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First Newspaper Artists' Exhibition in Los Angeles



Some of the
Work of
the Newspaper
Artists
to Be Seen at
the
First Annual
Exhibition
of the
Newspaper
Artists' League

THE art-loving people of Los Angeles will be given a great surprise when the doors are thrown open in the first annual exhibition of the Press Artists' League on December 4. The exhibition is to be given in the parlors of the Angelus Hotel. At 8 o'clock the patrons and their friends will be given an exclusive view of the collection.

On the following two days the public will have an opportunity of reviewing the collection, and any one who leans to the artistic will have an opportunity to gratify his passion for the beautiful. Every newspaper illustrator in the city will be represented by his best work, embracing subjects of worldwide interest, and worked out in every "medium" from pen and ink to oil. The members of the local committee are making every effort to arrange a great popular art exhibition.

An artistic souvenir catalogue is being prepared which will enlighten the public on the work of the league, which numbers in its membership men of the very highest artistic ability. They are

working their way to prominence in the profession while the world at large sees only their fifteen minutes' sketches to illustrate daily happenings. Nearly all patrons of artistic culture in the city are among those who are encouraging the exhibition. Generous aid has been lent to help the busy artists make their first exhibit such a marked success that it will pave the way for many future such exhibitions.

Wonderful advancement has been made in both departments of the modern newspaper in the last few years, and today the people are almost as much interested in the cartoons as they are in the publication of the news. With the encroachment the camera has made in the way of illustration, unclassified men, who were known as newspaper artists, have been weeded out; the field of the real artist in newspaper illustrating is very limited, and the future newspaper illustrating probably will have only two branches, in either of which only men of art, education and talent will be used. Thus cartooning, which is a presentation of political news and events of the day, tinged with humor, wit and sarcasm, and the illustrating of events, where

imagination, conception, invention and composition (facilities not possessed by a camera), must of necessity be employed. Under this head will come court sketching of the famous trials and character drawings. The camera has really enhanced the illustrator's art.

The practice of newspaper artists of the United States to make annual exhibitions of their work is growing. All the larger cities of the east have seen these exhibitions and thoroughly enjoyed them.

The newspaper artist is an everyday worker, but he is a clever man—otherwise he would be doing something else. He is versatile, quick-witted and well-read. He takes his daily assignment and with remarkable rapidity turns out the finished product of his skill and brain, and he lives for a day, and then is lost. From first to last, his work is done under pressure, and yet there is a degree of art reached in the newspaper illustrations of America that is wonderful. The artist realizes that if he would get recognition of his work he must put a certain amount of excellence of execution into it and it must have the idea behind it. So he works

hard, and the result is a work of art. Among the local newspaper artists are some whose productions have brought them a national reputation. The cartoons and comics of Richard K. Culver are widely known and enjoyed, although the artist is still a young man, and has been but a few years in newspaper work. Mr. Culver's art education was acquired in California, and most of his work has originally appeared in this state. However, the larger papers of the east, and such widely circulated ones as Puck and Judge and Life and the New York World, have used his work from time to time, during the past four years. His originals have been largely sought after by art lovers, and many a wall in the most pretentious homes in San Francisco and this city is adorned by them.

Will E. Chapin of the Times is one of the artists longest in the newspaper work in this city, and his work has attracted much attention. There is always strength and originality in his pictures, and his sketches are much sought after.

Easily, the most artistic work produced by any newspaper artist in this

city is that done by Arthur Dodge. Mr. Dodge is one of the oldest newspaper illustrators on the Pacific coast, and his work is extensively known. His wash drawings are celebrated in the newspaper world all over the United States. The originals have all the effects of the most artistic portraits, and a smoothness and intricacy and truth of detail that makes them works of newspaper art. Mr. Dodge was formerly the head of the San Francisco Chronicle's art department.

Harold Coffman of The Herald enjoys an enviable reputation in the field all his own in Southern California. His pen and wash sketches of beautifully posed women of the period are simply artistic gems. No other artist in California approaches him in this line. Men fall in love with the creations of his pen and brush, and women try to look like the pictures. His faces are cameo-like in their clearness and outlines and his figures are models for the modelers.

E. F. Broitze is one of the well-known newspaper artists of the city. For some time he was at the head of The Herald's art department. His work is bold and striking and effective.

One of the younger artists among the exhibitors is H. G. Villa. He is a deep student of art, and an enthusiastic worker. His drawings for newspapers and books have attracted wide attention, and the young man is rapidly making a name for himself.

J. Bond Francisco, the well-known painter, will exhibit some of his work, which is welcome news to all of the art-loving public of Los Angeles, who are proud of Mr. Francisco and his work.

E. O. Sawyer, Jr., a newspaper artist who has made a reputation of marines, will exhibit some of his sketches.

Other exhibitors will be Mrs. Regina O'Kane, who is well known as a landscape painter and teacher of composition and original design; Miss Lillian Drain, who has made a special study of figure drawing; Miss Helen E. Coan, known widely as a painter of figures, landscapes, Chinese subjects and portraits. Miss Coan has done considerable book illustration.

Harold E. Crafts, a recent arrival in Los Angeles from New York city, where he was with the Century Magazine company, will exhibit some of his portraits and ideal heads.

Everyday Life in Faraway Japan

Things Queer to the Eyes of the Visitor From America Made Clear Through Japanese Glasses—Japanese Opinions of American Fashions

Nagaoka, Echigo, Japan, Oct. 23, 1902.

THE winters of Nagaoka are very long for the months I have seen only snow, and just as soon as the dikes are dry—for there is where the snow first melts—then the girls tuck up their kimonos and with purple drizzling on their heads and every one carrying a small basket and a bamboo knife, they dot the dikes slopes to many different kinds of green each can find. This is a "gathering green" letter. American friends—those I know back in the States the four years I spent there—are constantly asking me "Why don't you tell us of courtships and flirtations, of bathing and clothes, of servants and Sundays, and the hundreds of trifles of daily life?" That is just what I thought I had been doing; but I must have been mistaken, for today when I looked over the diary of my American guest he hints as to what "trifles" would be of interest. I was much surprised to see that she had devoted two pages to a description of a half-hour the family had spent in examining her kimono. She was greatly amused when one of the children was sent after two neighbors that they might see the wonderful thing, but at the same time she herself was examining with the greatest curiosity one of the rough, narrow, little bands of metal or leather which many Japanese women constantly wear half-way down the front of their kimono. We saw with the right hand partly closed, pushing the needle with the outside of the finger instead of the end of side.

On another page I saw this entry: "I must be careful about what I throw in the waste basket, as this morning I learned that the servants had agreed to take in emptying it in order to secure the treasures. My letters from America are carefully divided among them, and a bit of soiled ribbon and an empty spool are held by one lucky girl as precious curios."

As I read, the thought came to me to copy several dates from the diary of this friend who looks with American eyes, and then to explain them from a Japanese point of view. Before I begin there is one thing which I must make unquestionably clear. What I say in this letter is not written in a spirit of criticism or defense. I do not argue the wisdom or the right or wrong of Japanese customs. Many books have been written about Japan by foreigners. Some of them are full of valuable information, collected through years of study and observation, by able men and women who have lived among the people. Some of them are only glimpses of Japanese life, seen while riding through the streets in a jinrikisha. Such books as these may make entertaining reading, but it is not possible that they could be reliable. I shall speak of things, not as they appear, but as they are; and I am talking, not of the few spots of modern half-Europeanized Japan near the coast, but of Japan as a whole. Courtships held the first suggestions from my friend's diary.

Extract No. 1: "We returned today to find our little maid, our plump, giggling, slant-eyed Sumi, gone. She has taken unto herself a husband, and I'm afraid may have more tears than eagles in her future life, for her mate was chosen by her own heart instead of her parent's head, and that according to Japanese rule is pretty low class. Four Sumi is looked upon by her friends as being a girl who is in England when she cast her future with Mr. Lewes. I wonder what her courtship was like! It must have been carried on by a series of telegraphic signals, and I know her narrow eyes twinkled their 'Yes' during the swing of the Bon dance, for certainly there has been no nearer opportunity to do any courting."

We have no courtships in Japan, as the word is understood in America. In ancient days the communication between men and women was as free as it is in America, but when Buddhism entered the country it reached out only one helping hand toward education, literature and art. With the other it clutched a woman with an unclaspable grasp and she has been a prisoner ever since. In those old days women were free to choose and marriages were made in heaven instead of by the gods of Idzumo, but for several hundred years no woman of a cultured class has been wedded except by the judgment of her parents. No girl would have it otherwise for children of Samurai breathe in family pride with their first breath, and for ages only those of the lowest and most ignorant class chose their mates. Such a marriage is still looked upon by the upper class as an animal choice in which feelings master judgment, and is therefore repellant. Even in the lower classes where the sexes mingle more freely with each other, marriage without parental consent is impossible, as the Japanese marriage consists in the presence and consent of both parties. In olden time both bride and groom were very young, marriage often taking place at 12 years of age for women and 15 for men. Now the legal age is 15 and 18. As the young couple always lived with the groom's parents the responsibility of a home was not thrown on the bride for several years. Neither knew either young people, and often they became very fond of each other. Many marriages and many homes were happy, but also, in many cases, an unrequited or unloved wife led to serious complications, and the holiest feelings of nature were outraged. But Japan is changing. The Japanese girl is still taught in the belief that there can be neither happiness here nor in heaven in the future for the disobedient, but she is beginning to accept the statement with unquestioning submission. Western ideas have crept into the open ports and they are flying like birds of hope even to the interior villages. Sumi has traveled her little world and gone forth, disgraced, but with a song in her heart—half-fright, half-joy, though it be such as only a few Japanese women, and as soon as the years past have known.

Extract No. 2: "Today an incident occurred which was amusing albeit a trifle humiliating to the 'White Giant,' as they call me here. The bathroom had to be repaired, and mine host attempted to make arrangements with the public bath just around the corner by which his family could have first choice in the morning of the bath tank—but trouble arose at once. The bath master had learned that the foreigner in the family, and—never for a moment mistrusting the foreigner—he promptly refused, saying his business would be ruined at once, for no Japanese would enter the bath ar-

ter a foreigner. He was courteous enough to add that he personally believed Americans were often very nice, but he was obliged to cater to the general feeling. It really is a humiliating fact that the Japanese people consider us very uncleanly because of the national custom of bathing but once or twice a week. Also on account of our reluctance to being seen in the bath, there is a prevailing impression that foreigners are deformed. Of course it was explained that the foreigner was not included in the request, and the man's excitement was calmed, but I feel like a sutor who has been refused by the girl he didn't intend to ask.

It seems absurd to spend any time in explaining in detail a simple everyday thing like a bath, but some foreigners have such queer ideas in regard to Japanese bathing that it seems

ridiculous in the center divides the hot from the cold, and into both water is always flowing. The bathers washes himself standing on the wet floor and pulling his little bucket as often as he wishes from the double tank, using one of the bamboo dippers floating on top. Generally speaking, the people do not use soap, but every one going to the bath carries a little bean bag with which he rubs and scrubs and rubs and scrubs. After being thoroughly washed and rinsed—and no Japanese is economical of either scrubbing or rinsing—the bathers enter the large bath tank. This is frequently large enough to hold twelve or fifteen persons, and several get in at once, but they are always clean before entering, and it is considered a serious breach of etiquette to glod the water with soap or bran. After leaving the tank, another splashing

teeth. This is done shortly before marriage, at the time of the exchange of the betrothal presents. Blackening the teeth originated over a thousand years ago, but like shaving the face, no one knows why. Some say it was to make women more beautiful, and so help them win their husband's love. Some say it was to lessen their beauty and so prevent the husband's jealousy. Some say it was originated by wives to distinguish them from concubines.

Once it was the fashion of the young men of the court to blacken their teeth, but this was discontinued in 1370. All women continued the practice until a few years ago when her nastily appeared with teeth white. Of course, that was the fashion for the society ladies of Tokyo, but black teeth are still more frequently seen than white, and the celebration is still

made room for the foreigner—and I saw that the sumo and the geisha were walking along holding hands, for all the world just like two country lasses in America. The thing was so out of harmony with her dignified little toddle and her erect lordly bearing that I felt like laughing aloud.

I never saw such a thing before in Japan, but it was really so. And that brings me to flirtations. Young girls never flirt; history gives no instance of a married woman so far forgetting her dignity, and the only place where flirtations are found in this country are among the geisha girls. Even servants modestly accept or repel advances from their lovers, but to be coy does not seem natural to the Japanese girl, and it certainly does not become an acquired accomplishment. At restaurants and tea house girls are trained to be pleasant and polite under all cir-

cumstances, for all the neighborhood has received hints from the servants of the wonderful buttons and hooks and strings with which her clothing is supplied. The Japanese dress has neither button nor hook, spring or fastening of any kind. We fast our kimono one over the other and the obi or sash folds all in place. But of all my friend's belongings nothing is so strange, so interesting and so universally admired as pins. Everybody exclaims, "Abunai!"—dangerous!—but everybody wants one, and she has received more bows of thanks for her presence of them than for any of the beautiful gifts I brought home from America. The men proudly stick them in the neckband of the haori and the women push them into the stiffened hair where their tiny heads shine out in competition with the gay hairpins.

Latest celebration arrived before the grain was ripe, tax day came and found the uncared rice bunches still hanging on the straw ropes stretched across the street, and though the mosquito nets were promptly put up on the proper day the troublesome little ka went by the old calendar and failed to appear until almost time to take down the winter decorations.

The whole world seemed in hopeless confusion. To change the work to the new dates was too much of a revolution. It was like unwinding a type only to twist it in the opposite direction to make one no stronger or better, so the country at large put the responsibility of that step of progress on the shoulders of the next generation, and now we are going peacefully on our way guided by the light of the moon. That is why, up here in Echigo, we are having two October's this year. The moon is a reliable regulator, and the one year in three has come around once more when two moons put together will equalize things and bring New Year at the usual time.

But some day, even in Echigo, the moon will give way to the greater light of the sun, for the time is coming when Japan will forget her superstitions and loosening her hold on the useless customs of the past will allow the sun to shine beneath her shaded temple eaves. Then we shall really have with all it means, the Sunday of the West.

ETSU INAGAKI SUGIMOTO.

SCHOOL FOR DESERTED WIVES

On the top floor of the New Erie building, Halsted street and Blue Island avenue, are the studios of the most interesting of institutions in the city. It is known as the "United Hebrew Charities Workroom." The presiding genius, or, more technically, the superintendent, is Mrs. Louise Mitchell.

This workroom has a unique mission among the poor Jewish women of Chicago. It aims to give employment to deserted wives and dependent daughters who have children to feed and clothe. It seeks to make them self-supporting by teaching them various kinds of needle work, and endeavoring to educate them in the decencies of life, to raise them in their own esteem and to give them that desire for a certain social standing essential to the happy woman's makeup.

The committee in general charge of the undertaking is headed by Mrs. Louise Schott. The other members are Isaac Greensfelder, Mrs. Garson Myers and Mrs. Alfred Kohn.

Every day the rooms are filled with women whose poverty and helplessness are known to Superintendent Edward Rubovits of the United Hebrew Charities. They come at 9 o'clock in the morning and leave at 4 in the afternoon. These hours allow them to complete all their household work before leaving home and to return in time to prepare the evening meal. The tasks given them are not hard and in payment each receives 75 cents a day.

The only drawback to the workroom is that it can accommodate no more than fifty women at a time. The committee must, therefore, select those who are most in need of help, and according to the means at its disposal. It cannot be generous. It can only be just. In coming to the Superintendent Rubovits says:

"Our applicants appear in a different attitude from that adopted by those who petition non-Jewish charities' institutions. They demand where other ask. It is true that our donors were more liberal. The peculiarities may have their origin in that maxim of the Bible: 'For the poor shall never cease out of the land.' And, therefore, the liberality on the one hand is greater and the demands from our people on the other hand are more persistent.

"Our manner of procedure is easily explained. A case appears and the application is taken. Then an investigation is made. This is done for the purpose of learning the history of the case and to ascertain the causes that prompted the person to ask for assistance, and also to enable the members of the committee to form an opinion as to what extent aid should be furnished. Such investigation frequently led to detection of intended fraud, sometimes to unworthiness.

"On this latter point I wish to say that the women who are taken into the workroom are all respectable and upright morally.

"We do not, as a rule, undertake our investigations with the preconceived idea that we shall discover its object to be unworthy. When we do discover it to be such it is quite accidental and very disappointing. In that case, of course, the applicant is refused aid. When we have cause merely to suspect that something is wrong we give the woman the benefit of the doubt until something further develops.

"Every worthy case is taken up promptly and all possible assistance granted.

The work furnished is chiefly that of making men's neckties for the wholesale establishments. The big manufacturers furnish the material and pay from 15 to 25 cents a dozen for having the ties made up.—Chicago Chronicle.

LUXURY OF NEW YORK CLUBS

That money is always at hand to contribute to the luxury of New York clubs is known, but the experience of one organization shows how much easier it is to raise large sums than one might suppose.

In one of the handsomest as well as newest of New York clubhouses the ceiling in one room has never been decorated. It was done before the club was opened two or three years ago. It was decided to allow this detail of the decorations to remain until the further consideration of the architects.

It was finally decided to copy for this room the ceiling of a famous apartment in Rome. It was estimated that the expense of the work would be about \$25,000, as it will be necessary to send to Rome an artist who will do the work there.

The sum was large in view of the great amount already spent to decorate the clubhouse. Before the call for subscriptions was made on the club at large a few members were asked if they would not like to help the committee to make a good showing before the call was passed in the club. When the time came to call on the members at large only \$5000 more was needed. The few men who had been appealed to first happened to be so prosperous that the expense of the new ceiling was almost met by their contributions alone.—New York Sun.

Glad to Lend Grandpa

When the government concluded to adorn the new issue of two-dollar bills with the portraits of the country's two greatest inventors, Robert Fulton Blight was asked for the loan of a miniature of his grandfather, from which to make the die. He complied, and in reply to the thanks of the government, wrote: "I am more than glad that my grandfather is to be placed on the two-dollar bill. I shall now see the old gentleman's face often than if he were placed on a twenty."

Mr. Blight was presented with the first new bill struck from the die.—Minneapolis Journal.

Recklessness of a Beginner

Old Stager—I see this is your first campaign.

Candidate—It is. How did you guess it?

Old Stager—You are distributing 17 Havana cigars.—Chicago Tribune.



well to "drop the bottom from the bucket and so lose forever the shadow of the moon." Yes, public baths are common. Every city, town and village has them. There are in Tokyo alone about nine hundred, and they are said to accommodate over four hundred thousand people. The average price for a bath is 14 cents for adults and less for children. Every man, woman and child in the empire takes a hot bath every day, and the skins of the people are soft, finely grained and always clean. The clothing of some of the poorer children seen on the street is far from clean outside, but the underwear and lining are generally neat, as people like clean things next the body.

Houses of the upper and middle classes and most houses that rent for as high as \$5 a month have private baths, but in the cities there are many streets of crowded little boxes, whose inmates go to the public bath. In the sudden imitation of foreign ideas several years ago, a bath was made requiring men and women to have separate bath rooms. Everybody thought it a queer sort of a law, but no one cared anything about it, so the men and women innocently removed their clothing together in one large receiving room, then went to the bathrooms separated by a partition. As a rule the law is observed, but in many country places and overcrowded cities it is not strictly carried out.

Bath houses must be not only clean, but new. All the interior is made of hard, white wood, and as soon as the fresh wood odor is gone from the walls no one goes there any more. In scrubbing the tank and floor a sort of sand soap is used. The floor, also of hard, white wood, has a scarcely perceptible slope toward a drain. A dry platform, which usually runs the length of the room, has shelves dividing it into compartments to receive clothing. On the opposite side another shelf holds dozens of little white wood buckets arranged in pyramids. The water is brought in bamboo pipes from some lake or spring. In addition to the big steaming bath tank at one end of the room there is always another tank of water, deep and clear. A par-

and rising in fresh hot water poured from the little buckets always follows. The small tanks of hot water are always clear, but the water in the bath tank, unless filled with running water, which cannot often be done outside of the cities, sometimes gets very cloudy by evening, but it is never dirty-looking.

The upper class do not bathe together any more than they do in America. The private bath tank, not so wide, but deeper than an ordinary American bathtub, is brimming full of steaming water, which in the nicest houses is constantly running in at the top and out at the bottom. It is kept hot by a little charcoal furnace built in one side of the tub. The lord of the house of course bathes first, followed by wife, children and servants in order, but on account of the strict rule in regard to clouding the water it is not perceptibly less clear after several have bathed than when the lord got in. The mission of the water is not to rinse but to warm the body. The temperature varies from 110 to 120 degrees, and the growth of the hair is sure preventive against taking cold, there never being any chilly reaction as is the case where the water is cooler.

Extract No. 3: "Today I was astonished by being asked by the hair-dresser if I shaved myself, and she was equally astonished on learning that American women never shave." When or why this custom originated I do not know, but every Japanese woman and girl-child has her face shaved about once a week. It is not necessary, as is proved by my own smooth cheeks after four years of abstinence from the razor in America. The custom may have gradually grown from the fashion of shaving the forehead. This is always done when the hair is dressed, the idea being to show honor to the goddess who has her face shaved, and to encourage the growth of the hair in the shape of Fujiyama, our sacred mountain. Women after marriage also shave off their eyebrows and never allow them to grow again.

Another custom, to foreigners very peculiar, is that of blackening the

almost universal where a girl of 13 is presented with teeth-blackening box and brushes, to be carefully saved until her marriage. The custom is not uncommon, either in appearance or reality. The coloring preparation is a liquid obtained by mixing the peel of egg-plant with water in which a red-hot iron has been dropped. Teeth brushed with this every day are as black and shining as the most polished lacquer.

One well-known legend of its origin is this: In the olden, olden time there lived a beautiful young wife. Above her egg-shaped face, her black hair shone like lacquer. Her brows were new moons, her cheeks were the tint of cherry blossoms, and in her peach-lip mouth were teeth like white marble. She was wedded to a husband whose heart was bitter with needless jealousy. This was her great grief. One day after a shower she was gathering two narrow strips of the peel of egg-plant in the garden and noticed the damp peel stained her hand. Lighly she was always watching for what would please her lord, and put her hand in her mouth. Thus she placed them in her mouth. Her beautiful teeth were hidden and she hoped to become repulsive in appearance, and so ease her lord's jealousy. Instead, however, she was more beautiful than ever, but her purpose was accomplished, for her lord saw her faithful heart and trusted her ever after. As all beautiful creatures grow so this fashion in time reached all women of the empire. Little girls frequently cut the egg-plant peel and putting it about the teeth play a game called "The Dutiful Wife."

Extract No. 4: "Today coming home from the wrestling match, I saw a funny sight. Japan, in the crowd was a man, whose tall figure and queer-tied hair proclaimed him a sumo wrestler. Close beside him was a girl—a wee, dainty creature. Her neck was painted in long yellow points, her hair shone like satin and a man servant behind her carried a samisen cane. Of course she was geisha—and comes the funny part! As I passed along the crowd pressed away from me—it always

circumstances, and this must be some- times misunderstood, for "Murray's Guide Book" gives this warning to strangers: "The waitresses at any respectable Japanese inn deserve the same respectful treatment as is accorded to girls in a similar position at home. Too many foreigners, we fear, give cause for indignation by their behavior toward Japanese women, whose engaging manners and naive ways they misinterpret."

Extract No. 5: "An unflattering source of curiosity and comment is my clothing, but tonight my possessions retired into the background. Evenings we usually gather about a lamp perched up on a two and one-half foot post and talk, read, play poem cards and sometimes have music and talking games. Today's mail brought the September number of a well-known American fashion magazine, and tonight I expected the very shoddy to tremble with long breaths of wonder and delight, as I showed the pictures. I was never more disappointed in my life. I slowly turned the leaves and every one gazed earnestly and solemnly, but all were silent until Senko San exclaimed in an awestruck whisper: "Mother, do foreigners really look like that?" Evidently present company was excepted, and I humbly accepted the proof that I am not a stylishly attired person."

Extract No. 6: "My greatest trouble here is to remember the days of the week. I have learned the queer characters on the Japanese calendar which hangs in my room, so I know 'the day of the moon,' but the day of the week is lost to me, for they have no Sunday in Japan."

My friend made a mistake, for we do have a Sunday, and it comes every seven days. It is not a holiday, however, as it is in America. We have only three workmen's holidays in the month—the 1st, 15th and 23rd—but for convenience of foreigners—we have divisions of seven days each—Sunday, Monday, Tuesday, Wednesday, Thursday, Friday and Saturday. This division is used in the ports and among firms who do business with western nations, but the country at large still moves with the moon. It is not altogether because Japan is too stubborn a nation to wheel at once into the march of progress. Cities can readily adopt the sun calendar, but seasons and harvests cannot be changed, and for ages the peasantry has been guided in its work, festival and even minute details of daily life by the seasons. Our New Year comes in February, and it is the first day of spring. We still have snow then, but the plum blossoms are tinted against its white and we feel that winter is beginning to be gone." All important dates of the year are counted from that day. Invariably a certain number of days after the plowing begins another certain number of days and the rice is sown. Another number fixes the house-cleaning date, and another the time to get out the mosquito nets, another to start the winter fires in the fireplaces, and the time for our special week of daily life is decided by the same method of counting.

When an attempt was made to adopt the sun calendar, everything was moved a month backward, and the entire country was thrown into perplexity and dismay. New Year came in the middle of winter, the Mayday festival took place in the bleak snow-season, the Cherry Blossoms day began and found the buds still stony with no tint of pink, planting time was pushed

PLAYING POEM CARDS

SEWING IN JAPAN

The Beauty Spots of Los Angeles

NO ONE feature of a municipality is so truly a measure of the city's progress and prosperity as well as the refinement of a city, as its public parks.

In the parks, as an institution, is given the only opportunity for the public expression of artistic ideas and it is in these places that the true citizen of the municipality expands and becomes his better self, while the whole city with its achievements and its money and his desires have made possible.

Here in the glorious south land, where all nature smiles and pours forth from her horn of plenty the most bounteous gifts to him who will take them, the matter of public parks is one that is easily solved.

Given the inclination and the money for the permanent improvement, it is comparatively easy for the city to erect and maintain a system of parks, not to be equalled in the whole of the United States.

Experience has shown that there is no expenditure of money, aside from the conservation and supply of pure drinking water to the public, which pays so well as the establishment and maintenance of public parks.

All men and women are born with one of the greatest gifts of nature—a blessing instilled in the soul, and they never get old enough to lose this love, no matter in what part of the world they live nor what their occupation may be.

This fact has been recognized in all parts of the world and no idea is taking such a firm hold of the people as the park idea. The craze for parks and the fact that it is our parks that first takes his visitor that he may impress him with the beauty of the city, as well as inform him of the enterprise and cultivated tastes of the people of the city.

In Los Angeles exists a system of parks that includes the largest domain ever given to the purpose of a public breathing ground, as well as one of the smallest cultivated areas of the city kept for the benefit of a municipality.

The city of Los Angeles has expended more than six hundred thousand dollars in the improvement of these parks, and is about to spend more in order that the public parks in this city shall be the equal of any and the superior of all.

In fourteen different localities inside the city limits these parks offer a place where the citizen may sit down and contemplate the beautiful view of the city, the nearby ocean, the while he rests and thanks a kindly fate which has cast his lines in such pleasant places.

Griffith Park

First in importance in point of area is Griffith park, that magnificent domain containing no less than 1,000 acres, on the northwest of the city limits, presented to the city of Los Angeles by Colonel Griffith J. Griffith.

In only one city of the world is there a park of this size, and it is one of the largest, but they are isolated and hard to reach, and are not open to the poor on account of the difficulties of transportation.

The Bois de Boulogne, in Paris, is the one exception, and Griffith park, like the Bois, is so close to the heart of the city that it can be reached by the poorest inhabitant of the municipality.

In order to conserve this park for the poor, about the only restriction that was placed on the gift, was that no money should be expended on the park, and no money should be expended on the park, and no money should be expended on the park.

Several plans are in the possession of the board of park commissioners for the improvement of Griffith park, but the most important of these is the plan to do much toward beautifying and opening this vast playground for the benefit of the people.

It is proposed to build a new park and some drive in and around the park, each receiving a fair amount of attention from the public on holidays, but the distance to the park and the poor

condition of the roads have kept many of the hills and valleys, the forests and the jungles of the "Paradise of the Pacific."

Griffith park contains some two and a half miles of hills and valleys in the cross and of the Calaveras valley and about five miles of the Los Angeles river bottom, the range of hills running through the center of the park rising to a height that affords a view of the ocean on the south and west side and of the extended San Fernando valley on the other.

It is a part of the old Rancho de Los Feliz, and was once the range of a Spanish grange, and served for a grazing place for his herds of cattle and horses and a hunting ground for his retainers.

