo by Frank Davey

13. Encina Hall, men's dormitory, a very large, finely built stone building, was injured by the fall of stone chimneys, one young man being killed. The building also has a serious fissure in each of two upper corners, but is otherwise unharmed.

The wooden buildings on the grounds lost only chimneys and parts of plastering. No injury was done to books, and little to apparatus or collections. The working part of the University, as distinct from its architectural effects, is little harmed. The most effective part of its architecture next to the great church, the inner arcades with their Spanish arches and towers, is wholly undisturbed.

The following is the report of a committee of the engineers and architects of the University faculty:

After a careful examination of the buildings used for University purposes, including Roble and Encina Halls, we find that the damage from the recent earthquake is much less than was anticipated.

The buildings of the inner quadrangle, the one-story buildings of the outer quadrangle (with one exception), the Zoology building, the Physiology building, the Assembly Hall, the Library, the old Engineering building, the Machine shop, the Foundry, the Mechanical laboratory, are substantially intact, and can be used after a few minor repairs.

The four corner two-story buildings and the small one-story Physics building of the outer quadrangle, the Forge shop, the Wood-working shop, and the Chemistry building will require partial rebuilding of some of the walls.

In Encina Hall the south walls of the east and west wings will require partial reconstruction; also those portions injured by the two fallen stone chimneys. The fall of one of the chimneys, which tore through the floors to the basement, caused the death of one student. Aside from the damage noted above, the building, as a whole, is uninjured and perfectly safe.

The damage to Roble Hall is confined to the two holes torn in the floors by the falling chimneys. The remainder of the building shows practically no evidence of having passed through an earthquake.

In the opinion of the committee, such of the buildings mentioned above as are necessary for carrying on the University work can easily be made ready for occupancy and safe use in time for the opening of the University on August 23.

Our full and detailed examination of the buildings, from foundation to roof, shows that the actual damage to their stability is less than might be inferred from external appearances.

Signed by the committee,

CHARLES B. WING,
WILLIAM F. DURAND,

ARTHUR B. CLARK,
CHARLES E. HODGES,

CHARLES D. MARX, Chairman.

The greatest loss is that of the church, the center of the aesthetic life as well as of the religious life of the University. This building will doubtless in time be restored, but with a Spanish dome instead of a spire on the tower, and without the flying buttresses, which belong to Gothic cathedrals, but are unsafe in lands where the mountains are not perfectly at rest.

Workmen are now engaged in the removal of debris. Stonemasons are taking down loose stones. The work of repair on the quadrangles and laboratories will begin at once, and these will

be in readiness at the beginning of the fall term, August 23. It is not likely that the Library and Gymnasium will be restored, at least in the near future. Some interested friend may come to its relief, when these things must be replaced.

There will be no falling-off in attendance. The people of California never lack in courage. The Stanford alumni are loyal in the highest degree. Daring and forceful spirits in the East will flock to a University where things happen and the very rocks are alive with energy. Stanford University has met with greater losses and greater calamities than this, and the indomitable spirit of its founder carried it through. The example of the faith, zeal and courage of Mrs. Stanford is not lost on her successors.

The interests of the University as a center of teaching and of research are first to be considered. The work will go on next year, exactly as already planned, and there will be no set-back in the work of the University.

GEOLOGY AND THE EARTHQUAKE

By J. C. BRANNER



WHAT is it? what causes it? where does it come from? will it happen again? and, if so, when and where and how much? These are the questions the geologist is expected to answer regarding earthquakes in general, and in particular regarding the San Francisco earthquake of April 18th. And, as usually happens in such cases, the geologist can half answer some of these questions, and others he cannot answer at all.

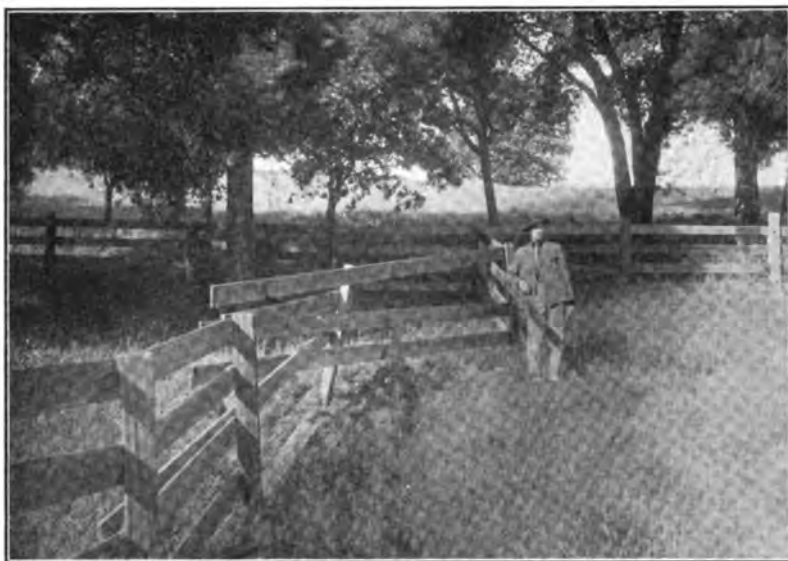
To begin with the last item—the “how much?” Was the late earthquake really a severe one, or was not its severity and importance greatly exaggerated as compared with great earthquakes, and was not this exaggeration carried still further by the burning of San Francisco, which immediately followed?

The scales in use among geologists for classifying earthquakes divide them into ten classes, according to their violence or intensity. By the Rossi-Forel or the Mercalli scales, the San Francisco earthquake stands somewhere between eight and ten at points of greatest disturbance; from which we infer that we may trust our senses to the extent of believing that it was no small affair.

The picturesque and sensational features of earthquakes are abundant and entertaining, but to the geologist these features have only a passing and accidental interest. For example, if a chimney top, broken off by an earthquake, should fall on a man in such a fashion

Illustrations for this article are from photographs taken April 21-22, 1906, by E. G. Dudley.

as to go right over his head and leave him standing unhurt in the flue, it would be a striking, and to the man a very important, fact; but, from a geological point of view, its only importance would lie in the fact that the shock was severe enough to throw down the chimney. One hears, in the vicinity of Palo Alto, of a herd of cattle having been swallowed up in the Santa Cruz Mountains and how they had to be dug out. This seems like a genuine earthquake tragedy; but it turns out that at the time of the earthquake there was a landslide affecting some ten acres of land on which the herd was grazing. On the higher side, the slide left banks up which the cattle could not climb, so that a road had to be dug to get them out. This again turns out to be a matter of but little importance



AN EARTHQUAKE EFFECT IN PORTOLA VALLEY

The man stands at the fault line. The panel of fence behind him shows the former direction of the fence, which has been offset eight feet toward the left.

from the geologic point of view. Mention is made of such cases simply to call attention away from the strange and bizarre, and to direct it more effectively to what are regarded as matters of fundamental importance in connection with earthquakes. The phenomena that bear directly upon the causes and throw some light upon the past and future seismic history of the region are evidently the ones of the deepest importance, and it is to some of these that attention is directed.

In the Portola Valley, five miles west of Stanford University, there runs through a pasture field what looks like a plowed furrow. It is such a furrow as might be made by a big turning-plow, except that

the sod is not turned clear over, the clods and grass roots are rough and irregular, and the furrow not straight or gently curved, but ragged and lumpy and sometimes forked. Where this furrow crosses a fence-line, the fence has an offset in it amounting to a little more than eight feet. A few hundred yards away, it crosses another fence-row at a low angle and here there is eight feet more fence than is now needed; where it crosses a third fence at a right angle there is another offset in the fence of fully eight feet; at another place it crosses a line of water-mains, and the pipes are displaced more than six feet.

To the passing observer these facts may appear trivial enough,

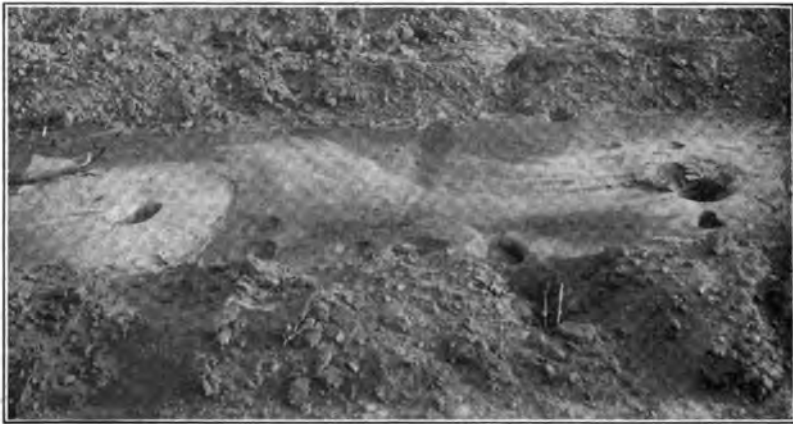


BREAK ALONG THE STEVENS CREEK FAULT
Five miles southeast of Stanford University

but to the geologist they are full of interest and importance, for they lie close to the source of the earthquake; they are produced by a lateral displacement along a line of fracture in the crust of the earth. Where this fracture passes through the Santa Cruz range of mountains, it was worked out from the geology some ten or fifteen years ago and was gradually traced in detail for a distance of forty-five miles. Starting on the coast at Mussel Rock, seven-and-a-half miles south of the Cliff House, it takes a course of south about 40 degrees east, following certain topographic features that are plain enough on the ground. It runs through San Andreas and Crystal Springs lakes, Portola valley, passes just west of the peak of Black Moun-

tain, follows along Stevens Creek cañon, and, passing to the west of Loma Prieta, continues in the direction of Sargents station on the Southern Pacific Railway.

Immediately after the recent earthquake this old line of fracture was visited at a number of places and everywhere it showed evidence of having been newly broken and displaced. The displacement was mostly a lateral one, amounting to a maximum of eight-and-a-half feet, but there was also some vertical movement which probably does not exceed three feet in the region thus far examined. The country southwest of the fault sank and moved at the same time toward the northwest, or else the region on the opposite side rose two or three feet and moved about eight feet toward the southeast. When we reflect that these mountain masses were moved such a



MOUNDS OF SAND BROUGHT UP BY WATER THROUGH EARTHQUAKE
CRACKS NEAR MILPITAS

distance in a few seconds and stopped suddenly, there is no cause for wonder at the jar produced in the adjacent region.

The materials visible in the line of this fault are worthy of note. The fault is an old one, along which many and great movements have taken place; the rocks have therefore not only been broken across, but they have been crushed, recrushed and ground up until it is now difficult or impossible to find large blocks close to the fault-line. Furthermore, the word "line" is here somewhat misleading, for it is really a belt or zone, from twenty to fifty or one hundred feet across, rather than a clean-cut line or plane. At the surface, decomposition has further attacked the materials and the soil is commonly deep and yielding and this soil has in all probability taken up a good deal of the actual displacement by lagging, stretching and crushing; this seems to account for the fact that the displacement is not everywhere of the same amount.

The phenomena to be seen at the surface along this line of displacement are such as might be expected. Wherever fences cross the frac-

ture at right angles they are torn in two and the broken ends now stand from one to eight feet apart; roads that were formerly straight are now bent; barbed-wire fences are pulled in two or they are variously shortened; water-pipe lines have the pipes either broken and pulled apart, or where the pipe line crosses the fracture at a low angle the pipes are telescoped into each other from four to six feet. A dam across Crystal Springs lake crossed this old fault-line at right angles; it was expected that the dam would be torn in two or badly fractured, but it was so well built that the fault was compelled to pass round the dam and through the rocks at its end. The same thing happened at the dam across the east end of San Andreas lake. Where trees stood directly upon the break they have been uprooted, and in some cases they have been split in two.

Such are a few of the evidences of a displacement of the rocks



FRACTURE IN A ROAD BETWEEN MILPITAS AND ALVISO, SANTA CLARA COUNTY

over a distance of some seventy-five miles through the Santa Cruz mountains south of San Francisco. North of that city the topography suggests that this same, or a closely related, fault passes through Tomales Bay, down the Gualala and Garcia rivers, entering the ocean at the town of Manchester near Point Arena light-house. It is expected that a further examination will disclose similar evidences of displacement along this line north of San Francisco.

The fault-line mentioned, however, is far from being the only one in the Coast Ranges. The long parallel valleys of the state are due, in part at least, to faulting that took place a long while ago. One great fault, that seems to have been involved in the San Francisco earthquake, follows the entire length of the Santa Clara valley, from about the head-waters of the San Benito river south of Hollister, past San José, through the Bay of San Francisco, up the valley past

Santa Rosa, Ukiah, Willets and down the Eel river, or parallel with it, to Eureka in Humboldt county. Since the earthquake, this fault-line has not been seen by the writer, but many cracks have opened along its axis near the south end of the Bay of San Francisco between Milpitas and Alviso. At this place not only were cracks opened from one to four feet wide and five or six feet deep in the soil, but for a couple of days water ran out through some of the cracks bringing up sand and forming small cones about them. Some wells began to overflow that hitherto had never done so, the flow in other wells increased very decidedly, while in still others the water sank somewhat.

Evidently the earthquake and the faults are related; but did the faults make the earthquake, or did the earthquake make the faults? It is a fair question. Look at the matter for a moment from a purely theoretical point of view. Conceive of a mass of rock as big as a big house under pressure enough to break it—would not the breaking produce a jarring of the surrounding mass? Or imagine such a rock already broken across and the two faces forced past each other for a distance of eight feet—would not this movement jar the surrounding mass? And if the break were three hundred miles long would not the jar extend into the adjacent rocks and soil in the same fashion and for many miles? This theory seems to explain the earthquake.

There are fractures, however, that evidently must be attributed to the earthquake; such are those connected with landslides, the disturbance of steep and unstable slopes, the settling of loose masses of gravels and the like in wet ground. But these are all matters of small importance and quite incapable of producing earthquakes, except of a very local kind.

It is plain enough that faults are caused by unequal pressure developed in the rocks. This pressure may bend the rocks, or it may break them and thrust them past each other; and when they break, the fractures may pass down for thousands of feet, or even for miles, into the rocks beneath the surface. What causes this strain or inequality of pressure is not so evident. Three theories have been suggested: first, the cooling and consequent contraction of hot rocks; second, the heating and consequent expansion of cool rocks; third, the shifting of loads upon the earth's crust by the washing of land-masses into the sea.

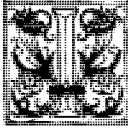
But whatever theory one adopts regarding the remote causes of earthquakes, the conclusion is inevitable that they are produced by natural causes, one of which is the relief of strains within the earth's crust along lines of fracture. The knowledge that they are due to natural causes ought to contribute to a philosophical view of them and rid them to some extent of the terror they inspire in the minds of those who attribute them to the wrath of God or to other supernatural causes.

As for the earthquake happening again, the only guide the geologist has is the record found in the rocks. This record shows plainly enough that there always have been earthquakes. As for anything more specific in regard to time and place and violence of future earthquakes, the geologist must leave prophecy to the prophets.

ORGANIZATION IN THE CRISIS

By *RUFUS P. JENNINGS*

Secretary of Citizens' Relief Committee and the Committee on the Reconstruction of San Francisco



IN SAN FRANCISCO'S recent ordeal, her men of affairs have shown their mettle. They proved themselves able to act promptly, to organize quickly and effectively, and to handle a situation of stupendous gravity. As for the people of San Francisco, they displayed a quietness and courage, a willingness to obey and to comply with every measure inaugurated for the common welfare, that has been a matter of general comment.

Remarkably few acts of lawlessness have occurred during these days of disturbed conditions, despite the lurid tales to the contrary that have been originated and published outside.

The suppression of lawlessness was due first of all to the fact of the immediate closing of all saloons early on the morning of the eighteenth, to the efficient work of the police, and to the fortuitous circumstance that the United States troops were at hand, and there was therefore no delay in putting into operation this most effective agency in the preservation of law and order. The National Guard also was promptly on the scene. The United States troops joined with the fire department and police in heroic efforts to fight the conflagration.

The city was never for one moment under martial law, although



GENERAL GREELY AND STAFF

Illustrations of this article are from photographs taken by Turrill & Miller, for the California Promotion Committee.



HEADQUARTERS OF COMMITTEE ON RECONSTRUCTION OF SAN FRANCISCO

the presence of the military led some to infer that such was the case. The mayor was at all times the authoritative head, according to the powers vested in him by reason of his office.

It is doubtful if there has ever been recorded so prompt and decisive action in organizing in the midst of disaster as was displayed in San Francisco on the eighteenth of April. Thoughtful men of business, professional men, capitalists, realizing that the city was face to face with a tremendous crisis, quietly turned their backs upon the inevitable destruction of their own property, and, leaving the



HEADQUARTERS FINANCE COMMITTEE OF RELIEF AND RED CROSS



SEVEN THOUSAND SACKS OF FLOUR FOR RELIEF

blazing walls to crumble and fall, picked their way through streets heaped high with debris and swept by sheets of flame, to the headquarters of the mayor. They came together, these men, as by a common impulse, ready to grapple with the task that they saw confronting them.

By three o'clock on the afternoon of the eighteenth, the organization known as the Citizens' Committee of Fifty was formed, a number of San Francisco's representative men having convened for that purpose at the call of the mayor in the Hall of Justice. In the midst of the meeting thus called they were obliged to adjourn to the Plaza opposite, the fire having encroached upon the Hall of Justice. An hour later the Plaza had in turn become untenable, and the session



PART OF THE UNBURNED DISTRICT OF SAN FRANCISCO
Photograph taken May 13, 1906

was interrupted by an exodus to the Fairmont Hotel, about half a mile further west, where deliberations were resumed. On the morning of Thursday, the nineteenth, the fire had reached the Fairmont, and the meeting of the Citizens' Committee was adjourned to the North End Police Station. Here the organization was completed by establishing sub-committees and the appointment of the men who were to serve as chairmen of these committees.

By noon the fire had reached the North End Police Station, and headquarters were again moved, this time to Franklin Hall on Fillmore street, where the entire building was appropriated for the use of the Citizens' Committee, and where it remained through the



EAST STREET SOUTH FROM MARKET SHOWING FERRY POST OFFICE
Photograph taken May 10, 1906

ensuing days. The Committee had thus established itself in five different places and been driven out by the fire four times.

The sub-committees instituted by the Citizens' Committee were as follows:

Relief of the Hungry	Restoration of Fires in Dwellings
Housing the Homeless	Restoration of Abattoirs
Relief of the Sick and Wounded	Resumption of Transportation
Drugs and Medical Supplies	Resumption of Civil Government
Relief of the Chinese	Resumption of the Judiciary
Transportation of Refugees	Resumption of Retail Trade
Citizens' Police	Organization of the Wholesalers
Auxiliary Fire	Finance
Restoration of Water	History and Statistics
Restoration of Light and Telephone	Sanitation

The chairmen of these sub-committees were given the privilege of selecting their own committeemen. This was done at once, and

by noon of Thursday, the nineteenth of April, a complete organization was in harness. Other committees and departments were appointed for special work under the several sub-committees.

In Franklin Hall meetings of the Citizens' Committee and of sub-committees were in constant session, the first and immediate work being directed to the housing and shelter of the homeless, feeding the hungry, and caring for the sick and injured.

These headquarters, in a hall hitherto but little known in the great city, became at once the center of its administrative activities. Throngs of people, in quest of information of every conceivable character, surged in and out of the building through all of the busy hours of day and night. Each and every one of these anxious visitors received due consideration and attention, and their requests, no matter how trivial, were granted wherever possible. The systematic handling of these crowds had a reassuring effect and was most helpful in bringing order out of what otherwise would have been chaos. A busier place, yet orderly, has seldom been seen than was Franklin Hall during these strenuous days. Men prominent in business and social life, regardless of their personal affairs, came in throngs to the headquarters eagerly volunteering their services in the relief work. There seemed to be no demand for service in any special line, but that the right man to render that service was at hand, this one for this task, that one for that—the assignments fell with decision and judgment. Men of thought and of action, who had been accustomed to plan and to do, found themselves undaunted in this sudden and unexpected crisis and rose to meet it with all the mental and physical alertness born of the stimulus of emergency.