Many stories of past magnificence are hidden away in its beautiful little coves, and darker whispers of the one-time imperious rule with which the old Spanish hacienda was governed fall with the leaves of the oaks and the needles of the mysterious, whispering pines.

Full of natural beauty, the park is now one of the finest places to be found in or near the city of Los Angeles in which to spend a day.

The honorable board of park commissioners, at the last meeting of the commission, passed a resolution which, when carried out, will give Griffith park two and one-half miles of ornamental driveways, and Colonel Griffith has expressed a willingness to donate a necessary strip of land fifty feet in width, which will give the city a right of way to the park from the city limits and will secure an entrance on the west side of the park for all time to come.

It is expected that the work now planned for the driveways in Griffith park will be completed during the present season, and when they are open the beautiful glens and canyons of the park and visitors will begin to enjoy this magnificent domain than ever before.

Elysian Park

Few places in the country possess finer topographical features for the production of striking and effective results in landscape gardening and park arrangement than Elysian park, which is in its wild state is exceedingly attractive, and its hills and dales over which forever blows the purest air, is one of an ideal location for a public park.

Because of the lack of rapid transit facilities, the public has not become so familiar with this park, its wide valleys and beautiful rolling hills, as with some of the other parks, but as the trolley lines are extended the park is becoming better known, and more people are visiting it than ever before.

During the last month a new electric line was opened that gave entrance to the park from the south side, and the city is now enjoying the benefits of a trip through the center of the beautiful valley spot to the Freeman gate on the river bank.

The work in Elysian park has been confined to clearing the roads, some six miles in length, in good shape and improving the trees and groves already set out.

A well stocked nursery is kept in this park for the preparation of plants for the other parks of the city, and a visit to this model farm for the breeding of flowers and ornamental trees is well worth a visit of the visitor.

The feature of Elysian is the landscape gardening just inside the Freeman gate, if the gate itself can be called less than the main feature of the park.

The hillside facing the east has been laid out in ornamental beds and planted with a variety of flowers, bits of tropic and semi-tropic scenery, and beauty to one of the most magnificent expanses of green sward in California, graded driveways, and a turn of the road, the summit, a view of the entire city of Los Angeles can be had, and the country for miles is visible from the park.

From Fremont Gate to the nursery, paths have been laid, making this drive the loveliest palm parterre drive in Southern California.

The new trees are of the Washingtonia and "Chico" varieties, and will thrive in the soil. At the same time, the valley so that in a few years another magnificent drive will be added to those already maintained by the city.

Visitors from the east have said that this drive offers a greater variety of scenery than any other in a public park in the United States, and the exception of the Lake Shore in Chicago and the famous Riverside and Speedway in New York. The absence of marine view in

this drive is amply made up by the lovely little valley pictures and the magnificent view of the broad San Fernando valley, a sea of fertility and wealth, miles in extent.

Elysian park contains 532 acres and was on January 1, 1901, 100,000 acres, expended by the city park commissioners, and the plans are hardly started.

Eastlake Park

This park has become the most popular of the breathing places of the city and every Sunday from 3,000 to 10,000 people may be seen walking about the conservatory and flower gardens or listening to the music from the band stand at the water side.

In general, it has been the plan of the commissioners to make one feature do for each park and in this case the conservatory has, until the past year, been regarded as the feature of Eastlake.

Several very fine wild animals have been donated to the city in the past year and the proper housing of these has created a new feature for the park and one which receives as much attention as the conservatory.

During the year just past a new carriage has been completed and the house has been renovated and practically rebuilt.

These two improvements with the old cages and yards for animals, make a series of dens and cages that are as extensive as interesting, and the animals attract thousands of visitors every month.

Westlake park, four blocks square, is one of the best residence districts of the city, and its popularity is increasing every month.

It lies closer to the center of the city than any other large park, and has therefore received more attention at the hands of the commissioners and the public than any other playground in the municipality.

The special feature of this park is the lake, the elegant homes which surround it on the hills.

Giving, as it does, the woodland idea with that of a metropolitan location, the lake is a beautiful feature of water and of mansions in the greenery of the hillsides, are peculiarly charming.

The lake is the largest of any in the city and is surrounded by gravelled walks and drives, and over numerous artificial waterways by rustic bridges and ornamental viaducts.

As in Eastlake, the special feature of the park is the artificial pond, prepared for the outdoor variety planted in profusion around the shore of the lake.

Marine life is represented by sea shells in the artificial pond prepared for them, and numerous water fowl are kept on the lake.

This park contains the only shell collection in the city, and some very fine water entertainments are given here, the summer feature being the annual display of fireworks on the lake, which the park is peculiarly adapted.

One may fish in Westlake and catch fish, a fact not generally known to the people of this city, and for that matter, fish are to be caught in any of the parks.

The casino at Westlake is built on the water's edge, and the west side of the lake contains a charming view of water, building and landscape may be obtained.

The new work in Westlake for the year just passed has been confined to the completion of a rustic bridge, the opening of new walks and driveways and the building of retaining walls about the shore of the lake.

Most of the money spent has been for the maintenance of the walks and drives, the planting of some twenty thousand flowering plants and the beautifying of the lake and grounds.

Central Park

Central Park more than any other in the city belongs the appellation of "breathing ground" for its position, almost in the heart of the city, makes it a place for a refreshing daily of all sorts and conditions of people.

The usual fete and jettam of a big city gathers in this park and it has become one of the sights of the city on account of the many daily discussions that are held here.

No orator however humble, fails to receive attention from a crowd of listeners in this park, and such a nuisance did these peripatetic philosophers become, that it was necessary to pass an ordinance by the city council, making it a misdemeanor to make a public speech in Central park.

When "Uncle Billy" Workman declared that he would make a park in Boyle Heights that would be second to none in the city for beauty and popularity, he was met with a shower of encouragement but not much substantial assistance, yet the work done up to the present line has been of such character that Holdenbeck is one of the most beautiful, if not the most beautiful, of the city parks.

Easy of access and removed from the center of the city, this park has become just what its father-in-law would have wanted, and the percentage of visitors is better every winter, until now it rivals Eastlake and Westlake as a popular place for a visit.

The dowager empress had their wish granted, and my countrymen, the Count Tolstol, raised the money for their departure, I myself securing for them their lands in Canada, in a climate much like their own.

"I had arranged with the Canadian government that after they had dwelt in their allotted land three years, these lands—120,000 acres in all—were to be given to them as a reward for their services, and they were to receive their land as a gift from Canada. But there is danger in their false prophecies spoiling everything."

"These false prophets, headed by Alexander Bodjansky, have led the Doukhobors into foolish religious excesses. Bodjansky is a man of intelligence and education, but he is untrustworthy, and he is never sincere. What he does is done, as a rule, not for the Doukhobors' good, but for the furtherance of some selfish end of his own. He wants the Doukhobors now to move from Canada to California, should they yield to him in this, he would become their absolute ruler."

"These good people have been living a life as simple and clean and comely as the world has ever seen. Their flocks and herds and houses have been taken prize for excellence. They came penniless to Manitoba, and in three years they have reached the point of being able to pay for their own land and stock. Worth, three years ago, not five dollars a man, they are now worth something like \$500 a man. Their good health, their cleanliness, and politeness, and humanity, have made them notable. Of them the Canadian commissioner of immigration said recently:

"Those who have visited the Doukhobors' villages say they are truly what they declare themselves to be—members of a Christian brotherhood. They attend regular worship each Sunday morning with the same devotion, no matter how early that may be. They clothe themselves in their simplest and best, and, standing in rows, they meet on one side, and the other, each one recites the verse of Holy Scripture which he was taught as a child. This is interspersed with chants or psalm-singing, and each one salutes the other with a holy kiss and a triple bow, recognizing the Trinity in the brother or sister. This is their simple faith, and this service

frequently couples from four to five boys and girls, and the excitement of mercy on the part of the sons of men. They are following the commands, you see, of a man who is actually insane on certain questions of religion."

"These people are ignorant, credulous and zealous. Hence they may be deluded, and in their delusion they may commit any and every folly, and some absurdity that will destroy them. But they number now 8,000. They have hundreds of prosperous farms and great quantities of livestock. They are being instituted among them—the first schools they have ever had—and they are, in the majority of cases, level-headed."

"Meanwhile, to hasten the trouble's passing, Mr. Elkinton proposes to start a new colony in three years for the Doukhobors' Canadian settlement."

Known and respected citizens of Wichita, and for years it has been noted by their friends that they thought alike on every subject. One day, as they were questioned separately and each gave the same reply differing, perhaps, only a little in their forms of expression. Their business partner, J. S. Alexander, has been with them thirty years. He knew them apart, but he could not tell how he knew. "I have," he said, "made a most minute examination of their faces and forms, of their eyes and expressions, of their voices and their laughter, of their habits and manners, and for the life of me I can't tell why I know them separately. We who have known them for a quarter of a century have noticed that they cut their tobacco in exactly the same form that they walked exactly alike, and that they thought precisely alike."

Once, when John broke a limb, Wilbur immediately suffered corresponding pains in the same limb. They had never been known to disagree on any matter. They lived together in the same house for thirty years.—Wichita Eagle.

Health Is Wealth

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My Prices.

Five dentists out of ten will charge double what I charge and render no better service. The other five will do the work for almost nothing, and you get work that is worth just exactly what you pay for it. My aim is to keep the quality of my work up to the highest possible standard and reduce the cost as low as is consistent with the standard. My Prophylactic treatment diminishes the pain, and I feel safe in saying that you will not regret consulting me before you have dental work done. No charge for examination and consultation. Come in any time.

On this foundation is laid a "binder course" one inch in thickness made of asphaltum cement mixed with all kinds of shade trees, and applied when heated to 320 degrees. It must then be rolled with a heavy steam roller and thoroughly packed for not less than five hours, after which a fine cement is spread over it and it is ready for the wearing surface.

The asphalt wearing surface must be two inches in thickness, composed of asphaltum cement, sand and finely powdered carbonate of lime, granite quartz or other suitable material.

This must be mixed, heated, in the proportions of: cement 17 per cent; sand 65 per cent, and grit powder 18 per cent, and must be applied hot, rolled with hand rollers and then packed firmly with a heavy steam roller for not less than five hours.

The blanket of cement and asphaltum extends to within three feet of the curb and the best plan of a gutter, so far found, is that on Hill street from First to Second street, and on Broadway from First to Second street, and cemented firmly with asphaltum cement.

When this street is laid as per the specifications, it gets all wear and weather, and stands, in this city, for all time.

Of such material and construction is the pavement on Main street, which extends from the plaza to Jefferson street, a distance of three miles and a half in an unbroken line.

Spring street, Broadway and all the cross streets are laid in the same way and except where new conduits have been laid since the street was laid, and the pavement replaced in a slipshod manner, the streets are as good as the day they were put down.

In the city during the past year North Main street has been paved for a distance of 325 feet, over 12,571 square feet of pavement being laid in accordance with the specifications mentioned, and from Main to Figueroa, a distance of 428 feet, quite over a mile of new pavement on this street alone.

In addition to this work, some defective work has been replaced, about half a mile of this character of work being done in the last year. The next large piece of work to be done by the city is that on Hill street from First to Pico, a distance of 765 feet, and eighty feet wide. When this piece of street work is finished, the city will have an unbroken stretch of asphalt pavement nearly a mile and a half long and as straight away as a rule can draw it.

Hill street is now a noble thoroughfare, but when the pavement is laid there will not be a finer street on the Pacific coast.

The total number of feet of paved streets in the city of Los Angeles amounts to no less than 93,867 and completed before the close of the present fiscal year to bring this well over 100,000 feet.

Of graveled and turpined streets, meaning those beautifully graded and macadamized streets and avenues in the residence districts, there are no less than 250 miles in the city and more being added all the time.

Unhappily the city suffers from an imperfect system for the gathering of garbage, and the sewers are not what they should be, though bonds have just been voted to make the needed improvements in this line.

By the close of the next year, 1903, Los Angeles will have the best and most complete sewer system in the state and will have in connection with it the best of the city engineers for the guidance of contractors in laying the pavements for the city of Los Angeles is enough to show that the work is not only good, but that the city is in the extreme. Very little effort is required to make plants grow in this climate and when the natural advantages of location and soil are taken into consideration the work going on and completed will give this city the finest system of public parks in the United States.

Other Municipal Improvements

A glance at the specifications prepared by the office of the city engineer for the guidance of contractors in laying the pavements for the city of Los Angeles is enough to show that the work is not only good, but that the city is in the extreme. Very little effort is required to make plants grow in this climate and when the natural advantages of location and soil are taken into consideration the work going on and completed will give this city the finest system of public parks in the United States.

TOOTH TALK

No. 29

Danger in Cheapness.

I have told you a great deal about my system of Prophylactic Dentistry—that it does and how successful it has been. I have also mentioned what I can accomplish in filling, crowning and bridging. Today I want to warn you against the danger of cheapness in dental work—cheap dentistry is dangerous dentistry, for the inflexible reason that you cannot buy gold for the price of base metal nor silver for the price of base metal, and at the price of unskilled, I recognize the fact there are many dentists who charge more than their services are worth, simply because they have succeeded in working up a name for themselves, either by entertaining socially on a large scale or some other method just as remote from the field of science. The extreme prices charged by this class of dentists drive many patients to the dentists who have no recommendation but low prices—a remedy worse than the disease.

Cheap Plate Work.

Cheap plate work is absolutely dangerous because the plates are vulcanized of the cheapest rubber and colored with the cheapest vermilion coloring which is one of the most scientific and best of science. The extreme prices charged by this class of dentists drive many patients to the dentists who have no recommendation but low prices—a remedy worse than the disease.

Artificial Teeth.

I mount teeth on gold, rubber or porcelain plates. I use nothing but the very best. To satisfactorily make an artificial denture in addition to its utility in supplying the place of the natural organs in the field of science, it must preserve the contour of the face and lips formerly supplied by the natural teeth. It must also be in harmony with the general appearance of the face and the temperament of the wearer. Those who naturally show their gums in their laughter and the field of science, their plates will match perfectly. For instance, a person of the facial expression of President Roosevelt would have no difficulty in obtaining a set of teeth at my office which could not be detected.

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REMOVES THE MASK OF TIME

That hides the beauty of many faces. The complexion changes, resulting from exposure, improper cosmetics, and the like, is quickly removed. The impurities of the skin are removed. THERE IS PURITY in the very touch of Creme de Lis. It imparts the health-glow of youth. Removes tan and sunburn quickly. See a bottle at the drug stores, or direct from us. Trial size, postpaid for ten cents.

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The Value of a Silk Hat

By Charles Battell Loomis

WHEN Henry Corbould came home at 12 o'clock at night and saw a light in his study...

"Caught in the act, I'd been to the burglar when I came home I noticed a light in my study...

"Oh, that's all right. It's easy to tell you day-day like that. Come now, go to bed. I'll be right along. I want to see you in the morning...

"The burglar picked up Henry's hat, which had been on the study table and placed it on the floor...

"I've had a bit more nerve than I need tonight, but I'll be all right. I'll be in the morning. I'll be in the morning. I'll be in the morning...

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CONFESSIONS OF A WIFE

It does not seem possible that any reader of this book can, after careful consideration, form a one-sided, unqualified opinion regarding it...

As the title would indicate, the book is a study of marriage, of the relations of husband and wife...

There is much quotation in the foregoing setting forth, but that cannot be helped. It is hardly necessary to explain to those who read the 'Emma Lou' stories...

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The girls of larger growth have extended an enthusiastic welcome to the preceding volumes in the 'Brenda' series...

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THE INEVITABLE

There is a story that tugs at the heartstrings and incites to rebellion, and yet, there is still 'The Inevitable' to face.

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Advertisement for 'New Books' featuring titles like 'The Battle With the Sium', 'The Young of Heart', and 'The Royal Cloud' with prices.

BEAUTY QUEST Diana Makes Her Evening Toilet

The Several Stages of a Formal and Ceremonious Affair, With Many Mystic Rites and Occult Ordinances. The Beauty Seeker Must Disregard the Lapse of Time

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WHEN Diana makes her evening toilet it is a procession—a grand procession—of a goddess passing from one stage to another. That the elaborate ceremonial may not be an exhausting one, it is preceded by a cup of chocolate. This is a hint she takes from her English maid, who tells her, "in my country, madame takes her cup of chocolate every night—every night—and then in the morning, she looks fresh and blooming."

This is quite true; the beverage, taken the last thing at night has a rejuvenating effect and gives a color and glow which manifest themselves in the reflection from the mirror in the morning a more pleasing one than that of the night before, when it was perhaps a trifle worn and weary and colorless.

Of course, there can be no hard and fast rule laid down. It may not be best to try this "night cap" every evening, and certainly if one is gaining flesh too rapidly, chocolate is best left alone, and a cup of hot bouillon substituted. Milk, heated to the boiling point, but not boiling, is also nourishing and stimulating; nothing indeed rests and soothes one's weary nerves like a cup of hot milk.

With garments and hair let down and every muscle relaxed, Diana at her leisure, sips fresh life and vigor from a dainty eggshell porcelain cup and thinks of the social world of the day, perhaps, and plans fresh conquests for the morrow.

Fully realizing that she cannot be healthy or attractive to others, unless every muscle is well trained, so that "broad and arms are not flabby; shoulders round, and head stooping; abdomen protruding, and waist loose; she devotes a quarter of an hour at least to athletics, either using dumbbells, Indian clubs or a wand.

One evening, perhaps, it is her alabaster throat and snow white shoulders which receive her undivided attention; another night she goes in for arm cultivation or hand extension. Or the girth or the hips must be reduced, or her waist shaped into symmetrical proportions.

Having conscientiously performed her duty by her figure, she seats herself before her mirror to give her hair its due share of attention. Her maid always brushes and dresses her hair in the morning; but at night, as a rule, she prefers to be alone and attend her own toilet. Perhaps she has a letter to read and dresses her hair in the morning; but at night, as a rule, she prefers to be alone and attend her own toilet.

Hair does not get half the attention it needs. Forty minutes at least every night should be devoted to the hair. Glossy, elastic and alive with color is the rule for hair. The hair, tress by tress and the scalp, inch by inch, should be soiled every day.

Place the tips of the fingers lightly on the head, beginning at the forehead, then manipulate the whole scalp with a light movement and firm pressure. Before commencing the operation the roots of the hair, but not the hair itself, are thoroughly wet with either water or a lotion. After the manipulation the hair is combed with the coarsest possible comb; combing starts, not at the head, but at the ends of the hair, and the comb is combed upward to avoid breaking.

Combing removes dust from the hair and gives free ventilation. The brush up, down, right and left, over the forehead to the center of the head; then from the nape of the neck upward to the same point. By this time the head should be in a glow. The circulation has been stimulated, and if the manipulation of the scalp has been thorough each blood vessel is aroused to renewed action. The hair is only when there is a flow of blood to the hair follicles.

Not until the hair shines like satin is it properly groomed. It is then brushed with a Marcellite, for the hair tangles loose all night it is very apt to get broken and tangled.

If the hair is very parted it is carefully combed out every night and dressed in a different place, that it may not become too broad.

Of course, mindy knows enough to know when performing her duties of the toilet, for by so doing she conserves her strength and preserves her nerves. At least fifteen minutes are devoted to the hair, and for this ceremony she also seats herself at her ease.

If very weary or troubled with insomnia she takes an alcohol foot bath, or a quart or so of some aromatic toilet water is added to a warm foot bath. This is restful and refreshing.

Last of all, the hands are washed in water softened with a little glycerine and rose water. The face is never rubbed dry; it is gently patted with the towel and a dab of cream. Perhaps a tiny line appears on the face. She doesn't call it a "wrinkle," because she has not yet reached her first years. Lines are caused by a thousand and one things besides wrinkling one's forehead, for example, when weighing the pros and cons of some question in her mind, or for this reason she also seats herself at her ease.

of green? Jack and Harry. Shall she smile upon one and drive the other away by a frown? These momentous questions, which arise before one is 20, before one is 16, perhaps, are liable to bring faint forces, at least upon the brow, and only yield to cold cream and friction. So hopelessly mixed up are romance and prose in life!

The lines in the forehead, "lines of thought," she calls them, are grazed away by rubbing from the lines to above the ears and from the center to either side; an emollient is used; whatever is left on the face is carefully taken off with a piece of cotton batting.

Beauty's hand requires very special care if it would retain its power to charm. After washing the hands with soap and warm water, they are again washed with oatmeal and warm water; the oatmeal is rubbed on the hands, the friction removes every particle of dust which would roughen the skin, and the oil of the oatmeal and a little vasoline process in hand culture is to manipulate each hand, using a good cold cream, which is rubbed into each joint to promote flexibility and firmness. If fingers are not as tapering as fashion requires frequent pinching of the ends does a great deal toward making them taper.

To prevent roughness and redness of the hands due to winter's chilling blasts, violet cream should be used. This is made by melting over a fire one ounce of white wax and one-half ounce paraffine; when melted, three ounces of oil of sweet almonds are added and then the whole is stirred until cold; when nearly cold add twenty drops of extract of violet.

Rough hands can be made fine, soft and beautiful by frequent applications of this violet cream. Or almond oil alone is beneficial. If a bottle of glycerine and rose water is kept on the washstand and a little used after bathing the hands they will always be smooth and soft.

When Diana is composing herself for slumber she places her hands by her sides, lightly closed. The last stage of the toilet has been reached. The time consumed has been about one hundred minutes, divided something as follows: Slipping the chocolate, fifteen minutes; beauty exercise, ten minutes; brushing hair, forty minutes; brushing teeth, fifteen minutes; foot bath, twenty minutes; washing face and hands, five minutes; cultivating the hands, twenty minutes; total, 125 minutes.

Two hours and five minutes seem a long time to devote to one's toilet. But whatever is worth doing at all is worth doing well. Is it not? However, it is not possible to take things so leisurely; five minutes must be taken off here and ten minutes there, until the evening toilet is made within a shorter time.

Time, however, is not made for the beauty seeker. She must wholly disregard the lapse of time, even length of days, in making herself so charming, so complete that he—Who looks upon her loveliness Looks surely to his heart's disaster.

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THE ARDUOUS EVENING TOILET, MAY BE PRECEDED BY A CUP OF CHOCOLATE IN NEGLIGENCE IN NEGLIGEE ATTIRE.

home-made one. Nothing is better than the following: Buy rum, 1/2 pint; glycerine, 2 ounces; quinine sulphate, 10 grains; tincture of cantharides, 1 dram; ammonia, 1/2 dram. Always shake well. Use a little every other night. About twice a week massage the scalp with one-third alcohol and two-thirds sweet oil. As you say, the scalp does need "something"—rubbing or manipulation with finger tips to stimulate the circulation. After a few weeks, write to me again about your hair, which I think then will be in better condition. I hope this letter will get answered, you write, as if I have never had any luck with the few letters I have happened to write to papers. Write as often as you please to this department, and your letters shall be answered in due time. This time I am taking your letter before its turn, that you may not again be disappointed.

This answers your questions, too, X. Y. Z., except about a shampoo, which you need once every three weeks; use any soap you prefer, or yolk of an egg only.

"Christina"—Please tell me how to make an upturned nose straight and how to get rid of pimples. I am 17 years old and wish to become beautiful. Please do not throw my letter in the waste basket.

No letters find their way into the waste basket until they have been answered, although I fear many correspondents are beginning to think such is the case, so long have they been waiting, but each letter must wait its turn. It is very natural to wish to be beautiful, and I don't know why you cannot be so, even if your nose is upturned. It probably goes better with your features than a straight one would, and gives you a piquant expression. The next renaissance has been reached from this point of view, you will have to content yourself with it, or consult a surgeon, who would doubtless give you some good advice. It is important to free your complexion of eruption. Be very careful of your diet—take no sweets of any kind—candy, cakes, pie, hot milk or chocolate, for a time. Drink plenty of cold water, and once a day a glass of hot water. Occasionally add the juice of half a lemon to the water. Eat the fruit you can get—juicy apples, grapes and cranberries, particularly. At night, bathe the face with hot water containing powdered borax, or a hot foot bath, containing common washing soda; one tablespoonful soda to one quart water. Wash again with cold water. You may know result of this treatment for your complexion.

"E. K. M."—For your complexion, take a course about "Christina" and "Raymond"—I cannot tell author of the book.

Oh, I don't know. I had a hair was kinky curly. Perhaps some reader of this column can come to the rescue with the desired information.

"Alma"—For marks left by pimples bathe face with water as hot as can be borne and then rub in sweet oil, rubbing it in slowly and thoroughly.

"Valentine"—There is nothing better for the teeth than precipitated chalk. Use it at least once a day; it is very absorbent. If you do not wish to wear her hair in a braid, let her comb it straight back, unless her forehead is too high, in which case it is better parted the following: Part five and one-half pounds of barley flour that you may procure of your grocer in a new linen bag and press as tightly as possible and tie tightly. Place this in a kettle of water in which has been put forty-five grains of soda; boil for six hours over a moderate fire. When cold you will find water to prepare the flour as follows: Remove the outside sticky layer of crust and the inner core will be white and very hard. Pound this up and run through a sieve and it is ready to use for broths or barley water as desired.

This treatment serves to make the flour much more easily digested, retaining all the virtues of the barley without some of the undesirable features which follow the use of the merchantable article. It is used exclusively in the hospitals in Vienna, and is particularly of service in the treatment of children who are in a "decline"

care should be exercised in the selection of the eggs, and it is always wise to have the nurse break the egg in another room, since if one should be accident be a little over-ripe it might serve to set the patient against them permanently. The white of the egg alone, well beaten, is even more easily digested, and we have known starving babies whose stomachs would not tolerate any other form of food thrive finely on this alone.

"Nurse"—Barley water and broth are very serviceable in the care and feeding of the sick. The flour can be procured easily, but you are in a position where facilities are such that you can have the "very best," hence we advise you to prepare the flour as follows: Place five and one-half pounds of barley flour that you may procure of your grocer in a new linen bag and press as tightly as possible and tie tightly. Place this in a kettle of water in which has been put forty-five grains of soda; boil for six hours over a moderate fire. When cold you will find water to prepare the flour as follows: Remove the outside sticky layer of crust and the inner core will be white and very hard. Pound this up and run through a sieve and it is ready to use for broths or barley water as desired.

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Mary Mapes Dodge, Author and Editor

AT THE late meeting of the National Progressive Reform association of the speakers said that if the nineteenth had been the woman's century, the twentieth ought to be called the children's century because of the universal philanthropic effort for their benefit. That this is so must be put down in due measure to the exertions of Mary Mapes Dodge, the editor of St. Nicholas and author of young people's books.

Mary Mapes Dodge became a writer for youth, not because she had children of her own to whom she was obliged to be father and mother both. She was the very happy wife of William Dodge, a brilliant and successful lawyer, and she had three children, the ideal home. After a few years of this happy existence Mr. Dodge died suddenly, and all came to an end. A writer says that Mrs. Dodge found herself a perplexed widow with two hearty boys to provide for. She took them to her father's home in New Jersey while she could look after them, and make up her mind what to do next.

Her father, Professor James Jay Mapes, was one who deserved well of his country, and he received a just reward in his true worth. Horace Greeley called him one of the leading benefactors of American agriculture. He was an inventor, a farmer and a lover of nature, and his mind turned the direction of working to improve the condition of the farmer and make rural life beautiful. For many years he was the first to use them and the original demonstrator of the profit to be derived from them. Millions of farmers have been saved from the phosphorus fertilizers, yet he himself died poor, like many another benefactor of his race. When his daughter went to him after his death she found him a lover of her plan to burden him permanently with the support of herself and her sons.

After all, her gifted father had given her something better than unlimited wealth. Like him, she had a fine and powerful mind, and she had cultivated it in the best way possible. She was a good musician, and had a talent for drawing and modeling. Her father believed children could appreciate good literature as well as art, and he had a library of choice books. He was a brilliant teacher, who later practically illustrated the theories for all the world. Her father carried on such a famous English, hence the fine critical judgment she applies in her editorial work and in her own writings.

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"Clarice and Lizzie"—"Wash for dark brown hair that will give it a reddish tinge, is desired." You can only change the color of a hair with a dye, and we do not dye in these columns, as I have often remarked before, but you be satisfied with dark brown hair? Brush it daily until it is glossy and alive with color and shines like a piece of satin. Then I know you will like it, and that red dye!"

"Lawrence"—Please let me know through this week's paper if cucumber cream is to be put on face at night and now often to use it; also please give recipe for a pure cold cream.

Please don't ask for a reply in "this week's paper." It is impossible to comply with such requests. Use the cucumber cream two or three times a week, at night. For a pure cold cream melt together one-half ounce each of vasoline, spermaceti, white wax, add one ounce oil of almonds and a little perfume, a few drops of extract of violet or a little rose water. Stir constantly.

"Perplexed"—I have never heard that peroxide of hydrogen would remove superfluous hair. Why not try the recipe given in our column? Use the cream from barium sulphide and five grams laundry starch. Moisten and apply a little. After four or five minutes wash off and put on a little cream. Barium sulphide is a poison; don't use it if there is any eruption. Constant use of the powder you mention will not cure your complexion.