All of the City Departments collaborated with the Citizens' Committee, and, while the resources of these departments were taxed to the utmost, the demands were met with all possible dispatch and effectiveness.

Active measures were taken to preserve the health conditions of the great city in these disordered days, and the success attending such measures was noteworthy. The health conditions were remarkably good throughout; so much so as to occasion wonder even among those who had these conditions in charge. Theirs was no easy task considering the fact that the water supply was short, many of the mains having been broken; that the garbage crematory had been damaged so as to be out of commission temporarily; and that it was not considered advisable to use the sewers until they had been inspected for possible breaks.

Orders were issued restricting the use of water, householders not being allowed to use water from their private faucets but being obliged to go for their supply to some one place of distribution designated for such block. The use of toilets in dwellings was pro-

hibited. Garbage was collected by wagons, placed on scows and towed out into the ocean, where it was deposited. Orders were issued to boil all water used for drinking purposes. "And shall we boil the water we use for cooking, too?" asked one woman eager to conform to all regulations. The beneficent climate of San Francisco was never more conspicuously to the front than in these days of enforced open-air life suddenly brought upon thousands and thousands of people.

The members of the Red Cross worked in close affiliation with the Citizens' Committee, taking charge of the distribution of supplies and clothing, the arrangement of camps, and the establishing of emergency, maternity and general hospitals.

At the headquarters of the Citizens' Committee thousands of telegrams and letters were pouring in in a steady stream; these were from all parts of the world. They were in the nature of inquiries regarding friends, messages of sympathy, offers of assistance or contributions, and suggestions of every conceivable kind. Each of these communications was answered promptly, oftentimes in detail, and referred to the proper committee or department for attention. The replying to all communications in this systematic manner and at the time of such a crisis is probably unprecedented.

Even before the fire had been arrested in its work of devastation, the men of affairs turned their faces toward the future and their thoughts to the rebuilding of the city.

As soon, therefore, as the relief work was in systematic operation, a consummation which was greatly facilitated by the taking over of the distribution of supplies by the United States Army, a committee of forty on the Reconstruction of San Francisco was appointed by the mayor, established headquarters at Century Hall, and vigorously entered upon its duties.

This committee is divided into sub-committees grouped as follows:

FINANCE.

Finance—

Its duties shall include the consideration of the amount and limitation of municipal indebtedness, the manner and means of securing the funds needed for municipal restoration, and also the manner and mode of securing funds for private and individual necessities and enterprises.

Assessment, Municipal Revenue and Taxation—

It shall co-operate with the Finance Committee; its province shall include the consideration of the revenue which may be derived for municipal needs by taxation on real and personal property and from licenses.

Insurance.

CITY GOVERNMENT.

Municipal Departments, including Police—

It shall consider the needs and reorganization of the various branches of municipal administration.

Outside Policing, including Army, Navy, Militia and Specials.

LEGISLATION.

Special Session of the Legislature, and on State Legislation, including Constitutional Amendments—

It shall consider all necessary subjects of legislation to be acted upon at the special session, if called; to offer suggestions to the Governor of the State as to the scope of the call for a special session and the subjects to be embraced therein, and to aid generally in the promotion of the city's interests and the interests of her people in matters brought before the Legislature.

Judiciary—

It shall pass on the legality and validity of any proposed legislation or acts referred to them for consideration by the committee or its chairman, or by any sub-committee.

Charter Amendments—

It shall consider and recommend necessary amendments to the charter and such constitutional amendments as may be necessary to give validity to the same.

STRUCTURAL PLANS.

Condemnation of Old Buildings.

Building Laws and General Architectural and Engineering Plans—

It shall co-operate with the committee of and from the Board of Supervisors.

Securing Structural Material.

Public Buildings, Federal.

Public Buildings, Municipal, including Schools.

Statistics.

Supervisors' Committee on Building Laws.

Auxiliary to Supervisors' Committee.

GENERAL STREET AND PARK PLANS.

Burnham Plans, Parks, Reservoirs, Boulevards and General Beautifications.

Permanent Location of Chinatown.

PUBLIC UTILITIES.

Sewers, Hospitals and Health.

Water Supply and Fire Department.

Harbor Front, Wharves, Docks and Shipping.

Lighting and Electricity, including Telephone, Telegraph, Electric Light and Power System, except railways.

Transportation, including street and commercial railways.

Library and Restoration Thereof.

EXTENDING, WIDENING AND GRADING STREETS,
and Restoring Pavements.

PRESS.

HISTORY.

The Committee on Reconstruction is not unmindful of what San Francisco has before it in the task of rebuilding. It realizes that patience, indomitable energy and judgment must have their perfect work in fulfilling this task, but it also realizes that there is a spirit in this city of the Western Sea that will surmount all obstacles. With head erect and steady purpose in her eyes, San Francisco undaunted looks out upon the future.

San Francisco

THE RELIEF WORK IN SAN FRANCISCO

By JACOB VOORSANGER
Chairman of the Food Committee



IN THE ritual of the Synagogue for the New Year and the Day of Atonement, fatalistic like all Oriental rituals, there occurs the famous poem of Rabbi Amnon of Mayence, which is the quintessence of all doctrine on foreordination and predestination. "On the New Year it is written, and on the Day of Atonement it is finally ordered," begins the martyr-rabbi, re-iterating in his epigrammatic texts the old Talmudical declarations that the Books of Record are open before Almighty God; that therein is written the destiny of all men; and that the latter pass before him like sheep beneath the shepherd's hand. "It is written and ordained," to continue for a moment Amnon's description, "who will live and who will die * * * who by fire and who by water, who by earthquake and who by pestilence." Out of the terrible personal experience of this learned mediæval Jew came a lesson we in San Francisco have spelled out to the very last letter of the alphabet, and we are still learning, still under the spell of the cataclysm that wiped out our past and compels us to interrogate the future.

Five o'clock and thirteen minutes on the morning of Wednesday, April eighteenth, 1906. Our latest descendants will repeat with horror the awful tradition of those fateful forty-eight seconds when the earth quaked, when the wrath of God seemed to thunder out the world's doom and the land and its people seemed to await death and destruction. Ask no more about those awful seconds. They who can describe the earthquake possess more graphic powers than are at my command. You may as well ask lambs led to the shambles to minutely describe their sensations when their doom is reflected in the mirror of the knife that presently will cut their throats. I know a few facts about the work after the earthquake—but, I am not ashamed to own it, the terror of those four-fifths of a minute was a common one. When we realized at last that we had escaped the doom of death, we did not yet know what the inscrutable hand of Destiny had traced for us. In the crashing, tumbling buildings we read the death of our prosperity; in the wild flames we traced the fall of our beautiful city; in the faces of the fleeing, terrorized masses there was written a mute *Kismet*—a conviction of an appalling, yet undefined, fate; a wild, astounding certainty that God and the people and the earth had parted company.

And after the earthquake, the fire. The historic holocausts have faded into insignificance before this latest manifestation of man's impotency to control destiny. Neither Nineveh, nor Constantinople, nor Nero's Rome, nor London, nor Chicago, nor Baltimore have

witnessed the terrible majesty of fire as we witnessed it. Nor Vesuvius, nor Mauna Loa, nor the spitting columns of Mont Pelee could inspire the terror of those mountains and forests of fire reflected in the placid bay, surely become a sea of tears. For sixty hours the flames raged and consumed. For three days our terror-stricken populace awaited the complete destruction of the city. The merciful west wind stayed the hand of Death—and now we are working our way out of the valley of the shadow. I said one hour after the earthquake that we had the advantage of all the world, for it still awaited its Day of Judgment and we had had ours. Grim joke, that; but the truth underlying is that Almighty God cannot, could not, send us a more terrible experience than this of quake and holocaust, desolation and impoverishment, and I make this statement in the face of all the remarkable spirit our people have manifested, in the face of the wondrous hope and courage that pervaded us all, the more remarkable because of the awful terror that did not paralyze our energies and convert thousands of us into raving maniacs or despairing, babbling idiots.

One hour after the earthquake we were all at work. Out of crumbling homes rushed heroes and heroines. Out of the pathetic crowds huddled in the streets came men and women with spirit in them. The mighty force of self-preservation began to operate. Out of the gaping jaws of death came a new love of life, and out of the ruins a new hope of restoration. Literally, truthfully, the new San Francisco was born ten minutes after the earthquake, and before the fire had eaten its hungry way to the heart of the fair city, before the hour had expired, many of us had already found our way to the Pavilion on Larkin street, drawn thither by a common impulse to organize for the rescue of the dead and wounded. And there were enacted scenes that will linger in our memory and become themes for the future singers and poets of the West. The old prophets and rabbis, in the years that separate us from them, already foreshadowed the times when human nature, attaining to its glorious maximum, would call into existence the time of Messiah—the time of a humanity made whole and sound by its great virtues and healed from its great sorrows and afflictions. It seemed so to me, in this second hour of the catastrophe, and in the marvelous hours that followed, that God had mercifully permitted me to witness the noble rise of human nature to its fullest height. The scene was pitiful enough; but, truly, its pitiful aspect was overshadowed by the remarkable humanity of man to man witnessed in those supreme hours. I can scarcely describe the motley crowd that came rushing into the improvised hospital. Without, the automobile emergency service—let some other pen descant upon the vast assistance rendered us by the magical car—had already begun its blessed, helpful work in bringing in the

dead and wounded. Within, an army of physicians, nurses, clergymen, monks, nuns, Sisters of Mercy, a crowd of all and no description, stood ready to render service—service of the body and service of the soul. But all station, rank and creed were as completely forgotten as if they had never existed. On mattresses and cots lingered the maimed and the bruised, and as there was but one art of prompt healing, so was there but one religion. The touch of God was upon man, and out of the crumbling churches and synagogues had come the spirit of love and peace. We ministered that morning to a congregation that heard but one interpretation. I saw a cowed monk lean over an orthodox Jew and whisper words of the tenderest comfort into his ears. I saw nuns, in all their picturesque raiment, face the publicity of the crowd as if they had never lived in seclusion. The Archbishop and the Bishop forgot their ranks and became nurses. Out of the bustle and apparent confusion came splendid order; surgical instruments were brought in; operating tables fixed; medicines, bandages, lint, cotton, everything needful appeared as by magic, and the organizing genius of Dr. James W. Ward, President of the Board of Health, before the hour had expired, had created a hospital as perfect in its appointment as the circumstances permitted. Among the men whose names shine out with splendor in the record of the catastrophe let Dr. Ward be especially remembered. His courage, his presence of mind, his fine capacity for organization, even more than his science, relieved the terrors of those early hours and subsequently reduced the fears of disease that afflicted the minds of the terror-stricken people.

Whilst doctors and lawyers and clergymen were busy at the Pavilion, Mayor Schmitz and a number of young men had rallied at the old City Hall, the Hall of Justice. Schmitz became the man of the moment and the hour. There were two opinions about Eugene Schmitz before the earthquake; his friends and enemies were many; they attributed to him the maximum and minimum of political sagacity and competency. There is but one opinion of Mayor Schmitz today in our stricken city. His courage and presence of mind in the hour of danger, his splendid capacity for organization, his remarkable cheerfulness in the midst of trying conditions, his quick perception of the needs of the hour—these qualities have justly earned the appreciation of all citizens, regardless of rank or political affiliations. There were a number of clerical calamity-howlers in our city, who, like Titus Oates in London in 1665, had attributed to our chief magistrate the cause for all the real and imaginary troubles, physical, ethical and moral, that had made their appearance in our midst. These self-same calamity-howlers now recite Schmitz's praises in wondrous unison. It is uncertain how long this theological amity will continue; possibly until the next municipal campaign,

for the emotions of politics are as unstable as quicksilver; but meanwhile the quill of the historian has traced the name of Eugene Schmitz and his fame has become independent of the shifting passions of selfish men or time-serving clerics and politicians. It is the fame of a man qualified to meet the demands of the hour, therefore a man out of a million, and the distinguished leadership he has exhibited has determined the position of our "earthquake mayor" in the annals of the greater San Francisco.

They met at the old City Hall one hour after the earthquake. Schmitz, the night before, had been the mayor of the most prosperous city on earth; that hour he was the mayor of a fallen city and a stricken people. That hour proved his worth. The organization of his Committee of Fifty exhibited a catholicity as completely removed from political considerations as is the serene sky from the heaving seas. He met his bitterest opponents with a suavity gentle and refined; clasped hands with his enemies, placed his detractors in positions of command, looked for men and found them. It is but just to say that, if he proved worthy of them, they proved worthy of him. There was but one unanimous sentiment, to save our city and rescue our people. There were no politicians that morning—only men, real, strong men—and never was the spirit of the Argonauts so rampant. The old generous pioneer spirit was reborn and across the rents made by the earthquake men of all faiths clasped hands and vowed that no selfish motives should hinder the noble work that the exigencies of the moment had cut out for them. History will preserve the names of that great Earthquake and Fire Commission, and a study of their names will prove interesting. Mostly young men, from every walk of life, the genius of reconstruction was alive in them, and they met the terrible emergency like veteran captains accustomed to the carnage of battle.

I tried to reach the Mayor that morning, but between the Pavilion and the Hall of Justice was a sea of fire, and so we did not meet until the morning of the third day, when he had moved from the Hall to the police station on Washington street, and when we had all begun to fear that our entire city was doomed to become a prey to the awful holocaust.

That Friday morning we exactly knew the nature of the work in hand. The Fire Department and the artillery were making a glorious effort to save the residential portion of the city; a hundred thousand people were awaiting the dynamiting of Van Ness avenue. Funston had poured his regiments into our streets—the hours of consternation had been succeeded by a quiet determination to restore order as soon as the flames were conquered. Even then we knew that a part of the city would be saved, though the Mayor had given the word to move to Franklin Hall, and thence, "if necessary," to the Stanyan-

street police station. The city was without light, fire and water; the people were without food. It is impossible to contemplate the serious import of so brief a statement. We were on the eve of calamities more terrible in anticipation than were the visible results of our present affliction. What the earthquake had left the fire had consumed; and now were to be added the dreadful possibilities of famine and pestilence, and the looting of property in the grim hours of our Egyptian darkness. The Mayor acted at once. His committees were immediately organized—Fire Committee, Light Committee, Water Committee, a Sanitation Commission, above all a Food Committee. Above all, the people must be fed. Hunger is the worst anarchist in existence. The insanity of thirst and empty stomachs creates infinitely more mischief than the wrath of the earthquake or the fury of fire. Man hurts himself more than God injures him. The people must be fed. The Mayor appointed a committee "to relieve the hunger." We met immediately, but without a particle of exact knowledge of the work before us—only an indistinct consciousness that the people must be fed. I wish to preserve here the names of that Food Committee, every man full of youth and vigor, every one remarkably equipped for the tremendous work of the ensuing few days. There were two young attorneys, Oscar Cooper and John S. Drum; the rest were merchants, A. B. C. Dohrmann, George W. McNear, Jr., Prescott Scott and H. C. Tilden, the latter soon done to death by the bullets of a careless militiaman. Subsequently we added Alfred Esberg, who, as chief of the administration of the food supplies, exhibited executive powers of rare degree. As stated, when we met, Friday morning, at 11 o'clock, we only knew that the people must be fed. How to do it was a problem of the extent of which we at the time had not the faintest conception. Neither did we know the amount of food the city could control, nor did we anticipate at the time the royal succor of the ensuing days. We scattered, each man to his task, to meet again in the afternoon. At four o'clock we were able to report encouraging news to the Mayor. The people had organized for self-protection along natural lines. In each political district, the leaders had assembled and had given the food question a thorough discussion. While the city was still burning, whilst tens of thousands had begun their pathetic emigration to the Park and the seashore, each district developed a few determined men, resolved to maintain order and protect the people, as far as possible, from the dangers of disorganization, in which the food question constituted a considerable element. Out at the Presidio and at Fort Mason General Funston had already nobly met the issue by opening the army stores to the people. Personally, I believed there was no immediate danger of famine. The earthquake had not destroyed the private stores of the people. Even those who were driven out

of their homes had been careful to take supplies with them. But a few disturbing symptoms began to appear. On Friday noon complaints came of a few grocery stores charging exorbitant prices—that was really the beginning of our organization. Then, in one or two instances we heard of people helping themselves. So spontaneous was the district organization, that before sunset of Friday a number of future food-stations were practically federated under the government of the Food Committee, and twelve hours after the appointment of the Committee the work could commence. We had no time then for system or method. We had to feed the people. The first station to distribute food in orderly fashion on Saturday morning was the Lodge at Golden Gate Park; next came the big building of the Young Men's Hebrew Association on Stanyan street.

How we obtained supplies that day is still an unraveled mystery. Some day we will meet and endeavor to recall the facts. The Committee was everywhere. After some trouble to make local station-managers understand that the Mayor was in charge of the city, things began to work smoothly. Dohrmann risked his life half a dozen times to find the supplies that were reported as coming in at the docks; Cooper and Drum, at Franklin Hall, stood off an army clamoring for rations and whipped a splendid staff into shape—a staff composed of bankers, lawyers, sundry merchant-princes and millionaires, working at the same table with their quondam clerks. I myself was all over town, now in an autocar, then in a buggy, again on a truck, and my companions were soldiers, militiamen and policemen. The Saturday before I had preached in the Temple of the living God, for it was the Sabbath day, to keep it holy. That following Saturday I was the biggest thief in the United States. I commandeered store after store, with a police officer's badge on my clerical coat, and the Mayor's authorization in my pocket. I emptied grocery stores, drug stores, butcher shops, hardware establishments—and at four o'clock that great and glorious day, I was able to report to the Mayor that the people were being fed and that to the best of my knowledge there was not a hungry soul in San Francisco. I now solemnly state this to be the truth, and it was one of the glories of our calamity. The subsequent story of our administration of the food supplies need not be discussed here. When we surrendered to the Army, we had solved our own problem. We had done the work without system or method; but you know perhaps the bridge-builder's reply to General Sheridan upon his demand for the drawings: "Damn your drawings—here is the bridge!" We had to feed the people, and we fed them.

San Francisco

THE REBUILDING OF THE CITY

San Francisco's Disaster is San Francisco's Opportunity

By JOHN GALEN HOWARD



UT of the horror and hardship of the earthquake and the fire, a new being has sprung into life and energy—the New, the Greater San Francisco—San Francisco Dauntless. The heterogeneous elements of which the old city was composed, the half a hundred sets and cliques, each with its petty interests and prejudices and with its hammer always ready to knock the rest of the world, have been cast into the crucible together and by a tremendous chemistry have been united into

an entity. More history has been lived in one short moon by the people of San Francisco than in all the period since '49. The old community has been obliterated spiritually as utterly as have the works of man. Doubtless, the old town had within it the seed of what it is today, but it had never pulled itself together for the great uphill task of accomplishing consciously and with intent its manifest destiny. Today, as one looks back upon the prehistoric days which flowed so sleepily along before the earthquake, one can recognize here and there an intimation, a premonition of the forces which underlay the surface of San Francisco life, but it needed a *coup de foudre* to blast away the surface and to unite all the powers for good which the old nature had never known how to bring to bear. Today all that is changed, and San Francisco stands full-panoplied to wage her warfare for success. Her hour of sleep and of content with what she had is passed and she looks now upon her future with a will to seize the opportunity which has been offered her by the erasure of all her old-time errors. She has a clean sheet upon which to limn the form of her future greatness. She has a fallow field through which to trench the essential channels of her future traffic. No sooner had she realized that she was one and great and that her field was fair, than she set herself, with a fixed purpose, to accomplish that for which from all time she had been destined—to make herself in all the phases to which the work of man contributes, worthy of her incomparable site. By an extraordinary fatality, a great plan for the development of the future city had been laid out within this very twelvemonth and the report which crystallized and embodied the great project had been sent out over the world

only a few days before the catastrophe which laid the city low. What wonder that the cry went up: "The hand of God hath done this thing, not for vengeance of a city's sin, but to bring forth order and beauty out of chaos!"