"L. V."—For your trouble with your complexion, follow advice given above to Christina. You will find the foot bath with washing soda of great benefit. Rub the tips of your cheek, which you fear is ring worm, every night with tincture of iodine, after you have bathed with the soda water. For your lips, which seem to have a "crust" on them, at night hold on hot cloths and then bathe them with glycerine one-third and two-thirds rose water. This does not help you let me know, please.

"Homely Girl"—Is there any way by assuming that I can get my nose to assume an upward curve, I very much desire this and shall be grateful if you can help me. The reason is my nose is too long. What can be done for thick lips and dark lines under the eyes?

I can only refer you to Christina, who has an upturned nose for which she has no use. If I were able to give you any advice, I would not make any such suggestion, that there would be an exchange of noses. The nose is always best left as nature made it. If you massaged it, you would make it more crooked, without changing its shape. For thick lips, too, I fear I can suggest nothing. Thick lips, I always think preferable to too thin lips. The young people who are plump and you don't pout or draw down the corners of your mouth, that is the best that can be done. For dark lines under the eyes, try getting more sleep. Do you get your "beauty sleep"? That is, do you go to bed at 9 or 10 o'clock at the latest? Don't fret or worry or get very nervous. Lie down for fifteen minutes during the day, if possible. There is no external application that is of any use.

"Marie B."—A three-mile walk daily should reduce your hips. "Alma"—No, the lotion you mention will not make your hair darker. Use a little about twice a week, rubbing into the scalp. For your complexion, leave out the 1 dram of musk and substitute extract of violet. I can give you a still better recipe for hair lotion. It is as made up. For your eyes, use a cream tincture cantharides, five drops of lavender. Use twice a week.

"Edna B."—For the little white pimples which seem to be under the skin, massage daily with mutton tallow or sweet oil as hot as you can bear it. If finger nails split soak them several times a day in a solution of ten minutes at a time. Never cut them without first dipping them in the oil or warm water.

people about the Dutch and their ways. The tale gradually took shape in her mind. Meanwhile, however, during the time she was getting her hand in she wrote a number of short stories, a collection of short narratives for children. Then, after she was quite ready, appeared "Hans Brinker, or The Silver Skates." It was the success of this story which is still in circulation in America and in England and was translated into French, German, Russian and Italian. She received for it a prize from the French Academy. Previous to writing it she had searched every book and source of available information in regard to the Netherlands people, and the remarkable success of "Hans Brinker" was only a just reward of labor.

"Hans Brinker" was written while Mrs. Dodge was at her father's with her boys. There was a successful little farmhouse near Professor Mapes' home. This Mrs. Dodge fitted up in her quaint, artistic way for her study, and there her children, the merry, merry, merry boys were in her mind first, last and always. In the intervals of work she walked with them, studied with them, and was in their hearts. She watched their intellects unfold as a flower opens, and she learned things she would not otherwise have learned in order to help them. Her son James was a successful inventor. The other son developed musical talent, and his mother was his best teacher. Even his father's outdoor sports, such as swimming and skating, the merry, wonderful mother was with them, swimming and skating as well as they.

Mrs. Dodge's first editorial work was on Heath and Home, the paper which counted such famous individuals as Harriet Beecher Stowe and Donald G. Mitchell on its editorial staff. She took charge of its home department in 1879, and in 1872 she founded the young people's monthly which has carried her name as editor ever since, St. Nicholas. She named it and she has directed its career from the beginning. What is she has made it, and yet, besides her work on its pages, Mary Mapes Dodge has found time to write several books of prose and poetry, as usual for boys and girls. The names of the names of one of these books is "The Land and Puck."

Mrs. Dodge does not neglect the social side of life in the "curmudgeon" way of some successful authors. It is her pleasure to open her pretty home in New York periodically for delightful social and literary receptions to friends and strangers. JESSIE McBURNE.

little doubt but that the condition is due to an affection of the nerves and local applications and massage would do but little good. We are inclined to think that electricity would be the very best treatment for it, and it administered rightly would give satisfaction. In the hands of a tyro this method would possibly do injury, so we urge that a competent specialist be the operator. Properly administered electricity would help the general rundown condition very markedly.

"F. A. M."—We are not acquainted with the remedy you mention in your letter of inquiry, and so cannot express an opinion of its merits. On general principles we are opposed to the use of purgative medicines, although there are many which are valuable, and this one may be among those. We are conscientiously urged to recommend that such trouble as yours warrants your having a thorough physical examination made by a competent physician and to follow his prescription without question.

"Charles." Your affection is probably ringworm. Take every precaution to keep the general system in as good condition as possible, and use the following frequently: Sodii hyposulphit, dr. ii. Aquae, oz. ii. -M. Sig. Apply locally.

"F. G. N." Albinism is the condition where the skin is perfectly white; the hair thin, soft and very light in color; the pupils of the eyes are red; the eyes are exceedingly sensitive to the light. There is no known cause of the disease,

unless we except heredity, which may play some part. Negroes are more often affected than white people. There is nothing to be done.

"G. B. N." From what you write us there can be little doubt but that you have a cataract of the eye, and we are glad to say there may be help for you outside of the use of the knife. There is one remedy that has benefited many cases, and yours seems a favorable one. We refer to Succus Cineraria Maritima, and if care is taken to insure that the Succus or fresh juice is obtained the best results can be hoped for. Better go direct to your family physician and ask him to get a supply for you and superintend its use. Cineraria is quite expensive, but the results secured by its use more than justify the expenditure.

"D. H. K." You are simply in the fashion in having a "touch of the gripe." There seems to be a moderate epidemic about of "grippy" colds, and in a few cases quite serious attacks of the disease. Here is a tablet which we believe will benefit you and if taken persistently for several days will entirely remove the trouble. We have used the tablet for years in this city, and know that it will about nine cases out of ten, if taken when the symptoms of chilliness, sneezing, cold in the head, lassitude and backache first come on. It must be made by a homeopathic pharmacist: Trit. Gelsemium 8mp. 3x. Trit. Eupator. perfr. 3x. Trit. Arsenicum 10. Trit. 3x. q. s. Trit. Tablets ad. oz. one. Sig. Three tablets every 1 or 2 hours.

HEALTH HINTS

Suggestions for the Care of Body and Brain

[This department is under the direction of a practicing physician of Los Angeles, who has devoted to answering questions pertaining to health and hygiene. Correspondents are requested to address all communications intended for the doctor to "Health Department, Herald Office." Answers will appear as soon as possible after receipt of questions.]

AN OLD colored servant once told General Washington the secret of life in a few homely words. He said, "Ghiral, if you want a good night's sleep, get up de night befo'." In other words, if you desire keen senses and lively enjoyment in the commonplace acts which constitute nine-tenths of life, "tint yourself. Give every normal want a reasonable gratification only. Moderation is the golden mean between indulgence and asceticism. A broad knowledge and general application of economics constitutes the science of living.

To illustrate: If you stint your diet each food as you do take will be re-

ceived gratefully by a stomach which has accumulated surplus energy. Every organ in the body will be eager and ready to supply the necessities of Assimilation, therefore, is improved. A satisfied stomach means a healthy liver, regular bowels, sound and resistant nerves, dreamless and refreshing sleep. Just the right amount of exercise means a healthy degree of fatigue, even distribution of blood, and a relief of tension, predisposing to rest and recuperation. Too much exercise causes active congestions and undue nervous exhaustion; too little exercise results in passive congestions and accumulating nervous energy. And so it is all through life. Too great intellectual and emotional indulgence weakens the tone of the organs and centers involved; too little stimulates development, turns the energies in upon the individual organism and leads to retrogressive action. Stint yourself; and see how the blind, uneducated, un disciplined energy of the body, which ferments naturally and always to extremes and excesses, will broaden, will become discriminating and selective and purposeful under the tutelage and direction of an intellect and will that is freed from bondage and internal rebellion. Stint yourself; be moderate; and learn to live rightly.

Now that the colder season is near and everybody is thinking of warmer dressing, we wish once more to remind our readers of a little secret which means more to the people of South California than any one other so far as comfort goes. When you put on woolen clothing put it over cotton or linen; that is, do not wear wool against

the skin. The rapid changes of temperature within the twenty-four hours that occur in this climate necessitates two things—that there shall be enough covering to insure warmth when the evening comes, and some arrangement so that extra exertion in the middle of the day shall not bring on perspiration which will later on chill the body. These two purposes can be accomplished by having cotton gauze or linen mesh next to the skin and plenty of wool over that. The cotton absorbs the perspiration and thus prevents chilling the skin. On the other hand, the wool against the skin is non-absorbent and finally becomes clammy and unhealthy, with the inevitable result that the skin becomes chilled by any great change of temperature and acute colds are the sequel.

"Eggs." Raw eggs are exceedingly nutritious, easily digested and retained, and but little used. The only objection to their use is the personal objection of the patient, but this is almost invariably overcome after the first one is administered, for there is seldom any objection afterwards. The egg may be broken into a glass, care being taken that the yolk is not broken, and a little salt and pepper added to suit the taste. It slips down without effort, raising no trouble to swallow it whatever. We have seen patients take and relish a raw egg who could not retain anything else for a moment, and in one case over six hundred were taken by one lady in less than four months, with the result of saving her life and giving back good health when physicians were in despair. It is hardly necessary for us to say that utmost

care should be exercised in the selection of the eggs, and it is always wise to have the nurse break the egg in another room, since if one should be accident be a little over-ripe it might serve to set the patient against them permanently. The white of the egg alone, well beaten, is even more easily digested, and we have known starving babies whose stomachs would not tolerate any other form of food thrive finely on this alone.

"Nurse"—Barley water and broth are very serviceable in the care and feeding of the sick. The flour can be procured easily, but you are in a position where facilities are such that you can have the "very best," hence we advise you to prepare the flour as follows: Place five and one-half pounds of barley flour that you may procure of your grocer in a new linen bag and press as tightly as possible and tie tightly. Place this in a kettle of water in which has been put forty-five grains of soda; boil for six hours over a moderate fire. When cold you will find water to prepare the flour as follows: Remove the outside sticky layer of crust and the inner core will be white and very hard. Pound this up and run through a sieve and it is ready to use for broths or barley water as desired.

A Child-like Genius

WAGNER'S imposing principles, the astounding strife stirred up by him, and the romantic features which bedged about the man and composer and assisted in the triumph of his theories and their practical demonstration, served also to throw into the darkest shade many of his contemporaries. Now that the Wagner wave has spent itself, to some extent, men who wrote music during the Wagner heyday, and who wrote it well, are emerging from the darkness, and are meeting with a consideration that was denied them heretofore.

Among these unrated geniuses none is greater than Anton Bruckner. This writer of mighty symphonies was, in his life, the sport and target of the light wits of Vienna who saw in the pathetically simple and childlike peasant a rustic dolt whose grotesque personality and servility to the people of the city furnished endless amusement. Born a peasant, by nature and desire a rustic, and with a burning love for the country, the trees and mountains, Bruckner committed the grave error of his life and drank to the dregs the bitter cup of humiliation when he ventured into frivolous Vienna. Yet to musicians the composer was known before this time, for although with a country training, he sought, met and defeated the greatest organists of Europe in repeated contests.



BUCKNER AT THE ORGAN

Born in Ansfelden, Upper Austria, in 1824, the son of the village schoolmaster, he became an organist at an early age, and, being extremely poor, was altogether self-taught. He haunted the village church, studied the organ diligently as opportunity offered, yet succeeded so well that in 1855 he defeated a large number of competitors for the place as organist of the cathedral at Linz-on-Danube. His education was almost altogether that of the church musician, and the deep reverence he has for everything connected with the church was so thoroughly ingrained in him that his symphonies are grand orchestral chorals, musical songs of praise to the Lord, while in his masses

he carries, with Wagnerian richness of harmony, these to their utmost grandiose effect. His last symphony, the Ninth, written when he knew his death was impending, is a hymn of praise and speaking of it, he remarked: "Beethoven devoted the last moment of his life to the last movement of my Ninth to the dear Lord, 'Te Deum laudamus.' He is the Liberation, the Light, the Sun, to which we must all come out of the misery of life."

He worked and lived in the fear of the Lord, like the peasants about him, of whom he was a type, and just like these, when the church service was over, he sought the merry dance and

gullestrolle frolic. So it is, then, that in his symphonies, while the adagio is a magnificent song of praise, a deum, the scherzo is a pure, spirited, quaint and irresistible rustic dance. The naive and cheerful music of the peasants had not been so well mirrored, not even by Schubert or Beethoven, as by Bruckner. An enthusiasm of the highest degree, both in his religious fervor and his simple joy of the village, Bruckner often reaches the extreme in both feelings, so that he has been called severe in the one and simple in the other. Bus, Richard Strauss in Europe, Theodore Thomas in this country, and Richter in England have brought out the symphonies of the composer with a gradually widening popularity.

The paths of Bruckner's life center in his Vienna experiences. This gay city, which has been dealt to the warts and needs of so many great musical writers, not only denied Bruckner, but made fun of him. Bruckner's intense naïveté and simplicity was largely responsible for this. The gay, strange life of the city puzzled and perplexed the rustic; the helpless dreamer stumbled through the streets and did such extraordinary things in his intercourse with the people that he was looked on as a simpleton, fit only for the sport and rough jokes of the wags and fun-makers, none of whom were worthy to brush his coat.

But the severest blow to the artist's pride came from the attitude of the critics, only one of whom, Dr. Helm, was friendly. The persistent enmity of conductors like Von Bülow and critics like Dr. Hanslick, embittered Bruckner so that finally he passed wearily out of a people he could not understand, and, on his dying request, his body was taken back to his mountains and trees and buried under the organ of St. Florian. Yet, with the common exception of the dying request, Bruckner was honored at his burial service with a tremendous outpour of the people of Vienna. And since that time this man who, according to a hostile critic, "composed like a sot," has steadily

gained in recognition. Bruckner's mode of life and manner of dressing gave the Viennese abundant food for their shafts of satire. He was of medium height, but of a round build, which made him appear short and ungainly; wore enormously wide trousers, a vest that had a wide opening and which reached nearly to his knees, a peasant coat that was strikingly curtailed, while, in his desire to escape the heat,



BUCKNER AND HANSLICK

blously, "his wife and family are away, and he has been taking her out somewhere every evening."

"His family away!" repeated the old lady, shocked that her young friend had been accepting the attentions of a married man.

"Yes," replied the clerk, "he told me his family is away, and he's told others."

The Blanks were indignant, and decided to administer some wholesome advice somewhere, in view of the absence of the parents of the young lady. They appear by showing such devotion to another young lady than their own wife? "Everybody is talking about it," a married man said. "My wife!" ejaculated the young man. "Yes; and you've been telling everybody your family is out of town."

Then, like a flash, the true situation dawned upon him.

"Oh, Lord!" he exclaimed. "I'm not married yet. My family consists of my mother, sister and brother."—Washington Post.

which worried him, he had the collar of his shirt cut very low. The entire effect of the costume was to arouse ridicule, which he heightened by his queer demeanor.

It is not natural that the caricaturist should find a personality of this sort inviting material and Bruckner figured extensively in the illustrated papers of Germany. The shadow pictures with this article are taken from various numbers of "Die Musik."

The Tardy Appreciation of the Work of Anton Bruckner

Bruckner at the Organ" is serious in purpose, but "Bruckner and Hanslick" is a delicious jest. Hanslick, the greatest of the German musical critics, was a bitter enemy of the composer, and on one occasion, when Bruckner met the critic on the street, instead of showing resentment for the many castigations he had received, he stopped, stooped and deferentially kissed his enemy's hand. Bruckner simply knew no better; he was a child lost in a confusing city. It is recorded that after a Bruckner symphony had aroused considerable attention, and the emperor, in giving him an audience, asked if he could bestow any favor on him, he replied that he had but one wish, which was that the emperor would command Hanslick to keep his hands off. The simple man could not comprehend the imperial explanation that the critic was not subject to his control. The picture is, of course, an imaginary meeting, for, on the occasion of the osculatory episode, Hanslick retired from the field dismayed and, for once, worried. The picture of "Bruckner and Wagner" is a delightful presentation of the two great composers and their relation to one another. Wagner was Bruckner's musical god, one of the very few who had shown sympathy and appreciation, for, after Bruckner had wandered to Bayreuth and had submitted his Second symphony to Wagner, the latter granted him an especial favor that it be dedicated to him and so showered his favor in the way of hearty entertainment on him that the simple peasant was made speechless, and, as he said afterwards, "he is the only human being before whom I kneel, as I had before never felt to one except God." Wagner's music shows in all the later works of Bruckner, the "Siegfried" motives particularly being used in various ways. But the simple man only revered the music of Wagner; he had no conception of the poet and philosopher. His own nature was too simple and artless. In his life he had read but two books, the Bible and a life of Napoleon, but he



WAGNER AND BUCKNER

was a voracious devourer of the news of the day, particularly that of the most sensational sort, and his interest in criminal happenings was so great that he attended murder trials and executions, but to pray the night through for the condemned murderers. This man's love for humanity was overpowering, notwithstanding the fact that in Vienna, as his advances to form friendships were repulsed with scorn, so that in the end he was forced to retire to lonely quarters in the fifth story of a nearly deserted house, where he denied himself to all but one or two pupils, who provided, with their scant fees, the simple fare on which this genius existed.

E. F. K.

The Indian Fiesta at Coahuila

THE Indians at Coahuila last August held the first fiesta they had observed since 1854, and it is not likely that many more will be held, for few of the old Indians remain, and the young Indians, in painful modern apparel, dance the waltz and two-step instead of the rhythmic eagle dance.

The Coahuila reservation is twenty-five miles from Idyllwild and the ride to reach it a most interesting one. The ground is covered with wild flowers and grass, suggestive of spring time, with no hint of the dead brown of mid-summer. Groups of queer-shaped rocks are a feature of the landscape, some of them covered with a fine lichen of red and dark green clinging

at a time or two the luck always changed and invariably was with the banker. The Indians were gratified at the arrival of so many white people, there being all told about fifty, and arranged some extra dances for the afternoon. Only the old Indians took part, as the young Indians have been to the government school and know little of the old ways of amusement.

The dance of the afternoon was the eagle dance. The dancer was an old Indian with eagle feathers in his hair and a girde of eagle feathers about his body. Instead of trunks he wore a pair of blue overalls rolled well up upon his thighs. His body was nude, save the beads about his neck. White patches made of flour and water took

steps, but the excitement increased. Several Indians pushed through the circle and joined in the dance, among them two women. One of the women pushed her husband into the fire, which was now a bed of glowing embers, amid shouts of laughter. Some of the Indians snatched the coats from the fire; they had been dancing until four and seemed to be tired out. Old Duro, who sat close to the fire, was attired in a heavy black beaver overcoat and seemed well high exhausted. We had been told that they would stamp out the fire with their bare feet, but they had on heavy shoes, and finally gave up the dance before the fire was all out. Some of us were tired, too, and slipped away, finding the path to our camp in the darkness, for the moon was not yet up. We piled the campfire high with fuel and soon had a glorious warmth and light for our bedtime toilet.

The music and noise of the fiesta was continued, and a new sound was added, in the monotone of the man who called the figures for the quadrilles. All during the waking hours of the night we heard it, even until the gray dawn. When we awoke in the morning the sky was aglow with the rising sun and the sound of passing wagons was heard, for the Indians had begun their exodus and the fiesta was over.

MARY E. STILSON.



WOMEN DANCERS



THE EAGLE DANCE

WHEN HIS FAMILY WAS AWAY

Situation That Had to be Cleared Up for Sake of a Young Woman

Many a man has come to grief through carelessness of speech. It is easier to suspect evil than to credit good, and the most apparently trifling showing of thoughtfulness of words of mouth may cause lifelong impressions.

STAMP WORTH \$600

John F. Seybold of this city has added a two-pence (black) Canadian to his rare collection of postage stamps. This stamp is the only one of its kind, but speaks volumes to the uninitiated. Its rarity may be guessed when it is known that it is valued at \$600, and Mr. Seybold says it does not part with it for a great deal over that figure.

It is a 1917 issue, and is one of the stamps of the Canadian government stamps in 1917. The stamps of this issue were made by the United States Post Office at New York, who also printed the first issue of United States government stamps in 1847.

At the time of the issue of the two-pence stamp, the Canadian currency was 1 shilling (25 cents) sterling, the Canadian currency being at a discount. The postage to the West Indies was twelve-pence, and the postage to the West Indies was 1 shilling (25 cents) sterling. Therefore, about all of the stamps went either to the West Indies or came to this country, few, if any, going outside of the two countries, and Canada, those coming to this country carrying, of course, a double-weight letter. As there were few, if any, collectors in the West Indies, it is probable that that country were about all destroyed.

Government buildings and old correspondence have been turned over to discover more of these stamps and the ground has been thoroughly covered, so that there is little chance of others being found. In Kingston, Ont., a boy collector had one which he parted with for only a few cents, and the stamp was sold in a short time for \$200. A pair also sold recently in Boston for \$1800.—Syracuse Post-Standard.

FOUND MONEY ON BUSHES

Lincoln, Neb.—The fairy tale of money growing on bushes was realized this week along the right of way of the Burlington railroad between Hyannis and Alliance.

A gang of section men were at work when one of them noticed something that looked like a bill waving from the tangle of the open air door and was struck off pieces under the wheels and the contents were scattered to the winds. This hypothesis is supported by the late discovery of not one of the damaged pouches.—New York Sun.

Horrors of the Famine

"Harry, what has become of that collection of old corn-cob pipes that used to ornament your mantle?"

"By George, old boy, I'm using them for fuel!"—Chicago Tribune.

Fashions for Fair Women

An Evening Gown

The illustration shows an evening gown made of chiffon and Renaissance lace over a foundation of re-colored tulle. Knife pleated chiffon forms the body of the waist, which is almost covered with a deep fall of the lace. This is one of the latest ideas and is very effective in evening gowns or bodices, where a soft filmy effect is desired. The sleeve is a dainty fitted band of the lace with a narrow ruff of the pleated chiffon, and is held in place by a narrow velvet strap, caught with loops and rhinestone buckles. The skirt is exceedingly smart. The lace is fitted smoothly over the hips, with habit back, and is finished with a deep flounce of the knife pleated chiffon. The black velvet ribbon is again introduced in the skirt with charming results. The first blouse is of white knitwear. It is made with the narrow tucks on bodice and sleeves. Black lace in flower pattern held by narrow black ribbon forms a deep finish for yoke and sleeves.

The second model is of pale blue lousine, with deep tucked effect and lace on hand and narrow ribbon sleeve edged with lace and a deep puff of the batiste completes this fashionable waist.

Fur Styles

Furs will be more costly than ever during the coming season, for the coarser furs that have been worn during the last few years will be reserved for what may be termed rough wear, as motor



AN EVENING GOWN

The Difference

Two workmen, treading their homeward path, have paused to rest by chance At a rustic bridge, where they catch a glimpse

Of a ruined, vine-clad manse. One of them gazes with stolid eye, But the other, with a keen, discerning eye, At the stately ruins, the dying light, At that glimpse o'er the wooded hill, And catches the turrets with tender glow. Brings his soul no message—he turns to go.

An English Woman Farmer

The Hon. Lillah Constance Cavendish, Lord Chesham's daughter, is an enthusiastic farmer. She is beautiful and charming girl and a fine horsewoman, but her hobby is farming, and for that purpose she has taken from her father a farm on the latter's estate. There all the live stock is black; there are black horses, black cows, black sheep, black cats, black dogs and black chickens. Formerly Miss Cavendish had black fowls and set their eggs to her mother, Lady Chesham, but one night a fox raided her poultry yard, and, as of course, she missed the babe she carried awfully. Their robes aglow with the moonlight gleam.

White ghosts come out to play The air is silvered with falling dew And a thousand fancies thrill him through.

Ah! these men travel day by day, The same green path on their homeward way. They pause to rest in the self-same spot, But one is a artist—and one is not. Two women stand at a cradle side, And gaze on a picture fair. A nestling child, with dark fringed eyes, Where lurks the deep-toned blue of the skies.

Cheap Kid Gloves

Bear in mind that so called cheap gloves are generally the dearest. You may once get a bargain in this way, but in nine cases out of ten you will find your money has been wasted. Good kid gloves are never "given away" by shopkeepers; so if you want them you better make up your mind to pay fair price and then get a pair of kid gloves on a reliable article. Woolen gloves for winter and lisle thread gloves for summer are the best wear for girls whose hands should be kept within very narrow limits.

Royal Resting

The queen of Serbia is a late and distinguished convert to the idea that if one would preserve a good figure she must eschew luxurious beds. Her majesty is conceded to possess the most figure and most stately carriage of all the royal women in Europe. She has given up the soft bed and down pillow and sleeps on hard and narrow divan spread with an unyielding mattress. There is no vestige of pillow under her head, but her feet rest on a small one. Previous to taking up with this unregal method of resting, the queen had been a sufferer from insomnia and nightmare, but from both the terrors she is now entirely free. The physician who induced her majesty to this cure is a strong advocate of brief periods of rest for nervous women. Such rest can be taken in a semi-reclining position on a chair, by relaxing every muscle. Sleep may or may not follow. It is not accustomed to sleep in the daytime to fall into a doze at will. Sleep should not exceed ten or fifteen minutes, the time being more refreshing than an hour. Place the hands back of the head, slightly swaying the head from side to side; think of nothing. This is absolutely imperative to attain the best results from the afternoon's rest.

Read the Right Books

Avoid the weak novel, whether weak in moral tone, in thought, or in both. Such reading perverts the taste and incapacitates for the enjoyment of productions of genius. To satisfy the craving for such food the mind seeks something still more startling and unreal, says Literary Life. Your life should be filled with virtuous, elevating thoughts. Read that which will make you stronger, happier, and better; that which will help you, hold you up and uplift you; that which will increase your capital for intellectual comfort and healthful influence; that which will give you brain, mental fiber, nerve and heart; that which will enable you to see further, judge more accurately, stand more firmly, work harder, think more of your fellows, and rise higher; that which will make you more a man or more a woman.

Died of Love

A romantic tale is told concerning the father of Dr. E. J. When he was serving his apprenticeship in London, Staffordshire, Eng., a young woman fell violently in love with him.

He did not return her affections, but still when he took up his abode at Letchfield she followed him, lodged opposite the house where he lived and continued to foster her hopeless passion. At last Mr. Johnson was informed that it had preyed on her mind as to endanger her life, and he from pure humanity went and offered to marry her. It was, however, too late. She actually died of love.

She was buried in Lichfield cathedral, and Johnson placed a stone over her resting place, with the inscription: "Here lies the body of Elizabeth Eley, a stranger. She departed this life 20th September, 1894."

Cape Collars

The cape ruff has brought into fashion once on romantics and gowns. These cape collars are cut in a fashion and are quite plain at the top, but frill a little at the edge. The spreading

Married Folk Would Be Happier

If they tried to be as agreeable as in courtship days. If they kissed and made up at once after every quarrel. If household expenses were always proportioned to receipts. If each would try to be a real support and comfort to the other, not merely a human being, not an angel.

If women were as kind to their husbands as they were to their lovers. If both parties remembered that they were married for worse as well as for better. If there were fewer "Please, darlings" in public and more polite manners in private.

Notable Gloves

In the Clifford family there still exists a pair of gloves worn by Queen Elizabeth. These she dropped, and Clifford, earl of Cumberland, one of her ancestors, picked them up and had them adorned with jewels. A fur lined glove worn by Henry VI is still to be seen in the house where he took shelter after the battle of Hexham, in the family of the Fudseys, Bolton hall, Yorkshire, 1464, and is in company with a boot and a spoon which the monarch left at the same time. In New College, Oxford, William Wykeham's gloves still exist, and in a private collection there is another pair of the same date.

Two Cute Waists

Two women stand in the self-same place. They are not unlike in form and face; they see the same child in a wee white bonnet. But one is a mother—and one is not.—Muriel Montagne in The Boston Globe.



TWO CUTE WAISTS

so close to the surface that at first we were positive the rocks had been painted.

On reaching the village of Coahuila, we pass the schoolhouse, where a bell swings in Mexican fashion, and off on the hill is the village store, a small red building with windows. Off to the left are the wickiups built especially for the fiesta.

It was about 1 o'clock when our party of twenty-five arrived at the fiesta. Some of the Indians were at their dinners, others taking the noon-day siesta. An open space, some 75 by 100 feet, forms the place where the dancing and games take place. About the court are entrances into small rooms, some used as restaurants and others occupied by families.

In one part of the court is a wooden platform and at the opposite end a circle of bare earth. Around this is the campfire. During the day the platform was occupied by a table, upon which was played the fascinating game of chuck-o-luck. Some of the callow youths of our party could not resist taking a hand, but after they had won

the place of war paint. The old chief, Senora Duro, of the Mesa Grande tribe, who is said to be 106 years old, was the font of inspiration, the dancer stopping in front of him after each figure and receiving the signal for the next. The last figure, with the whirling motion, was exceedingly graceful. Other dances followed by the men of the Mesa Grande, and then the women of the Coahuila began an opposition dance, feeling that the Mesa Grande were having too much attention. The singing of the women was in a monotone, the swaying motion of their bodies keeping time with their voices. The young Indians took no part, but looked on as interested spectators.