All San Franciscans are brothers today; they have all dropped the useless impedimenta with which their prosperity had encumbered them so long that they had thought their burden was an essential part of their existence. The veil of unrealities has at last been torn from their eyes and they know human life for what it is. They know the riches of human brotherhood. They know the wealth of freedom, and they know the joy of service. Service! The San Franciscan who today can find no gift of courage, loyalty and conviction to offer his beloved home, must be counted poor indeed. The unanimity with which all citizens have joined hands to the end that San Francisco be rebuilt, better and more beautiful than before—yes, a thousand times more safe, more useful and more fair—is one of the marvels of our time. Never a gloomy face nor an empty heart can be encountered within the precincts of the city of the Golden Gate. No one looks backward, even for a month, save with a certain archæological interest quite remote from present consciousness. The eyes of all are fixed upon the future. What does it contain for San Francisco? Surely a vast, a boundless wealth of strength and loveliness. She will upbuild on larger and truer lines, laid out for her career by great Burnham and she will house herself in mansions, proof against fire and trembling of the earth. Her dower of the gods, her unrivaled harbor, her central site upon the nation's western coast, her point of vantage for the trade of the Pacific, the unique and exquisite beauty of her physical conformation and her landscape setting, the tribute which mine and field lay at her feet—these things, and, above all, the essential character of her people, she has never for a moment lost, but only a few accommodations and conveniences which, since they were unworthy of her, are better gone.

A few of her former citizens may perhaps have been temporarily driven elsewhere. Let them come back five years hence and they will recognize their San Francisco only by her majestic and inalienable landmarks. The face of the city will have put on a new and lovelier expression and she will have taken her place as one of the greatest communities of the world in outward manifest as today she has already done in her spiritual uplift.

The Burnham plan for the Greater San Francisco is composed in obedience to the essential principle that each of the great centers of interest should be joined one with another by great arterial avenues, as direct in line and as easy in grade as is practicable, all things being taken into account. The old plan of the developed part of San Fran-

cisco took almost absolutely no account of this law of civic convenience, which all the great cities of the world are recognizing more emphatically as years go by. Paris, Vienna, Berlin, London, Rome and almost every provincial city in Europe has, within these latter decades, found it necessary to cut diagonal or "crosslot" avenues, in order to accommodate the ever-increasing traffic. All this has meant enormous expense but it has been found that the first cost is trifling when compared with the immense saving of time and friction in the daily conduct of affairs. In old communities, where the convenience of circulation requires the creation of new streets, many old buildings, and sometimes whole quarters, must be razed or revolutionized—radical measures which are justified solely by the intestimable benefit to the community as a whole.

In San Francisco the measures proposed for the simplification and utilization of the portion of the city which has been destroyed, are, though adequate, neither radical nor destructive of individual interests. The old system of streets remains, with insignificant exceptions, precisely as it has always been, but the existing system has been overlaid, interpreted and unified by a second system of wide, diagonal short-cuts, calculated on the one hand to reduce the distance of intercommunication to a minimum, and, on the other, to act as fire barriers by dividing the city into a large number of comparatively small sections, each surrounded by free space. The diagonal avenue system has moreover been so arranged as to bring the highlands into easy accessibility from the lower levels.

The region which has been burned away must be considered under two heads: the region north of Market Street and the region south of Market Street. The first of these is in large part extremely hilly. The second is practically level, excepting for one small rise, Rincon Hill, which has already been partly cut away and which the property owners are recommended to level, in their own interest and at their own expense.

The center of the region north of Market Street is California hill, which on its north, east and south sides rises abruptly from the low lands. So steep are these slopes that the old streets are practically impassable, except by some such mechanical device as the outworn cable-car. Between Sutter Street on the south, and Bay Street on the north (a few short blocks south of the northern shores of the peninsula), there is no old street running east and west which is practicable for a horse and carriage, with the sole exception of Pacific Street, which crosses the saddle between California Hill and Russian Hill, and two blocks of even this street have a grade of over 12 per cent. The first and greatest task in replanning this great hill region was, then, to contrive, along as simple lines as possible,

an avenue or avenues, so adjusted as to bring the highlands and the lowlands together. This has been accomplished by means of a wide highway, running on wide curves and at an easy grade from the intersection of Kearney and Commercial Streets up to the intersection of Taylor and Pacific. From the latter intersection, Taylor Street runs on an easy slope to the top of California Hill. The lower end of the new avenue communicates directly with the Ferry Building, by means of Commercial Street, widened, and with the intersection of Taylor and Geary Streets by a crescent, which forms one segment of a ring of boulevards which encircle the base of the hill district, some of the segments being made up of present streets, widened, and other portions being new diagonals. An approach to the top of California Hill from the south is provided by a long diagonal of slightly irregular direction, running from the intersection of Van Ness Avenue and Market Street to the crossing of California and Powell, whence the summit of the hill is attained by a semi-circular climbing road which swings out through the block formerly occupied by the Stanford and Hopkins estates, the whole of which, excepting the streets which will cross it, is recommended for development as a look-out park and belvedere. At the 200 ft. contour-level of the hill, a circuit boulevard is planned, corresponding in a general way with the encircling avenues at the base of the hill. In the upper circuit as in the lower, the present streets are made use of wherever practicable, being merely increased in width and supplemented by new contour roads in places where present grades are inconvenient. By this dual system of circuit boulevards, with their approaches, the entire hill region is made readily accessible from all portions of the city and an immense area of property which, up to this time, has been all but useless, owing to the difficulty of access, has been brought within easy reach of the centers of business activity. In addition to the streets already mentioned, the plan provides for a further north-south and east-west division of the north of Market region, by the widening of Pacific, Geary and Golden Gate; also Polk, Taylor, Kearney, Montgomery and Sansome.

The region south of Market is opened up by a widening of Folsom and several of the north-south streets, as well as by a diagonal running from the ferry to the intersection of Fremont and Folsom, by the extension of Sansome to the intersection of Third and Folsom and by several streets radiating from the junction of Seventh and Folsom.

Of these latter radial arteries, by far the most important is a wide avenue running directly from the intersection of Van Ness and Market to the Mail Dock. This avenue is in continuation of the Park Panhandle, which is extended to Market Street.

Perhaps the most brilliant and useful of all the features provided for in the Burnham plan is the Civic Center. This is placed at the point to which it must unquestionably gravitate, viz.: at the intersection of Van Ness and Market. The open place at this point will be surrounded by great public buildings. From it will radiate the great arteries of intercommunication:—first of all, Market Street, to the east and to the west; the Park Panhandle to the northwest; Van Ness to the north; the California Hill approach to the northeast; the Mail Dock Boulevard to the southeast; Eleventh street to the south, leading to the future Union Railway Station, the vestibule of the City; and, finally, to the southwest, the extension of Van Ness Avenue to connect with the triple system made up of Mission, Capp and Howard, which lead south, on gentle gradients, to the Porto Suelo—that pass through the mountains which forms the natural gateway from the south to the precincts of the town.

All this is logical to the last degree—inevitable if the city is to be prepared for her future greatness; and more than that, it is essential for her present need. To the lines now indicated others may, as time goes on, be added, but the plan laid down now may be regarded as a minimum of what the city must do in its own defense. There is no line of new streets indicated which cannot be proved on more than one account as necessary. Fortunately the temper of the citizens seems emphatically in favor of the improvements. The report of the sub-committee which had in charge the investigation of these matters, and which embodied the features which have been outlined here, was unanimously and enthusiastically adopted by the Reconstruction Committee appointed by Mayor Schmitz, and has already been similarly received and endorsed by the Board of Supervisors. San Francisco has never shown herself greater than in these acts for they signify her full consciousness of her powers and of her destiny.

Berkeley, Cal.

BY THE WESTERN GATE

By GEO. N. LOWE

NOW, chastened by the mighty mother, Earth,
 Core of my heart! Thou sittest by the gate,
 Bereft and mourning, woeful, desolate—
 Rent by the pains that presage grander birth.
 Where joy once sat now waileth Grief, and dearth
 Sits on thy knees, O Queen, dethroned, distrait—
 Yet still the many cargoed galleons wait
 Thy swinging portals and thy coming birth.

Be not afraid, Queen of the Sunset Seas!
 Thy loins be fruitful and thy sons be strong.
 Tho' cosmic fingers grip thy radiant face,
 Thou feeder of the nations, every breeze
 Is redolent of roses. Sing thy song,
 And build a braver home and market place.

Berkeley, Cal.

THE FUTURE OF SAN FRANCISCO

By JAMES D. PHELAN



SAN FRANCISCO, during the days of its prosperity, was a hospitable city, glad to receive its friends and speed them on their way for the most part rejoicing; and now, when stricken by calamity, these friends have all returned after many days expressing sympathy and yielding helpful assistance. Los Angeles has been foremost in these offices of love, and hence it appears to us that our misfortunes are not unmitigated. The entire country, in the most emphatic manner, has substantially expressed that fraternal feeling which binds all states, as well as individuals, together.

San Francisco was prone to boast, and not without justification, that it was the capital of an independent empire, which had within itself resources sufficient to maintain its people with the importation of foreign commodities; that the products of mountain, valley and sea were equally hers—and such indeed is the fact.

The burning of San Francisco, caused indirectly by earthquake shock, was merely a tragedy which will subsequently serve to make the history of California interesting. It will no way affect the resources which have made the City by the Golden Gate necessary to commerce and to trade. San Francisco is a natural city, and the mere burning of houses simply signifies that new and perhaps better ones will be constructed on the old site. The injury will be borne principally by individuals.

Much of the distress now falling upon individuals is due to that same self-sufficiency which made San Francisco and California great—the absorbing belief in themselves and the intense “Territorial Sectarianism” which made the patriotism of the Californian a dominant characteristic.

By the constitution of 1879, for instance, the Mortgage Tax Law was enacted, by which the mortgagee paid the tax on the mortgage and the mortgagor had the amount of the mortgage deducted from his bill. The effect, if not the purpose, of that was to discourage the investment of eastern and foreign capital. The scheme prospered admirably, because almost exclusively, in San Francisco, the money loaned for the erection of buildings was advanced by the San Francisco banks and money lenders. In other words, the money accumulated by the people was reinvested in mortgages in their own city, and, in the absence of an extensive stock market, the favorite investment of individuals was found in the purchase of real property. By the same constitution, all promissory notes, evidences of debt or solvent credits, and all bonds and stocks of foreign corporations were declared taxable, and hence the stocks and bonds of

corporations, other than those of California, were not the ready objects of investments. So it appears that the Californian's banking upon his patriotism, by giving local support to his own institutions, resulted, when loss came, in his finally paying the bill in full. If he had had his investments partly foreign and partly local and if his money had represented diversified securities, he would not have fared so badly. There is a prejudice against eastern capital, but I think, in the light of recent events, it will be considered that it would have been wiser for San Franciscans to have shared their risks with their eastern brethern. Money of the East and the West should circulate freely; and, if the money of California had not found such ready investment in mortgages and in real estate, it would have more fully entered into the channels of commerce, trade and manufactures.

Already, however, eastern corporations, both of banking and construction, have entered the field of San Francisco to make loans and erect buildings. There seems to be no timidity. The moral effect of the earthquake has already been dissipated. It is now understood how little buildings have suffered by earthquake and how few lives have been lost. But fire is the fiend we know and is common to us all. We do not abandon the sea because it is the element of storms and tempests. The staunch sailing craft weathers the storm, and if, at long intervals of fifty years, the earth trembles, the well-constructed house will stand and the people will be immune.

The benefit of the earthquake is in exposing faulty and dishonest construction, and so San Francisco is today in a better position than ever before to build a city that shall be enduring. The most populous city in Italy is Naples, located on the side of a volcano, and we know that the San Francisco earthquake was not volcanic in its origin. It was due to a geological fault, or the slipping of a ledge, and the wave vibrations reached the edge of the peninsula, causing the so-called temblor. It was a mere settlement of the soil at a point many miles distant; that settlement is now made and there is no likelihood of its repetition. We are in the position of the patient that has had his appendix removed. He commiserates with those who have not been so fortunate.

I expect to see the San Francisco of the future a far greater and more beautiful city than the San Francisco of the last fifty years; and, just as the old Mission Church, founded in the historic year of 1776, has stood a century without injury, so will the new San Francisco stand, with its improved and better construction, for a thousand years, or until stone disintegrates and iron corrodes. Purified in the furnace of affliction, San Francisco will be better for her fiery ordeal, through which she has come undismayed and unconquerable

THE ENNOBLEMENT OF CALIFORNIA

By WILLIAM E. SMYTHE.



WHEN the sun went down on the evening of April 18, 1906, it looked upon a California which had been born again—born out of the mighty labor of Mother Earth—and which had taken unto itself such exaltation of soul that from this day henceforth nothing is impossible.

Chastened by calamity and moved by an overmastering sense of what they owe each other and the world, the Californian people are infinitely greater with San Francisco in ruins than when it stood unchallenged metropolis of the Pacific in all its pride and power.

Before the disaster California was great, materially; today the material greatness has been multiplied tenfold by the force of a newly-awakened spirituality, which, seeking immediate outlet in works of brotherhood, will find its enduring expression in the unprecedented advance of Associated Man. California must surpass itself in the future because it has found its soul—because it has enlisted the higher nature of its people in the work of building a real commonwealth. And the breath of a real commonwealth, be it said, is not the land-boom; nor is the town-lot its corner-stone, nor the banking house its temple. These things have their place, but their place is neither in the deep-laid foundation, nor in the imposing front, nor yet in the crowning turrets of the real commonwealth. The California of the future, taking its inspiration from the ruin of San Francisco, will illumine the world with the brightness and beauty of the institutions it will create for the upliftment of the common man.

Do you deny it—do you say that what we have seen is but a passing enthusiasm for humanity? Then I appeal to the future, for only the future can answer. But let us study a few of the new influences which have come into being and see whither they lead.

We have been united as a people as nothing but overwhelming calamity can unite us. Just as a family draws closer together when one of its members encounters illness, misfortune, or even disgrace, so the Californian people are drawn together—aye, literally welded together—by the catastrophe which has overtaken San Francisco. I do not forget that some persons, and even some cities, are frantically advertising to the world that *their* real-estate was not shaken—that they are “500 miles away from San Francisco.”

But I deny that this is the voice of the people. It is only the voice of speculation, and it will never drown the voice of humanity and the voice of the real California. The mass of the Californian people are not ashamed of San Francisco, nor Santa Rosa, nor San José, nor Palo Alto, nor are they “500 miles away.” They are *there*—there in the very heart of the ruins—and they love the stricken cities as they never loved them before. They claim these

stricken cities for California, as an integral and inalienable part of their loved commonwealth. And as in the hour of acutest distress they stretched forth their well-filled hands to feed the hungry, so in the painful months and years which will be consumed in the labor of reconstruction, they will stand very close to their brethren. Not the note of selfish alarm, but the deep-toned sympathy and loyalty of Walt Whitman, is the voice of the real California:

“Not a mutineer walks handcuffed to jail, but I am handcuffed to him and walk by his side;

Not a youngster is tried for larceny, but I go up too, and am tried and sentenced.

Not a cholera patient lies at the last gasp, but I also lie at the last gasp;

My face is ash-colored—my sinews gnarl—away from me people retreat.

Askers embody themselves in me, and I am embodied in them; I project my hat, sit shame-faced, and beg.”

The whole of California stands or falls together, and the people would not have it otherwise. They have been ennobled by calamity—the earthquake shook the dross from the soul of the commonwealth and left the gold untarnished. This will become clearer as time unfolds, but already the new spirit is in evidence.

One of its earliest manifestations is the declaration of the labor leaders that while San Francisco is rebuilding there shall be no controversy about the open shop. Who would dare to estimate at this time the influence of this single example of brotherhood upon the future of California industry? It is the first of many rich social dividends to be reaped from disaster. Others are foreshadowed in the plans of the new city. Does anyone believe that the squalor of the old tenement districts will be deliberately reproduced by the architects and builders? On the contrary, the love of man for men will be exemplified in the arrangements for housing the poor, and this testimony of love will be limited only by the inflexible boundaries of our economic system. (God speed the day when the boundaries shall be no longer inflexible!) In a thousand ways the human sympathy lighted at the flames of San Francisco will find permanent expression in the remodeled and enlarged social arrangements of the metropolis. But these gains will not be limited to San Francisco alone. As California suffers in common—as the hurt of one community is the hurt of all—so California will rise in common in response to the new and irresistible influences which sprang into being at the moment of its rebirth.

I have said that we are to behold an unprecedented advance by Associated Man. This is inevitable, for two reasons.

First, we stand as one man in our determination not only to rebuild what has been destroyed at home, but to restore whatever has been lost of the State's prestige abroad. The obligation to do so rests upon us individually, but we shall fulfill its demands collectively, because only in that way can we succeed in planting the flag of California upon loftier heights than it knew in the past. I repeat, it is the instinct of the mass of our people to bear their full share of the burden and misfortune, and if there are those who would escape it—they can't! We are all in the same boat. We have got to pull

together, and we will! It is worth all its cost to have a united California, "one and inseparable, now and forever."

Inevitably associated in the labors of restoration, we shall as inevitably associate our brains, our efforts and our capital—the common capital, which is the public capital—in our practical methods of creating the Greater and Better California.

When we have applied the last dollar contributed for the benefit of our sufferers by the generosity of our fellow-men, spent the last of our insurance funds, and borrowed from the banks all that can be had upon the security of private property, we shall still need scores of millions to develop the natural resources of California and make it worthy of its opportunity. Even before the disaster, we were crippled in our progress by lack of capital to do the larger things which lie beyond the reach of the individual, and which cannot be trusted to the corporation with safety to the commonwealth. The hundreds of millions absolutely wiped out of existence by the disaster must be created anew. We may borrow them for a time, but in the end they must be paid back. Not only so, but we are proposing to make finer and larger cities, and to carry the development of California as a whole far beyond the highest stage it has marked heretofore. How shall we secure the wealth to make this possible? We must go where we found the wealth that has perished—must turn to the primary source of all wealth—to the kindly earth. We must draw upon the soil of California in a measure, and with a degree of intelligence, which we have not yet done.

If there are limitations to private credit, and to the confidence of capital in private security, there are practically no limitations to public security.

Already we have seen how the people turn instinctively in the hour of trouble to the unworked mine of public credit, and put into motion the neglected machinery of public enterprise. When the individual stood helpless in the presence of disaster, united and organized man proved equal to every demand. The government of city, state, and nation lifted imperious hands and pronounced the edict: "Let there be peace! Let there be plenty!" Peace descended upon the people, plenty fell into their empty hands. What was done in the moment of emergency will be done in the sober years of rebuilding and of upbuilding that lie before us.

The works of man go down in shock and flame, but the works of God are not crumbled by earthquake, nor consumed by fire. We still have our valleys, our forests, our mines, our rivers, and our sunshine. The sources of human happiness have not been dried, nor the foundations of economic prosperity sundered.

But one thing is necessary to make California the Paradise of the common man, and that is that the common man shall know the power of brotherhood and organized humanity. We get a fascinating glimpse of the creative possibilities of this power in the Burnham plans. The New San Francisco is to illustrate a comprehensive scheme of beauty and utility. Why? Because the Interest of the Individual will be subordinated to the Good of the Whole.