It was a weird scene, the group of old Indians dancing about the fire and passing before old Duro, the wide circle, mostly of white people, some of whom were children, gazing intently at the strange spectacle. Some were seated upon chairs, others upon the ground. An outer circle of Indians stood looking over the heads of those who were seated. The dance continued with little change in the music or the

at once as damaging as they are unfounded. Up on Columbian Heights is a young man who poses neither as a saint nor a sinner, but is a leader and wisar man as the result of an experience he had several days ago.

A young lady, whose home is in Atlantic City, recently came to Washington to visit at this young man's home; but the members of his family, unknown to her, had been detained in New England on their summer outing. Mr. X, the young man, alone represented the family in town, and as the young lady had been invited as the guest of the family he arranged for her entertainment at an apartment house on Columbia Heights, not far from his home.

"How long will she be here?" asked the clerk.

"I don't know," answered X, "it depends on how soon my family will be home. I'm arranging for her here because my folks are away."

The clerk smiled, but it was lost on her. Incidentally, she was a very charming girl, and X had not been slow to appreciate that fact.

Now, it so happened that Dr. and Mrs. Blank, who have apartments close to those she occupied, were old friends of her parents. Mrs. Blank mentioned to the clerk how gratified she was that her young friend from Atlantic City had apartments near them, and that Mr. X, of whom the young lady had spoken, had been able to make such comfortable arrangements for her.

"Yes," replied the clerk, rather du-

ally, "his wife and family are away, and he has been taking her out somewhere every evening."

"His family away!" repeated the old lady, shocked that her young friend had been accepting the attentions of a married man.

"Yes," replied the clerk, "he told me his family is away, and he's told others."

The Blanks were indignant, and decided to administer some wholesome advice somewhere, in view of the absence of the parents of the young lady. They appear by showing such devotion to another young lady than their own wife? "Everybody is talking about it," a married man said. "My wife!" ejaculated the young man. "Yes; and you've been telling everybody your family is out of town."

Then, like a flash, the true situation dawned upon him.

"Oh, Lord!" he exclaimed. "I'm not married yet. My family consists of my mother, sister and brother."—Washington Post.

LOS ANGELES-PACIFIC RAILROAD

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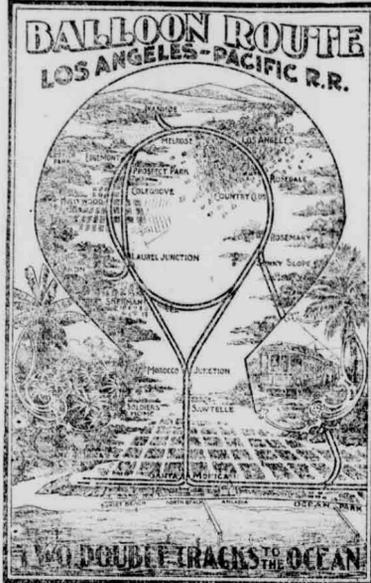
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Beautiful Santa Monica

By-the-Sea

Of all the seacoast towns which surround Los Angeles, Santa Monica is the one possessing the greatest natural beauty of location and the most artificial advantages. Situated on the edge of a rugged bluff overlooking the ocean, the town slopes gradually toward the west and south until it finally reaches the level of the water. The sea breeze sweeping over the town from west to east, blows, uninterrupted by any promontory (as is the case at most other resorts), direct from the bosom of old Ocean himself. No spot in all the Southland is cooler in summer, and tamer is the air more delicious.

How to Reach Santa Monica

Reached by two steam railroads, and by electric cars which run every half hour to and from Los Angeles, Santa Monica is the most accessible of all the coast towns. The ride by the electric road is interesting and attractive. The cars are large and handsome, and run as smoothly as a passenger coach on a railroad.

There are three routes, and a ticket sold on any one gives the choice of returning on either of the others. The road which goes round by way of Hollywood skirts the foothills, and runs between groves of oranges and almonds, with here and there the picturesque vegetable gardens. Another route goes by way of the Palms and the oldest portion of Los Angeles out through the little Cahuenga Valley.

The Sixteenth street line runs through a beautiful portion of Los Angeles, passes the new clubhouse and golf links of the Country club, taking the most direct line to Santa Monica, and arriving at the beach in 15 minutes.

All three of the roads start from the main office of the company on Fourth street, Los Angeles, and traverse Spring street in the most important business section.



INTERIOR OF PARLOR CAR "MERMAID," FIRST USED BY PRESIDENT WM. M'KINLEY AND HIS CABINET.

Ocean Park..

Ocean Park is the only beach on the Pacific coast with a superb and safe sewer, gas for cooking and lighting, electric and steam railroads. With all of these modern improvements Ocean Park is yet the most homelike, orderly and unconventional beach on the coast. It is by far the healthiest residence place.

The town consists of miles of neat, tasteful cottages right on the sand in which people can enjoy life and rest and dress simply. Ocean Park is beautifully located on the Pacific sands which are white and clean and especially adapted to children's play and to the "douce far niente" of persons seeking rest and relief from care. The bathing is the safest on the coast. There has been no case of accidental drowning at this beach.

There is a fine double-braced wharf extending 1260 feet into the sea. Fine fishing can be had from the wharf and the trolling in sail boats is splendid sport. The domestic water is pure and soft and derived from a subterranean river. The climate is simply superb. It is the coolest of all our beaches in summer and warmest in winter. In summer it is always cool and bracing with the constant trade wind direct from the vast Pacific. This beach in summer is equivalent to a sea voyage without its motion and dangers. The air and breezes are all from the sea. In winter the climate is still more charming. Bathing goes on all the year around. One of the great advantages of Ocean Park bathing is that you can bathe from your own cottage and without the need of the excellent bath house.

There is a bowling alley, reading room, etc., now, and the finest arrangement for golf, tennis, polo etc., with a ladies' and gentlemen's clubhouse which will be constructed this year.

Los Angeles can be reached by half-hourly cars until midnight.

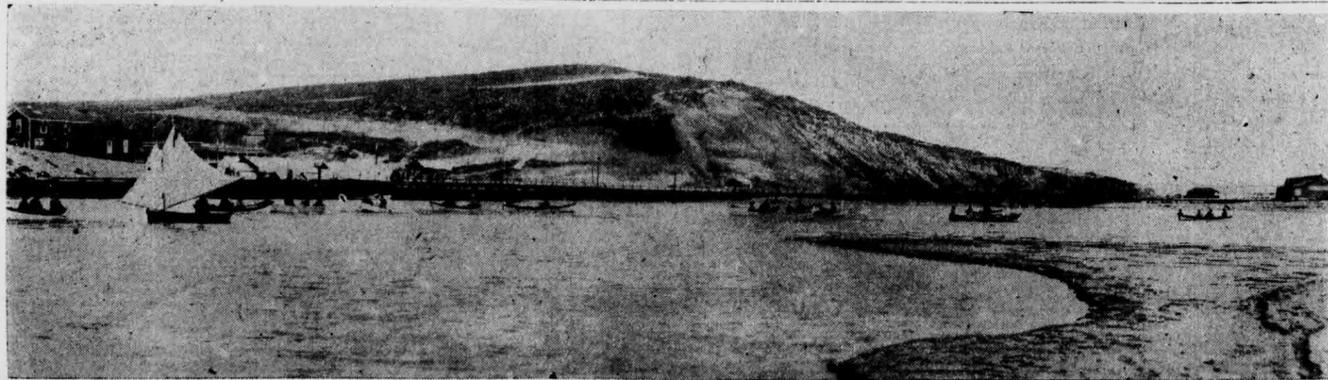
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Rapid Service

Los Angeles-Pacific Railroad, General Offices 316 West Fourth Street Between Broadway and Hill, Los Angeles, Cal.

stream, in ten minutes, equal to the flow of water then in the Santa Cruz river, and the ten minutes' flow did not diminish the pressure from either well. All of the thousands of acres in this vicinity have soil of unsurpassed fertility, a friable loam that is highly susceptible to cultivation. It is all of the country around for many miles could be easily irrigated by gravity and made highly productive, besides supplying Tucson with a magnificent supply of exceptionally pure and soft water.

About three and one-half miles northwest from the source of this water is the Allison ranch, which is partly irrigated by water from these wells, conveyed in a ditch. About 500 acres of the ranch is under cultivation and all kinds of agricultural products are raised.

President Thomas E. Walsh, of the National Irrigation congress, has given eloquent expression to the chief significance and higher nobility of the work of the national irrigation congress in his address at the tenth annual meeting of the congress in Colorado Springs, October 10, 1907. He said: "The irrigation of the nation in words that will be deeply felt by all true Americans and that will win the warm assent of all who love our country and can foresee the moral as well as commercial grandeur to which we may rise."

This reference to Mr. Walsh's address without adding a few sentences from it indicates in honor to those who were so unfortunate as not to read it in the news columns of the Los Angeles Herald of October 7. It is what may be called the humanitarian aspect of the national irrigation system now inaugurated, which quickens my pulse and makes me desire to dedicate myself to the work in which we are engaged," he says, "for the inauguration of national irrigation means that every family in the United States that wants a home of its own may have one. It means that the door is open to permit the man who is not needed where he is to go to the place where he is needed."

"It is not the dream of empire that may come to a great nation with the conquest of a territory wherein a hundred million will some time dwell which appeals to my imagination. But it is the dream of home and independence which will come to many a struggling family."

"Let me show you what I mean. The irrigated farm is necessarily a small farm. The small farm means plenty of neighbors, and that, in turn, means social advantages which were not within reach of country people in the boyhood days of Garfield, Lincoln and others of their generation. The boys and girls of arid Arizona, for example, will have the intellectual stimulus which goes with neighborhood association. Thus they gain one of the chief advantages for which so many people are rushing into the towns. But it is only half of their advantage. The other half is the industrial independence and the glorious contract with nature which come with life on the irrigated farms."

"Now think of arid America with its hundred million acres of irrigable land, as densely settled as those Utah valleys. Think of the people who combine the social advantages of town life with the industrial independence of the country. Think of them with their daily newspapers, their telegraphs and telephones and their rapid means of transportation for products and people, and then realize that under the same conditions the humblest citizen of the republic can pass at will from the discouraging conditions of town life to the hopeful opportunities of this new promised land."

"It is when I think of it in this way that my enthusiasm is kindled in my mind and heart and I feel that I have lived to see the great policy of national irrigation actually inaugurated."

Educational Work in Pima County
The territorial board of education, the head of educational work in the Territory, is composed of the president of the University, the principal of the Tempe normal, the principal of the public instruction, the governor and the territorial treasurer. This important body is composed of men, a majority of whom are immediately connected with educational work.

In the selection of text books for periods of four years and the granting of certificates upon University diplomas the matter rests with men immediately engaged in educational work.

up September 7, 1901. The mills were built by Nordyke-Marmon company of Indiana, Ind., at a cost of \$20,000, with a capacity of seventy-five barrels per day, and of feed, 150,000. Since starting the company has ground 10,000,000 pounds of grain, most of which has been sold in Arizona and some in Mexico and Texas. The plant and stock cost about \$50,000. The mills run most of the time through four horses and find ready sale for all of the product.

The mills are owned by O. L. House, president and treasurer; George Shand, manager; C. House, secretary; T. C. Cowen, director.

The Gardiner, Worthen & Goss Company's
Foundry and machine shops were founded in 1882 by John Gardiner, brother of James Gardiner, present senior member of the firm. The ground occupied by the establishment is 200 feet square. The machine shop is by 50 feet, store and offices 40 by 40 feet, country 40 by 50 feet, warehouse 20 by 200 feet. Mining and general machinery, also mine and mill supplies are manufactured, aggregating in value, per year, from \$60,000 to \$70,000. Thirty-five men are employed all the year round. The pay roll is \$2500 per month. The business extends all over Central and Southern Arizona and North Sonora.

The Tucson Sash, Door and Mill company manufactures sashes, counters, store fronts, saloon fixtures, mantels, cabinets, doors, windows, blinds, moldings, brackets, turnings, screen doors, screens, etc.; also handles plate, window, leaded and ornamental glass, French and German mirrors. The business aggregates \$100,000 annually. Sixteen men are constantly employed and the pay rolls aggregate \$1200 per month.

The Tucson Ice and Cold Storage company's machinery building and ice plant is 60 by 80 feet, one and three stories; cold storage building, 50 by 75, two and three stories. The building and plant cost \$100,000. The ice manufacturing capacity is thirty-five tons per day. Sold at 50 cents per 100 pounds, and in carload lots from \$5 to \$7 per ton. Ice is shipped to all points west as far as Yuma, east and south, Lordsburg, Cananea and North Sonora.

The Tucson Steam Laundry company and Troy Laundry company have both good plants. The latter just completed a brick building 80 feet, with up-to-date equipment, that cost altogether \$10,000.

Southern Pacific Railroad Shops and Business
Tucson is division headquarters for all the Southern Pacific Railroad company's business between Yuma and El Paso and is an important distributing point for Southern Arizona and North Sonora. C. C. Stroufe is division superintendent and Charles A. Barkhauser, division freight and passenger agent. The railroad machine and repairing shops employ over 400 men repairing engines and cars. The pay rolls exceed \$30,000 monthly. Three hundred train and engine men arrive at and depart from Tucson daily. The buildings of the company, comprising depots, round house, machine and repair shops, offices, hotel, etc., cost over \$40,000. R. Lowrie is the agent at Tucson.

All other lines of industry are well represented, as enumerated elsewhere.

The Carnegie Library
The Carnegie Free Library—Andrew Carnegie responded to two appeals from Arizona for funds with which to erect library buildings. One came from Prescott, the other from Tucson. In reply to the former, Mr. Carnegie gave \$25,000, understanding that the city should agree to supply like amount. The terms being accepted, in the case of Tucson the city accepted Mr. Carnegie's offer. The building, which cost \$200,000, will be completed in 1909.

Through the agency of a former Pittsburg, George W. Pittcock of Tucson, best known as "All-Over-Arizona," brought about Mr. Pittcock's offer of a newspaper family. His brother, the late John Pittcock, was the founder of the city of Portland. He became a daily in 1899 through its purchase from T. J. Driver by Henry L. Pittcock, the present manager of our Oregon contemporary.

The corner stone of the building was laid by the Masonic grand lodge of Arizona in November, 1900, and a year later was dedicated.

rooms, the central station of the telephone system of the city and several business offices, besides the office of the grand recorder of the order for Arizona and New Mexico, which owns the building. The property is valued at \$40,000, as it is paying a good interest on that amount.

"The Owl" Building
The new "Owl" building is a unique affair of brick, plastered on the outside, decorated with an ornamental tablet or escutcheon in front, all constructed according to the design of Frost & Rust, the leading architects of the city. The house is built for the residence of three latchkeys, M. Freeman, president of the Consolidated National bank; H. B. Tenney, cashier of the same, and Leo Goldschmidt, president of the Eagle Milling company. The building is 48 by 80 feet, with two stories and a basement. The upper story is divided into three separate and complete sleeping apartments, with bath, while the main floor below is principally occupied by a large living room, a dining room and kitchen common to the use of the three occupants of the house. The cost of this beautiful batchelor's home is \$15,000.

The county courthouse is a substantially built and handsome structure of brick and stone, three stories in height, that cost \$30,000.

Newspapers
The Arizona Daily (morning) and Weekly Star (evening) are published by the Star Publishing company and was established in 1877. L. C. Hughes is president, general manager and editor.

The Sewerage System
Fifty thousand dollars have been expended for an installation of a sewerage system, without the issuing of sewer bonds or the levying of a sewer tax. A frontage cost to property holders for sewerage connection has quite met the expense of the sewers, and gives permanent right of connection with sewer without further monthly or yearly charges for sewer service.

City Debt
The present indebtedness of Tucson consists of a floating debt of approximately \$30,000; water bonds, \$100,000 and other bonds, \$24,000, aggregating \$154,000. The present year's tax, when collected, will nearly wipe out the floating indebtedness, at least should leave not to exceed \$6332.50.

The Largest Bank in Arizona
The Consolidated National Bank of Tucson—Recent Improvements
Standing at the head in the volume of deposits and one of the strongest financial institutions in the southwest, the Consolidated National bank of Tucson, for its recognized conservative management and the liberal and progressive policy that characterizes all of its dealings is evidenced by its popularity.

With a capital of \$50,000 and carrying a surplus and profits of \$25,000, its assets have grown in six years from \$100,000 to \$900,000, and with a fixed rule that never permits its cash resources to fall below 50 per cent of its liabilities, it is in a strong position that cannot be shaken. The handsome quarters owned and occupied exclusively by the bank, would do credit to any city, however large, and the luxurious interior furnishings of the main banking and marble combine an attractive appearance with an evidence of solidity that is in itself a guarantee of success. A steel safe deposit vault of the highest standard is just being installed at an expense of \$6000, for the accommodation of the patrons of the bank. The Consolidated is the Tucson depository for territorial funds. Its officers are M. P. Freeman, president; H. B. Tenney, cashier, and E. W. Graves, assistant cashier.

M. P. Freeman, the president of this bank, has been engaged in the banking business for over twenty-five years and for fifteen years of that time in Tucson. The success of the bank possibly may have come from a strict adherence to what Mr. Freeman calls his "theory." Here it is: "While the conduct of the business of the bank should be dictated by great care and prudence, a spirit of liberality is not incompatible with the banking principles. A proper and conservative consideration of the needs and interests of the clients of the bank is due them, and should be accorded them."

Principal Hotels
Willard hotel, Orndorf, St. Xavier, Windsor, St. Augustine, Park View, Colonial, and the Santa Rita, a four-story brick and stone building, now in course of construction, that will cost, furnished, about \$125,000.

Real Estate
The items following give an idea of real estate values and the tremendous amount of improvements being made, which is a safe criterion of the city's advancement.
City of Tucson, consisting of fifty-two lots, owned by the city; was sold in 1900 for \$25,435. The same property today is worth \$75,000.
In January, 1903, over \$300,000 in improvements will have been made.
Congress street improved property sold in April, 1902, for \$500 per front foot.
Building lots, 66 by 185, can be purchased in different locations from \$100 upwards. Choice residence lots, \$300 to \$2500.

Consolidated National Bank
The city has more buildings in course of construction, fraternal organizations, labor organizations, mercantile houses, money on deposit in national banks, than any other city in Arizona. It also solves more express matter and freight than any other city in Arizona. One hundred and twenty-five acres of watermelons planted near Tucson in 1902 brought \$150,000.
Cotton and tobacco grow in the Santa Cruz valley.
The Amole soap weed (Caeti) grows in abundance in Amole mountains. Large quantities of the extract is shipped annually.
Three new extension ditches to tap the underflow of the Santa Cruz are now being arranged.
A never-failing water supply is obtained by running ditches up the bottom land until the flow is obtained; fall seventeen feet to one mile depth of underground flow average twelve feet.
An inexhaustible supply of light gray tuff, elegant for facing, foundations, buildings, engine blocks, etc. has been opened up within one mile of Tucson.
Ample beds of clay for brick making lie adjoining the city.
Large reefs of limestone near the city furnish lime for all purposes.
Beds of mica are found in the Rincon mountains.
Tucson has the following business houses licensed: Abstracts & advertising agencies 3, commercial agents 4, merchandise agents 1, agricultural implements & architects & architects 2,

assayers 4, attorneys at law 42, auctioneers 2, bakeries 6, banks 2, bands and orchestras 1, barbers 1, bath houses 5, bicycles 4, bill posters 2, billiard halls 4, blacksmiths 5, books and stationery 2, boots and shoes 7, bottlers 5, bowling alleys 3, buyers agents 3, brick manufacturers 6, commission brokers 10, merchandise brokers 3, ticket brokers 1, building and loan associations 3, building material 2, cabinet makers 4, carriage and wagon makers 4, cigar manufacturers 2, retail cigar stores 6, civil engineers 7, clerks 10, clothes cleaners 2, coal and ice storage 3, collection agencies 3, confectioners 4, confectionery manufacturers 3, building contractors 8, grading contractors 3, six-story and higher apartment houses 6, curio 1, dairies 7, dancing schools 2, dentists 6, doors sash, etc., 3, dressmakers 10, druggists 4, dry goods 3, electric and gas lighting 2, employment agencies 2, fish dealers 3, cut flower 2, flour mills 2, foundry and machine shops 1, retail fruits 20, wholesale fruits 1, furniture 15, furnishing stores 15, carpets 4, retail grocers 11, wholesale grocers 5, gunsmiths 2, hardware 6, harness and saddlery 3, hay and grain 4, hides 2, hotels 15, ice companies 3, ice cream manufacturers 2, insurance agents 11, jewelers 4, job printers 7, laundries 8, libraries 2, wholesale liquors 17, restorers 3, livery stables 7, lodging houses 12, lumber dealers 2, marble and granite works 2, meat markets 9, millinery 6, music teachers 7, daily newspapers 2, weekly newspapers 4, notaries public 42, opticians 2, opera houses 2, painters 5, oil and paint stores 10, painters 5, photographers 3, physicians 14, piano tuners 3, pianos and organs 2, planing mill 1, plumbing and gas fitting 5, powder and fuser 2, publishers 8, real estate 14, restaurants 17, roofers 4, second hand goods 5, sewing machines 2, shoemakers 7, sod. manufacturers 4, sporting goods 4, wholesale stationers 3, stoves 13, stoves and tinware 14, tailors 4, tents and awnings 4, wholesale tobacco 8, toys 8, truck and transfer 5, undertakers 3, upholsterers 3, variety stores 3, veterinary surgeons 1, wall paper 6, water tanks 4, wind mills 5, wood and coal 3.

Chamber of Commerce
An organization of business men where the welfare of the tourist and investment seeker are always looked after. The office is located at No. 420 South Stone avenue. Parties will be able at all times to obtain any and all information regarding the city and surrounding adjacent ranches, mines, camps, resorts, accommodations and places of interest. Here also can be found the celebrated Hore cabinet of minerals and curios, the finest in Arizona. Full particulars regarding the commercial interests of the county and city may be obtained.

Pima County
This is one of the most important counties in Arizona and contains the largest city in the territory (Tucson). It has 314 square miles, 16,000 inhabitants, 3555 school children, eighteen school districts, twenty-one school buildings, that cost \$125,000, and about sixty-five miles of standard gauge railroad.

Following were the expenses of Pima county for 1901:
Salaries \$19,584.28
Official 11,922.49
Road improvements 1,829.71
Feeding prisoners 1,001.64
Jury and mileage 2,436.40
Interest \$6,292.30
Water 200.00
County clerk 1,000.00
Sheriff fees 5,200.29
Tucson justice fees 1,488.80
Tucson constable 1,831.00
County clerk fees 1,857.35
Indigent sick (hospital) 5,537.30

Assessment Roll for 1902
Number. Valuation.
Land, 60,380.5 \$174,110.96
Improvements 11,202.3 31,620.22
Land grants, acres 651 651.00
Improvements 202 3,000.00
Patented mines 2 3,900.00
Improvements on unpatented mines 8,600.00
Town and city lots 797,955.60
Improvements 1,178,580.00
Horses 1,537 15,370.00
Range 684 17,755.00
Saddles 14,388.44
Stallions 25 800.00
Mules 33 2,820.00
Asses 15 1,500.00
Cattle 21,690 216,900.00
Range and stock 21,690 216,900.00
Milk cows, league Encampment 2 7,620.00
Bulls 218 4,310.00
Sheep 5,140 10,280.00
Pigs 10 200.00
Hogs 19 37.00
Railroads—Standard gauge (miles) 64 454,674.50
All other property 648,904.87
Total \$3,726,561.59

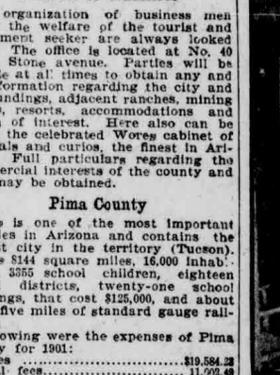
Metereological
Altitude, Tucson, 2369 feet.
Rainfall, 12.02 inches.
Maximum temperature, 1901 (July 7), 109 degrees.
Minimum temperature, 1901 (December 17), 17 degrees.
Mean temperature, 1901 63.8 degrees.
Temperature and rainfall by months:
Month—Max. Min. Mean in.
January 76 22 52.4 1.13
February 73 20 46.7 1.13
March 84 30 56.3 1.70
April 83 34 65.1 .76
May 91 41 66.1 .48
June 108 50 82 .40
July 109 70 9 3.22
August 99 69 84 2.69
September 101 50 89.7 .25
October 85 46 70.8 1.27
November 78 35 56.7 .84
December 78 17 47.7 .01

Country Drives
Which border along the finest scenery in the world, where the kodak is never idle nor the eye closed.
The Military road to Tucson. The city is most fortunate in the matter of good roads. One can roll over the vast table lands stretching to the east, up the well-watered Santa Cruz valley, amid fields of evergreen, in and out along shady avenues, and in less than an hour be among the rugged, high and towering mountains, the peaks of which stretches of country before you—a vast panorama which no novice can realize. In the latter part of the day in around Tucson, the sparkling teams of blooded horses, the automobile, coaching parties and bicycles are seen in all directions, loaded with happy parties who are enjoying the healthful, balmy ozone of the skies.
The American-Mexican Pacific Railroad
Prominent citizens of Tucson, in conjunction with eastern capitalists, are interesting themselves in the construction of a railroad from Phoenix to Florence, over Tucson to Calabasas, Nogales, Fairbank and Naco. This line, while connecting with other railroads at eight important points, will have a local character in the territory, and is all tributary to Tucson.
There are thousands of tons of low grade ore in the vicinity of the mine in the vicinity of and tributary to this line, awaiting transportation facilities, and the entire country tributary to the line has no superior for producing traffic tonnage. This is true not only of Arizona and New Mexico, but also of the country through and south of Sonora, in the Republic of Mexico, all tributary to Tucson.
The following officers and directors were recently elected at the annual meeting of the company: President, George P. Blair; first vice president, W. H. Barnes; second vice president, H. H. Pilling; third vice president, R. G. Minty; fourth vice president, M. Ford; secretary, R. H. G. Minty; treasurer, H. D. Corbett; chief engineer and general manager, Lyman Bridges; auditor, H. H. Pilling; directors, George P. Blair, W. H. Barnes, H. H. Pilling, R. H. G. Minty, J. M.

THE NEW WILLARD

The remarkable progress of Tucson during the past five years has necessitated, among other up-to-date improvements, a strictly first-class hotel. The Willard, recently opened in a most fastidious taste. The rooms are commodious and provided with electric lights, also all other modern conveniences. This new and elegantly furnished hotel may appropriately be called a gem, being just the right size to accommodate the best class of patrons with all the comforts of home, which all guests truly enjoy.

Mr. Willard S. Wright, the proprietor, is an "ideal" hotel man, and is ably supplemented by his equally handsome two-story brick structure, especially constructed for that purpose, will compare favorably in every respect with the leading hotels of the southwest. It is situated at the corner of Sixth avenue and Twelfth street, in the best improved part of Tucson, opposite the Military plaza, a new city park, and nearly opposite the new and elegant \$25,000 Carnegie Library building. The Willard, however, is convenient to the Southern Pacific railroad depot and the business district. The building cost \$25,000 and contains thirty-four rooms, also up-to-date lavatories on each floor for ladies and gentlemen, and elegantly



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appointed bathrooms for both sexes on each floor. A private table telephone on the second floor adds materially to the convenience and comfort of guests. The spacious dining-room is in charge of genial C. S. Roberts and wife, who are experienced caterers and, withal, give unremitting attention to the comfort of guests. The cuisine is excellent and sufficiently diversified to satisfy the demands of the

permitted to visit her "sanctum sanctorum" can spend a delightful and profitable hour or two inspecting her choice collection of books, Indian and Mexican pottery, curios, serapes, and lace, but not least, her magnificent (silver) mounted Mexican saddle, which she has frequently used in rides of sixty-five or more miles per day to and around 'their cattle ranch.

there were shipped 25,441 head of cattle, value \$406,656.
The Southern Pacific company employs 500 salaried employees \$1,000,000 per annum to its employees in Tucson. Artesian water has within the past year been developed in the Santa Cruz valley, adjacent to Tucson. Tucson is the largest city in Arizona and has the most perfect winter climate in the United States. It was the order of Elks of Tucson has one of the finest buildings west of the Missouri river of any of their brothers, and in the elegance and richness of its country.
The order here is four years old and the building will soon have its third anniversary of its dedication. It is a two-story brick structure with basement of thirteen rooms, built on lines of the Spanish style of architecture, with a roof of Spanish tiling. It cost \$25,000 for the building and \$7000 for the furniture. The present membership is 280 of the "B. F. O. E."

Wells-Fargo Express Company
C. E. Hutchison, agent, reports that the business has increased 20 per cent during the past three years, and prior to that a steady increase for ten years. Six men and two teams are constantly employed. Produce from California (fruit and vegetables), mostly from Los Angeles, is nearly half of the business. From the east butter, eggs, poultry and merchandise are the principal articles. No fruits are received from the east. The post office business was applied for and prepared, but was too late for insertion.

Might All Bring Some
"Yes, we have been married seventeen years on the 9th of October, and we are going to invite all our friends to help us celebrate it."
"The seventeenth anniversary! I never heard of celebrating it. Is it anything but the silver anniversary, or the china anniversary?"
"Yes, it is the coal anniversary." Cleveland Plain Dealer

The chance of two finger prints being alike is not one in sixty-four billion.

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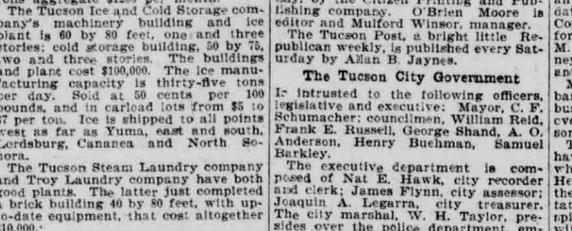
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EAGLE FLOUR MILLS, TUCSON



The Tucson Citizen, Democratic, is published every evening except Sunday, by the Citizen Printing and Publishing company, O'Brien Moore, editor and Mulford Winslow, manager. The Tucson Post, a bright little Republican weekly, is published every Saturday by Dan H. Jaynes.

The Tucson City Government
It is entrusted to the following officers, legislative and executive: Mayor, C. F. Schumacher; councilmen, William Reid, Frank E. Russell, George Shand, A. O. Anderson, Henry Buchman, Samuel Beckley.
The executive department is composed of Nat. E. Hawk, city recorder and clerk; James Flynn, city assessor; Joaquin A. Lagarra, city treasurer. The city marshal, W. H. Taylor, presides over the police department, employing but three roundsmen. The committees of health, streets, licensing, printing, land and building, purchasing, fire, drainage and sewer, cemetery, library and board of trustees are largely composed of the above named officers.

Property and Taxes
The current year property taxes for the city of Tucson amount to \$569,455, real estate, \$776,405; value of improvements, \$1,133,502, making a total valuation of \$2,410,357. This amount, with the current city tax rate of 1 per cent, will place (when all is collected) \$23,668.52 in the city's treasury.

The Tucson Water Supply
The source of the water supply for the city of Tucson is the underground flow of the Santa Cruz river. It is tapped by open wells in iron caissons, from which the water is pumped by means of two pumps, one a compound condensing, with a capacity of 1,250,000 gallons in twenty hours, the other a duplex compound pump, capacity 500,000 gallons. The water is forced across the city onto the high ground to the south, east into a standpipe eighty feet high, with a capacity of 425,000 gallons; but on occurrence of a large fire the water

in the standpipe is cut off from the mains of the city and the great pumps force the water direct from the wells into the city mains, developing a pressure, when needed, up to 120 pounds to the square inch, sufficient to throw a stream over or upon any building in the city, and holds in the necessity of a steam fire engine. The standpipe maintains a pressure in the water pipes of the city of forty to fifty pounds. Of water runs in the street, about ten miles for gravity and ten miles for high pressure.
Tucson water contains no vegetable matter and holds in solution a mineral than any water along the line of the Southern Pacific in the two territories and a greater part of Texas. At the property temperature it is a pleasant, drinkable water and perfectly wholesome, being absolutely void of taste.
The water supply has never failed, though the flow in the river is higher in August and the autumn months than other parts of the year. It is never quickly influenced, however, by heavy rains at the point of the city's source of supply.

Plentiful Water Supply
The water at its source is abundant for time indefinite, but the rapid growth of the city will result in the immediate future a duplicate pumping plant, coupled with additional well capacity, to meet the growing demand.
The yearly cost of maintaining the waterworks and service is about \$16,000. This is supposed to be balanced by a monthly charge to consumers of from \$1.50 to \$4.00.

SANTA CRUZ NORTH SONORA

In this part of the Altar district the whole surface for many thousands of acres has been worked over by Mexicans and Indians with dry washers.

There are two large companies now operating in this district, working the placer mines. They have taken up the principal drift placer ground, but in addition to this there is an excellent opportunity for small investors in gulch placer mining, where investments of \$5000 or more may be rapidly turned into fortunes by staking smaller claims and empowering the chief native labor to work dry placer machines on shares.

Near the Gulf coast at San Jorge by the Sierra Pintada Mining company has a large quartz mill and a railway twelve miles in length, running to the mines in the mountains. The product is gold and the mines are paying handsomely.

About twenty-five miles north from Sierra Pintada are the Holland mines with an eighteen-stamp mill, which is a good paying property.

About thirty miles south from Magdalena is the San Francisco mine, one mile from Liano station. This is a gold mine with a five-stamp mill now in operation. The mine is opened to a depth of 300 feet, showing a continuous vein of good gold ore. East of Liano are several good copper prospects, owned by J. T. Brickwood, L. Eppraim and W. Jimmie of Nogales. But little work has been done on these claims. Nine miles east of Liano is the Santa Barbara mine, which yields gold, silver and lead, and has a five-stamp mill owned by Gayou Bros. of Nogales.

Three miles from Puerto station, which is ninety-three miles south of Nogales, are situated the mines of the Washington-Sonora Gold and Copper company, consisting of 570 pertenencias (or 1425 acres), through which run numerous veins carrying gold, silver and copper. About forty tons of ore from this group has recently been smelted, yielding 20 per cent copper and good values in gold and silver.

Twelve miles west from Puerto is the Las Animas mine, having a forty-stamp complete smelter at the mine. Several hundred tons of ore has recently been smelted and the bullion product carried from 70 to 85 per ton. The mine has also over \$150 per ton value in gold and silver.

About twenty miles southwest from Puerto is the Alma mine, which has been actively developed, showing good copper values.

Near Poza station, 115 miles south of Nogales, are several important mining properties. The mines west of Poza are the old Leontina mine, which was extensively worked by the Spaniards and is said to have produced a large amount of silver. Since last January development has been made on the mine and at the present time over twenty men are employed, with good prospects of reopening a very rich mine.

Eighteen miles from Poza is the El Oro mine, on which considerable work has been done, showing a good vein of gold ore. A few miles further east is the Socorro mine, on which considerable work was done by the Spaniards a few years ago. It has produced a large amount of gold and silver ore, sufficiently rich to ship to smelters.

About twenty-five miles east of Carbo station, which is 120 miles south of Nogales, are situated the Copeta mines, which were worked by the Spaniards long ago and are rich in copper and gold. The Copeta Mining company has a smelter at the mines, which has a daily capacity of 250 tons. Adjacent to the Copeta mines the Copeta company is developing actively and has opened up very fine bodies of ore carrying copper and gold. In the same vicinity the Santa Cruz company is also developing a rich vein of gold and copper ore.

Nogales, Sonora This interesting Mexican pueblo has a population of 2600 and is growing steadily. The mayor is Emilio Gonzalez. It has one councilman (regidor) to each 500 inhabitants, and the mayor counting as one. They meet every Saturday evening and their services are rendered without salary. The treasurer and secretary are elected by the council; also the police force. There is a chief of police, sub-chief, five night and five day patrolmen. There are two schools, one each for boys and girls. From 7 to 14 years of age children are now enrolled. Children from 6 to 7 years of age are in the primary grade. There is a principal and three assistants in each school. The teachers are paid \$100 (Mexican money) per month, and house rent; first assistant, \$75; teachers, \$50 per month. A vocal teacher is employed in the girls' school and an English teacher supplies both schools. Prisoners arrested for minor offenses sweep the streets, which are also sprinkled and are in excellent condition.

P. Sandoval & Co.'s bank has a capital stock of \$250,000 and the Banco de Sonora de Hermosillo and Guaymas has a branch in Nogales.

There is considerable cultivated country in the Santa Cruz valley east of Nogales, watered by the Santa Cruz river; also south in Agua Zarca and Cibola, stations on the Sonora railroad. There is also considerable cultivated country southwest on Arizona creek. Wheat, corn, barley, apples, pears, apricots, plums and peaches are produced. The market is principally the mining camps, comprising Arispe, Magdalena and Hermosillo districts. Land tributary to Nogales is sold as follows: Grazing, \$3 per acre; regular farming and fruit growing, from \$50 to \$100 per acre, Mexican money.

There are three large department stores in Nogales, Sonora, which are patronized extensively by Americans, especially those seeking Mexican drapery, blankets and other interesting Mexican made goods; also curios.

The federal building, custom house and postoffice cost \$125,000. The distilling plant, in a frame building, contains a complete apparatus for distilling persons, baggage and mails. The federal district court holds sessions in Nogales. The municipal government occupies a \$25,000 brick building. The jail building, stone and adobe, cost \$10,000; the two public school buildings, \$7500 each. The plaza occupies a prettily ornamented three acres of ground, surrounded inside by wide cement walks, where the fair Sonora and senoritas, escorted by gallant husbands and sweethearts, promenade every evening, and especially Sunday nights, when the music of the Mexican band attracts all ages and classes, who mingle freely, with here and there an American escorting his lady love.

An Austin patent sprinkler makes two rounds each day on the principal streets. Electric lights are furnished by the Nogales, Arizona, electric light company for \$2.50 per month.

Over \$30,000 has been expended during the past four years in retaining walls, also stone and iron bridges to prevent the arroyos from flooding the town.

The principal business buildings are as follows: Lo Moda, department store, two-story and basement, brick, cost \$80,000; La Francesa, department store, two-story brick, cost \$25,000; stone railroad warehouse building, \$6000; P. Sandoval & Co., bank building, two-story brick, \$30,000; Carnon building, two-story brick (occupied by Banco de Sonora), \$25,000. The list of railroads

buildings and cost is given with those of the company in Nogales, Arizona.

Among the principal residences are those of Don Ygnacio Bonillas, ex-mayor of Nogales, two-story brick, stone basement, cost \$18,000; P. Sandoval, two-story brick and stone, \$16,000; ex-Governor Ramon Corral, one-story brick cottage, \$6000; Cirilo Ramirez, one-story stone front, \$10,000; J. M. Elias, two-story brick, \$15,000; Miguel Molina, one-story brick and adobe, \$10,000; church and parsonage, \$8000.

What has been said regarding the healthfulness of Nogales, Arizona, is equally applicable to its sister city in Sonora, and it is also an orderly city in every respect, where life and property are as safe as in any Arizona community.

The writer is indebted to Don Ygnacio Bonillas for most of the foregoing information and other interesting statistics unavoidably omitted.

The Mining Industry in Northern Sonora and Southern Arizona

The following article is based upon data kindly furnished by A. L. Pellegrini, assayer of Nogales, who is an old resident of this district:

This refers to mines of gold and silver in the oldest mining regions in Mexico or the United States. The placers of La Cienega, Santo Domingo and others in the mountains of Sonora were extensively worked by Mexicans until the discovery of gold in California caused a rush to the new El Dorado. These placers had doubtless been worked by the Indian tribes long prior to the conquest of Mexico by the Spaniards. In nearly every mountain range can be seen old shafts and tunnels and the remains of crasas and adobe furnaces, which date back beyond the memory or tradition of the oldest inhabitants. In one sense, however, this country as a mining region is new and the industry only in its infancy. It is only within the past few years that systematic development has been attempted except in a few instances, and the result, as a whole, has been very flattering. A number of the Antigua or old mines have been cleared of debris, equipped with modern machinery, and now give promise of large production.

This refers to mines of gold and silver only, as these metals were the only ones of value to the old miners. Within the past few years, however, great attention has been devoted to copper and other metals, which has resulted in the opening up of new and, in some instances, very rich mines. One condition that retarded the development of this section for a long time was the poor circumstances of most of the mines, which prevented them from undertaking extensive developments.

Or, if they succeeded in interesting men of capital, the latter would send an "expert" on a flying trip of investigation, who would spend an hour or two in the old workings, take a few samples in the most convenient, possibly from the vein matter, and the assay report of "traces" or little better would settle the matter to the poor miner's detriment. It is now generally conceded that the old Mexican and Indian "jambuneros" were the best judges of gold and silver ores in the world and seldom left any pay ore in the mine within reach of their six-foot iron bars, every bit of waste or barren material, however, being left in place that could possibly be worked around or tumbled down below. A number of such mines might be mentioned, in which there was nothing "in sight" when re-located, but which, with a small amount of work, developed large ore bodies that are now being shipped to the smelters or milled at a good profit. It is gratifying to observe that within the past few years capitalists and men of moderate means, but possessed of mining knowledge from many years' experience elsewhere, have become interested in this section and by the installation of modern machinery and the systematic intelligent methods of experienced mine workers, a revolution has taken place and heavy shipments of bullion and ores are now made from this northern Arizona and northern Sonora.

J. MILLS DAVIES.

Leslie H. Rhuart AGENCY DIRECTOR New York Life Insurance Company for Arizona and Sonora

The New York Life Insurance company, which is the largest international life insurance company in the world, does a large business in Arizona, having branch offices established at Phoenix, the capital of the territory, which is under the supervision and direction of Leslie H. Rhuart, agency director. The company's branch offices at Phoenix are centrally located and fully equipped. They include the sub-offices in Prescott, Tucson and in Guaymas, Sonora, Mexico, for the convenience of the patrons and agents. The Phoenix office controls offices of the territory of Arizona and the state of Sonora, Mexico, and paid for over \$1,500,000 of business during the year 1901. It is expected this office will pay for considerable more than that amount this year.

This company does more business in Arizona than any of the other old life

companies and has over \$4,000,000 of insurance in force in the territory. According to the census of 1900 the population of the territory was 123,931. Of this number 1371 persons carried insurance in the New York Life Insurance company. In other words, eleven persons out of every 1000 living in Arizona carry their insurance with this company. There are only a few other states in the Union where the per cent insured is as high as in Arizona.

The success of this company in Arizona, as well as all over the world, is due to the simplicity and liberality of its policy contract. Its policies are accessible and contain no restrictions whatever as to travel, residence or occupation.

The high percentage of people carrying insurance in the territory speaks well for the intelligence of its inhabitants and proves that in the hearts of its citizens there exists the same feeling of love for wife, babe and home that is found elsewhere in the law-abiding citizens of all other states in the Union.

SONORA MILLING AND MINING COMPANY

Sonora Milling and Mining Co.

If there is anything in Sonora, that great northern state of the republic of Mexico, more widely known or more frequently referred to than the Yaqui Indians, it is the remarkable copper mines. Of these there are many large producers and hundreds of properties that in their own good day will equal them. The most notable mine, no doubt, is the Greene Consolidated, better known as the Cobre Grande, where a city of thousands has sprung up in two or three years; but it is probably no larger and perhaps not

side these engineering enterprises, the camp is well equipped with residences for the manager, quarters for the employes, a general store and many minor buildings.

The Sonora M. and M. company has been particularly fortunate in its employment of engineers. The property has been frequently experted and always with satisfactory results. W. E. Defty is the principal engineer, and the development of the last year has fulfilled every prediction made by him a year ago in a way that cannot but inspire the confidence

various crosscuts well defining the deposit.

The Cobre claim contains 132 pertenencias and was purchased by the company within the last six months. The croppings are prominent and in some places sixty feet wide. Northeast of the main croppings are several surface openings showing excellent quality of copper carbonate and silver bromides. One shaft seventy feet deep sunk through the croppings cuts them at an angle. There is a crosscut at the bottom of the shaft. A drift 135 feet deep entering the hill

big copper camp of the southwest. His "school of mines" was the vast area of mineralized mountains in these two states, his instructors have been shift bosses and his technical knowledge was gained with a hammer and drill. He may not be able to pronounce the dictionary name of every rock he comes to, but he can come as near as anybody to telling what mineral it contains. Leaving in Chihuahua he went to the now famous Congress mine, where eighteen years ago he was pounding the drill alongside of many now scattered all over the terri-

America. Naco is surrounded by several extensive cattle ranches. The water supply is obtained from three wells, each from 150 to 200 feet in depth, which furnish an unlimited supply at a cost of \$3 per month to families. E. G. Ord, the well known plumber, tinner and sheetiron worker of Bisbee, is the lessee of the water supply. He has a branch of his Bisbee establishment at Naco. The Naco water is extensively supplied to Bisbee. A stage line, owned by Liggett & Son, Bisbee, is operated between the two towns. Naco has two banks, the largest one a branch of the Bank of Bisbee. Among the principal stores are the following: Copper Queen, Aguirre Mercantile company (the latter in Naco, Arizona and Sonora); Goldman & Montgomery, Southwestern Commercial company, all general merchandise; W. A. White, Drugs; Curry & Co., dry goods. The lumber and other lines of business are also well represented.

Among the principal buildings are the Hotel Naco, F. M. Abrams, proprietor, two-story adobe, thirty-five rooms, cost \$5000; W. A. White building, two-story adobe, cost about \$20,000; Madding opera house, cost \$15,000, seating capacity, 500.

The Catholics have a frame church building and a good membership; the Baptists, recently organized, have an adobe building.

There are two public schools, with an aggregate enrollment of about 100 scholars.

A number of public improvements are contemplated. E. F. Graham, the mining, real estate and livestock broker of Naco and Bisbee, proposes, with others, to erect a number of buildings; also an ice and cold storage plant, an electric light and power plant, etc.

Naco is connected by local and long distance telephone with Bisbee, Douglas and other towns in Cochise county. The residents of Naco say there is a good opening for Naco newspaper.

Peace This is a prettily situated mining town in the northeast part of Cochise county of from 700 to 800 inhabitants, nestled at the foot of a hill. It is remarkably quiet and orderly for a mining camp, the men working in the mine being nearly all married, hence the town does not attract the usual class of drifters generally found among all miners.

The Great Commonwealth mine is situated at Pearce. This is a gold producer and is regarded as one of the most substantial mines in Arizona. During the past year the work has been directed mainly in mining and developing ore bodies in the main workings. The mine is about 500 feet in depth and pumping plants have been installed for deeper sinkings. The drifts and slopes of the workings have been considerable extended, but little work has been done on the property of the company outside the main workings. A new eighty-stamp mill was erected recently to take the place of the one destroyed by fire. About 200 tons of ore crushed each day. Crude petroleum is used as fuel. About 200 men are employed throughout the year.

Benson, Cochise and Fairbank Unfortunately the articles sent for and thoroughly describing these group towns failed to arrive in time for this edition.

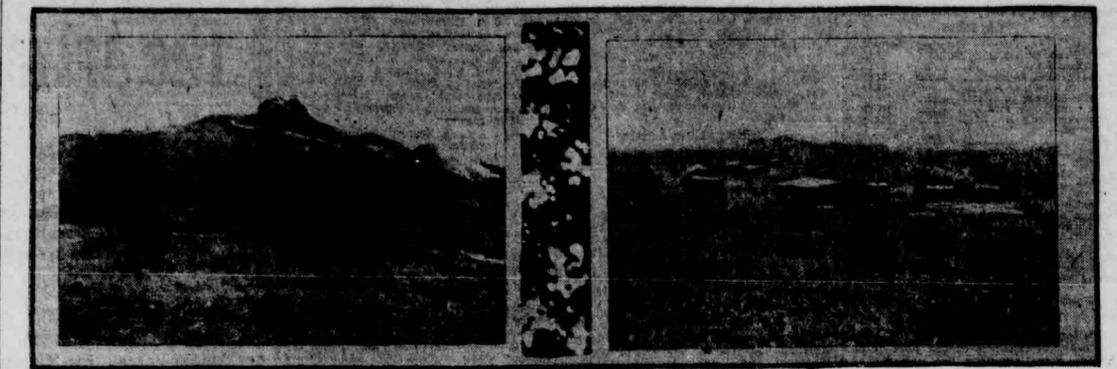
Forty-eight miles east of Tucson is an important station on the Southern Pacific railroad; also the northern terminus of the El Paso Southwestern railroad. Cochise is on the Southern Pacific railroad, between Benson and Wilcox. Fairbank is the junction of the El Paso and Southwestern and the Sonora branch of the Southern Pacific railroad. The new branch of the El Paso and Southwestern railroad, from Fairbank to Tomstone, ten miles in length, will be in operation about December 1.

J. MILLS DAVIES.

A Story With a Missouri Moral A Missouri farmer has made a serious mistake in exposing himself to the gibes of a heartless world. He saw an advertisement of a "two-dollar fire escape" and the more he looked at the advertisement the more he wanted the fire escape.

"I can't let a bargain like that go one get away," he murmured through his tightly whiskers. And then he sat down and mailed the two-dollar bill. In due time the fire escape arrived. It was an inexpensive copy of the Bible.—Cleveland Plain Dealer.

By Wholesome Exercise Will U. Beegood—How do you expect to keep yourself warm this winter? "I expect to get it from the fellows that ask me 'Is this cold enough for you.'"—Chicago Tribune.



300,000 TONS OF RICH ORE IN SIGHT IN BURNT PEAK

so big a deposit of minerals wealth as that of the Antigua or old mines has been cleared of debris, equipped with modern machinery, and now give promise of large production.

The Sonora Milling and Mining company is the owner of one of these many rich copper mines, which is usually much silver and Con O'Keefe is the president and general manager of the company. Mexican law requires that mines operated by Americans be incorporated under both governments. In compliance therewith the property referred to is held by the La Fortuna Mining company, organized under the laws of Mexico and the entire stock of the La Fortuna is owned by the Sonora Milling and Mining company, incorporated under Arizona laws. The vice president of the company is W. S. Sturge of Tucson, a wealthy cattle raiser and a member of the live stock sanitary commission appointed by the governor. The secretary and treasurer are John Dessart, of Nogales, where the company's offices are located, the nearest point in this country to the company's holdings in Mexico.

The mines are situated in the district of Altar municipality of Tubutama, eight miles distant from the village of that name and on the Altar river. It is six miles from Magdalena, the nearest railroad station, but a good wagon road winds over a rolling mesa that may be cheaply traversed by a railroad. The property comprises 225 pertenencias, or about nine hundred and seventy-five acres and are all within a radius of three and one-half miles. The company was organized July 10, 1901, and 450,000 of the 1,000,000 shares, at a par value of \$1, were placed in the treasury for development purposes.

Since that time development has been vigorously prosecuted and good progress has been made. A total of over 300 feet of development work has been accomplished, and in this work mammoth ore bodies have been revealed. A fifty-ton Vulcan smelter was erected and blown in April 29 of this year. That was the one mistake that has been made by the management, for it has proved to be the wrong type of smelter for the Tubutama ores. It is not considered a serious mistake, however, for it gave opportunity for testing the values in the ores, and



SONORA MILLING AND MINING CO.'S RESERVOIR DAM

ence of every officer and stockholder in the company. Mr. Defty is a resident western engineer. For years he has made his home in Arizona and his time has been devoted entirely to mine inspection. He is, therefore, familiar with every notable property in the southwest and an authority on the mineral formations of this region. When he reported on the company's holdings a year ago he advised the thorough exploitation of the Penasco Quemado claim, predicting a large ore body running well in silver. Mr. O'Keefe took his advice and while developing his big copper lodes on other claims kept a force of men busy on the Penasco Quemado. As a result he has in that property alone a big bonanza. Mr. Defty was recently sent for to report upon it after the year's development, and this is what he says:

"The main work has been a tunnel run with the surface a distance of 200 feet and on a level with the smelter. From the portal for a distance of 120 feet the tunnel is driven in sand and boulders, the bed of an old wash, and beyond this for forty feet through a detritus covering of the lode. From this point for thirty feet the work is in solid ore. Beyond this ore the working is in talc and



SONORA MILLING AND MINING CO.'S RESERVOIR DAM

pect to. On the opposite side of the hill there is a seventy-five foot shaft, and there are numerous surface excavations, all in ore. Thousands of tons of ore lying on the surface are now available for treatment. This ore fluxes nicely with the ore from the Penasco Quemado. Samples from this ore run all the way from 2 per cent to 20 per cent copper, but the average is placed at 5 per cent.

On the La Fortuna claim there is a shaft 160 feet deep and another 100 feet deep. On the eighty foot level of the latter shaft a drift has been run following the vein 400 feet and connecting with the deeper shaft. The drift is all in ore most of the way and at no places does the body narrow below two feet. There are seven shafts. But the work is not all too near the surface, say the experts, who advise going deeper for larger and still richer bodies.

The data given above relative to development is sufficient to show to any reader that Sonora Mining and Mining properties contain immense deposits of rich ore that only needs the erection of the proper plant to treat it and further digging to increase the quantity many fold. Those interested can secure further details from the company. There is one thing further to speak of before this article is in any way complete, and that is a short sketch of Con O'Keefe, the moving spirit of the enterprise and under whose practical judgment the claims have been thus far developed. Sonora has lived in Arizona and Sonora for the last twenty-two years, coming first to CL on, which was in those days the town and some who are now in his employ. He went to Jerome from Congress and for twelve years lived in that big copper camp most of the time. There he consorted with such men as George

SONORA MILLING AND MINING COMPANY'S CAMP

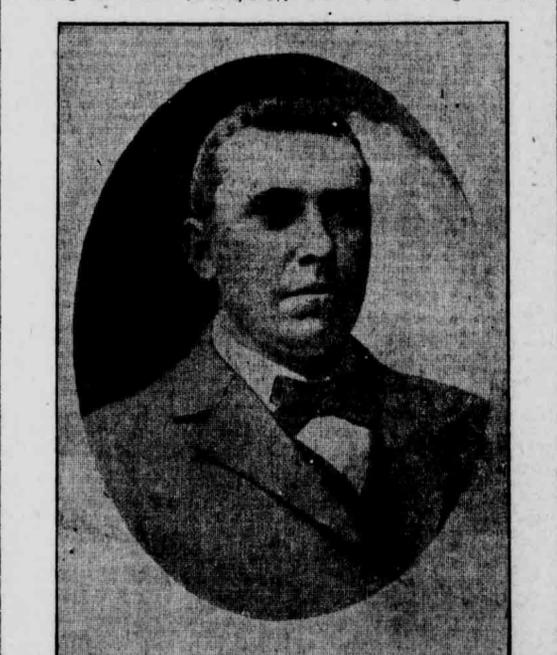
Mitchell, who now counts his wealth by millions, and worked with him, elbow to elbow. He has therefore a practical knowledge of both mining and smelting and is most at home in a deep, dark slope, or while inhaling the sulphur fumes of a copper reduction plant.

When the Cobre Grande Copper company was organized and a good man was wanted to take charge of the big enterprise, it was but natural the selection should fall to Con O'Keefe, and he was not slow to accept a position that would give him an opportunity to show what he knew about the business. To make a short story of it, the Cobre Grande mine at La Cananea, Sonora, was developed and made famous under his administration and it is today one of the marvelous camps of the world.

Though he severed his active connection with it after the subsequent litigation of which the world has heard so much, and the reorganization of the company into the Greene Consolidated company, he has only good things to say of the property for he helped to make it and knows what it is. He did at that time, however, induce various of his friends to place their money with him in the organization and development of the Sonora Mining and Milling properties and he is today a proud man to think they are developing so well and so nearly in accordance with his expectations. A big, good-natured Irishman, Con O'Keefe wishes no man harm, and if there is anything better than his judgment it is his rare good luck, for beginning at the foot of the ladder, he has made a success of mining. Though not a millionaire, he has every reason to expect to become one at no distant day and others who are and will be interested with him in his enterprises will own corner lots on Easy street.

NACO A THRIVING PLACE

This rapidly growing little town is situated nine miles south of Bisbee on the international boundary line between the United States and Mexico. It is aptly called "The gateway of the Cananea district." The town was started in 1898, with the advent of the El Paso and Southwestern railroad, and now has a population of about 450. The railroad to Cananea, now the Cananea, Yaqui River and Pacific railway, has materially enhanced the prospects of the little town. The Southern Pacific Railroad company is constructing a branch from Cochise on the main line between Benson and Wilcox, to Naco, to connect with the Cananea, Yaqui River and Pacific railroad. This will give a still greater impetus to the growth of Naco and make it an important customs point on the boundary line, especially being situated between two of the greatest mining districts in



CORNELIUS O'KEEFE

about 6000 pounds of copper was produced. The failure of the smelter was by reason of the vast amount of coke required to reduce that particular rock, making the expense too great for profitable operation. Fortunately, however, there is but a small part of the plant that cannot be used in the erection of an appropriate plant at an early day. The experiment, therefore, was by no means a total loss, and may prove a blessing in disguise. The 6000 pounds of black copper was from 120 tons of charge, and proved an average of \$10 to the ton. The product was the result of an eighty-hour run.