Tried by earthquake and fire, California comes forth ennobled! The future historian will date the building of the real commonwealth from April 18, 1906—the greatest day in our annals.

San Diego, Cal.

THE RUINS OF SAN FRANCISCO

By *BRET HARTE*



TOWARDS the close of the nineteenth century the city of San Francisco was totally engulfed by an earthquake. Although the whole coast-line must have been much shaken, the accident seems to have been purely local, and even the city of Oakland escaped. Schwappelfurt, the celebrated German geologist, has endeavored to explain this singular fact by suggesting that there are some things the earth cannot swallow,—a statement that should be received with some caution, as exceeding the latitude of ordinary geological speculation.

Historians disagree in the exact date of the calamity. Tulu Krish, the well-known New Zealander, whose admirable speculations on the ruins of St. Paul as seen from London Bridge have won for him the attentive consideration of the scientific world, fixes the occurrence in A. D. 1880. This, supposing the city to have been actually founded in 1850, as asserted, would give but thirty years for it to have assumed the size and proportions it had evidently attained at the time of its destruction. It is not our purpose, however, to question the conclusions of the justly famed Maorian philosopher. Our present business lies with the excavations that are now being prosecuted by order of the Hawaiian government upon the site of the lost city.

Every one is familiar with the story of its discovery. For many years the bay of San Francisco had been famed for the luscious quality of its oysters. It is stated that a dredger one day raked up a large bell, which proved to belong to the City Hall, and led to the discovery of the cupola of that building. The attention of the government was at once directed to the spot. The bay of San Francisco was speedily drained by a system of patent siphons, and the city, deeply embedded in mud, brought to light after a burial of many centuries. The City Hall, Post-Office, Mint, and Custom-House were readily recognized by the large full-fed barnacles which adhered to their walls. Shortly afterwards the first skeleton was discovered; that of a broker, whose position in the upper strata of mud nearer the surface was supposed to be owing to the exceeding buoyancy or inflation of scrip which he had secured about his person while endeavoring to escape. Many skeletons, supposed to be those of females, encompassed in that peculiar steel coop or cage which seems to have been worn by the women of that period, were also found in the upper stratum. Alexis von Puffer, in his admirable work on San Francisco, accounts for the position of these unfortunate creatures by asserting that the steel cage was originally the frame of a parachute-like garment which distended the skirt, and in the sub-

This farcical prophecy appears in a volume of "sketches" by Bret Harte, published in 1872 by James R. Osgood & Co. The destruction wrought by fire following the actual earthquake was by no means so sudden or complete as the overwhelming by water which the author jestingly pictures—but it was sufficient.

mersion of the city prevented them from sinking. "If anything," says Von Puffer, "could have been wanting to add intensity to the horrible catastrophe which took place as the waters first entered the city, it would have been furnished in the forcible separation of the sexes at this trying moment. Buoyed up by their peculiar garments, the female population instantly ascended to the surface. As the drowning husband turned his eyes above, what must have been his agony as he saw his wife shooting upward, and knew that he was debarred the privilege of perishing with her? To the lasting honor of the male inhabitants, be it said that but few seemed to have availed themselves of their wives' superior levity. Only one skeleton was found still grasping the ankles of another in their upward journey to the surface."

For many years California had been subject to slight earthquakes, more or less generally felt, but not of sufficient importance to awaken anxiety or fear. Perhaps the absorbing nature of the San Franciscans' pursuits of gold-getting, which metal seems to have been valuable in those days, and actually used as a medium of currency, rendered the inhabitants reckless of all other matters. Everything tends to show that the calamity was totally unlooked for. We quote the graphic language of Schwappelfurt:

"The morning of the tremendous catastrophe probably dawned upon the usual restless crowd of gold-getters intent upon their several avocations. The streets were filled with the expanded figures of gayly dressed women, acknowledging with coy glances the respectful salutations of beaux as they gracefully raised their remarkable cylindrical head-coverings, a model of which is still preserved in the Honolulu Museum. The brokers had gathered at their respective temples. The shopmen were exhibiting their goods. The idlers, or 'Bummers,'—a term applied to designate an aristocratic, privileged class who enjoyed immunities from labor, and from whom a majority of the rulers are chosen,—were listlessly regarding the promenaders from the street-corners or the doors of their bibulous temples. A slight premonitory thrill runs through the city. The busy life of this restless microcosm is arrested. The shop-keeper pauses as he elevates the goods to bring them into a favorable light, and the glib professional recommendation sticks on his tongue. In the drinking-saloon the glass is checked half-way to the lips; on the streets the promenaders pause. Another thrill, and the city begins to go down, a few of the more persistent toppers tossing off their liquor at the same moment. Beyond a terrible sensation of nausea, the crowds who now throng the streets do not realize the extent of the catastrophe. The waters of the bay recede at first from the center of depression, assuming a concave shape, the outer edge of the circle towering many thousand feet above the city. Another convulsion, and the water instantly resumes its level. The city is smoothly engulfed nine thousand feet below, and the regular swell of the Pacific calmly rolls over it. Terrible," says Schwappelfurt, in conclusion, "as the calamity must have been, in direct relation to the individuals immediately concerned therein, we cannot but admire its artistic management; the division of the catastrophe into three periods, the completeness of the cataclysm, and the rare combination of sincerity of intention with felicity of execution."

AN ARCHÆOLOGICAL WEDDING JOURNEY

By *THERESA RUSSELL*

CHAPTER VI.

TOGOHOLTATZE SPRING AND BOKOCOKLEESE CAÑON

"Little drops of water.
Little grains of sand."



NEXT morning the Expédition embarked once more in its white-sailed prairie schooner and continued its cruise over the billows of sand. But it was the evening of the second day ere it arrived at a place. The place was a sort of Rip Van Winkle dell—without the flagons. The intruders were not invited to partake of a cup, inebriating or otherwise, but they were quite welcome to help themselves and furnish their own cup. By holding it high up, close against the rock cliff, one might in time accumulate a sizable, clean drink of the water that oozed out, drop by drop, and was taken up as fast as issued, like popular Government bonds. Otherwise, one must dip it up out of the shallow, muddy pool, and be comforted with what had been left by the Navajos, their babies, their dogs, their sheep and their goats.

The proprietor of Togoholtatze Spring and patriarch of the flock, biped and quadruped, we called Belshazzar. His name sounded as much like that as anything, and moreover, there was a feast. We dined on one of his kids (quadruped) while he regaled himself on our canned peaches and deviled ham.

Belshazzar lived in a very good imitation of a house; that is, he had one. It seemed to exist for the same reason that the rural parlor of our grandfathers had its being—just to show that it could have a being if it wanted to. The adjoining courtyard, bounded by a stone wall, was the real living room. It boasted some imported chairs, but they, too, were in the nature of ornaments, or reserved seats, perhaps, for those who liked that sort of thing. The Indian prefers to squat on the ground; then he is in no danger of falling off.

Leaning thus at ease against the outer wall, Belshazzar and Sliver were enjoying an animated conversation; that is, Belshazzar was animated. Evidently he was relating a dramatic and detailed account of the wanderings of his Aeneas, harkened to by his auditor with an interest now serious, now amused, as indicated by the varying tone of his responsive grunts. As I watched them, wishing I could understand the recital, I was

filled with amazement that this could be Sliver, our speechless, distant, inscrutable Sliver.

"Did you dream that such vivacity lay under that impassive mask?" I inquired.

"It wasn't so much a mask," amended the Anthropologist, "as the side he chose to turn toward us, strangers and aliens as we are. This is the side kept for his tribal brother and friend. Humans are hexagonal, you know."

"All humans?"

"Well, from that point of view, we might say, speaking geometrically, that primitive man is something of a rhomboid: an unsymmetrical figure, with angles both acute and obtuse, difficult to fit in anywhere. As he is whacked into shape by the processes of civilization, he assumes more regular proportions, but still presents many angles to view. It is only after the file of education and the hammer of experience have done their work upon him, that these sharp, insistent points are worn and pounded down, and your 'well-rounded man' emerges from the stress of life. For a sphere is simply a body of infinite sides and invisible angles."

"And capable of touching another sphere only at an infinitesimal point?"

"I believe it has been so alleged. But, granting that, we must consider that even solid bodies are capable of radiation and absorption, that these influences are interpenetrating and permeating, and that the impact of even a slight contact is communicable to the whole inner substance."

"Clear to the center?"

"Sometimes; but always the center is protected and concealed. It is the perimeter that has to bear the brunt of the blow."

"Only, in some cases, there isn't much space between circumference and center."

"To be sure. That's the advantage of being big. All vital instruction is reducible to this, 'Lengthen your diameter.' The more surface you present to life, the more impression you can receive from it, and, at the same time, the more invulnerable rests the Core of Self."

"And what is it the blessed old Autocrat says about the arc a man subtends?"

"That a very small one will show his size."

Meanwhile the women were getting supper. A fire was built on the ground in an angle of the stone enclosure, meat roasted and bread baked. The preparation of the meal seemed to be more by way of being a social function than was its consumption. Each dusky sister, curled up comfortably on the ground, reclining

languidly against the wall, reaching around the babe in arms, tossed and patted the dough into shape with a leisure and aplomb that would have scandalized the scurrying Saxon housewife. The tortillas may have been seasoned with sand, but they were certainly flavored with mirth and garnished with the gossip of the hour. As each morsel was cooked, it was handed or flung to some one of the numerous members of the family, loafing or running about, and thus all managed to dine before the last shred of daylight was gone.

Thereupon, darkness having fallen, naught remained but to roll up in warm blankets and dream and dream into another day.

When we weighed anchor next morning, we knew it would be thirty miles between drinks, for the next water-island in our ocean of sand was to be a certain White Cave Spring, a long day's journey beyond.

Now to toil along a wearisome trail all day toward an essential goal may have the incentive of anticipation. But to arrive painfully and late and not find any goal there after all is somewhat dispiriting. There were some sounds by night, but they were not of revelry, and we made a very dry camp indeed.

By early morning light, however, that shy, retiring White Cave Spring, that had played hide-and-seek with us the night before and won the game, had to give up and be found—away up in the cañon, so coyly disposed behind barriers of rocks, reached by such a wavering, half-hearted trail that it was something to win out even with daylight playing on your side.

But when we went joyously to round up our thirsty beasts and give them the glad tidings, one was not present at roll call. Brown Bob, in his disgust and despair, had decided that a tavern without a bar was indescribably blanker than a Hamletless Hamlet, so he, while his companions slept, went backward, toiling through the night. His unspeakable scorn at being trailed and made to retrace his truant miles was as measureless as his thirst. But when the one was assuaged, the other was softened, and he concluded to forgive Bill and Erminio for the chase and capture; to forgive them, as we also, of our magnanimity, forgive those against whom we have trespassed and upon whom has fallen the retribution for our misdeeds.

From that point it was decided to make a hasty horseback trip to Bokodokleesh Cañon. Wherefore, leaving the mules and the Mexicans to keep camp, Sliver and the Instigators sally forth.

Now equestrianism is a jaunty exercise, when properly performed. Otherwise it is a jolty one. It jolts your temper up and your philosophy down—that is, if you are a novice, and are perched aloft on a ponderous old Bill. Like some of your

friends, Bill has never acquired the light touch. Consequently, he bears down hard on whatever happens to be in the way, nerves or anything else. But he is good, oh so good, and uncomplaining, and earnest, and capable of grinding out such quantities of hard work!

Therefore, you pound along, and in your imagination the score of miles waxes to three score and ten, and their increase is indeed trouble and sorrow. Yet will the utmost flight of fancy not make of Bill a Pegasus, nor equip you with the wings of a dove—no, not even a buzzard, although you see the black pinions circling above you, silent, darkling, ominous. But the stubborn miles are worn out at last, as is the way with things, and you find that, after all, they were leading you to something worth while. For you are standing on the brink of a cañon.

Much is said about mountains; and the most that can be said is not enough. In their sublime presence, fluency turns into faltering. But before the cañon we stammer yet more. The cañon is the complement of the mountain. It is the mountain reversed—as though Nature had used it as a seal to stamp some mighty state secret, and left forever imprinted there the wonderful intaglio.

Man looks up at the mountain, and feels his own puny stature and limited view. He looks down into the cañon, and exults in his own vantage-ground. It has his truer comprehension, because of his juster point of view. It arouses his keener joy for its beauty of contour and color. It wakens his deeper reverence for the majesty of its vastness. It quickens his more solemn awe for the mystery of its depth. And always it claims his whole-hearted affection; for, with all its beauty and vastness and depth, it casts no frowning shadow over him. He is still dominant; and the hush that falls upon him is for the wonder of himself as much as of that other wonderful thing.

Then you go down into the cañon. And as you go, you wish that the deep-sighted old Scot, who was so sensitive to the marvels of the universe, might have seen this surpassing marvel. More than ever would he have exclaimed, "He who cannot wonder, who does not habitually wonder and worship, is but a Pair of Spectacles, behind which there are no eyes."

This thought flits about in your mind, albeit your own eyes are well nigh blinded by mere weariness of the flesh. So that when Men of Science make remarks to you about the loveliness of the place you are approaching, you murmur to yourself, "Gott sei dank, *approaching!*" and mumble incoherently aloud, "Yes, indeed, it's almost picturesque, isn't it?"

Then you part company with Bill so suddenly that they run

to pick you up and carry you inside. For the place has an Inside. It is another Uncle Sam Indian School. The school is closed for the summer, and the youthful discipuli are returned to their native heath and preferred costume, though the scenery is on duty the year around. Closed with the back door open, fortunately, so the Expedition goes in, a la Little Goldenhair, and sits on all sizes of chairs and eats an aristocratic luncheon from a sure-enough table. It has to make its own porridge, though, and the bears never come home at all. Nobody comes but a cat, and later, a few Navajos, all of whom seem equally well-disposed and uncommunicative.

There is something that babbles, however—a stream of running water. It wouldn't know what you meant if you called it a "brook," but it has all the symptoms of one, and, in addition, a spring bubbling up out of the sandy bottom right in the midst of it. Altogether, it is a dear; and you tell the Expedition that it may go on and leave you to stay on, forever. When you see, however, how forlorn and dejected your devoted Bill looks at this announcement, you repent, and are again hoisted to his ample but uneasy back.

It is too far, of course, to make the entire return trip today, but it is necessary for the unprovisioned excursion to reach supplies as soon as convenient. So it travels till dark, sups on rations of coffee and biscuits, and goes to bed.

Going to bed is so easy when you journey without impedimenta. You hang your hat and shoes on a cedar tree, roll up in your saddle blanket with the saddle itself for a pillow, and shut your eyes.

Going to sleep is another matter.

Next morning a ride of three hours brings you to camp in time for a seven o'clock breakfast. You are glad the boys have spied you coming and have the bacon curling up over the coals when you arrive.

This happy episode over, the entire caravan puts itself into motion, and covers the distance to another spring before noon. It is not thirty miles away, though. But since that be chronicled, the fact that yet another spring is our portion for supper should receive honorable mention. This one is called Weepo, but not for the same reason that Eve named the Dodo. At least, it does not look lachrymal to the wayfarers. To complete the liquid extravagance, a shower comes up, and we are well moistened inside and out.

This has to last through two more dry days, and then, behold, the Ship of the Desert swings into port, and all hands are ordered to disembark.

A DAY SHADOW

By CHARLES HORTON



O, SIR, Pennington," the Colonel was saying, "there isn't the least excuse for it—not the least! Given an average intellect, good health, no upbringing—a rearing under the worst conditions possible!—and a man, if he fails, has no one to blame but himself. Especially does this stand true in our Western country, where Opportunity knocks once every day, regularly, at every man's door—and has done it for the past fifty years!"

The Colonel was one of the "points of interest" in the Southwest—to a select few. There was nothing that offered so pleasing a diversion from the long, tedious trip and the narrow confines of a Pullman as a stop-over at his ranch—provided you sought the lights of the country and not the shadows. A strong personality, wealthy, influential, powerful politically, indeed, the factor most felt where money exerted the wielding force, Colonel Anderson and his ranch were well worth the time expended, even though one's business on the coast be of a pressing nature.

This morning we had ridden fifteen miles to the fence—a trip the Colonel had proposed over breakfast. I had accepted the chance eagerly, for it afforded me a closer touch with ranch-life. And in covering his extensive lands, in viewing his many head of cattle, in talking with his boys, I had found, throughout, all the fancied interest such a life had held for me in the East. Circling on our return, we had struck off to the north and were now within a mile of the house.

During the entire ride, this discussion of equality had been rife. The Colonel had met my obstinate disagreement with good-natured laughter; but, as we neared the house, he had re-opened the topic with a spirit which led me to conclude that he was maliciously holding me on the griddle. At his reiterated assertion, I had either nodded my head in dull acquiescence, or had brought up a chain of facts to disprove his claim. To his last thrust, however, I replied somewhat heatedly, for certainly I was not in accord with his views.

"But there's no room for question!" came his spirited rejoinder. "We *have* an equal chance! A boy of the slums, a boy of a ten-acre farm, a boy of a thirty-head ranch, Pennington, each has opportunities of success as well as the boy on the Avenue, the boy of a thousand-acre farm, the boy of a ten-thousand-head ranch! He has them, not in spite of his lower station, but because of it! An imbecile? or one weak physically? Of course not—there isn't the even show I speak of. But with the right stock in

him, under favorable God-gifts, there is!" And he spurred his horse, I following, for it was almost noon, and a good dinner awaited our coming. The Colonel dined at mid-day.

"For example," he continued, as we drew up to the ranch, "take the facts of my own life. My parents left Kansas, poor as preachers, for the gold-hills of California—'forty-nine, you know." He stroked his beard reflectively, then went on. "There were nine of us huddled together in a three-by-nine prairie schooner, and all children—including the old folks, for a more youthful couple never lived than my parents. About three weeks out, we were surrounded and attacked, one morning, just as we were about to break camp, by a small band of roving Pawnees with plenty of nerve. Well, my father was killed, and the Indians, withdrawing before the rapid fire of our wagon-train, picked up a younger brother of mine, who had strayed before the attack, and made off with him. He was about five years old, and, as I remember, the brightest one of us children. The men followed the renegades, but they got away.

"Naturally, my dear sir, it fell to us boys to conduct to a finish what my father had begun. Well, we did it—and with considerable success, you will admit. Two of them are in San Francisco to-day, well-liked and well-pocketed. The girls married comfortably. I—well, the smallest interest I have in the world is this outfit." The Colonel need not have said more, for the outfit was the largest in the Territory. "And, Pennington," he concluded, forcibly, "we didn't get our start in 'forty-nine gold! It was downright hard work—a hustle for a dollar at a dollar's worth of hustle. The conditions under which we started could not have been worse. We—— But you grasp what I mean!"

During the Colonel's recital we had entered the patio fronting his place—one of the prettiest ranches in the Territory. Beautiful and inviting, it certainly was the least-expected of things in this land of amole and cactus. Through artificial irrigation the Colonel kept hardy and thriving trees that were foreign to the soil. Vines crawled over the porches and up the sides in true tropical density. Many varieties of cactus softened the flat-brown of the earth, lending to the entire establishment the appearance of an oasis—a clump of green in a great, bare, monotonous, brown landscape. Entering the court I felt the cool of shaded eastern lawns, and as we dismounted, a man quickly appeared and took charge of the horses. We then strolled up to the porch—I with as keen an appetite as had ever possessed me.

Mounting the steps, we observed a man seated on a low bench in the corner. He was reading a book. "Hello!" exclaimed the Colonel. "We've got a visitor." The man apparently was deep

in the book, for he continued to read, his lips moving with every syllable. I noticed that he was leaning half off the bench on a support—a long, cactus cane which caught him beneath the arm, throwing up his shoulder into a semblance of deformity. One leg crossed the other, and between the tops of his shoes and the lower ends of his overalls, which were well drawn up, there were exposed two thin legs that seemed barely capable of supporting the body above. Humped over as he was, a dusty slouch hat drawn well over his eyes, a pair of torn trousers peeping plaintively from beneath his shabby overalls, the man's general appearance was that of a bundle of rags.