Another completed detail of this great mining enterprise is the construction of a storage reservoir. This section, which is the greater part of Sonora, is very dry between rainy seasons. Though there is a well on the property 100 feet deep and supplying 6000 gallons of water daily, it is not enough for the reduction works. The topography of the country embraces various dry water courses that in the rainy season become torrential streams. A dam has been built across one of these, 300 feet above the smelter, with a storage capacity of 56,000,000 gallons, which, it is estimated, will be ample to run any reduction plant that may be needed through dry seasons. The dam, which is twenty feet thick at the base and sixty-two feet long, is of solid masonry and well anchored, and can be made higher if need be, the waterbed being large enough to fill a bigger basin. Be-

schist and is being driven to connect with the shaft. Sampling proved this ore body to average twenty-five ounces in silver per ton. (Other reports have placed it, even higher.) The work exhibits porphyry on the hanging wall and diorite on the foot wall, with a solid thirty-foot vein between walls."

Mr. Defty says the new ore body is already sufficiently opened up to exhibit a large additional tonnage to a hitherto proved tonnage of available ore. In a general estimate and a conservative one at that it is announced that ore values now in sight will aggregate a million and a half dollars, and that the ore can be reduced for 20 per cent of their value. The Penasco Quemado is at the present time the particular delight of Mr. O'Keefe, for beside the present fine showing in fulfillment of early predictions, there can be no doubt of the big lode going down, and it is further indicated that at depth is attained the copper values, which are at present secondary will increase sufficient to pay for the expense of reduction. There is also some gold values, but they are small.

Of the older claims, or the claims developed earlier, the McKinley was located by reason of an immense iron reef, the ore making an excellent flux. The reef is from four to six feet wide. The development consists of a sixty-foot tunnel, a forty-eight foot drift, winze and from the south has not yet reached the ore body, but is not far enough in to ex-

A Piano advertisement for The Zeller Piano Co. featuring a large image of a piano and text describing the company's products and services. The text includes: 'Is, today, one of the necessary furnishings of every modern home. We will furnish you a Piano, guaranteed to withstand the extreme dry climate of the southwest at eastern prices. If there is none in your family that can play, we will furnish you an Apollo Piano Player, that will play the piano for you. If you haven't all the cash to pay down, you can pay a small payment upon receiving the Piano, and the balance in monthly or quarterly payments, giving you from two to three years to pay for it. We will ship a Piano, freight prepaid, with stool and cover (no other expense) to any railroad station in Arizona or New Mexico, upon a payment of \$25 cash, and the balance on long time. The Zeller Piano Co. Headquarters for Arizona. 118 E. Congress Street, Tucson, Arizona. Los Angeles Office . . . 121 1/2 South Broadway Branch Houses . . . El Paso, Bisbee, Nogales

BISBEE ENTERPRISES CO.

Most Promising Copper Mining District in the United States

Review of Its Mining Resources, Business Interests and General Prospects

As the El Paso and Southwestern train approached Bisbee, a companion to the writer, "Come out on the platform and see what you see," he said. "It is certainly a large part of the town or city, and a very ambitious one withal, is perched up on the sides of the hills, on narrow terraces, one above the other, almost to the summit of the steep peaks. The queerest feature, however, and the most imposing, is the narrow, tortuous streets, most of them alleys, which extend up the canyons, some of them a distance of about 100 feet, and in some cases, as in the case of Tombstone canyon (what a name), is necessarily narrow, to avoid cutting down the steep hill on each side. The Spanish style of building, the Queen hotel, a substantially built four-story brick structure, occupies a narrow bench in the rear of Tombstone canyon, its magnificent proportions protesting mutely against its unsightly and cramped situation. All these conditions, however, prove that the foundation of Bisbee, its location and its future, size of the town when the little mining camp was started, for the town has now fully 9000 inhabitants and is growing and extending rapidly, and any town of equal size in the southwest.

Realizing its inevitable growth as a great copper producing district, the enterprising citizens of Bisbee have decided to expand the limits of the city and several additions to the original town site will soon be subdivided into business and residential plots. These have been located on comparatively wide and level tract, commencing about a mile south, just beyond Lowell, a well-suburban residential district, as described elsewhere in this article.

Bisbee is situated fifty-five miles southwest from Benson, 103 miles from Tucson, 604 from Los Angeles, and about ten miles from the Mexican border.

The Copper Queen Consolidated Mining company's mammoth reduction works in the first impressive sight to the visitor notices upon arrival at the camp and their huge smokestacks. The reduction works are composed of a smelting and concentrating plant comprising five steel water-jacketed furnaces, 120 by 42 inches and 5 by 3 feet "Queen Type" converters steam furnished with hoisting and conveying machinery by thirty-two common tubular and marine boilers of various sizes and designs, the fuel at present being used being electric power from Texas and California. The total consumption is about 13,000 gallons per day, while about 100 tons of coke is consumed at the same time. The furnace is of a type that is the outgrowth of the peculiar ore conditions of the camp. From tilting wells below each furnace a matte is drawn into a battery of a battery of converters, whence comes bullion 99 per cent fine. Also a considerable admixture of gold and silver, each of which is carried in the matte average about 8 1/2 per cent of copper. No fluxes need be brought in, as the sulphide, carbonate and oxide ores, which are used in due proportion for the best results of smelting. The coke used is brought from Colorado. The slag is run off into large tanks, each of which is equipped with a Baldwin engine some distance away for dumping into the canyon. It is a well-known fact that the furnace, which are then hauled in small trains by Baldwin engines some distance away for dumping into the canyon. It is a well-known fact that the furnace, which are then hauled in small trains by Baldwin engines some distance away for dumping into the canyon.

Bisbee has a relic of departed greatness, which is, however, still doing active and efficient work for its food of coal and water. The furnace, which are then hauled in small trains by Baldwin engines some distance away for dumping into the canyon. It is a well-known fact that the furnace, which are then hauled in small trains by Baldwin engines some distance away for dumping into the canyon.

Early History of Bisbee

Like all other mining camps, the early history of Bisbee is somewhat philatelic, the following particulars are probably accurate: In 1876 George Warren, while acting as scout and guide for government troops, picked up the copper from the following copper mines now a part of Bisbee. Soon afterwards he located a claim and called it "Copper Queen." About the same time Joe Pritchard, a brother of the famous Pritchard-Tucson associated with Joe and Timothy Dyer, and they located the Neptune, Uncle Sam and Hayes claims in the same gulch. In 1878, George Warren sold his interest in the now celebrated Copper Queen claim to Messrs. Ballard & Martin. Some citizens of Bisbee report that Warren, while intoxicated, made the claim against \$50 in a foot race and lost. However, Messrs. Ballard & Martin formed a company in 1880 and operated the Copper Queen and other adjacent mines for years until 1884, when their property was purchased—also other mines in the same vicinity, including the Herring mine—by the Copper Queen Consolidated Mining company.

Formation and Ores

The general formation of the copper belt, in which all the big mines of the Bisbee camp lie, is lime. This lime is invariably accompanied by porphyry, so it should be explained as lime and porphyry, with the lime predominating. Throughout all of this run lime is found in the form of iron, generally in well defined lines. These veins or strata of iron crop to the surface through the lime and form an ideal condition for the formation of copper deposits. The heavy cropping of iron is characteristic of the whole Bisbee country, and is especially prominent on the property of the Copper Queen mine. This mixture of lime and iron, so noticeable in the Copper Glance and the other great copper mines in and around Bisbee, forms the famous Herring line, generally characteristic of the great copper camps of the world.

The ore bodies of the Bisbee (or Warren) district, comprising about fifteen miles square, north of the International boundary line, lie regular, under the thick formation of the carboniferous period. These regular formations, in the center, are disturbed by volcanic action, and in the Bisbee canyon may be found the greatest evidence of that disturbance, consisting of the formation adjoining the center of disturbance. Copper ore predominates in this district, but silver and gold to a small extent are also found in the same ore bodies, and one mine, the Easter Sunday, is exclusively a gold property.

Following is a necessarily brief description of the principal mines in this district:

their general offices are in New York. The company is also heavily interested in metal manufacturing on the Atlantic coast. The president and general manager of the mines department is Dr. James Douglas, father of Walter Douglas, general manager of the Copper Queen Consolidated Mining company. Dr. James Douglas is one of the foremost metallurgists of America. It is estimated that the company's gross income from the Copper Queen mines alone is about \$7,500,000 annually, and they are expending many millions of dollars in the development and improvement of this and their many other properties in the southwest.

Copper Queen Consolidated Mining Company

The Copper Queen mines begin on the north of the great open slope that is situated just above the library building at Bisbee. At first the prospector's work was upon a small ledge of carbonate, rich in lead and silver, far up the gulch behind. But in August, 1880, a thirty-ton water-jacket was run down near the bottom of the canyon. It is reported that the first workings comprised a solid body of oxidized copper, 4000 feet in area, that ran 23 per cent of metal in the ore, the ore being so free smelting that silica had to be added, to the furnace charge. This ore body extended to a depth of 400 feet along the incline from the surface and there terminated in hard limestone; but in three years it had yielded 20,000,000 pounds of copper.

In 1884 the present ore bodies of the Copper Queen were first encountered, almost by accident, on the 200-foot level of the Car shaft. This ore body was developed into one of the largest ever known with steps that were 2000 feet in size. Yet no definite vein has been traced, the great value of the Bisbee West Copper Mining company has followed the same line of procedure as its big neighbor and has demonstrated by actual work that it has the same character of ore, the extent of which has not been fully shown, but the prospects of which are fully as bright as those of the Copper Queen company. The formation is of like character to that prevailing in the neighboring properties. The ores are oxides and carbonates on the surface, and the upper sulphides of depth is attained.

General Manager Walter Douglas, in his annual report to the governor of Arizona for 1902, reports as follows on the progress of the company's operations during the past year: "The output of this company for the twelve months ending June 30, 1902, was 18,312 tons of copper, and 1,873,000 lbs. of silver. The ore is brought to the surface through five shafts, of which two are used for development work only. The difference between the cost of the ore and the cost of the smelting works by a standard gauge railroad and the ore is transported by this railroad from the storage bins at the hoisting shafts to the smelting works, where the furnaces are fed. The reduction works are composed of a smelting and concentrating plant, there being five steel water-jacketed furnaces, 120 by 42 inches and five 3 by 9 feet "Queen Type" converters.

Steam is furnished for the hoisting and reduction works by 32 common tubular and marine boilers of various sizes and designs, the fuel at present being crude oil from Texas and California. The total consumption is about 13,000 gallons per day, while about 100 tons of coke is consumed at the same time. The furnace is of a type that is the outgrowth of the peculiar ore conditions of the camp. From tilting wells below each furnace a matte is drawn into a battery of a battery of converters, whence comes bullion 99 per cent fine. Also a considerable admixture of gold and silver, each of which is carried in the matte average about 8 1/2 per cent of copper. No fluxes need be brought in, as the sulphide, carbonate and oxide ores, which are used in due proportion for the best results of smelting. The coke used is brought from Colorado. The slag is run off into large tanks, each of which is equipped with a Baldwin engine some distance away for dumping into the canyon. It is a well-known fact that the furnace, which are then hauled in small trains by Baldwin engines some distance away for dumping into the canyon.

Calumet and Arizona Mining Company

Adjoining the richest claims of the Copper Queen Consolidated Mining company on the southeast, the trend of the Bisbee ore bodies, are the properties of the Calumet and Arizona Mining company, comprising the foregoing claims, also those of the Calumet and Pittsburg Development company and the Lake Superior and Pittsburg Development company. I. L. Merrill is the superintendent of all these properties. These claims were purchased two years ago from Martin Costello of Tombstone, a pioneer of Cochise county. All the claims are patented and the title to them is absolutely assured. These mines rank next in importance to those of the Copper Queen company. The company has expended altogether \$450,000. The property is located on the El Paso and Southwestern railroad and is in the same ore belt and zone. The owners are a stock company, legally organized under the laws of this territory, their stock divided into 5,000,000 shares of \$1 each. Of this amount Secretary Williams has sold to 90,000 shareholders, mostly to home people, and there is money in the treasury to do



"COPPER QUEEN" STORE, BISBEE, ARIZ.

officially that the company has completed four miles of exploration work under ground during this year. This work has exposed ore bodies of fair quality in copper, gold and silver. The smelter at Douglas has a capacity of 250 tons daily and will soon be enlarged to 600 tons capacity. In the three properties and machinery during the past year \$400,000. The purchase price of the properties was \$450,000.

superintendent of the Copper Queen mines; C. C. Warner, vice president and head of the Holbrook mine of the Copper Queen Consolidated Mining company; G. E. Tomlinson, secretary, was formerly head assayer and chemist of the same company; James Wood, treasurer, is head foreman of the Copper Queen company's smelter; C. L. Beckwith, manager, was formerly chief engineer of the Copper Queen company; John Connelly, one of the directors, is a well known and experienced miner of Bisbee, and was one of the original owners of the Copper Glance claims.

BISBEE WEST COPPER MINING COMPANY

This is another excellent mining property, comprising twenty-two full claims all of which are either patented or in process thereof. The company is composed almost entirely of prominent business, professional men and bankers of Los Angeles, all wealthy and conservative men. Besides extensive mining developments, a valuable supply of excellent water for domestic purposes has been developed in shaft No. 2 at a depth of 750 feet. This has been contracted for by a new townsite company, an addition to Bisbee, which, together with the mining developments and improvements, is fully described on the next page.

COCHISE COPPER MINING COMPANY

On the north line of the Copper Queen Consolidated Copper company's property, the Cochise Copper company's mines are located, and a part of the surface area covers a portion of the

working shaft in the Goss dike at the line contour in the center of the group. The ore is chiefly carbonates and assays from 5 to 20 per cent copper, a trace of silver and about \$2 per ton in gold. This group of 400 acres is favorably situated, being traversed through the center by the El Paso and Southwestern railroad, which centers at the west corner of the property, passing over seven of the claims to the east corner.

A BIRDSEYE VIEW OF BISBEE, ARIZ.

The Solomon Springs Copper company (a close corporation) is making a double compartment shaft on the property adjoining the above. They have ore all the way from the surface and lately made a shaft to a depth of 200 yards. This is the beginning of returns in this promising district.

Huachuca Mountains

Cochise county has a very promising mineral belt in the southwest corner of the county in the Huachuca mountains. Gold, silver, lead, copper and zinc are to be found in this district. The belt can be readily traced for fifteen miles from the mouth of the Montezuma canyon across Copper canyon and Cave canyon to the northwest end of the mountains.

Other Mining Properties

The space allotted to this article is not sufficient to mention any other promising mining properties. It can be said truthfully, however, that a large number of claims in this district are being held by men who will doubtless become important mines.

THE CITY OF BISBEE—ITS GENERAL INTERESTS

Bisbee was incorporated as a city January 9, 1902. Following is a list of the city officers, etc.: Mayor, J. J. Kinney; councilmen, First ward, Edward Scott and A. W. Kindred; Second ward, J. A. Bowen and J. S. Taylor; Third ward, Peter Johnson and C. C. Warner; committee on fire department, J. S. Taylor, Peter Johnson and A. W. Kindred; two policemen, J. H. Harrington and Harry Jennings.

Water Supply and Fuel

The water supply is furnished by the Bisbee Water and Fuel company, E. B. Mason, general manager. The supply comes from springs at the head of Brewery gulch and Tombstone canyon; also from three wells of the Copper Queen Consolidated Mining company on bottom lands near Naco, nine miles distant. The supply from the latter is plentiful, and both supplies are of excellent quality. The storage capacity of the Naco supply is in two tanks, each of 100,000 gallons capacity. The local supply reservoirs have 75,000, 50,000 and 30,000 gallons capacity respectively, which will soon be increased to 160,000 gallons more capacity. Residences are supplied for \$3 per month per barrel, business houses by meter charges.

ELECTRIC LIGHTS, ICE PLANT AND TELEPHONE IMPROVEMENT COMPANY

This is the only exclusively gold mine in the Bisbee district, although there are several other good prospects. This property consists of four full claims, situated about five miles from Bisbee. About \$15,000 has been spent in development work, sinking an inclined shaft for 150 feet to connect with a 300-foot tunnel. The best ore has

supplies the above important necessities of life. The electric light service is thoroughly up-to-date. Light and power are supplied to the city and surrounding mines at a cost of 25 cents per 1000 watts (meter service), with discount to large consumers.

SCHOOLS AND CHURCHES

Bisbee has three school buildings, one a two-story brick that cost about \$15,000 and two frame buildings that cost, including the lots, about \$3000 each. There are twelve teachers and principal, Professor Claude Smallwood. The number of pupils between six and twenty-one years of age is 1028. About one-tenth of that number are Mexicans. The Copper Queen company built the first school building (which is part of the present brick building) in 1854, and enlarged it several times. Up to the present year the Copper Queen Consolidated Mining company, with characteristic liberality, defrayed all school building expenses.

The Presbyterian church has a membership of over 100. A handsome brick church building that cost about \$12,000 is almost completed. Several members of the firm of Phelps, Dodge & Co. con-

tributed liberally toward the expense of building. Rev. Harvey M. Shields is the pastor.

The Methodist Episcopal church has a membership of twenty-two and a frame building that cost \$3000. Rev. Mr. Siegler is the pastor.

The Roman Catholics have two churches, American and Mexican, that cost respectively \$5000 and \$1500.

The Christian church, H. W. Studley, pastor, holds services in Society hall, over the opera house; membership about twenty.

The Episcopal church has no pastor nor church, but owns a lot and contemporary building soon.

All leading fraternal societies are well represented.

Gymnasium

The handsome three-story brick gymnasium building, now almost completed, was donated to Bisbee by Mr. Cleveland Dodge, of Phelps, Dodge & Co. It will cost when equipped at least \$30,000. It is claimed that it will be the finest and best equipped gymnasium between Denver and San Francisco.

The Bank of Bisbee

This is one of the important institutions of Bisbee and, like everything else in this prosperous town, is well represented. It is a prosperous bank organized in February, 1900, by Ben Williams, W. H. Brophy, J. S. Douglas and M. J. Cunningham. The present officers are: W. H. Brophy, president; J. S. Douglas, vice president; and M. J. Cunningham, cashier. The capital stock is \$50,000; surplus, \$20,000. The bank is over \$500,000. It is the third largest bank in Arizona, and one of the strongest.

The Miners and Merchants' Bank of Bisbee

This bank opened its doors for business July 30, 1902.

The bank is incorporated under the laws of Arizona with a paid up capital of \$50,000. The organizers are L. C. Shattuck, president; Jos. M. Muhlem, vice president; J. T. Hood, cashier; L. J. O'Neil, teller; and J. S. Douglas, also make up the board of directors. The stock is all held by local men. The business of this new bank is also growing rapidly.

Newspapers

A city or town's condition and enterprise are readily gauged by its newspapers. In respect Bisbee is fortunate, for, like its citizens, the newspapers are progressive and prosperous. The Daily Review, a morning Democratic paper, is published by the Consolidated Printing and Publishing company. W. B. Kelly is president, general manager and editor; Carl Graf, secretary and treasurer. A good job print line department, one of the important adjuncts of the Review.

Railroads and Railroad Business

The El Paso and Southwestern Railroad company, one of the properties of Phelps, Dodge & Co., is referred to in detail under the head of Cochise county and the article on the Copper Queen Consolidated Mining company's interests. A detailed report of the company's immense railroad business at Bisbee, its train service, equipment, etc., was applied for by the writer, but, unfortunately, was not received. It is used very extensively in the mines and smelters and costs in Bisbee \$1.37 per barrel. Mining lumber comes principally from San Pedro, Cal., and costs from \$2.50 to \$3.00 per 1000 feet in carload lots.

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The Bisbee Improvement company

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company has ordered the erection of ten houses for the accommodation of the miners employed.

The Property

The property of this company consists of twenty-four full mineral claims, each 800 by 1500 feet in size, making in all 480 acres of mineral-bearing ground. It should be stated here that copper properties of large areas are always more desirable for development purposes as is evidenced by the fact that the first consideration of any strong company looking for copper property to develop, is that here the best twenty Blisbee camp, where the ore occurs in immense deposits, instead of veins, as is usual in most cases.

These claims have been more or less developed for the last ten years by one of the best copper prospectors in southeastern Arizona, John Connelly. Mr. Connelly is a mine and a geologist—not a theoretical man, but a persistent and practical prospector who has "foot-worked" nearly all of that surrounding country during the last twenty years.

Mr. Connelly is one of the directors of this company. S. W. Clawson, the president of the company, is now in the last few years of the great Copper Queen Consolidated mine at Bisbee. In his position as such he had the absolute management of the underground workings on this famous property, directing the breaking of new ground and the opening of new ore bodies. He has nearly a thousand men under him, and to him come the important questions of the practical operation and development of this immense property. It may be said that brought up Mr. Clawson's personal management has this mine been developed and under its present position, that of one of the greatest copper-producing mines of the world. Mr. Clawson has lived in southeastern Arizona since 1880, and copper mining has been and is today his life work.

Side by side with Mr. Clawson and a constant partner in mining operations covering a period of twenty years, stands the vice president and superintendent of this company, C. C. Warner. Mr. Warner has served his mature years in this Bisbee mining camp, and Mr. Clawson, the head mine man of the Copper Queen company.

Mr. Warner has charge of the Holbrook mine, one of the properties of the Copper Queen Consolidated mining company. He has been in the county twenty years and is considered one of the best informed mining men in the southwest.

C. L. Beckwith, the manager of the Copper Glance Mining company, has been identified with the mining interests of the Bisbee camp for the last thirteen years. Aside from his own knowledge of mining, Mr. Beckwith is a civil engineer of high standing.

James Wood, the treasurer of the Copper Glance Mining company, is the head foreman of the smelters of the Copper Queen company, and has devoted his life work to this branch of the mining industry in Bisbee and the great copper camp of the Mont. Mr. Wood is recognized as authority on matters pertaining to the successful treatment of ores on a large scale, and his position is one of great responsibility.

G. E. Tomlinson, the secretary of the Copper Glance company, has been for many years an assayer and chemist for prominent mining camps.

Development Many shafts have been sunk in various sections of the property, but the main work is confined to the sinking of a two-compartment shaft on the northeast side of the property, which is in close proximity to the porphyry dyke that runs through this mineral belt. A single compartment shaft is being sunk on the southwest side of the claims to develop a new vein in the prospect. This shaft was started in ledge matters, which has continued to the present depth of 115 feet, and the quartz foot wall shows no sign of changing its present dip. There are certain geological conditions that have an important bearing upon mining in this immediate district, and the porphyry dykes are among the most important, as the ore deposits are usually found at the contact of the porphyry and lime. The two-compartment shaft which is being sunk on this property was started at a distance of 400 feet from the porphyry dyke, which has a southeasterly course, and when the shaft depth has been attained in this prospect, cross-cutting will be commenced to explore the ground on the northeast side of the dyke. There are copper croppings all over this 480 acres, and it does not seem probable from the surface showings, but what the shaft will reach, that counter large ore bodies are sufficient depth has been attained, and it is thought that it will not require a large amount of drifting on account of the location of the shaft. It is well known in this section that the ore bodies lie deeply, as the various shafts of the Copper Queen and the Calumet properties have demonstrated, but the counter has been met with in the world. This company is in excellent financial condition, which insures a thorough development of the property and it is not likely that any more treasury stock will ever be offered.

The company has recently erected a hoisting plant at the two-compartment shaft, which will be sunk to a depth of 1000 feet or more, as may be required. The company is taking out patents for the mining claims, and the whole work is being carried on in a thorough manner by the very competent management which this property is so fortunate to have. This company is well thought of at home, and it is considered by mining men as one of the very best of the young properties at Bisbee.

Incorporation and Capitalization This company was organized under the laws of Arizona, March 26, 1901. The capital was placed in two and one-half million dollars, a much lower capitalization than is usual with copper companies, being divided into two and a half million shares of the par value of \$1 each. This is reasonable capital stock for a property with the extensive holdings of this company, being about one-half the capitalization customary under similar conditions. The company absolutely owns in fee simple this 480 acres of valuable land, and each share of the capital stock represents its proportionate share of ownership in this property. The stock is non-assessable, and is fully paid up. Under the laws of Arizona no personal liability attaches to an individual holding shares of the capital stock. \$1,250,000 shares have been placed in the treasury to insure the proper development of the property.

Communications relative to the company should be addressed to the secretary of the Copper Glance Mining Company, Bisbee, Arizona.

BISBEE WEST COPPER MINING COMPANY

Of the many undeveloped valuable copper mining properties in the vicinity of Bisbee, the Bisbee West, although still in the prospecting stage, ranks among the most promising, and is recognized by mining experts as one of the future great mines of the district.

As the Bisbee West Copper Mining company is almost entirely composed

of Los Angeles merchants, bankers and professional men of exceptionally high standing, the writer was particularly interested in the property, and accepted the kind invitation of F. L. Dwight, superintendent and general manager, to visit the Bisbee West camp. Many hours were consumed on a tour of investigation, and a most convincing demonstration was presented that this property has a great future. The extensive workings, costly machinery and other evidences of a large expenditure of money prove that the owners are confident of receiving great returns from the investment. Mr. Dwight, the superintendent and general manager, has had over thirty years' experience in practical mining. He is very sanguine of the future of this property, although of conservative temperament and a man of few words. While driving out with the writer to the Bisbee West camp, Mr. Dwight displayed, in a very modest and unassuming way, however, an excellent knowledge of general mining, and great familiarity with the ore formations of this district. Although the Copper Queen mines produced during the year ending June 30, 1902, 18,313 tons of copper alone, besides other metals, many conservative and practical mine owners in Bisbee express their belief that being contiguous to the foregoing celebrated copper mines, and in the same mineral belt, the Bisbee West may, in time, become equally as large a producer of copper. Mr. Dwight, however, in his quiet way, smiled when asked his opinion on the subject, and said: "We do not make such an assertion, but believe, however, that our mines will, in a year or two, rank among the leading copper producers of this district."

This group of twenty-two full claims lies about two miles southwest of the town of Bisbee, on the opposite side

of the slope from the Copper Queen mines and immediately adjoining recently purchased claims of the latter company in the same belt. During the past two and a half years the company has done the following development work: Shaft No. 1, single compartment, sunk to a depth of 50 feet, to prove the permanency of ore, which was thoroughly demonstrated; then shaft No. 2, a two-compartment, sunk a distance of 700 feet from shaft No. 1, to a depth of 750 feet. This is square set and fully timbered from top to bottom. At the 300-foot level a cross-cut was run 250 feet in length. At a distance of 200 feet from the shaft (No. 2) a body of ore 90 feet in width was struck. A cross-cut was then run on the 300-foot level, but 125 feet in width. At the 700-foot level a 200-foot cross-cut was run, which struck an immense flow of soft water, excellent in quality, as tested by the writer. As the supply is evidently inexhaustible, and a company starting a new addition to Bisbee has contracted for all that can be supplied (which is fully described on the adjoining page), the directors of the Bisbee West Copper Mining company decided to use shaft No. 2 exclusively for the development and supply of water for the new townsite, three miles distant, and to sink a third shaft to a depth of 2000 feet, if necessary, to operate the mine more economically and to insure permanent working. The water in shaft No. 2 comes from a depth of 750 feet to within 300 feet of the surface, without pumping. A pumping plant has been installed at the water works, and a supply of 200,000 gallons per day will be furnished, which can be increased to double the capacity by very little development. The pumping plant is 150 horse-power, 16 by 18 cylinder pumps, the largest plant of its kind in existence. It is worked by what is known as the dense air system, which uses atmospheric instead of compressed air, and employs the same air over and over again with but little loss. This is much cheaper and more efficient than either steam or compressed air, and is especially valuable and worthy of note in that it cannot be "drowned out."

The pump is operated from the engine room near the mouth of the shaft, and is actuated with the oil that passes through the 10-drill compressor with the air.

Mr. Dwight is not only an experienced mining manager, but is, moreover, a good engineer and machinist. He informed the writer how a representative of an engine company had failed to set up an engine at the mine through working order, but after he left Mr. Dwight succeeded in getting it to run smoothly, which it has done ever since. He has in operation a unique style of cage, an invention of his own. These chairs practically do away with a type of accident only too frequent in all mines of the falling of the cages. With this system the cage is under the perfect control of the man riding in it cannot fall further than five feet, and can be readily stopped at any point in the shaft where there is a timber. In addition, it reduces the cost of chair installation from between \$200 and \$300 to about \$2, the ground not having to be cut to receive the chair, which can be placed anywhere in the shaft. This is a most valuable invention most apparent to all who have to do with mines or similar undertakings.

The Bisbee West Copper Mining company is now erecting a thoroughly up-to-date hoisting works and machine shops at shaft No. 3, at a cost of

\$25,000. At present the force consists of fifteen men, including Messrs. Myers and Phelps, day and night engineers.