As we stepped over toward him, he raised his head and slowly closed his book, placing it away in an inner pocket of his threadbare coat. Then, with the aid of his support, he rose stiffly and removed his hat. With a sweeping courtesy and the slow mannerism of the Spaniard, he addressed us.

"Good day, gentlemen. Would you plees—I haf come for some clothes for myself—for my children. I haf t'ree boys, two girls. I—plees—old clothes. I am ver' poor. I haf make treep from García Cañon, feefty-seex mile, on my burro. He is stay out there." The man pointed toward an outer rim of trees. "I haf go to hospital in town. Horse he keeck me—here." He pressed both hands to his left groin, while an expression of pain crossed his face. "It is hole two inches deep. I haf been in hospital t'ree weeks. I am now go home. I——"

"Let's see the bruise," the Colonel broke in. There was pity on his strong features. I stood a step or two back of him, and when he made the request, I experienced a queer sensation—one of semi-nausea. All my life I had avoided such things.

The man looked quizzically at the Colonel an instant, then, peering carefully about, he loosened his clothes.

Poor fellow! His entire left side, from his hip-bone down along the groin, was one blue-black abrasion. Toward the side protruded a swelling not unlike a half-egg. But the holes he spoke of were merely slight scars left from the surgeon's syringe. As he stood there, pitifully exposed, a fit of coughing came over him and he weakly pressed the swelling, endeavoring meanwhile to stay the cough. I turned away, for his suffering affected me acutely.

"Have you had anything to eat?" asked the Colonel, kindly.

The man threw out his hands with a slow gesture. He looked up sorrowfully. "I haf eaten one—two days ago. Not'ing from thees time. But I am not so much beggar. I want clothes for my children. The mother haf die one year ago. They haf no mother. I am ver' sorry. I want clothes—old clothes—shoes.

The eat—not so much defference.” And again he shrugged his shoulders in Castilian indifference. Here the Colonel turned and entered the house, leaving the man silently gazing toward the ground.

It was a beautiful day. The sun was warm, and the winds from the north, blowing gently through the cottonwoods, caused their weaker limbs to bow lazily. The grounds were swept with moving shadows. Outside the tamarack hedge, the man’s burro set up a shrill bray, which he repeated often, as though growing impatient. The man lifted his head. “I haf Franké, out there. It is all—except my children. They haf heem—play’ing. They love heem—Franké.” And his eyes softened.

I had been standing away from the old man. But now I drew near and sat down beside him. As I did so I noticed that a scar as large as a tea saucer encircled the side of his closely-cropped head. Spotting the scar were patches of hair, the stubby growth left from hospital shears. I was curious, and asked him about it.

“Señor, the Indians he scalp me long, long time ago. I was t’ree—mebbe four years old. I cannot remember. Indians he took me from my father, my mother. I am not Mesican. You see I haf not Mesican face.” He slowly stroked his features. I was impressed with the truth of this assertion. His face was large, his features sharp—intellectual. Save for his speech there was nothing of the Mexican about him.

“You speak Spanish?” he asked, slowly bringing forth the book.

I did not; and he turned the leaves and began to read aloud. “Prayers,” he said. “I haf get them from priest in town. I make copy. El priest he haf give me book. My name is here. See? I haf write it on this page—Jo Andrews. I haf remember it from first time, when I lose my—my parientes.” Here he turned more leaves, translating as he read. “I live in Garcia Cañon. It is too far for priest. I am ver’ glad of thees book.”

Soon he replaced it in his pocket. “I am ver’ old, señor.” There was a distant look in his eyes. “I am seexty-two years next month.” And he stroked his cheeks gravely. “I wish it was not so old,” he continued, reflectively, and then looked up and smiled. I failed to understand this, but he offered no explanation.

As I sat watching him, my eyes held by the fascination of obvious misery, another fit of coughing seized him and he bent almost double over the racking convulsion.

Soon he slowly straightened his body. “I am ver’ seek—too much seek. I haf too much trouble. My children—they haf no mother. I haf not’ing. But”—this was an unexpected turn—“I haf begin wrong! I didn’ know my father, my mother. The In-

dians he leave me. A Mesican he find me and bring me to his house when I am so high." He indicated about four feet. "He was ver' bad to me. I haf been sheep-herder for him. I run away. But I haf go back—no money, no trabajo."

"Work?" I asked.

"Si, señor—work, I haf say. But the old man he die. And prutty soon I marry. Prutty soon children. The mother haf die last year. Then I haf get keeck by horse—and I can do not'ing. Plee—I would like old shoes. You got any? These—not'ing." He removed one. His feet were bare of stockings, and showed large bruises where the shoes, which were much too small for him, had rubbed the flesh. "These—not'ing," he repeated, and looked up at me. His faded blue eyes and the surrounding lines told plaintively of the rough course of his life.

I left him, and turned to enter the house. On the threshold I met the Colonel, who was returning with a servant. They were bearing an armful of clothes and a package of food.

"Here you are, brother," the Colonel said, cheerfully.

The old man rose and accepted the articles. His face beamed with pleasure. "I t'ank you—I t'ank you, señors. You are too kind." And he mumbled a prayer in Spanish. Then gathering up some of the clothes, he held forth his arm for the others. But the Colonel intervened. "No, no! The man here will help you to your burro." And the pair started slowly down the walk.

We stood on the porch watching them. The man was bent, and hobbled along on the support, with his eyes to the ground. The servant stalked aloofly at his side. As the pair reached the outer hedge, the old man turned, removed his hat and bowed low. "I t'ank you, señors; I t'ank you—for thees time." He turned and disappeared behind the foliage.

"One of Life's shadows, eh, Pennington?" the Colonel said, thoughtfully.

"Yes," I replied, while a haunting resemblance in the appearance of these two extremes flitted through my mind.

"Well, sir, Pennington, really I seldom do anything for his kind. But in this case something I don't understand sent me to the cupboard." The Colonel laughed, and we turned and entered the house. The cook was standing in the kitchen, impatiently waiting to serve dinner.

Albuquerque, New Mexico





Sickening, repulsive, filthy, revolting, disgusting, horrible—all these adjectives, and others even more unladylike, may be justly applied to Upton Sinclair's *The Jungle*, yet no other novel published in this generation, perhaps no novel ever before written, so sternly demands to be reckoned with. Jack London is quoted as calling it "the 'Uncle Tom's Cabin' of wage-slavery." The phrase is a striking one, but inadequate by as much as the disease is more important than a symptom. Chattel slavery was after all no more than a symptom of the disease of Greed—of the willingness to coin into drachmas not merely the blood of men but their hope, their ambition, their love, the virtue of women, the life of children—to squeeze them all dry of every physical, mental and spiritual possibility and then to toss them carelessly aside to rot. Now most of Mr. Sinclair's terrific indictment deals with symptoms—particularly with the gruesome details of the special one known as "the Beef Trust"—but it is clear throughout that he understands the real nature of the malady itself, and that the remedy which he proposes is intended to heal the disease rather than to suppress its manifestations.

I shall not attempt even to outline the story told in *The Jungle*, still less to follow it through the unspeakable filth of Packingtown. That is being exploited quite sufficiently just now in the daily press, and the world well understands that to Mr. Sinclair is due the credit for making public these infamies. But I cannot insist too strongly that his main purpose was not to expose foul methods of preparing certain kinds of food, not to secure better inspection of the packing industry, not even to cut down the profits of the Beef Trust. If that were all, between the reports of other investigators, the proposed legislation and the general nausea toward lard, canned meats, beef extract and other Packingtown products, he already has the scalp of the Beef Trust at his girdle. All this is but incidental. The most loathsome details concerning what has been offered to us to eat are of slight significance compared with the corruption and destruction of the men, women and children of Packingtown, which is incomparably its most hideous aspect. And all these horrors are, for Mr. Sinclair, only the mordant by the use of which he hopes to corrode deeply into the consciousness of mankind what he conceives to be his real message. This message may be briefly stated in words which he puts into the mouths of some of his characters, as follows:

That the majority of human beings, under the conditions of modern competitive industry, are not yet human beings at all, but simply machines for the creating of wealth for others. They are penned up in filthy houses and left to rot and stew in misery, and the conditions of their life make them ill faster than all the doctors in the world could heal them; and so, of course, they remain centers of contagion, poisoning the lives of all of us, and making happiness impossible for even the most selfish.

That this condition will never be healed until the labor of humanity shall belong to humanity, to be used for the purposes of humanity, and controlled by the will of humanity—in other words, until competitive industry gives way to the common ownership and democratic management of the means of producing the necessities of life.

And, finally, that this economic change can be accomplished only through the class-conscious organization of the wage-earners.

This is, of course, Revolutionary Socialism; nor is it offered as anything else. The importance of *The Jungle* does not lie in any novelty in its doctrine, but in the method by which the doctrine is presented—a method which will attract tens of thousands of readers who would yawn over the most powerful economic treatise, and which is likely to make hordes of converts through their imagination and sympathy who would be quite inaccessible to reasoned argument.

I cannot close this quite inadequate comment upon a book which has already, I believe, produced more important visible results than any other book ever did in the same time, better than by quoting its summing-up of the case against the Beef Trust in its larger aspects.

It was the incarnation of blind and senseless Greed. It was a monster devouring with a thousand mouths, trampling with a thousand hoofs; it was the Great Butcher—it was the spirit of Capitalism made flesh. Upon the ocean of commerce it sailed as a pirate ship; it had hoisted the black flag and declared war upon civilization. Bribery and corruption were its every-day methods. In Chicago the city government was simply one of its branch offices; it stole billions of gallons of city water openly, it dictated to the courts the sentences of disorderly strikers, it forbade the mayor to enforce the building laws against it. In the national capital it had power to prevent inspection of its product, and to falsify government reports; it violated the rebate laws, and when an investigation was threatened, it burned its books and sent its criminal agents out of the country. In the commercial world it was a Juggernaut car; it wiped out thousands of businesses every year, it drove men to madness and suicide. It had forced the price of cattle so low as to destroy the stock-raising industry, an occupation upon which whole states existed; it had ruined thousands of butchers who had refused to handle its products. It divided the country into districts, and fixed the price of meat in all of them; and it owned all the refrigerator cars, and levied an enormous tribute upon all poultry and eggs and fruit and vegetables. With the millions of dollars a week that poured in upon it, it was reaching out for the control of other interests, railroad and trolley lines, gas and electric light franchises—it already owned the leather and the grain business of the country. The people were tremendously stirred up over its encroachments, but nobody had any remedy to suggest—it was the task of Socialists to teach and organize them, and prepare them for the time when they were to seize the huge machine called the Beef Trust, and use it to produce food for human beings and not to heap up fortunes for a band of pirates.

The chapter from which I have quoted ends with the picture of the newly made Socialist lying sleepless, "for the glory of that joyful vision of the people of Packingtown marching in and taking possession of the Union Stockyards." Any possibility that the people of Packingtown, being so

ignorant, debased and degraded (no matter for what reasons) as *The Jungle* draws them, might prove to be as reckless and unscrupulous as a band of pirates as those they had driven out, and less skilled in navigation besides, seems never not to have disturbed the glory of that joyful vision. Yet right there is the core of the problem. For whenever the mass of the workers of the nation shall become convinced that the affairs of the nation will be on the whole better managed by an Industrial Republic than they are at present, then very shortly the Industrial Republic will arrive. The Jungle Publishing Co., New York. \$1.50.

It may seem like a far step from the remorseless and heartrending pictures of human greed and human suffering of *The Jungle* to an "estimate and appreciation" of one of the sweetest, noblest and most useful women alive—Caroline M. Seymour Severance. Yet the two books may very properly be named together; for, whether Mr. Sinclair be right or wrong in his conclusions, his inspiration is plainly the same as that which has glorified Madame Severance's whole life—an absorbing passion for the uplift of humanity. Few lives have been more joyously and effectively consecrated to loving service than has this one; few have been so clearly and consciously directed away from personal ends and towards universal ends. The little volume which contains a partial record of this magnificent service is published as *The Mother of Clubs*—a title which none who are familiar with Madame Severance's relation to the woman's club" movement will be inclined to challenge. It has been edited with loving care by Ella Giles Ruddy. I count Madame Severance one of the richest women in the world—rich not in money but in those priceless treasures which, we are given to understand on good authority, cannot be touched by moth or rust and require no burglar insurance. Baumgardt Publishing Co., Los Angeles. \$1 net.

Laird & Lee, of Chicago, in announcing their *Glimpses of the San Francisco Disaster*, say: "The publishers have endeavored to avoid all exaggeration, stating the facts with as much clearness and accuracy as possible under the circumstances." A few samples of the accuracy which they found possible will be interesting. They say, in a brief introduction: "San José, Napa, Santa Rosa, Oakland and other centres of art and beauty, with their fair homes, were shattered and swept away. Leland Stanford, Jr., University, one of the world's greatest centres of education, was also destroyed." And again, under a picture of the Hotel Vendome, San José, "This beautiful, thriving city, almost completely destroyed by the devastating earthquake." This is so wild and reckless an exaggeration of the damage done in the places named that it may be fairly called absolutely false. They show a "view across Fourth street after the earthquake," which is in fact a view after the fire; and under the same title they specify as "among the famous structures that were wrecked," the James Flood, Crocker, Mills, Shreve and Merchants' Exchange buildings. Not one of these "famous structures" was wrecked, or even seriously damaged by the earthquake. Perhaps to Chicago publishers it makes no difference whether the damage was done by earthquake or fire—but it makes a vast difference to San Francisco. For a last example, I will cite the "General View Overlooking San Francisco Bay. . . Looking down upon a wilderness of gaunt brick walls, a tangle of ruined homes, all that is left of the once proud and prosperous Golden Gate City, the metropolis of the Pacific." This may not have been intentional, but it comes pretty near being criminal. There are many square miles of San Francisco which were untouched by the flames and only slightly injured by the earthquake.

The same firm offer *The Doomed City, A Thrilling History of San Francisco's Destruction*. Here is a sample thrill: "San Francisco was a furnace, and those who came out of it after that were blinded, stunned, speechless or babbled with children's tongues and leered with the idiot's eyes." At which I seem to hear the shade of the lamented Josh Billings sob out, "This is 2, 2 match!"

With Walt Whitman in Camden, by Horace Traubel, is a most informing and intimate record of the daily life, thought and speech of that good, gray poet whose "barbaric yawp" sounded so finely and constantly the brotherhood of man. It covers a period of less than four months, in 1888, but covers that period with Boswellian thoroughness. Mr. Traubel says of his own work:

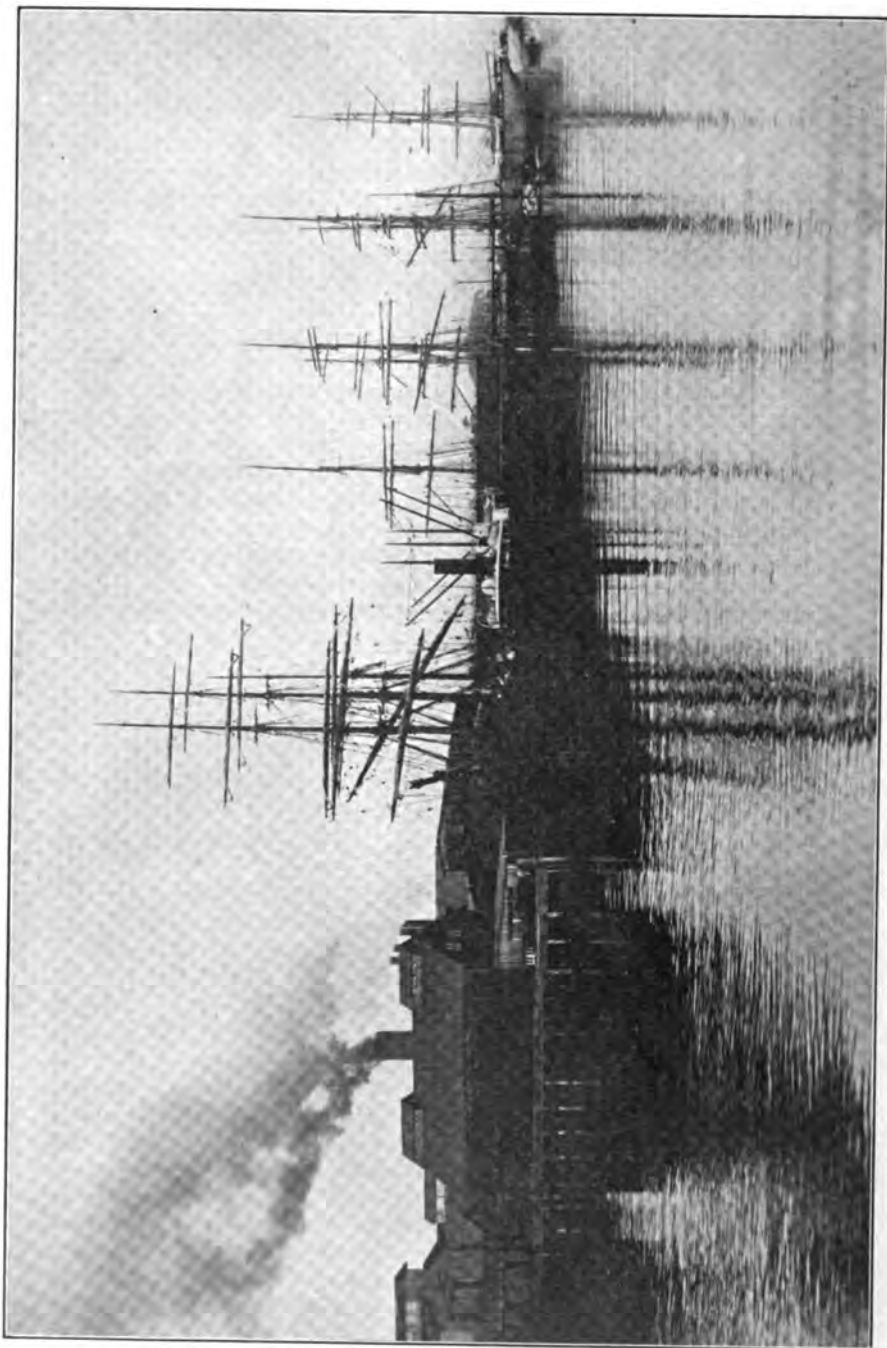
The record begs no questions. Never makes worse of better or better or worse. Tries to explain away no sin. Tries to lug in no virtue. Whitman was not afraid of the man who would make too little of him. He was afraid of the man who would make too much of him. He knew that it was easier to survive some kinds of enemies than to survive some kinds of friends. Whitman did not insist on his faults. But he wanted them all counted it. The last fault with the first fault. He would rather have been thought too little of than too much of. I have never lost sight of his command of commands: "Whatever you do, do not prettify me."

The volume is not recommended to the reader for mere entertainment, though the right kind of reader will find a very high order of entertainment in it. Small, Maynard & Co., Boston. \$3 net.

After reading *Boyville*, I gladly add the name of its author, John E. Gunckel, of Toledo, O., to that part of my mental calendar on which are jotted such names as Sidney Peixotto, of the Columbian Park Boys' Club, San Francisco, Ben B. Lindsey, of the Denver Juvenile Court, and (going back more than a generation) Lewis Pease, of the Five Points House of Industry in New York—men who by dint of sheer love and sympathy and horse-sense have converted thousands of "little toughs" into useful, respected and self-respecting citizens. If there is a loftier service which any man can render to the community or to the race, I do not know what it is. *Boyville* is the record—or rather it contains very brief and modest excerpts from the record—of the Toledo Newsboys' Association, which had its origin in the heart and brain of Mr. Gunckel, and to which he has furnished the controlling inspiration for fifteen years. Every lover of his kind should read it. The Franklin Co., Toledo, O. 75 cents.

Charles Dwight Willard's *City Government for Young People* is the first attempt to provide a text-book in that field for school use—and the author has made a distinct success. The book is offered not as an addition to the existing curriculum, but as a substitute for courses in Civics or Civil Government, on the very rational theory that the part of his governmental environment with which the citizen-to-be must come into contact soonest, most closely, and most continuously, is the part concerning which he should first have exact knowledge. The purpose of the book is not merely, nor mainly, to give information, but to help in the making of better citizens. The Macmillan Co., New York.

CHARLES AMADON MOODY



Mill and Shipping Scene on Humboldt Bay

HUMBOLDT COUNTY AND THE CITY OF EUREKA

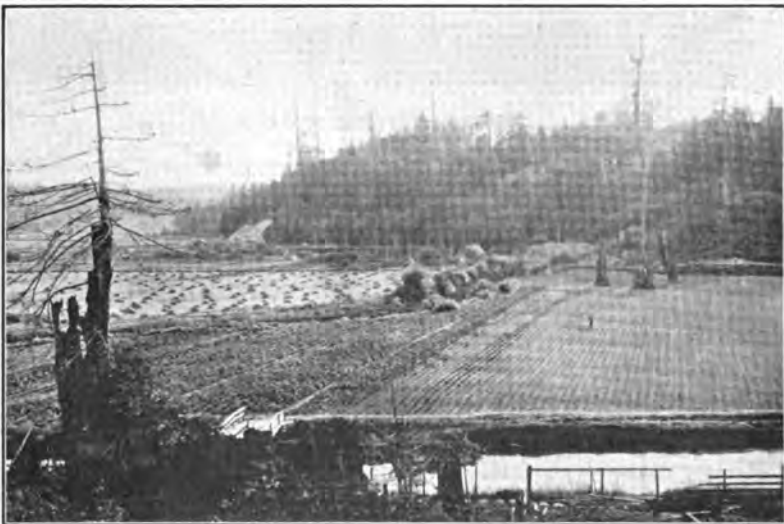
By WM. AYERS



UREKA, Humboldt Bay, and Humboldt County, situated on the Pacific Coast in Northern California, between the fortieth and forty-first parallels of latitude, are not unknown to the country at large, but hitherto have received but a small part of the attention at the hands of the public press to which their unsurpassed opportunities and natural wealth entitle them when impartially compared with other sections of the Pacific Coast.

Favored as all parts of the western shore have been by Nature's bountiful gifts, it is the opinion of those who have made a careful study of the country surrounding Humboldt Bay, that there is no section that surpasses, and many that do not equal Humboldt in the variety and wealth of her natural resources, the equability of her climate, and natural means for industrial development. Finally, the location is such as to give a most decided commercial advantage on the Pacific, when the various approaches and lines of travel shall have been improved and perfected by modern engineering science, and the artificial methods of the present age.

Humboldt's mineral, agricultural, horticultural, timber and manufacturing possibilities are so full and complete as to constitute her an empire within herself, possessing all the natural elements to make a territory and community of exceptional wealth and surpassing prosperity, even though cut off from all the rest of the world. Her independence and individuality in this respect is pronounced, emphatic and aggressive, as is the physical feature which she presents in the geography of this section of the world. No one can take even a casual glance at the map of North America without noting the huge "shoulder-of-mutton" which the most westerly coast of the United States presents, pushing aggressively into the Pacific waters. This bold headland comprises, and is embraced by, the county of Humboldt. Just a few miles north of this most westerly point of the United States



Humboldt Bottom and Stump Land in Cultivation

is the safe, commodious, land-locked harbor of Humboldt Bay, upon the shore line of which is situated the city of Eureka, the eldest harbor-sister of the Queen City of the Pacific—San Francisco.

To the incoming passenger by steamer the coast of Humboldt County, the Bay of Humboldt and the city of Eureka present a series of attractive and most interesting views. In coming up the coast the conformation of the shore-line has gradually forced the steamer westward until she is fully one hundred miles west of San Francisco and has reached a latitude that receives to the fullest degree the genial influence of the Japan current in its course toward this continent from the southern seas. Just before reaching Cape Mendocino, the extreme promontory, King's Mountain raises its head sheer from the water-line 5,000 feet above the sea, which altitude would cause it to be snow-capped the greater part of the year were its location farther inland; but here on the coast, subject to the Japan current, as well as the south winds during the season of storms, snow is seen on it but a few weeks in the year.



A Business Street in Eureka

Passing on, the coast hills tumble down into lesser elevations, broken here and there by wonderfully productive valleys of several miles in extent, through which the rivers debouch from the mountains in the background, discharging their clear waters into the ocean.

Nearing the entrance to the harbor, the face of the country immediately on the coast is greatly softened and less rugged; there is more of flat, valley, and rolling table-land, and the elevations are but hills instead of mountains. As the steamer crosses the bar and moves up the channel, the city of Eureka is gradually unfolded to view, and, framed with the dark green of the retreating forest hills, with the placid bay for the foreground, it makes a most attractive and interesting picture.

Landing at the wharf of this northern metropolis, the Queen City of the Redwood Realms, the visitor finds a clean city, with well-paved streets and substantial edifices, built on an admirable site, and having most perfect drainage. The site is on the southerly shore of Humboldt Bay, which is shaped very like a crook-necked squash, the city being built on the shoulder or blunt point which intrudes into and causes the crook in the bay. This concave water-line, and consequent convex shore-line, makes a sweep of

about six miles around the front of the city and its outer limits, and gives a west, north and east water-line and front. The city's growth will necessarily be southward and eastward, by reason of the bay shore-lines.

The deepest and best water to accommodate shipping is west and north, the east giving more upon salt marsh-lands with intervening sloughs. The city rises from the water's edge in a gentle slope toward the south, and the natural water-system can be illustrated admirably by comparison with a widely-extended fan, the dividing ridge, which reaches back to the mountains, rising gently for the first three or four miles, representing the handle, and the divergent water-courses draining the ground representing the rays of the fan.

Looking southward and eastward, the hills, forest-covered, rise higher and higher as they recede from the bay. The near-by tables and forest slopes are gradually yielding their kingdom to the inroads of the lumbermen first, then the wood gatherers, later to be followed by the cottages of



New City Hall, Eureka

suburban dwellers, who are thus clearing the way for the coming of improved streets and substantial buildings. The scattered cottages now extend southward from the most northerly water front for two and one-half miles.

A bird's-eye view of the city from the cupola of the Court House, showing its plan, affords a pleasing prospect of straight streetways, having a gentle decline toward the bay. The general prevalence of good sidewalks is a distinguishing feature of the city.

The area contained within the corporate limits at present is about five and one-half square miles. The streets run principally with the United States surveys. The city has about eighty-five miles of improved streets, fifty blocks of which in the business portion of the city are bituminized upon substantial concrete foundations. There are nearly one hundred and fifty miles of sidewalks, some of cement, some of asphalt, but the greater portion of two-inch redwood plank. The lay of the land makes possible an absolutely perfect drainage and sewer system, the topography resembling the back of an ordinary shovel, giving opportunity for outfalls on three sides in as many directions.

The growth of the city the last four years has been rapid, but healthy, and

still continues, there being but few idle people. The many opportunities make possible the healthy assimilation of a large stream of incoming population. The rush of building kept up during the last three or four years has been hardly sufficient to house the newcomers, and the alternative of going into rooms, as in the large cities, has to a large extent been adopted. Quite a number of residence houses are now being built in flats.

Eureka has been the center of the redwood lumber manufacture of Humboldt County since its beginning in 1851, but the city has long since become, and has taken on the appearance, methods and business of, a Pacific Coast metropolis. The details of the evolution of the lumbering industry, and the expansion of the city's business into a recognized factor in the commerce of the world, would be too voluminous for the limits of this article. It is but just to say, however, that during this development the lumbering industry has held, and still holds, the leading place in Humboldt's manufactures and commerce.

The county of Humboldt is fortunate in that its conditions are eminently favorable for manufacturing in other lines. A well-equipped woolen factory, established some five years ago, made the unusual record of winning in two

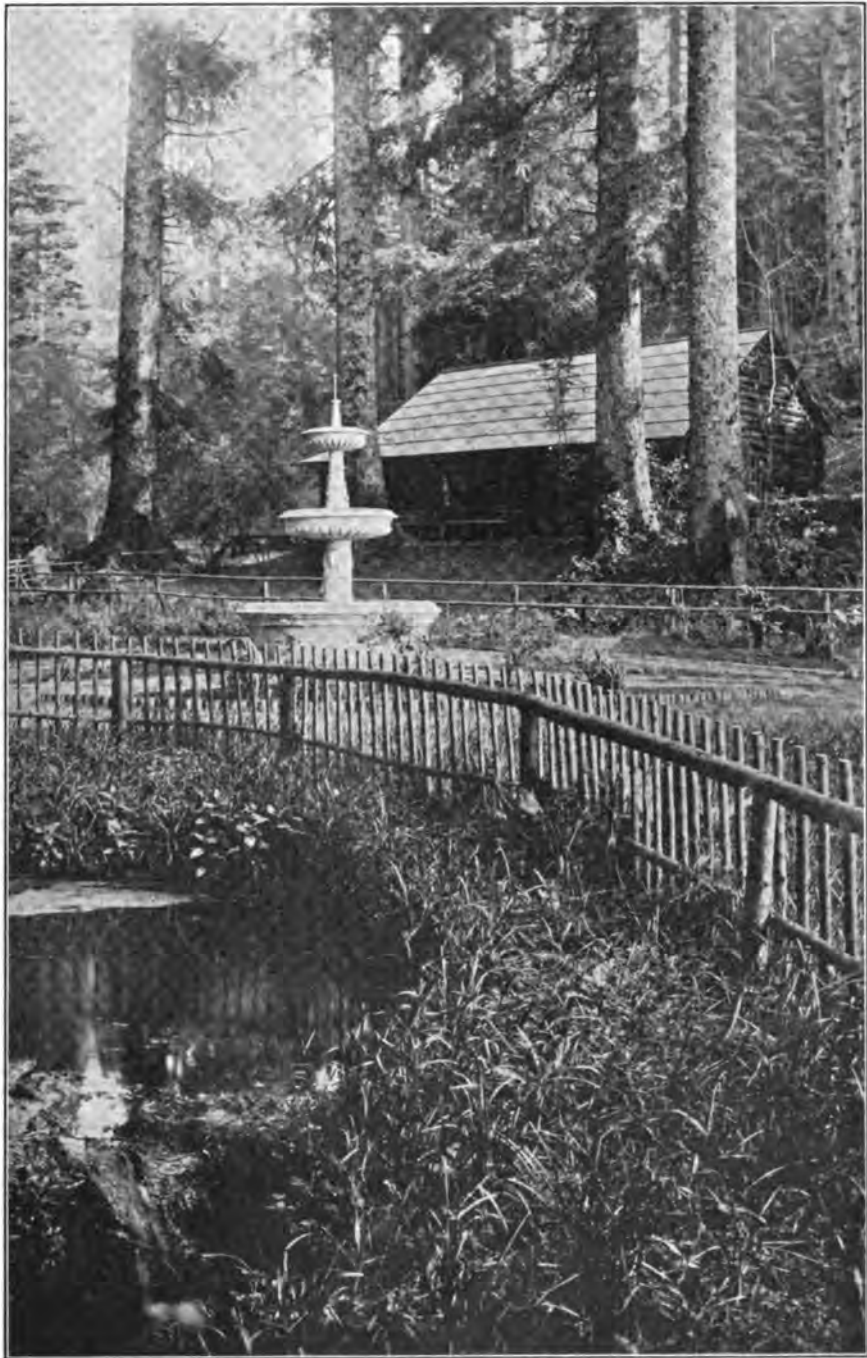


One of Humboldt's Redwoods

years a reputation which overwhelmed it with orders for its product. Careful attention to working details and good management are to be credited with part of this success, but the principal foundation lies in the complete adaptability of climate and water to the requirements of woolen manufacture.

Flax grown and decorticated in Humboldt and sent to Washington has been pronounced by the Department of the Interior to be equal to fibre grown in the districts of the world where the highest quality of flax is produced. It is the opinion of practical men that a flax-spinning factory here would prove a permanently paying institution.

Humboldt Bay, as yet, has not reached that position for which Nature has plainly designed her. Granting San Francisco to be the commercial center and Queen City of the Pacific, Eureka and Humboldt Bay, for commanding position, can easily claim second place, and in the near future are destined to develop as a commercial center for and highway between the Orient and Chicago, the great inland distributing point of the United States, which will challenge the present established commercial routes. At first



Scene in Forest Park, Eureka

thought this is not so understood, but the fact is that this bay and port is about one hundred miles west of San Francisco; a large majority of the craft coming from ports across the Pacific to California coast ports, sight Humboldt first, then sail to their destination. Two reasons impel this result: First, Humboldt being the most westerly land of the United States, it is sought for and sighted as a beacon. Second, the lower, or southern, edge of the Japan current flowing toward this continent, serves directly to this port.

On the other hand, the lowest passes in the great Sierra Nevada chain of mountains, the Pit River Cañon and Beckwourth Pass are almost directly to the eastward of Humboldt Bay, and are the two lowest gateways to the Pacific through that chain of mountains for a distance of at least one thousand miles.

One of these passes, the Beckwourth, has already been invested by the Western Pacific road, and the work of reaching the Pacific Coast by the most direct route from the East is gradually taking shape. The ever-growing demand for quicker and quicker dispatch in both travel and freight across the continent are forcing this innovation.

The first roads across the continent were not built for dispatch, but for land exploitation; the longest road that could be projected enabled the projectors to get the most land. That era has passed, and the demands of trade and travel are requiring roads built for quick dispatch in the carrying



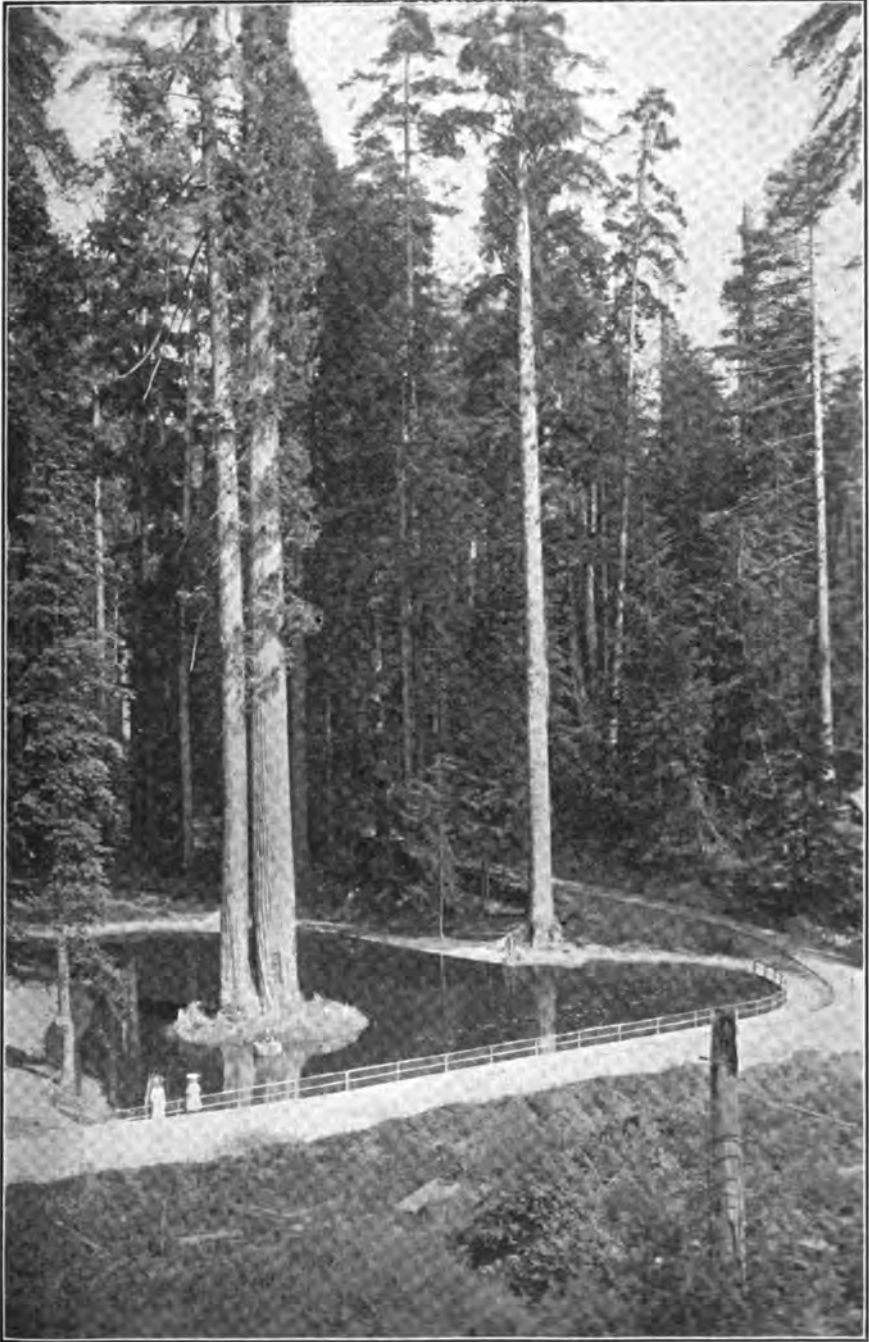
Eureka Free Library

traffic. Eureka and Humboldt Bay, lying on the coast immediately opposite and west of the two lowest passes that occur in the Sierra Nevada Mountains, as before stated, form the free, open gateways to the Pacific, the natural highway for the travel and traffic between the Orient and other trans-Pacific countries and the Middle West and Atlantic sea-board.

The country through which such road will pass has no superior on the continent in natural wealth; its mineral and agricultural resources can hardly be exaggerated. Pursuing a practically direct line across the continent, both freight and travel could have far quicker dispatch than is at present afforded by the circuitous routes to the south or north from San Francisco, or over the high, steep and dangerous grades of the Central Pacific.

When all these advantages are considered—our extreme western position, the Japan current, on the one side, and the lowest pass and the most direct route on the other, and through an undeveloped country of wonderful promise, where Nature herself has leveled the way—engineering science is certain to find out the facts in its search for conditions which will tend to dominate an eagerly sought carrying business.

And it would appear that these facts have dawned upon at least one of the great railroad companies—the Western Pacific—which is now making active, energetic and aggressive efforts to invest this field and build another trans-continental road, having its western terminal on Humboldt Bay. Two large water-front properties have recently been bonded in the interest of



Sequoia Park, Eureka

that company, and the citizens of Eureka, having the faith of conviction in the business stability and soundness of the enterprise, have undertaken to raise a bonus of one hundred thousand dollars to assist in the preliminary task of starting construction work, which is to commence within six months.

The harbor of Humboldt Bay, even partially improved, could accommodate the commerce of a hemisphere. Even under adverse conditions, with a partly built jetty system, vessels of two thousand tons burthen easily and safely come and go, and with the completion of the jetty system as first designed by the U. S. Board of Engineers, will undoubtedly accommodate all the ordinary sea-going craft. Besides this, the harbor city of Eureka is connected by rail with Trinidad, a sheltered roadstead twenty miles distant, which can accommodate the largest vessels that float alongside her wharf. A comparatively small expenditure would make of Trinidad a safe, protected harbor of limited anchorage.