FORMATION AND ORES The mineral belt in which are situated the twenty-two claims of this company is two miles in width, by eight miles in length, as far as demonstrated by actual development. The belt continues, however, in the opinion of mining experts, southward across the border into Sonora, Mexico, and extends to the great Cananea district. From the summit of a hill adjacent to the camp the writer was clearly shown how the belt extends many miles to the east and over the boundary line, and the Cananea, Sonora, district was plainly observed, also the huge volumes of smoke emanating from the mammoth smelters. This belt will doubtless, in a few years, become one of the largest copper producing districts in the world.

The claims of the Bisbee West Copper Mining company are centrally situated, joining the mines of the Copper Queen Consolidated Mining company.

FUEL AND LUMBER Fuel is comparatively cheap, crude petroleum from Beaumont, Texas, costing only one cent per barrel in El Paso. It is hauled in 6000-gallon tank cars and delivered in Bisbee at \$2.75 per ton, equivalent to \$1.37 per barrel.

Mining lumber costs from \$27.50 to \$30 per 1000 feet, which comes mostly from San Pedro, Cal.

OFFICERS AND DIRECTORS Following is a list of the officers and directors of the Bisbee West Copper Mining company: A. S. Robbins, president; A. B. Cass, vice president; F. L. Dwight, superintendent and general manager; Harvey Sturdevant, secretary; Daniel Innes, treasurer; Henry C. C. Allen, auditor; directors, Daniel Innes, George L. Cole, M. D.; General

W. Thompson, J. W. A. Ott, Henry A. S. Robbins; depository, State Bank and Trust company, Los Angeles, 245 Wilcox building.

The twenty-two full claims of this company are patented and in process of being patented.

ISSUANCE OF STOCK The stock-jobbing scheme, which is the curse of any mining community, has been strictly avoided by the Bisbee West company. The mine was modestly stocked, only 4,000,000 shares with a par value of \$1 per share having been issued, 1,000,000 shares of which were set aside as treasury stock for the development of the property. The owners of the remaining 3,000,000 shares showed their absolute confidence in the property by locking every share of the stock up in the State Bank and Trust company, under a three years' pooling agreement, being content to take their profits out of the dividends on a legitimate business enterprise and not to make their money selling stock on the open market, even at the enormous advance they were confident it would make. Of the 1,000,000 shares of capital stock of the company, only so much has been sold or will be sold as is needed to prosecute development work and to put the mine on a strong dividend-paying basis. The first block of stock was put on the market at 5 cents per share, and was readily taken, as was the second block at 10 cents. Development work was progressing so satisfactorily and the showing was so good that the third block was offered at 20 cents and found a ready market. At present this stock is selling at \$1 per share.

Another favorable thing about this company is that the officers, all being heavy stockholders, have agreed to "draw no salary from the company until the property is on a dividend-paying basis. Therefore the spectacle is presented of so prominent a mining man as Mr. Dwight working without salary at one end of the line, while the able financier, A. S. Robbins, devotes his time to their offices in the Wilcox building, Los Angeles, without apparent thought or care as to whether the property is ever seen such an enticing thing as a fat presidential salary. It is safe, however, to foretell the immediate future of so sure a property, developed to such a favorable stage. Every one in Bisbee has his eye on the Bisbee West, and the directors are speculating on the chances of being able before many months to add another cipher to the value of their stock.

The accompanying picture shows part of the property of the Bisbee West Copper Mining company and any experienced miner will readily understand that the formation is very favorable for large ore bodies. The great Copper Queen mines immediately adjoin this property. The view from the residence of General Manager Dwight, as seen by the writer, is very interesting, showing wonderfully rich croppings, extending from the Copper Queen mines and through the Bisbee West property to and beyond the international line between Arizona and Sonora, Mexico.

Dutch-Irish In a Bloomington journal appears the following notice:

SECOND EDITION A series of accidents has unfortunately necessitated an apology for the non-appearance of the paper for several days. Which, to say the least of it, is very Irish—London Express.

THE MODERN COPPER MINING COMPANY

The Modern Mining company owns twenty-eight claims in Tombstone canyon, six miles in an air line, northwest of Bisbee and twenty miles from Tombstone in a direct line between the two cities. It is also about six miles, with good wagon road, from Banning station, on the El Paso and Southwestern railroad. Sixteen of these claims lie in one block, and there is another adjoining, the trend of the veins through the property being from southwest to northeast. The main shaft, on Iron Mountain, is now down over 200 feet, in a "horse" between the schist walls, in one—everything that has come from it so far being of a quality that would connect with a break in the vein, to indicate a steady increase in the size of the lead. At the ninety-foot level there is a forty-foot drift, with a full breadth of ore. A. A. Centers, the president of the company, in speaking of the prospect, said: "There is no variety of copper ore which we have not found on our claim."

The entire district is mineralized and in the contact and the blanket veins show immense outcroppings of iron, under which explorations have developed large copper deposits, carrying silver and gold.

Gold predominates in the Modern Copper Mining company's prospect. This peculiar outcropping, as is the case in Arizona, is considered a certain indication, leading to the copper bearing ores. This ore belt, vein or deposit can be traced from the southern point of the range to the northern extremity. The first immense body found in the range was the Copper Queen property, which is, without a doubt, one of the greatest bodies of ore ever found in richness, quality and quantity. The second place of opening on this belt of ore is at Tombstone, which once gave great prominence to this mining district, and will meet her sister mines again in the future.

The third is where the Modern Mining company is now opening by far the largest body of ore in this district. Their indications are much bolder than the above named places.

In this range are three large chimneys of ore: Copper Queen, Modern and Tombstone. By identity of formation these three chimneys of ore can be traced from the southern point of the formation that carries the ore. The vein material is identically the same.

The Copper Queen, Modern and Tombstone mines have the same class of ore with this exception: There is more chlorite in the Tombstone district than in either of the others. In these veins or deposits the natural fluxing exists.

The ore now on the dump several hundred tons will go \$50 gold, while selected specimens have assayed as high as \$500 gold to the ton. This latter, if the ore with this exception, is not so rich, but simply showing that the average values are high, and we think, will be higher. The belt of schist lying between the lime and porphyry contact, which is our property, is, in our opinion, a continuation of that from La Cananea to Bisbee, indicating that we will have at least as high grade ore as either the Copper Queen or the Copper Queen. All of the mining experts who have examined our property have said that it has the best surface showing and indications of any property in Cochise county. And we believe these surface croppings, to be underlain by large bodies of rich ore. That the indications are confined to no one spot shown by the several prospect holes. Even while digging our sixty-foot well we struck native silver and pyrites of copper. All that Mr. Centers says, "all varieties of ore," a large portion of which carries good gold and silver in a forty-foot shaft on one of the claims adjacent to Iron Mountain there is some fifteen or twenty tons of ore on the dump that will average about \$30 in silver to the ton, while from an eighteen-foot hole on the Fountain group there has been ten or fifteen tons of ore excavated that will produce from 8 per cent to 10 per cent lead.

James P. Edwards, a prominent civil and mining engineer of Houghton, Mich., and ex-commissioner of mineral statistics for the state of Michigan, recently made a three days examination of the property on behalf of present and prospective stockholders, and from his report we quote the following:

"I find the claims entirely covered with a mass of rocks known as 'iron schist,' nearly vertical in position, intersected by numerous porphyry dykes or ledges, and quartz veins, whose outcroppings carry gold, silver, iron and copper sufficient in quantity to induce the explorer to expect larger deposits of copper at greater depth.

"There is a true fissure vein about four feet thick running through the property near the center line. This vein is traced without difficulty the entire length of the property, and from one-half to three-quarters of a mile beyond the end lines. This vein carries strong values in silver, lead and copper with traces of gold.

"Numerous strong fissures, to both sides of the main fissure, as I call it, lead in northeasterly and southeasterly directions to this main fissure. It is in many of these fissures on the north side, that the main exploring and present working shaft has been sunk to a depth

of 200 feet. This fissure seems to connect a 'blowout' or dyke of porphyry with main fissure. This 'blowout' lies about 150 feet to the east, and is the north of the main fissure and the commencing vein runs at about an angle of 20 degrees with the main vein, the junction being covered at this point by the 'wash' or gravel from a canyon which intersects the eastern line of the property.

This shaft, which is about six feet by eight feet nine, is what is known as a compartment-and-a-half shaft. It is vertical and is well timbered from the surface down, and is supplied with a new hoisting engine, and a battery of boilers set in masonry, capable of supplying power to sink the shaft to a depth of 2000 feet.

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"In the eighty-foot level I took about twenty samples, without selecting, from all over the drift, top, bottom, sides and end. After crushing all these samples together to get an average, an assay resulted as follows:

Ounces, Val. per ton. Silver 2.4 \$1.20 Gold 0.07 1.40 Copper 1.50 (per cent) 3.81

Total value, per ton.....\$6.41 "From similar samples taken from the bottom of the shaft at the 200-foot level (no drifting being done), the values were as follows:

Ounces, Val. per ton. Silver 21.7 \$10.85 Gold 1.3 26.00 Copper 6.82 (per cent) 18.83

Total value per ton.....\$52.74 "They also have a fine location for a townsite, with plenty of good water for both mining and domestic use, and a good grade for a track can be secured to connect with the railroad six miles away when necessary. There is at present a good wagon road to the railroad, as well as to Bisbee.

"Taking it all in all, I should say the Modern is a good thing."

F. C. Wright, foreman of the Spray shaft, Copper Queen company, and a mining man of much experience, makes the following report:

"Gentlemen: On the 7th instant I made an examination in person of the mining property owned, operated and controlled by your company, situated in the westerly end of the Mule mountains, about six miles from Bisbee, Cochise county, Arizona territory.

"I was somewhat surprised at the present outlook of affairs at your mine. There is no doubt but that you are situated on the great mineral belt, which seems to extend the entire length of the Mule mountains, and which, in my opinion, extends from the Copper Queen mine in Bisbee, to a northeasterly and includes the mines of the La Cananea Copper company, Tombstone, Clifton, Morenci, Jerome and many other mines lying along the Pacific coast, and I find that you have the most valuable outcrop of mineral, in my opinion, west of the Copper Queen. There is one vast ledge which extends the entire length of your property from east to west, which carries gold, silver and copper. The formation of this ledge is quartz porphyry, schist and iron, which seem to form the ore of a very large property that has not been personally examined.

"There is no doubt in my mind but that proper development will unearth valuable mineral deposits from this mammoth ledge. In my opinion, the half down 400 feet, with proper cross-cutting and rifling, will develop an immense body of paying ore. The development work is carried on at present in a practical, economical and workmanlike manner. I find that no money has been expended extravagantly and that every cent laid out has been actually and necessarily required, and at no time I wish to congratulate the management of your company for their diligent efforts in behalf of the development and conservative and economic exploitation of the property.

"I find in your deepest shaft, which I think is down about 200 feet, a great mineral showing, and on your 80-foot level I found a drift forty feet long in which are being found silver, lead and copper, and at a greater depth, in my opinion, your ore will be richer and in larger bodies, judging from my practical experience as a miner, which has not been limited to this country alone, or this territory, having had general experience in Mexico, Idaho, Montana, New Mexico, Utah and various other mining countries, and with what experience I had had in mining this is the best showing for a mine that I have seen in this section of the country.

The following description of the property was written by Rev. J. G. Pritchard, who is a mine owner and one of the most prominent men of Bisbee:

"The Modern mine, operated by the Modern Copper Mining company, is situated in the Mule mountains, about six miles in a direct line from the famous Copper Queen mine, in a northeasterly direction, and about eighteen miles southeast of Tombstone, the once famous silver city of Arizona.

"The Mule mountain range reaches from Tombstone to the line between Arizona and Mexico, and is richly mineralized throughout its whole length, the lime formation of the carboniferous period, from 400 to 2000 feet thick in places, seems to have at one time covered the whole region, and the convulsions accompanying the deposit of minerals in this belt lifted the mountains to a very high altitude, tilting the lime capping in all directions from this mineral center, then followed millenniums of erosion, which has filled up the San Pedro valley on the one side and the Sulphur Springs valley on the other, with detritus to a depth of a thousand to two thousand feet, the great convulsions causing these minerals, to a certain extent, to lie in large bodies in different parts of this range, and the character of these ore deposits is indicated by the deposits in the fissures that cross these range of hills all the way from the Tombstone silver mines in the northwest end, to the Copper Queen deposits in the southeast end.

"The Pearce gold mines, worked by the Commonwealth Mining Co., are on the northwesterly extension of this great mineral belt. Gold, silver, lead and copper show themselves all the way through, but the silver and gold are being continued.

The company was incorporated in April, 1901, with 1,000,000 shares, 450,000 of which are treasury stock, fully paid and non-assessable. This stock was at first offered at \$1 per share, but it is now quoted at \$1 per share.

The officers are: N. A. Centers, president; O. H. Briggs, vice president and general manager; J. H. Hooker, treasurer; E. A. Miller, secretary. Directors, N. A. Centers, O. H. Briggs, H. C. Haraha of Bisbee and Attorney W. A. Bateman and Mayor John R. Ryan of Calumet, Mich. Main office, Bisbee, Arizona, P. O. Box 552.

Willcox and Dos Cabezas Willcox is on the main line of the Southern Pacific railroad, forty miles east from Benson, and twenty-four miles west of Bowie, and is the shipping and supply point for a large area of territory, including large cattle ranches and mining districts. It is in the heart of Sulphur Springs valley, which is from fifteen to twenty miles wide and extends a hundred miles through Arizona into Mexico. There are between 200,000 and 300,000 head of cattle in this valley, and adjoining ranges. The town is also surrounded by extensive mining districts in both Cochise and Graham counties. Willcox has a population of about 450, two churches, a fine public school building, electric lights, an ice plant and extensive general merchandise stores. The town and surrounding country have an excellent supply of artesian water. Thirty-five miles east of Willcox is Hooker's hot springs, a prominent health resort.

The Dos Cabezas mining district is a few miles southeast from Willcox. There are valuable quartz veins and rich placer ground in this vicinity. The extensive placer fields are situated in the rolling hills just below the great quartzite dyke that cuts through the country for miles. The lack of water cuts the area down to a small amount of land

that can be made profitable by dry washing. Some of the ground is very rich, running from \$1 to \$5 per cubic yard. From \$5 to \$5 per day is made by washing and panning.

TRUSTS IN FORMER DAYS The cornering of foodstuffs by non-arches and the trusts is said to have been the earliest form of trust that ever existed, and as they had the power to prevent any bear movement in opposition to their interests, they were successful ones. Accounts of such transactions are to be found in Assyrian records dating back 7000 or 8000 years, and the Bible describes a very large operation of this kind carried out by Joseph, when, out of the wealth of the seven fat years, he provided for the poverty of the seven lean ones. The Romans did the same thing through their tax farmers, who laid embargoes on the food supplies of the provinces against arrears of taxes, and the probability is that similar operations were also conducted with regard to manufacturers.

Another form of monopolies, known as trade guilds, has existed from very early times and these, by the middle ages, amounted practically to the cornering of certain arts and industries as well as means of distribution. The great art of the guilds was to guard their monopoly—a length to which novelists and American capitalists have ventured to proceed.—Chicago Chronicle.

The Japs and Their New Allies When the British war vessel Kotopse came into the port of Kure the Japanese tars of seven warships gave a fete to the British comrades. Observing that the sailing ship was a very large one, an inferior class of Getaha had been supplied to dance for the Britishers, the Japanese determined to take revenge. "Waiting till the Scipios had left the port, so that none of their British friends would get into trouble, a band of Japanese sailors, 800 strong, smashed the Tamaka hotel, the inhospitable hospitality which had supplied the British with an inferior article in the way of dances.—North China Daily News Shanghai.

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J. G. Pritchard, E. M. Jones. Pritchard & Jones Real Estate, Insurance Mines and Mining

Mr. Pritchard has resided in Bisbee for fifteen years, was postmaster of the town for thirteen years, is thoroughly acquainted with the mining resources of Cochise county and with the miners and prospectors operating in the district. Mr. E. M. Jones is a practical miner and has extensive experience in mines in Colorado, California, Idaho and Oregon, and is a very conservative expert on mining properties. Information will be cheerfully furnished to all intending investors. Address, Room 9, Postoffice Building, Bisbee, Arizona.

ing reached a distance of eighty-five feet, and entire drift is in good ore, consisting of oxides, native copper and carbonates, containing good values in gold and silver. At the same time, work of

THE HIDALGO MINING COMPANY

OWNS THREE GROUPS IN SONORA, MEXICO

Offered and Financed by Douglas People—Development Work Now Under Way

For several months past some business men of Douglas and mining men of Sonora, Mexico, have been engaged in the work of getting possession of some valuable mining property in Sonora. It was but recently that they secured title to the property.

The company is the owner of three groups of claims, one group being copper, one silver and lead, and another gold. These properties are situated in one of the best mineralized sections of northern Sonora, a region which has long been famous for its great mineral wealth, and which at present is attracting more attention than any other mineral bearing country in the southwest.

The copper property consists of eighty pertenencias, or about 175 acres, and is six miles west of the celebrated Nacozari copper mines, owned by Phelps, Dodge & Co., five miles from the railroad and in the neighborhood of seventy miles from the international line. The ore on this property is not in veins, but is a huge deposit, averaging between thirty and forty acres. The surface showing equals, if it does not excel, the celebrated Greene mines at La Cananea. On this property there has already been done considerable work, consisting of one tunnel and three shafts. The shafts are between seventy and eighty feet in depth, and they all show ore that runs from 15 to 31 per cent copper and \$2.50 to \$8 in gold.

Two and a half miles south of this copper property the company owns a property containing twelve pertenencias. This is a high grade silver proposition, and repeated sampling shows it to contain large quantities of ore of a shipping grade, it running from 75 to 210 ounces in silver, 8 per cent copper and 60 per cent lead. On this property is a shaft eight feet deep. It is intended to soon commence the shipment of ore from this and the copper property.

Adjoining the Charunibabi property, which is owned by Phelps, Dodge & Co., the Hidalgo company owns a claim of four pertenencias. This is a gold proposition, and the ore runs from \$18 to \$25 per ton in gold.

The officers invite the fullest investigation of these properties by those intending to purchase the stock of the company. They know they have first class properties, and have nothing to conceal either regarding their mines or method of doing business. The officers of the company are: S. F. Meguire, president; J. E. Suits, vice president; E. R. Pirtle, secretary; C. O. Ellis, cashier of the Bank of Douglas; treasurer; S. L. Riley, late of Prescott, superintendent; A. C. Rioridan and T. S. Lamberson. Of these officers S. F. Meguire, E. R. Pirtle, C. O. Ellis and S. L. Riley are residents of Douglas, and prominently identified with its business interests, and any statement they may make can be fully relied upon. The other directors, Mr. Rioridan, Mr. Lamberson and A. C. Rioridan, are well known mining men who have been operating in northern Sonora for a number of years and their reputation and ability as mining men is well known. They have already expended considerable sums of money in the way of securing title and doing development work, thus proving their faith in the merit of their enterprise.

S. L. Riley, the superintendent, is a mining man of many years' experience. He is familiar with all the great mines of Arizona, including the Copper Queen and United Verde, he having been for many years identified with the mining interests around Jerome and Prescott. Mr. Riley is now at the Hidalgo mines, directing the work, which is to be pushed as rapidly as possible. All supplies and the necessary machinery will be sent forward to further this end as the mine develops, and it is expected that ere long the Hidalgo will rival some of the great producers of northern Sonora.

TOMBSTONE, CONTINUED

Projected Improvements

The Tombstone Improvement company has recently been organized to undertake many much needed industries. The company has purchased the Tombstone Gas company (now supplying light for the city) and will add to it an up-to-date electric light system. The company will also establish an ice manufacturing steam laundry and another water supply system.

The site of the Occidental hotel, which building was burned years ago, will soon be occupied by another large two-story brick hotel, building to be erected by E. J. Roberts, formerly of Tombstone, now of San Francisco, and M. D. Scribner of Tombstone. It will cost probably \$20,000.

Principal Buildings

Courthouse, two-story and a basement brick, cost \$50,000; city hall, two-story brick, cost \$10,000; Schiefelin hall, two stories and opera house (latter seating capacity 600), original cost, \$28,000; Grand block, two stories, being fitted up for hotel, cost \$14,000; Mining Exchange block, two stories, cost about \$10,000; Prospector and Epitaph buildings, cost \$60,000; Hanchuca Water company building, two stories, cost \$50,000; Tombstone Drug company, two-story building, owned by M. D. Scribner, cost \$60,000; Walcott building, cost \$50,000; Crystal Palace building, cost \$50,000; Vickers building, occupied by F. S. Warrick, cost \$40,000.

Tombstone's New Railroad

By December 1 of this year Tombstone will be connected with the outside world by railroad. The El Paso and Southwestern is building a ten-mile standard gauge railway from Fairbank (junction of the Benson and Bisbee railroad) and the Sonora branch of the Southern Pacific) to Tombstone. The station is one block east of the courthouse and will be nine miles east of Fairbank. The line will be extended

NEW YORK MINES GROUP

VALUABLE PROPERTIES NOW UNDER DEVELOPMENT

According to recent investigations that have been made in the New York mountains, mineral values that have hitherto been unsuspected are now reported found. This, in the belief of mining men, is essentially true of the group of mines known as the "New York mines," that lie five miles southeast of Manvel, the present terminus of the branch road of the Santa Fe system. Being within four miles of Purdy, sidetrack has been put in for the accommodation of this property. The country will permit extending the spur within one and one-half miles of the mines. Work that has been done on the group demonstrates that another large producer may soon be added to the riches of San Bernardino county.

The New York group comprises eight full claims, each 800x1500 feet, a total of 160 acres. There are known respectively from Martha No. 1 to Martha No. 8. The seven claims are all mineralized ground, while the eighth is a water claim. In the grouping all side lines of the claims and the end lines of claims No. 2 and No. 6 adjoin, so that a continuous body of land is un-

der control. At present there is more than sufficient work done to secure United States patents, the title being held by virtue of government location. From a geological standpoint the New York mountains are an extension of the Providence range, and though disconnected have for years proved virgin ground for the prospector. The attraction has been the masses of quartzite, limestone and schist that abound along the rugged line of peaks on the trend of the range from the northeast to the southwest. Close research has placed the gold-bearing area within the quartzite belt, while the copper and silver ores are found in connection with the limestone.

On the seven mineral claims much development has been done. In fact, some of the richest ore in the earliest locations made in the New York mountains came from the Martha No. 4. Shafts and tunnels that extend hundreds of feet have served to show the riches that are known to exist. On claim No. 2 engineers estimate that by driving a tunnel an ore chute would be opened that would add 3000 tons of ore to that now in sight, of a gross value of \$50,000. On claim No. 3 the two shafts that have been sunk on the vein have placed in sight ore that bears a gross value of \$15,000. These shafts are cited as instances that fully demonstrate the faith that mining men have in this mineralized zone.

Another instance of value is given on claim No. 5, where large chunks of ore from the \$125,000 now exposed, making a total of about \$400,000 on claims No. 1 and No. 2. This work would not include the values that would be found in No. 5 and No. 6, touched by the same labor.

One favorable feature is the abundance of water on the property. This is essential to successful mining and milling operations is on the ground and by means of tunnels can be utilized and stored, and carried to any part of the property for operating a mill or smelter. It is claimed that with the water level gained the value of ore would so increase and that the ore bodies would be found so extensive that one of the leading producers of this part of the state would add its wealth to the ever-increasing output of the precious metals.

THE NEW YORK MINES

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SAFETY IN MINING

Guarantee Offered by Charles J. George & Company for the Protection of Their Clients. (From "About Town" column Boston Herald, November 2, 1902.) Never in the world's history has there been a time when mining as a business commanded the attention it does at present. While that statement is true in an international sense, this article deals with the subject as viewed from the conditions existing in our own country, where the natural resources are greater and more promising than can be found in any other portion of the world. It is a fact for this reason that in the United States mining occupies the attention of the great financial minds to a greater extent than any other line of business effort—as it offers safer, safer and quicker returns than any other avenue along which men may devote their energies and talent. The writer makes this statement, having in mind the legitimate development of a mining enterprise and the sale of stock for proper development work. As a matter of business fact, a mine requires to be developed to make it operative from a profit standpoint, as truly as a building has to be erected and completed before it can be available for revenue purposes. The situation then is this as regards mining: Given a good property with proper management and it offers the best investment the financial horizon shows.

condition to supply a 50-ton mill with ore continuous from now on."

THE TOWN OF DOUGLAS

The Young Giant of Southern Arizona

Douglas is not yet three years old, but claims a population of about 3000. It was named in honor of Professor James Douglas, president of the Copper Queen Consolidated Mining company, and that enterprising company was its founder.

It is situated twenty-seven miles southeast of Bisbee, just north of the international boundary line. It has a good water supply, an up-to-date electric light plant, telephone system and all modern conveniences. Over \$500,000 has been expended during the present year in building and other improvements, including a handsome \$10,000 city hall and library. The Copper Queen company's store cost \$100,000. The Copper Queen smelter, now almost completed, will employ about 1000 men and have a daily capacity of 1000 tons of ore. The Calumet and Arizona smelter will have a capacity of 600 tons when enlarged and employ 600 men.

The El Paso and Southwestern railroad shops employ 200 men. This is the southern terminus and division headquarters. A fifteen-story round-house is now being built. The International Land and Improvement company is now constructing an ice plant. A street-car line will soon be built between Douglas and the smelters. Douglas has two banks, three churches and 240 school children enrolled. The International Land and Improvement company has set aside a block for park purposes, and is now improving it. The location of Douglas is excellent for sanitary purposes and the

climate is very good. Lots that were sold two years ago for \$200 are now selling for \$1000, and the young city is growing rapidly.

A Letter of Acceptance From Mr. Clyde H. Osborne, Our New York Manager

DENVER, Colo., Sept. 15, 1902. Charles J. George & Company, 402 Henne Building, Angeles, California: Gentlemen: Last winter when you tendered me the management of your New York office I accepted conditionally, with the proviso that I be given an opportunity to go over your different properties in person to satisfy myself as to their value. Permit me to say that I have just returned from a trip that absolutely every representation, and that I wish to remove the conditional feature of my acceptance and am ready to go on to New York at any time.

For my satisfaction, as well as your own, I should like to indicate briefly a few of the reasons for the decision which I have reached. First, I wish to state that absolutely every representation made to me with reference to the various mines I have visited has more than been verified.

The town site and group owned by the Poland Extension Gold and Silver Company. In all the workings I found ore which I should judge to be sufficient in value and quantity to justify the immediate erection of a reduction plant. I also found a Rand air compressor running two Ingersoll drills day and night, a pump in operation, any amount of fine timber and ample water for milling and domestic purposes; commodious bunkhouses and boarding house equipped to accommodate 125 men, good Chinese cooks, a company store with an up-to-date miller and a several thousand dollar well assorted stock of goods; a number of cottages and dwelling houses into which the families of employees have moved; no gambling house or saloon on the company's ground; a water and electric light system being installed throughout the town and the railroad running right into it. To say that I was surprised is putting it mildly. In addition to the mine being surrounded by the most favorable conditions, I found in charge of the property a man who learned his business through long experience, handles his men well, and so far as I can judge is thoroughly capable in every respect.

Upon the American Gold and Copper company's Fitzhugh Lee claim, which adjoins the property of the Poland Extension, I found a large dump of waste material, which runs away where from \$3 to \$27 per ton, to 150' shaft and 420-foot drift upon the vein, out of which from eight to twelve tons of ore per day are being hoisted. And I should say that the output from this property alone would keep a mill in operation if men were put into the upper tunnel on the ledge and in the stopes, in addition to those now working on the drifts. I understand that the Poland Extension company already has a contract with the American Gold and Silver company for the milling of the ore from this claim.

The Lincoln Gold Mining and Milling company is to be congratulated upon having practically corralled the great Lincoln ledge runs. The workings upon either end and upon the east side have all exposed this vein and are all in ore. All of the ore is at present being milled, and the plates in the mill "catch a very large percentage of the values. I found work being pushed energetically and as soon as the railway, which is being built from Mayer, reaches Bradshaw I should think the force could be increased and shipments of the highest grade ore commenced at once. The surface equipment is to consist of a stamp mill, a mill, ore bins, stable, blacksmith shops at the different tunnels, bunk houses, boarding house and manager's office—everything in good shape. At the time of my visit to this property the mill was only being run half time on account of the scarcity of water, but I noticed that more water is flowing into the mill from the tunnel of the Yellow Jacket and I assume that in a short time the continued driving of these tunnels and the drifts will develop sufficient water to supply the mill continuously. Another feature that impressed me most favorably was the amount of fine timber upon the property. Under the existing conditions, and with the economical management now handling the proposition, it will in my opinion, be a dividend-payer in the near future.