An incontestible card in favor of Humboldt as a residence place is its equable climate. Especially does this apply to Eureka. In this it holds a position and record above all other sections of the coast by reason of its even temperature. On this point San Francisco, Los Angeles, San Diego, Fresno, Sacramento, all must yield to the official record in favor of Eureka, which gives that city the least range of temperature of the six places; and though its location is so far north, yet its extreme lowest temperature is but a few degrees below that of the cities of Southern California. For in-



Eel River Dairy Farm

stance, take the three winter months, January, February and December, note the lowest temperature reached during each of the three months, and then take the average of those three lowest temperatures, and we have for the lowest winter temperature in Eureka in 1899, 30°; In 1900, 35°; in 1901, 32°; in 1902, 34°, and in 1903, 33°, which gives a mean lowest winter temperature for five years of a fraction less than 33°. On the other hand, the highest winter temperature for the same years was in round numbers, taking the mean and not counting fractions, is as follows: In 1899, 59°; in 1900, 65°; in 1901, 65°; in 1902, 68°; in 1903, 65°, or a general mean of highest temperature for the five years during the winter months of 62°.

During these five years the range of winter temperature in Eureka, from highest to lowest, was 27°; in San Francisco, 29°; in Sacramento, 35°; in San Diego, 35°; in Los Angeles, 46°, and in Fresno, 64°.

Considering that Eureka is nearly one thousand miles north of Los Angeles and San Diego, this official showing of her winter climate is exceptional for the latitude.

One more exhibit on this important subject and we will pass on to other things. The government reports average the temperature at Eureka by months for thirteen years as follows: January, 46.4°; February, 46.4°; March, 48.2°; April, 49.5°; May, 52.3°; June, 54.7°; July, 55.6°; August,

56.4°; September, 55.4°; October, 53.3°; November, 50.8°; December, 47.8°, making a total average of 51.4°. The annual rainfall is about forty-five inches.

As a health proposition, Eureka and Humboldt present exceptional features. There are many people of bilious habit, tottering on the brink of the grave, who have been restored to robust health by a few months' residence in the bracing, invigorating atmosphere of Eureka, which prevails along the coast generally. On the other hand, there is a zone of country inside, or eastward of, the redwood belt, fifteen to twenty miles from the coast, which is a natural sanitarium for all persons afflicted with pulmonary trouble. The coast sea-breezes and fogs are too strong and bracing for these people, but after these breezes, laden with invigorating ozone as they are, have drifted through the balsam forests of redwood, spruce, fir, hemlock and pine, and have become tempered and softened by contact with the forests and hills, they come as a healing balm to weak lungs and affected bronchial tubes. Much can be written on this score, but this simple statement of natural facts and conditions should be sufficient for all persons of ordinary intelligence.

Humboldt has a great future in the agricultural, horticultural and dairying industries, in all of which, particularly the two latter, she stands well in the forefront with the best sections of the coast. Although its dairying district



Redwood Stump Land Cleared and in Cultivation

is acknowledged to stand first on the coast, and its output always commands the highest market prices, yet so great are the undeveloped possibilities in this industry that each year witnesses great strides both in expansion of the business and the perfecting of the methods.

The undeveloped, but already demonstrated, possibilities in horticulture are even greater than in the dairying industry. Humboldt is the home of the berry fruits and of most of the tree fruits. Berries grow in unsurpassed profusion and perfection without irrigation. Apples, pears, peaches and cherries reach a perfection which commands the highest market price.

Humboldt not only presents a most inviting field to the fruit grower, but in a lecture before a recent convention of the California Fruit Growers, Luther Burbank, the great horticulturist, read a paper on walnut culture in which he called attention to the fact that almost every nut grown finds a congenial home in Northern California. He said that the Royal walnut, otherwise known as the English, European, etc., would, in some of its improved forms, always be the leader. Our southern neighbors, he said, "have been the first to obtain and bring into bearing these improved varieties, and they have been well repaid for their foresight and enterprise; for nothing which grows on trees pays better than walnuts." He said that "Central and Northern California were just waking up to the fact that no better walnuts can be grown anywhere than here," citing the fact that near Santa Rosa the Franquette and Santa Rosa varieties produce nuts which

have so far in all cases brought eighteen or twenty cents a pound, and even more, by the ton, when those from other sections were selling at from nine to fourteen cents.

A citizen of Eureka, desiring to be certain as to the application of his remarks to Humboldt County, wrote to Mr. Burbank and asked if his remarks included Humboldt and the extreme northern end of the State. He replied that his remarks applied to Humboldt as well as to Sonoma, and that the English walnut is well adapted to this county. "They will do well on either valley bottom-lands or hill-lands, if the soil is deep, without hardpan or standing water. River bottom is best; redwood land especially fine. They can be planted anywhere within a mile of the coast, if not in a very windy locality."

With such authority as a basis for experimental venture, and with the practically open areas of vast extent and promise that obtain in Northern California, here is a most inviting field for industrial development which will, in conjunction with the almost limitless possibilities in fruit culture, assimilate an increased population of many thousands annually for many years. This zone of country has been proved, and stands unchallenged as the home of the apple, peach, pear, quince, cherry, and all the berry fruits, almost invariably winning first premiums at both State and national exhibitions whenever they appear in contest with other sections.

Practical tests made in canning Humboldt-grown small fruits have developed the fact that her berry fruits are unequalled for canning purposes, preserving flavor, shape and firmness to a degree that has given them first position for table use. Apparently the only things required to develop an enormous industry in growing and preserving fruits in this county are transportation to move the products, and the energy, capital and enterprise to develop the field.

Humboldt County can supply, moreover, water-power for the generation of electric power to an extent that would be ample to run the combined machinery and rolling-stock of the Pacific coast. These opportunities are not confined or grouped in one section, but are fairly distributed over the length and breadth of the county, and easily accessible to undeveloped crude values and naturally productive areas. In its length of one hundred and eight miles by an average width of forty miles, it is very evenly divided by five considerable rivers—the Mattole, Eel, Mad, Redwood and Klamath. Both the Klamath and Eel Rivers have large tributaries which still farther subdivide the territory, and the opportunities for power generation and operation.

But, after all is said, the earnest seeker after a new home, or a new business field, should come to Humboldt and see for himself. The great development that will open with the commencement of operations this year will make openings for many people of many callings.



A Drive of Humboldt Turkeys Just Before Thanksgiving

CHICO, BUTTE COUNTY

By *W. J. COSTAR*



WHEN Chico is mentioned in California, the name of Bidwell is remembered; for it was here that John Bidwell, the pioneer of '41, builded a home and a name that will forever live in the annals of California.

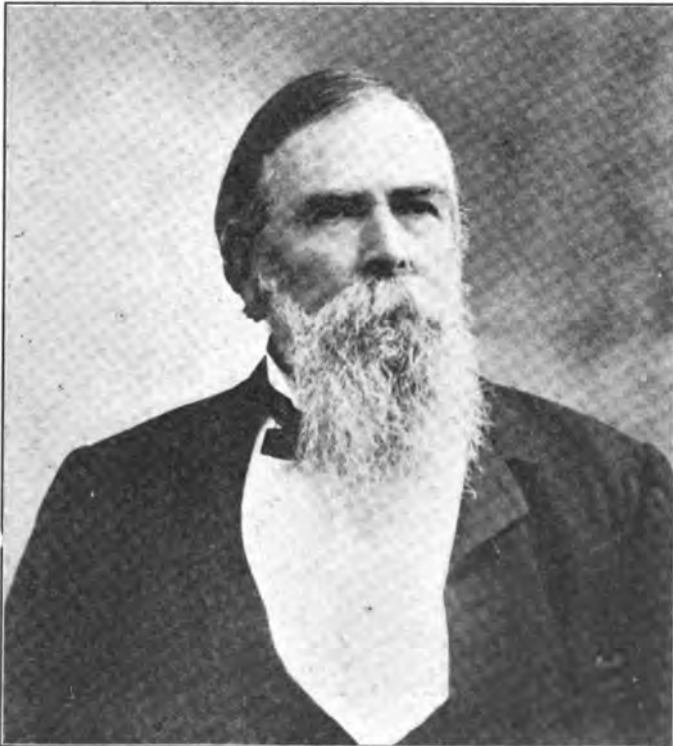
In the early days, while other men were delving in the earth for gold, young Bidwell was also using the spade and shovel, but for another purpose. The fertile soil and prolific vegetation, the abundant water supply and the healthful climate of the north end of the great Sacramento Valley attracted his attention, and though but a young man, he recognized the nucleus of an empire, and immediately set to work developing the resources of the country.

The water courses and the natural growth of timber along their banks were jealously guarded.

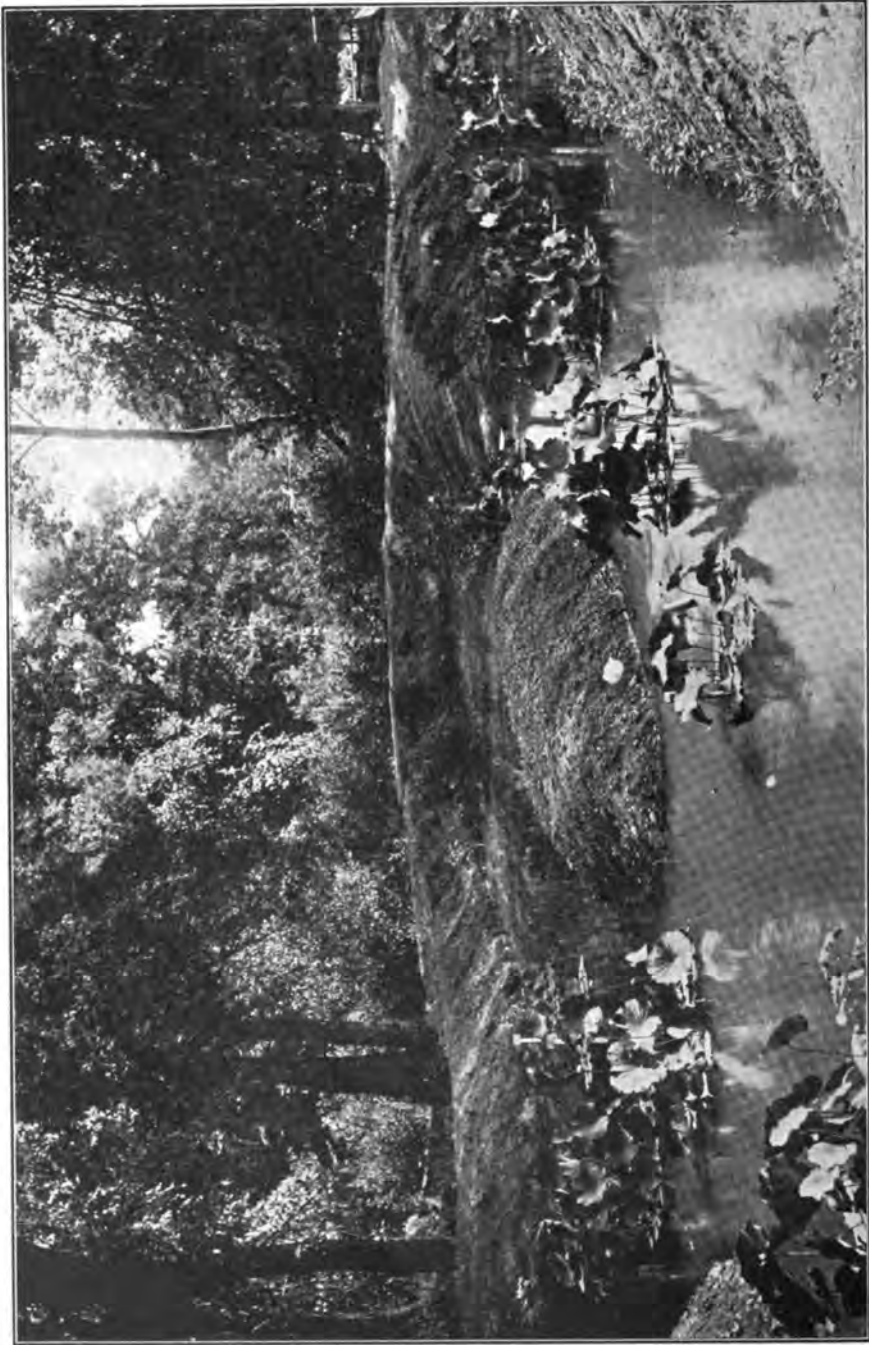
Experiments were made with grains and grasses, fruit and ornamental trees, to such an extent that when the U. S. Government decided to establish a Plant Introduction Garden in California, the work of General John Bidwell clearly demonstrated that no place in California was better adapted for the purpose than at Chico, county of Butte.

Dr. B. F. Galloway, Chief of the Bureau of Plant Industry of the Department of Agriculture, in an interview said:

"The Sacramento Valley is certainly a wonderful place. Around Chico



John Bidwell, Pioneer of '41



Lotus Pond, U. S. Plant Introduction Garden at Chito

almost anything can be grown. When the Government sent out men to study the conditions in California with the view of establishing an experimental garden, they, one and all, came back and could talk nothing but Chico. No matter if they started with the South or with the North, they invariably wound up with Chico.

"Well, I heard so much about Chico that I became rather set against the place. I did not intend to go back and talk Chico. But I have changed my mind; Chico deserves it all. The Sacramento Valley can be made the garden spot of the world.

"When I enter a place I do not look at the people and buildings; I look at the trees and the shrubs. Then I know what is in the soil. When one finds, as I did in this valley, orange, walnut, palm, camphor, apricot, apple and prune trees growing side by side, it seems marvelous. It is unique. And all these are grown without irrigation, too.



U. S. Plant Introduction Station at Chico

"What you need is the doctrine of more diversified crops. As I said, this valley could be made the garden spot of the world; all you have to do is to spread out. The ambition used to lean toward getting hold of land, but people are realizing that the small land holder is the man to make money, provided he 'spreads out' and caters to the market.

"Newer systems are coming, Oriental trade is opening up an immense new field. But the farmers should be improving what they have now.

"One new field in which there are great possibilities is that of raising camphor. Every year we import some \$2,000,000 worth of camphor. Now, in Chico, I noticed one camphor tree seventy or more feet in height. We have found a method of extracting the gum which makes it possible for our producers to compete with the cheap foreign labor.

"Then again, morphine can also be produced. Everyone knows how the

poppy grows here. We also import \$2,000,000 of this every year for medicinal purposes. There are also other fields that I might mention.

"We intend to work hand in hand with the State experimental stations. They are doing good work, and we wish to give them due credit. President Wheeler, of the State University, has been doing good work here, and as soon as he gets the new stations he will no doubt do better. The State can do things we cannot, and we can do things they can't. Thus by working together we can accomplish a great deal of good. The work at Chico is the largest in the West, and will benefit the whole State. The Sacramento Valley is the one place in California."

Rancho del Arroyo Chico, of which the site of the city of Chico is a part, was granted to John Bidwell by the Mexican Government.

After his death, which occurred on the fourth day of April, 1900, a large portion of this famous grant was subdivided into small tracts and sold to eastern homeseekers.



The Bidwell Home at Chico

Nineteen hundred and eighty acres were deeded to the city of Chico for a public park, which will no doubt some day have a national reputation.

The park is heavily timbered with oak, sycamore, alder, ash, and the flowering shrubs and vines native to this part of California. Standing as guardian over his children is the famous "Sir Joseph Hooker Oak," the largest oak tree in the world. Through the entire length of the park flows the beautiful Arroyo Chico, a mountain stream of pure crystal water, abounding with speckled trout and other game fish.

With one stroke of the pen, without money and without price, the widow of the illustrious pioneer, now living, and who is carrying out the generous impulses of her husband, transferred the title to this natural park to the city of Chico. It is a princely gift; the water right alone, commercially viewed, is worth \$250,000, to say nothing of the land that goes with it.

Another testimonial to the fertile soil of this section is the Banyan fig-tree of Rancho Chico. The cutting stuck in the ground more than fifty years



The Banyan Fig Tree of Rancho Chico



The "Swimming Hole" in Chico's 2000-acre Park

ago is now a giant thirteen feet in circumference. Its branches have taken root and formed arches and braces that support a canopy that at noon-day would shelter from the sun's rays thirty-five hundred men, allowing for each man four square feet. This tree has grown to such immense proportions that it has become necessary to cut the branches that encroach upon valuable ornamental trees adjacent to it.

The fig is a very healthful and palatable fruit, either fresh or dried, and



A Driveway in Chico's 2000-acre Park



The Foot Log in Chico's 2000-acre Park

is wonderfully prolific, maturing two crops in a season. It is therefore quite apparent to the reader that a tree of the dimensions herein described would be not only a great curiosity, but a revenue producer also.

Chico by no means depends solely for her income upon agriculture and horticulture. Over four millions of dollars are invested here in factories. The Diamond Match Co. and the Sierra Lumber Co., immense wood-working concerns, will soon be running night and day to supply the demand for doors, windows, and lumber occasioned by the disastrous fire in San Francisco.

The people who labor in these factories are happy and contented, because they are prosperous. Their homes are in the suburbs, usually on acre tracts—a parcel of ground that is quite popular here, for it insures the owner the bulk of his living. A little patch of alfalfa for his cow, a garden and a poultry enclosure, a small orchard of various table fruits, such as oranges, lemons, peaches, pears, olives, figs and grapes, and a flower garden from which he could pluck a rose for the dining table every day in the year—all these are not only possible, but usual, on the little home-place.

The population of Chico, including the numerous additions, is estimated to be 10,000, and is rapidly growing. At the present time Chico is experiencing a most prosperous period. There is an immense fruit crop in sight, the drying and packing of which will require a large force of men, women and children; the railroad building and the electric power development now going on in this part of the State are employing an army of men, and Chico on account of her river and rail facilities is the natural distributing point.

An interurban electric railway system has its headquarters here and has just completed one piece of road, which connects Chico with the Western Pacific at Oroville. The road is well equipped with up-to-date passenger coaches, and rapid transit is the watchword.

Surveys are now being made north and south from Chico, and it will not be long until many miles of electric roads will be in operation in this part of the State.

No place in California has a brighter future than Chico, nor more to offer the home-seeker or the investor.



The Learning Oak in Chico's 2000-acre Park

CITY OF BIGGS, IN BUTTE COUNTY

By J. M. COFFMAN



MOST favorably located in the northern part of the State, its eastern portion extending for miles up the timbered flanks of the mighty Sierra Nevadas, where numerous streams follow the course of cañon and gorge to form the common source of the Noble Feather River, and extending westward to the Sacramento River, Butte County stands unrivaled in her diversified products, varied resources, climatic conditions, and in all that tends to the health, happiness, comfort and prosperity of an intelligent, progressive and prosperous, dense population.

Butte County has an area of 1,763 square miles; an altitude from 94 feet to about 7,000 feet; mean annual temperature, 65.25 degrees.

The valley and foothill portion of the county has a semi-tropic climate all the year, while the mountains rise to an altitude of 6,649 feet, and are snow-capped in winter, at the same time when the golden orange is ripening about the city of Biggs in time for the Thanksgiving market, in the month of November.

The annual rainfall is from 20 to 50 inches, according to location, commencing about October and alternating with warm, sunny days until May.

Butte County is one of the leading fruit, grain, vegetable, gold mining, and lumber producing counties of California. Her orange, lemon, fig, grape, all varieties of deciduous fruits, and all kinds of nuts are unexcelled.

Butte County fruits, when dried and in jars, take first premiums at world and State fairs.



Feather River near Biggs



Drying Fruit Near Biggs

At California's mid-winter fair Butte County won first premium on her citrus fruits, and \$1,235 in premiums out of a total of \$2,500 awarded. Butte County oranges ripen from four to six weeks earlier than in the southern portion of the State, and thereby capture the November market. It is conceded that the finest oranges (navel) grown in the world are produced in Butte County.

Centrally located in the heart of Butte County's fertile and productive valley lands, on the California & Oregon Railroad, 73 miles north of Sacramento, is situated the flourishing little city of Biggs, with a population of about 1,000.

Biggs is an incorporated city of the sixth class, governed by a board of five trustees, a marshal, clerk, recorder, treasurer, etc.

The city owns a first-class water-works system and electric light and power plant.



Corn Growing in a Biggs Yard



Hotel Colonia, Biggs

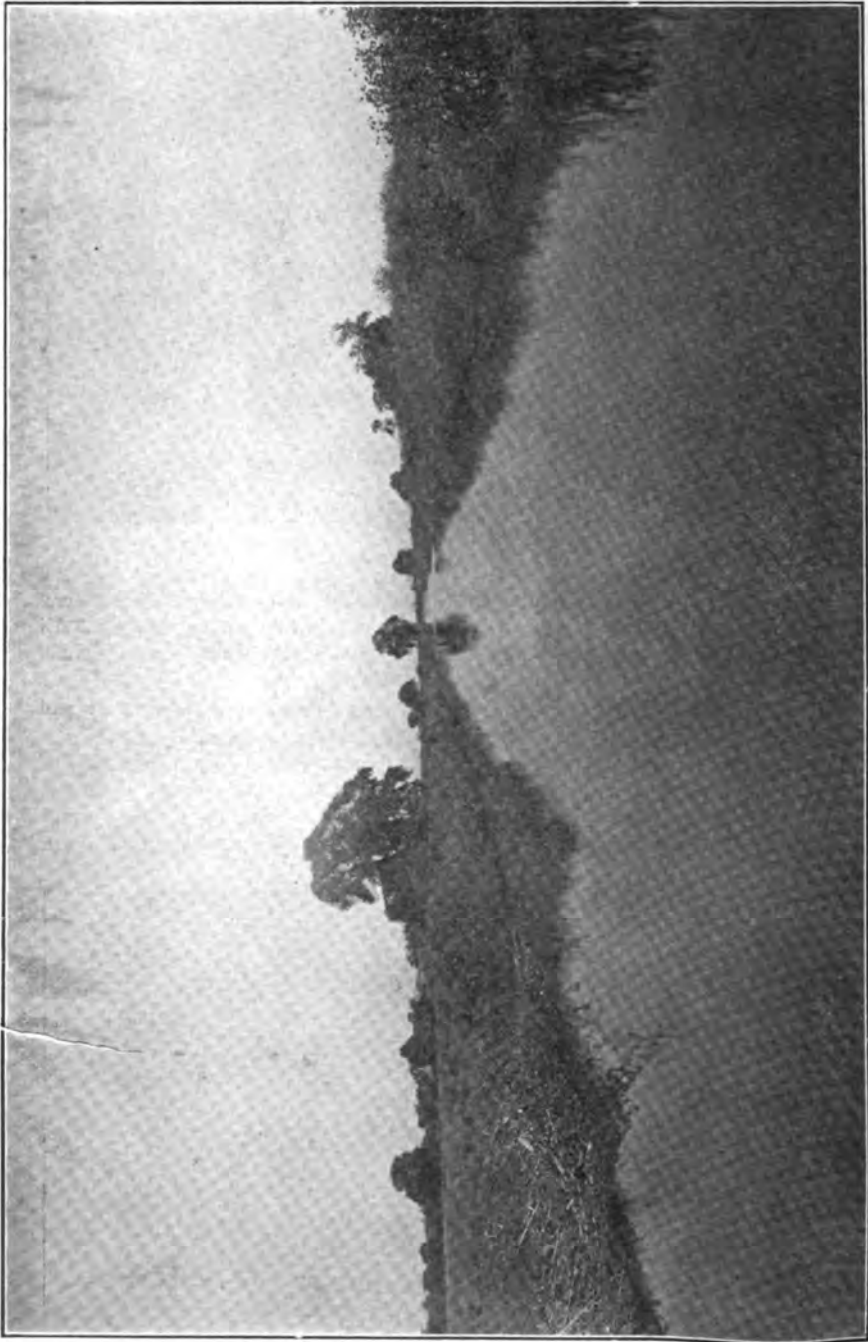
Biggs has an excellent public school, employing four experienced teachers. There are two churches, well attended, and flourishing Sunday schools. All the prominent fraternal societies, a progressive Ladies' Improvement Club, Ladies' Aid Society, a free library, and a Board of Trade.

The Sacramento Valley Bank owns and occupies one of the finest and best furnished buildings north of Sacramento.

The leading commercial interests are represented in Biggs by men of means, experience, enterprise, and public spirit. Biggs has one of the largest brick warehouses in the State, besides other immense buildings for the storage of grain, fruit, hay and other products, and a large brick cannery. In August,



Sacramento Valley Bank, Biggs



Main Butte County Canal

1903, a conflagration destroyed an entire business block, mostly brick buildings, imposing a great loss on the owners. Within a short time an entire new block of modern buildings has sprung from the ruins, among them the finest and most modern hotel in the Sacramento Valley.

A glance over the dwelling portion of town shows many handsome city residences and numerous neat cottages, shaded by evergreen trees, orange trees laden with the golden fruit, and ever-blooming flora.

The professions and trades are well represented in Biggs.

Surrounding Biggs and contributory to this city as a commercial center is a vast area of land of unsurpassed richness, its even surface unmarred by break or rock or hill for miles. To the north and west are the boundless grain fields; to the east and south are orchards, alfalfa fields, garden land in abundance, adapted to the successful production of every fruit, berry, vine, nut, vegetable, hemp, flax, etc.

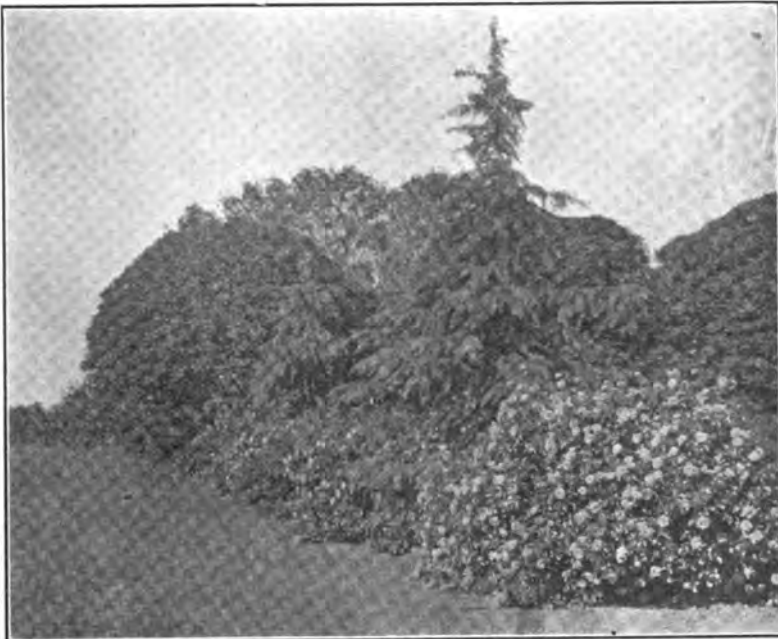
Some of the largest deciduous fruit orchards in the world, including the world-famous Rio Bonito peaches, are located along the Feather River, three miles east of Biggs.

The rapid growth and development of Biggs and rural surroundings is now assured. Many magnificent large holdings are now being subdivided into small tracts and placed on the market at prices within the means of men of ordinary circumstances and await the coming of thrifty husbandmen.

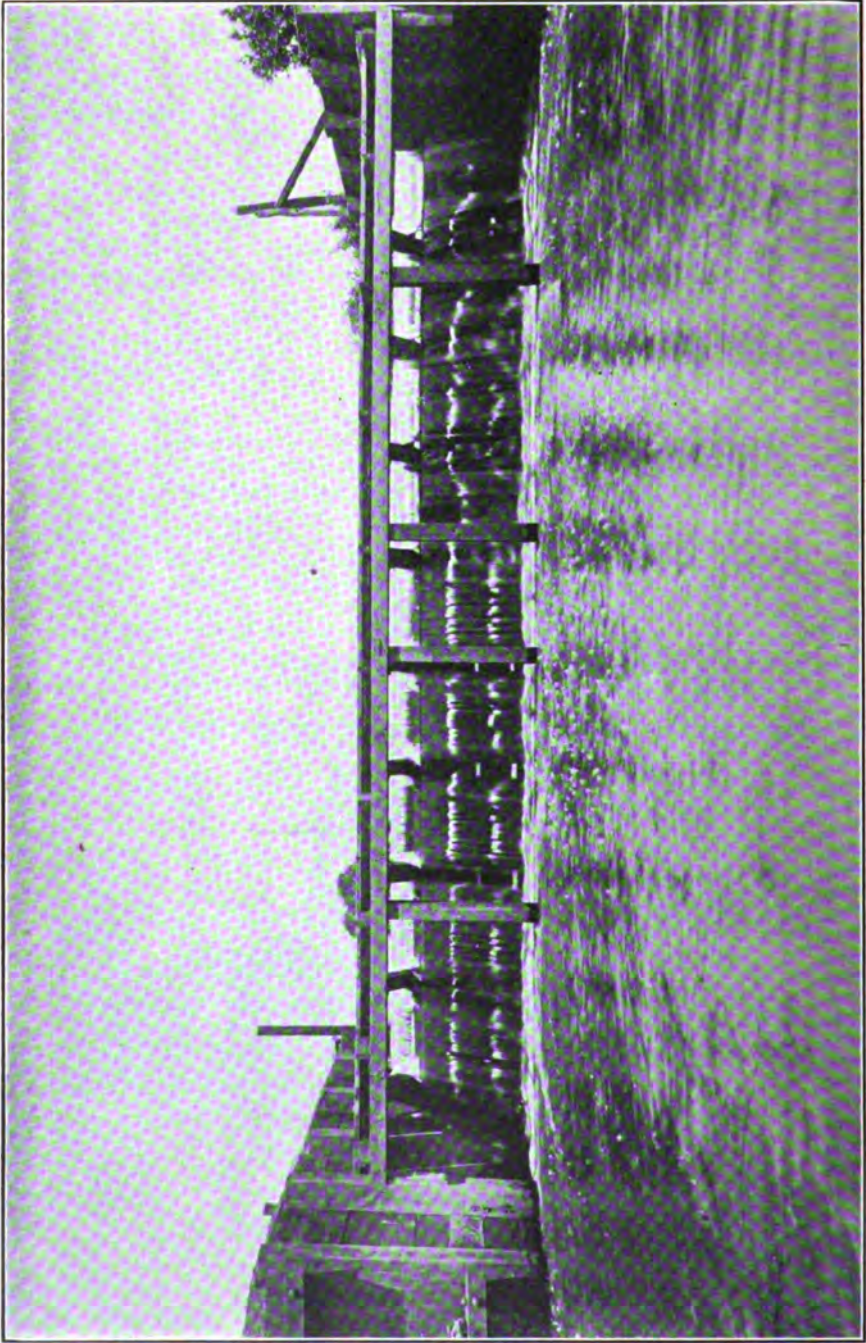
The Butte County Canal Company has completed an immense irrigation canal which will supply these lands with an abundance of water at reasonable cost, thus assuring the grower repeated crops, independent of rainfall.

The Northern Electric Railway is building its road through these lands and will afford excellent transportation facilities.

Thousands of industrious, intelligent and progressive people can find here the unequalled advantages of a healthful climate and pure water, and the opportunity of securing a home, comfort, happiness and prosperity.



May Roses in Biggs



Web on the Butte County Canal

GRIDLEY, BUTTE COUNTY

By W. D. BURLESON



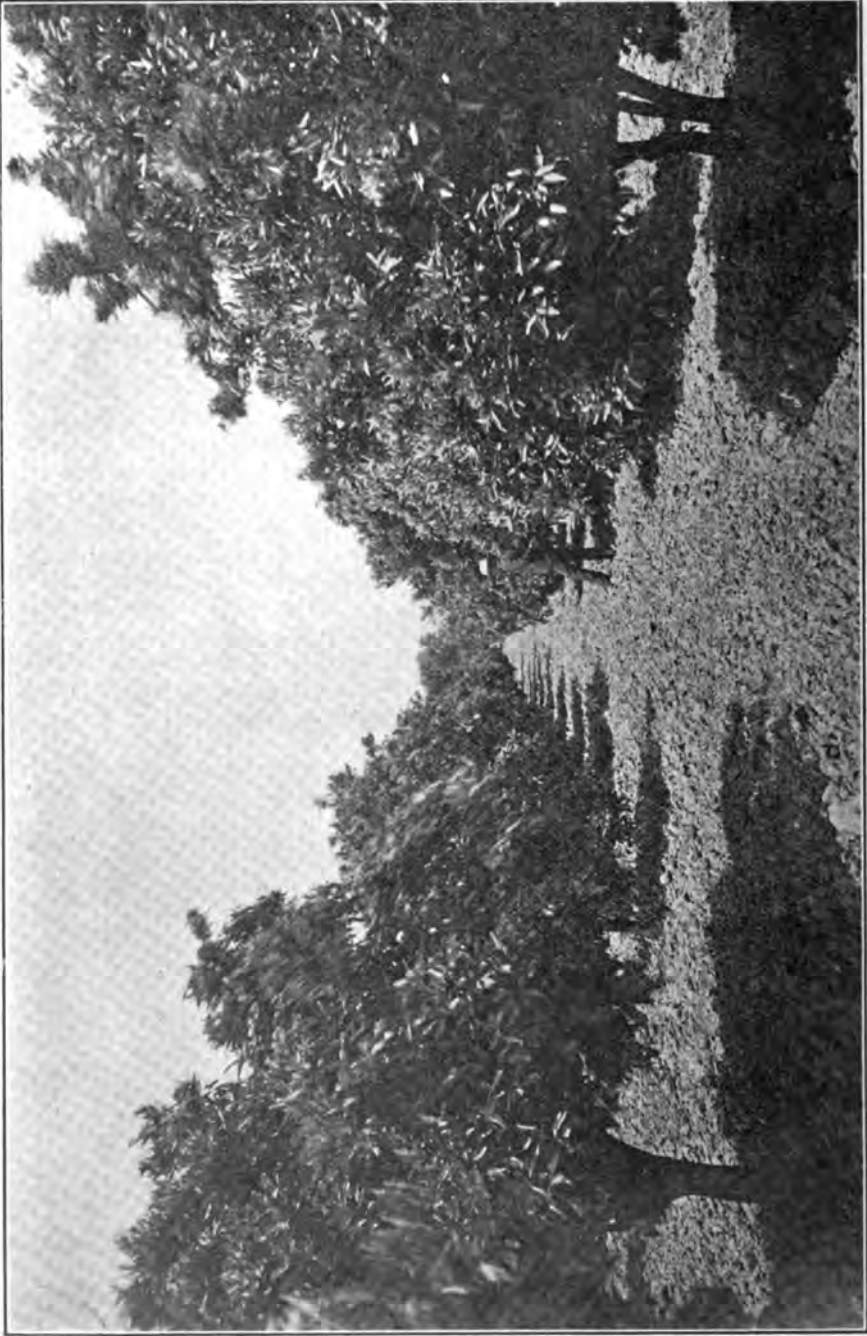
AMONG those sections of California now undergoing rapid development as a result of irrigation and subdivision of lands, Gridley is leading the van.

Gridley is located in Butte County, seventy miles north of Sacramento, 160 miles north of San Francisco, and about 500 miles north of Los Angeles. The town was established at about the time of the building of the California & Oregon Railroad, in the early seventies. It has a population of about 1500, has five churches, a fine public school housed in a new \$20,000 building, a splendid high school, a fruit cannery employing 400 people during the season, and a packing house which gives employment to about a hundred persons. Besides these, there are great grain warehouses, fine modern stores, hotels, an opera house, fire department, and beautiful public park. It is on the main line of the Southern Pacific Railroad; and the Northern Electric Railroad, on which construction has been going on for some time, will touch the town.

Last fall the Butte County canal was completed and water was turned into the big ditch. The irrigation system of which this canal is the main artery was conceived many years ago, and it was known and realized that the possibilities of uniting land and water were better in this vicinity than in almost any other portion of California. That such an opportunity should have remained unimproved for so long is due to the natural fertility of the soil of the neighborhood, and to the fact that the annual rainfall was sufficient to produce profitable grain crops. The owners of the land were not forced to adopt irrigation while they could harvest 30 to 50 bushels of wheat to the acre from their fields. They had a good thing and the work was easy.



Head Gate Butte County Canal



An Orange Grove near Gridley. Trees 7 Years Old. Gasoline Engine Used in Irrigating

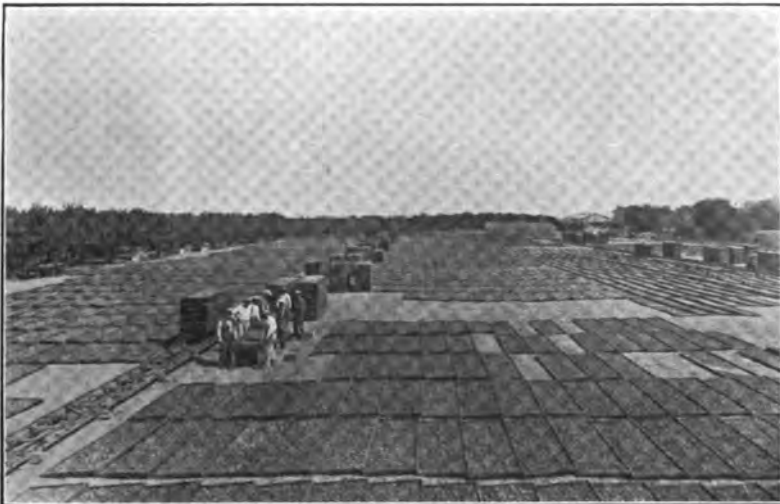


Cutting Alfalfa near Gridley

Why fuss with irrigation when everybody was on Easy Street?

But live people from the outside saw that if the irrigation opportunity was improved, the lands that were producing wheat could be made to grow fruit and alfalfa and made to earn interest on much larger valuations per acre. The engineering problem was as easy as a railroad through a flat country. The water supply was perennial and abundant. The land was naturally rich and the region had gained a reputation as a fruit country. Its peaches are the best in the whole State. Two crops of alfalfa per season were being secured without irrigation. Capital was easily interested and the canal was built. The problem was solved and the era of progress had arrived.

To a person familiar with conditions in Southern California it may seem strange that land within a radius of six miles from an orange orchard from which the owner received \$300 per acre last season can be bought for from \$80 to \$100 an acre. The same opportunities for irrigation go with the unplanted land as are enjoyed by the bearing orchard. The soil is identical



Drying Peaches in the Sun near Gridley



A Gridley Bean Field

in character and depth, is at the same level, and is exactly as good and will grow as many and as good oranges. Yet it is a fact. This orange orchard of three and one-half acres is owned by A. W. Campbell, and he sold the crop last year for \$1034.97 net. That is, he received that amount after paying freight and all other shipping charges.

The cost of water for irrigating is but one dollar per acre per year. And this gives you all the water you want at any time you need it. These lands are splendid for peaches, pears, prunes and all deciduous fruits, berries and nuts, as well as alfalfa. Deciduous fruits pay even better than citrus fruits.

Gridley is the place for the man of limited means as well as the capitalist. There are opportunities for both. The climate is that which is suited to the orange and deciduous fruits. The conditions are unique in that splendid lands under irrigation with a sure and abundant water supply can be had at a price that is but a fraction of the price asked for similar lands with similar opportunities in other parts of California. "The opportunity of the twentieth century," is what the local people call their proposition; and every outsider who visits the place agrees with them.

OUTWEST



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