My time was somewhat limited upon the trip from which I have just returned, and I consequently did not visit the properties owned by the Verde King and the Mina Grande companies,

GEO. MITCHELL, President DIRECTORS: L. C. HANKS, Cashier GEO. MITCHELL, F. H. SEYMOUR, W. S. DIXON E. A. VON ARNIM, L. C. HANKS

The Douglas City Bank

Capital, \$50,000

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DOUGLAS, ARIZONA

E. R. PIRLÉ & CO.

Real Estate and Mining Brokers

Gold and Copper Properties in Sonora, Mexico

Write for information in regard to THE HIDALGO MINING COMPANY, of Sonora, Douglas, Arizona. Douglas, the coming border town of the West.

appears that their clients are thereby absolutely protected.

It is not possible in a brief article to give in detail the exact details of this equitable plan, but it can be obtained at the firm's Boston office in the Tremont building, or at their New York office in the Metropolitan Life building, or by writing direct to their Los Angeles office. Charles J. George & Company will be pleased to furnish the highest bank references upon application. The companies this hour has developed as follows: The Poland Extension Gold Mining and Milling company, the Verde King Copper company, the Lincoln Gold Mining and Milling company, the American Gold and Copper company, the Mina Grande Mining and Milling company, the Little Louise Mining, Milling and Reduction company. In conclusion, it should be said that Charles J. George & Company control and personally manage any company they have placed before the investing public for their consideration.

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FAIRBANKS, MORSE & CO. GASOLINE AND STEAM HOISTS, ENGINES AND PUMPS. MINING MACHINERY OIL WELL SUPPLIES RAILWAY SUPPLIES WINDMILLS. ROLLS AND CRUSHERS AIR AND ELECTRIC DRILLS ORE CARS AND BUCKETS SHEAVES AND ROPE PIPE, VALVES AND FITTINGS BELTING AND PACKING. FAIRBANKS STANDARD SCALES LOS ANGELES CALIFORNIA

nor the group in the San Domingo mining district, owned by the American Gold and Silver company. But I shall take them all in by the latter part of this month. In conclusion I wish to express to you my hearty thanks for your hospitality and the very cordial treatment which I met with at the hands of yourselves and your employees, and trust that our existing cordial relations will continue. Yours very truly, CLYDE H. OSBORNE.

THE Bank of Douglas Douglas, Arizona. Capital - - - \$25,000. OFFICERS: W. H. BROPHY - - - President J. S. DOUGLAS - - - Vice President C. O. ELLIS - - - Cashier. DIRECTORS: W. H. Brophy M. J. Cunningham J. S. Douglas S. F. Meguire C. O. Ellis

A General Banking Business. To parties intending to locate in Douglas we will cheerfully furnish any information desired in regard to local conditions, opportunities and prospects. Address inquiries to The Bank of Douglas Douglas, Arizona.

LUMBER in Douglas. Oregon Pine, X White Pine, X Redwood, Shingles, Shakes, Sash, Doors, Mouldings. You can also get—Wire Nails, X Netting, X Iron Roofing, Corrugated Roll Cop, X V. Cop, X Etc.

THE J. H. JACK LUMBER COMPANY ARE THE PEOPLE. Yards at Douglas and at Bisbee. W. G. McDONNELL, Manager Douglas Yards.

Write for information in regard to The Hidalgo Mining Company. Owns some of the finest Gold and Copper Mines in Sonora, Mexico. S. F. MEGUIRE, President. E. R. PIRLÉ, Secretary. C. O. ELLIS, (Cashier Bank of Douglas), Treasurer. Douglas, Arizona.

ARGUMENTS FOR STATEHOOD

ARIZONA'S APPEAL FOR STATEHOOD

The Marvelous Growth of the Territory in Population and Commercial Importance Is Interestingly Described by Men of Prominence in Territorial Affairs

Colonel Alexander O. Brodie Governor of Arizona

The time has come when the people of the territory of Arizona believe their population, their commercial, agricultural and mining interests, and the thrift, enterprise and growing wealth of the territorial community, deserve a representation in the councils of this great nation.

The following pages have been carefully prepared by the highest officials and most competent men of Arizona, to fairly and accurately describe and picture the varied industries of the territory, in order that the rights of the community may be given due consideration in the discussion of a question of the most vital importance to Arizona—the granting by congress of Arizona's appeal for statehood.

The rapid progress and advancement of Arizona, industrially and commercially, are matters of great and just pride upon the part of her people.

Colonel Alexander O. Brodie, governor of Arizona, in an interview with The Herald correspondent, said:

"I am glad to be able to state that Arizona has made very material progress, particularly in the development of mining and in railway construction. The increase in taxable wealth shows that a substantial advance has been made in the industrial development of the territory, yet this does not give the territory all that is due, for the reason that the mining industry, which is the largest and most important in Arizona, escapes with but little taxation, and the cattle industry is not fully represented in the statement of taxation, owing to the fact that it is often a difficult matter to make complete assessment of cattle and other live stock in the various counties of the territory. However, the advance has been rapid and substantial in all of the resources of the territory, with the exception, perhaps, of the cattle industry, which received a setback owing to a protracted and severe drought covering a period of four or five years. This industry is still second in importance in the territory, and I am glad to say that the condition of the range is improving by reason of large shipments of stock, and this condition will continue to improve as stock is shipped out."

Governor Brodie for many years has been engaged in the business in Arizona, and this subject, as well as mining, are matters which he is very familiar with. Continuing his discussion of the cattle industry, Governor Brodie said:

"The location of the main cattle industry of the territory is in Cochise, Pima, Graham, Gila, Pinal and Santa Cruz, and in these counties the drought had the least effect. In the upper counties of Yavapai and the surrounding counties the cattle industry is but a small fraction, as the ranges have been greatly depleted during the past four years. The sheep industry of the counties of Coconino, Yavapai, Navajo and Apache is, I believe, in a very flourishing condition."

"For the same reason that the cattle industry has not flourished to the fullest extent in late years, so also have the agricultural interests suffered. The drought has been general, and the water supply for irrigation of but limited extent, thus resulting in depressing this industry throughout the agricultural sections of the territory. However, this condition, so unfavorable to agriculture, has been met with and frequently overcome by obtaining a water supply from wells. The fact that ranchers have stood the period of depression without being driven to bankruptcy shows how stable and substantial this industry has become. This condition has strengthened the efforts for water storage, and we are very hopeful that the Hansbrough-Newlands law will be applied in Arizona at an early day. With water storage, failures will become unknown in the agriculture, and ranching will become a pursuit of great profit to all engaged in it."

"The various valleys in the agricultural sections where agriculture flourishes are the Salt, the Gila at Florence, the Casa Grande valley, the Upper Gila at Safford and its vicinity, the Santa Cruz near Tucson, the valley of the Colorado near Yuma, the San Pedro at Benson and Fairbank, the Verde valley in Yavapai county, and a number of smaller sections, such as Tonto Basin, the San Simon country and the Walnut Grove district."

"Arizona," continued the governor, "possesses many valuable mines, notably the Copper Queen at Bisbee, in the vicinity of which many other mines are now being developed. Tombstone, famous as a silver producer, is about to be worked again extensively; Clifton and Morenci, in the eastern end of the territory, are stable camps; Jerome, which has been shut down on account of a disastrous fire raging in the workings, will be opened soon for operations, and there are many other copper mines which are fast becoming known in the mining world as producers. The gold mines of the territory are increasing in number and prominence. Notable among these is the Commonweal at Pearce; the King of Arizona at Kofa; the Congress, Octave, the Oro Grand, at present without reduction works; La Fortuna in Yuma county, and a number of other rich mines which are scattered throughout the territory. There are many producing mines in Yavapai county, such as Crown King, McCabe, the Henrietta, the Upper Hassayampa country, Big Bug, Lynx Creek, Chaparral, Castle Creek and other districts. It is rather hard to keep up with the gold prospects that promise in the future to make big mines. Copper and

gold are the chief metals which lead in production in the territory, although there are a number of excellent silver and lead mines which are constantly producing ore. In the mining districts of both southern and northern Arizona reduction plants have been erected during the year, and at the new town of Douglas a large smelting plant has been constructed for keeping ores from a copper mine close at hand. At this same town, also, new works of the Copper Queen, I understand, will be built.

"Railway building," said the governor, "has been active, particularly in Cochise and Yavapai counties. In the former county the line of the El Paso and Southwestern road has been extended 150 miles in Arizona, and a branch line is being constructed from

the line, Flagstaff, Williams, Hobbs, Winslow, St. John, Kingman and many others of importance commercially which you have no doubt heard of.

"Arizona is proud of its public school system, which is equal to many of the thickly settled states in school buildings, the ability of teachers and in the character of the students. The territorial university at Tucson is one of the foremost educational institutions in the southwest; the two normal schools, one at Tempe and the other at Flagstaff, are regarded as most excellent schools, and the high schools and grammar departments of our common schools are conducted upon the same broad lines which give the pupils the widest opportunities for gaining an

education to fit them for the responsibilities of life. There are 275 school districts in the territory, and there are 12,023 children enrolled in the public schools this year. The present valuation of school property in Arizona is \$654,942, which is a considerable increase over last year. The average salary paid to male teachers here is \$85.51, and for female teachers \$71.75. During the past two years thirty-seven new schoolhouses have been built and many of these at a cost of \$4,000 and \$6,000 each, I understand. In Tucson alone three handsome structures were erected this year, which are a credit to the territory, and show the attention which is paid to education by the people.

"I would like, also, in this connection," continued the governor, "to say something about the churches and the work which the ministry is doing, for I believe that the church must follow closely all educational advancement to show the strength of education in any country. Here in Arizona the church often precedes the school, missionaries going to frontier regions to preach the gospel and 'open a trail,' as it were, for educational work. However, the two must always be considered as the foundation of our social system, and realizing this, I embodied in my report to the secretary of the interior a presentation of the progress which has been made during the year. From this report you will observe that there are 135 churches in the territory, 150 ministers, a total church membership of 52,836 (which is an increase of 170 over the preceding year). The total valuation of church property in Ariz-

ona is something like \$400,000. There are 236 Sunday schools with a total membership of 12,239, which is an increase of 1111 over last year. The different denominations represented in the territory at the present time are the Roman Catholic, Church of Jesus Christ of Latter Day Saints (commonly known as the Mormons), Presbyterian, Methodist, Episcopal, Baptist, Congregational, Protestant Episcopal, Christian (Disciple), Free Methodist, Seventh Day Adventists, Dunkards, Salvation Army, Christian Science, River Brethren, Lutheran, Christian Reformed, Faith Mission, Gospel Union and Menonite."

"I believe," concluded Governor Brodie, "that the information I have given you is conservative, and taken as a whole, it seems to me sufficient foundation upon which to base hopes for the early admission of Arizona as a state. At the present time this question is uppermost in the minds of the people of the territory, and all of us look and hope for a favorable report from the senate committee on territories. We believe Arizona is entitled to statehood by reason of the character and class of its citizenship, the standing it commands as a patriotic community and the ability of the people to properly conduct a state government. The people of Arizona believe they have made complete preparation for an honorable place among the sisterhood of states, and the widespread benefits which will come with admission they believe will place Arizona among the foremost commonwealths of the Union."

for the establishment and maintenance of admirably equipped educational institutions attest this fact no less than does the correspondingly large and rapidly increasing number of religious organizations, whose modest spires evidence the presence of a God-fearing people in town and mining camp alike. The progressive easterner has come among us and found that an equally enterprising, wide-awake people had preceded him, ever ready to join in the development of our boundless resources. Of such is the territory of Arizona—a vast community of "rustlers," who will never cease their efforts until statehood is granted them.

So much has been said in favor of statehood for Arizona and so little against it that, so far as argument

hood, one way or the other, it is evident that the cause will be best served by alignment with the political party dominant in the nation. In fact this seems absolutely necessary as the first step towards the desired goal. While Democrats of a solid south are likely to favor our admission so long as we continue to send one of their political faith to congress, little can be hoped for from a minority. It is from the manufacturing and money centers of the great east that comes the capital which is developing the mines and promoting the chief industries of the southwest, and when these shall have been satisfied of the ability and disposition of our people to manage a state with certainty of adherence to safe and economical business principles and

until the volume of water is scarcely ample for the lands now under cultivation, hence it has been the policy of those charged with placing the attractions and advantages of this valley before those who are seeking new homes, to avoid urging an indiscriminate immigration.

With the present water supply there are lines of agriculture that can be followed with profit, embracing crops that require intense farming and which reach naturally with the least amount of water. To those versed in these lines the field is open. The large mining camps in the neighboring mountains, where but little if any ranching is attempted, consume all the surplus garden produce available in this valley. We hope, at an early day, to be able to throw our doors wide open and extend an invitation to all who wish homes in one of the richest valleys in the world, and this will be accomplished if the government decides to build the Tonto Basin reservoir.

The officials of the United States geological survey are now investigating the advisability of building this reservoir as one of the first to come under the provisions of the recent act of congress, known as the Hansborough-Newlands bill. The water users and land owners of the valley are uniting in a general association to put themselves in a position to secure the benefits of the recent legislation. If this effort is successful and a dam is built at the Tonto Basin for the conservation of the flood waters of the Salt river, there will open a new era, and nobody has an adequate conception of the results. The rich lands lying under the canal already constructed await only the coming of the water supply and its judicious administration to produce every variety of fruit and crop grown in semi-tropical regions. Then we can extend a hearty welcome to the immigrant who is seeking a place where on small capital he can build a home and rear his family in comfort. Then will be opened a region where only a few acres will be required to enable the farmer to lay aside liberal earnings for a rainy day.

Until the increased water supply is assured we are not justified in soliciting a great deal of immigration, excepting among those prepared to follow the lines of agriculture indicated and among those seeking a mild climate for the benefit of health or as a place of refuge from cold and disagreeable winter climates.

For persons who are delicate, especially those suffering from pulmonary troubles, the benefits of this climate with difficulty can be exaggerated. It is a mild, and the air is pure, and it boasts of the greatest amount of sunshine of any place on earth where resorts are maintained. To the persons described the valley offers every desirable inducement, but the climate cannot perform miracles and invalids in the last stages cannot hope to recover. Tubercular patients should seek their climate as soon as possible, and their arrival then will be none too early. It has been proved that a large percentage of consumptives regain their health, where the disease is in an incipient stage, by leading a quiet, restful life, avoiding great exertion, and for that reason it is recommended that immigrants should be provided with funds to supply their needs for at least a year. It is both cruel and unjust that eastern practitioners should send their most sick patients away from their homes and to this country with a commission to seek employment among strangers and depend upon their own exertions for a livelihood. Such persons have become a general burden upon this section, and the object sought—that of regaining health—falls of its purpose. It would be much better and humane were such extreme cases allowed to spend their few remaining days among friends and with such comforts as could be afforded them.

This valley as a winter resort has not been as well understood in the north and east as its many attractions for tourists warrant. Those who have spent a winter here agree that a more attractive climate does not exist elsewhere, and there is seldom a day during the entire winter that the most delicate person cannot spend the greater portion of it in the open air. A great many people live all the year in tents and many of the workings never sleep indoors.

The attractions of the valley are many, and its peculiarities appeal especially to those who have not visited an irrigated country. The canals and dams make a complicated system of irrigation which is of great interest to all visitors. There are many points of interest that are easy of access, such as the ruins of prehistoric inhabitants, the Indian reservation, where the red men of today are found living in their primitive ways; the Phoenix Indian and industrial school, second to the largest in the United States, where the children of these same Indians are trained in the ways of civilization. The orange, olive and almond orchards are of interest. The largest ostrich farm in the country, where one thousand of these monster birds, ranging in age from the chick to Old Jumbo which came from South Africa, flourish in this valley.

Tourists are cared for in the towns of Phoenix, Tempe and Mesa, where there are ample accommodations in hotels and boarding houses. Life in the country also is one of the charms, and many of the ranchers are prepared to accommodate tourists. There are ample railway facilities for reaching the Salt River valley, and there is a hearty welcome to great visitors from all directions.

practices, then may we reasonably expect their representatives in congress to intrust us with the responsibilities and duties of statehood. We of Arizona, confident of our own strength and qualities, earnestly hope and urge that we may even now be so regarded and early endowed with the advantages which statehood brings.

Both of the great political parties in Arizona have made the most of the statehood question, but to little purpose, unless the bold contention of the Democracy in the late campaign shall prove correct, which appears extremely doubtful because of the reduced majority by which its candidate for congress was elected. By Democrats it is claimed and by Republicans conceded that this majority would have been much larger but for the serious divisions among the former, while the election of one-fourth of the legislative ticket shows that within the largely increased voting population the Republicans have at least held their own. The situation remains practically unchanged by the recent election. While we contend that territorial politics should not affect our chances for state-

hood, one way or the other, it is evident that the cause will be best served by alignment with the political party dominant in the nation. In fact this seems absolutely necessary as the first step towards the desired goal. While Democrats of a solid south are likely to favor our admission so long as we continue to send one of their political faith to congress, little can be hoped for from a minority. It is from the manufacturing and money centers of the great east that comes the capital which is developing the mines and promoting the chief industries of the southwest, and when these shall have been satisfied of the ability and disposition of our people to manage a state with certainty of adherence to safe and economical business principles and

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Judge Joseph H. Kibbey
Territorial Co. Ordinance From Maricopa County

It is to be noted that the attention of the community has been attracted to a great portion of the inhabitants has been completely engaged by any subject as has that of the people in this Salt River valley in the matter of water rights for irrigation.

To those who are not at all familiar with the conditions prevalent in countries where the products of the earth are only obtainable by the artificial application of water to the soil, the difficulties attending the subject seem unimportant because the subject itself is unimportant.

We are all at best very provincial. Our habits of thought and action are largely due to environment and we are easily listless and indifferent to habits of thought or rules of action that have their origin and development under conditions to which we are unaccustomed. Not only is there listlessness and indifference, but there is obstinacy, unconscious possibly, to the considerations of economic problems dependent for their solution on conditions with which we are unacquainted, and our indisposition to acquaint ourselves with them.

JUDGE JOSEPH H. KIBBEY

Americans, irrigation is a vague notion. They think of it, if they think of it at all, in association with other uninviting details of life in oriental countries, distant and not well defined. It is one of the indistinct details in the story of an ancient people in ancient lands, of a decayed civilization and arrested progress and development.

Its epitome is ruin, decay and desolation. We read in a desultory sort of a way of modern attempts at restoration of reservoirs in Egypt and India. But the promised results, as we conceive them, are not alluring to us. They may suffice to eke out the existence of their people. But we Americans cannot tolerate the notion of an ill nourished, scantily fed and poorly sheltered civilization—and those are our generally conceived notions of those lands that are desert and only productive by irrigation.

And the average American mind is not readily open to any other conception. The American is composite enough, but the elements that enter into and form his character have developed under conditions as nearly the reverse of those that make up the character of the older denizens of irrigated countries, as can well be imagined. Instead of indolence he has energy and ambition, he is not easily contented, he is schooled to contest with nature for her fruits. His notion of the highest civilization is the subjection of the greatest possible number of the forces of nature to supply the greatest possible number of his wants. To expand the field of contest he increases his wants, and glories in that conquest.

The fact is not our American idea of the character of the oriental—of him we entertain a different and opposite notion. The confines of our American civilization have by mere expansion humbled and into the desert. With characteristic energy such of them as have come upon their new (to them) condition have undertaken the reclamation of the desert.

We are reluctant to learn, if there were much to learn, from the history of people, whose efforts of centuries have, by our standard, resulted in failure. And there is little of value to be learned from such study—the field from that point of view is uninviting.

However old it may be, it is to us a new problem and to its solution we bring new forces. It is the adaptation of an old system to the demands of a new civilization. And in this lies the allurements. We are unhampered by the habits of the older regime and we reject its teachings.

these products. The long growing season, the isolation from cheaper sources of supply of the ordinary food products render the cultivation of hay and grain and the commoner foodstuffs more than ordinarily remunerative. It would be easy to elaborate and thereby demonstrate not only the reasons why, but better still, the fact that these lands are productive of far more profit than lands moistened by rainfall alone, but space, and as well the purpose of this article, forbid that.

Irrigation involves the diversion of water from natural water courses and its conduct to and upon lands and its consumption there by absorption by soil and plant life. This process, at the very outset, necessarily violates one of the oldest doctrines of our common law. By the common law of these United States a riparian owner, that is, the owner of lands abutting upon a natural water course, or through which such a water course ran, had the right to have the water flow in that stream undiminished in quantity and undeteriorated in quality. Many of the states and territories have had difficulty in reconciling this common law right with that of the right of the use of water from such streams for irrigation. Fortunately for us it never has been recognized as a part of the common law applicable to conditions in Arizona, and was long ago expressly abrogated by statute. Custom naturally changes in order to meet new conditions and not only saved tedious vexations and costly litigation, but illustrates what has been suggested, the necessity for a change to meet the new conditions and our aptitude and promptness in meeting the necessity.

In the earlier history of the arid southwest and for a long time after its cession to the United States, there was little or no positive law upon the subject of the use of water for irrigation. The most that was devised was supplementary to, or to contemplate the existence of, local customs and practice.

The first appropriators of water of importance were the miners, and their customs, tolerated at first, and later expressly recognized by the government, were definitive of the rights to be used in the use of water from public sources of supply. These customs, to speak generally, were practically uniform, modified in unimportant particulars by local conditions. The use of water by miners was generally inconsistent with its use for other purposes. It violated the rights of the riparian owner, but that owner was the government itself, and as has been suggested, it was tolerant. The use of water resulted in a constant change of the place of its use—its diversion from its original source and its use in constantly changing places of use often involved the construction and erection of costly works, frequently beyond the means of the individual appropriator.

Custom naturally changes in order to meet new conditions, grew to recognize in the man or association who diverted the water and provided the means of conducting it to the place of use, a dominion over the water so diverted and carried by him and a consequent right of disposing of it for his own profit and to whomsoever he chose. This was the custom of miners, and the practice of appropriators of water for the somewhat but not entirely analogous use of water for irrigation. And hence, it is contended by many lawyers and recognized by some courts, developed the right to appropriate the water from public sources by one for sale to others who make the actual benefit of its use of it. This view is vigorously opposed by others who deny the right of any appropriator to dominion over water for any purpose other than his own use and claim that the selling or disposition of water for profit is not a use recognized by law, for which an appropriation of water can be made.

According to those who entertain this view, the analogy between the use of water for mining and its use for irrigation is in some important particulars at least denied. In mining the place of use is constantly changed as long as it is used for that purpose, while in irrigation the place is permanent. In either case it is conceded the actual use of the water is the basis of the right of appropriation. In mining it is to be used for awhile only and is constantly changing places of use—the right to use it for that purpose cannot become permanently appurtenant to the place of use. On the other hand, the use of water for irrigation is in each instance confined to a given place—the purpose of its use is a permanent one. The use of water for mining necessarily in time exhausts the purpose of its use—the use for irrigation is permanent.

Now, it is argued if the right of appropriation is based upon use, then the conditions and equipment of the use furnish the measure and the limitations of the right. And these are, a sufficient supply of water for all time to properly irrigate the land, neither less nor more. Logically this makes the right appurtenant to the land and hence a real and not a personal interest, and not segregable from the land. Water, the natural stream of the arid southwest has customarily come to be regarded as public and subject to appropriation for beneficial uses and this right of appropriation is now

through his land. He had the right to take therefrom sufficient water for domestic use or for himself and family and to water his stock, and his right extended, if that were necessary for that purpose, to the entire consumption of the water flowing in the stream to the complete deprivation of his lower neighbor. But this right was a right to the use of the water and not to a quantity of it, and under it no riparian owner could draw an equivalent amount for another purpose or for another person—it was for his immediate and peculiar use, measured and limited by his necessities. And to this is likened the right of an appropriator to the use of water for irrigation; that is, that the right to take the water is in its ultimate user and is measured and limited by his needs.

Another analogy is sought also in the right of common as it once prevailed in England and to some extent is still prevailing there. Land was permitted to be open and the public, or some part of it, was permitted to go there and take wood for fire and repairs of dwellings for like purposes and where used to pasture cattle. The individual right, however, was confined to the taking of only so much as satisfied his own wants. He could not take any to sell or barter to others, wood or turf or pasture others' stock. His own personal needs were the origin, measure and limit of his right.

the policy of the government has always been against a monopoly of the ownership of the soil, so, too, it has been and naturally would be adverse to the monopoly of the water for its irrigation which is so necessary an adjunct to the use of the land.

And so, upon the one hand we have those who claim a valid appropriation of water can be made by one whose only use of it is to sell or otherwise dispose of it to another, the ultimate user; and upon the other those who deny that the diversion of water from public sources of supply and its conveyance to a place of use, there to be disposed of for profit to one who makes the ultimate use of it by applying it to the soil, is a beneficial use of the water contemplated by law.

The latter class claim that the use contemplated by law is the ultimate, final act of the application of the water to the soil and that he who makes that application is the user and hence, lawfully, the actual appropriator. The former class affirm that the diverter of the water is the appropriator, and that so long as it is ultimately applied to a beneficial use by those designated by the appropriator his appropriation and consequent right to divert the water and dispose of it continues and is complete. Under this system the needs of the ultimate user are neither the measure nor the limit of his right. Those depend upon his contract with the appropriator and upon his inclination or ability to discharge his obligation to the user. There is no absolute right in the user of the water, and hence no right to become appurtenant to the land. This seems somewhat incongruous with our notions of the permanency and stability of titles to land.

We do not find in the common law any complete analogies that afford much aid in reconciling the conflict between these claims. A riparian owner had one right to diminish the volume of water flowing in the streams by or

are such in this arid country that the supply of water is not sufficient to supply all who could use it. As the doctrine is that all who have a use for it have the equal right originally to take it, how are the rights determined when more seek it than can be supplied? The natural, logical and only rule in such cases would seem to be that the first

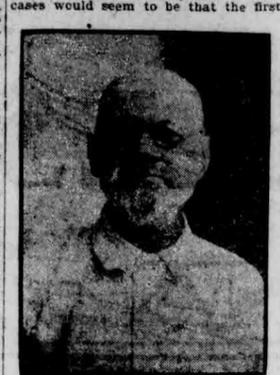
taker acquires the first right and subsequent takers in the order of the time of taking, take subject each to all prior rights. No other rule consistent with the existence of any right at all can be applied. It is the application of the old rule of "first in time, first in right." If there is no right acquired by priority of appropriation it would

at least 300,000 acre feet. By an acre-foot of water is meant an amount of water sufficient to cover one acre of land to the uniform depth of one foot. This capacity is estimated to be net for use for irrigation, after making allowances for loss by evaporation, seepage, etc. Enormous as the figures appear, a better conception of their immensity is obtained by estimating the capacity of this great reservoir in gallons—instead of acre feet. The enormous total is 260,663,040,000 gallons. It is further estimated, and the estimates are made by the best and most conservative government experts, that the water supply so obtained, supplemented by the natural flow of the Verde and Salt, will afford a completely adequate water supply for from 160,000 to 200,000 acres of land.

The natural flow of these rivers has already been mentioned, if not quite all, been appropriated for lands in the valley. This supply, however, is inadequate for the needs of the lands now under cultivation in the valley. These lands are now in private ownership. With this situation in view, not only in this valley, but in many others, the Hansbrough-Newslands act, supplementing its original design, provides for the construction of reservoirs not only for the storage of water for the reclamation of arid public lands, but to supply, which is equally beneficial from the statesman's standpoint, the deficit in the supply for lands already in private ownership. The Hansbrough-Newslands act defines the rights to the use of water impounded or developed under its provisions. It provides that the measure and limit of the right shall be the necessity of the user and that the rights shall be appurtenant to the land.

As the lands now under cultivation in the valley have, concededly, some rights to the use of water from the natural flow of the Salt and Verde rivers, it is to be greatly feared that the con-

struction of the Tonto reservoir, thereby obstructing the natural flow of the Salt river, may in operation, affect these rights. Whatever these rights are they are vested rights and cannot lawfully be disturbed—the act in terms prohibits the secretary of the interior, who is charged with these works, from interfering with vested rights.



COLONEL J. D. POSTEN
"The Father of Arizona"

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The greatest problem now to be worked out is the adjustment of existing rights to suit the new conditions that would arise upon the construction of the reservoir, and as well to provide a proper assurance to the secretary of the interior of the reimbursement to



THE CAPITOL AT PHOENIX

of the application of these various doctrines in practice, immense difficulties have arisen and much litigation. But the situation is not encouraging. American genius and aptitude for the solution of such difficulties is at work and out of it all a practical, just and common sense system will be built. The development of state beneficent systems has required time and whether any of them shall prevail or all give place to a better one than either require time to determine.

The possibilities of this valley for wealth and development are too great and immediate to permit these conflicting questions to retard its progress. Of the greatest interest to our people now is the late act of congress authorizing governmental construction of storage reservoirs.

That act, known as the Hansbrough-Newslands act, provides a fund to be used in the construction of reservoirs for the storage of water for irrigation in the arid states and territories. Happily the law is not framed with the idea of government ownership, management and control of a public utility. The purpose of those who devised it was originally to make a vast extent of what used to be known as the "Great American Desert" fit for settlement and hence marketable. To do so it was necessary to provide a supply of water for it, and as a matter of state business the government has undertaken, in the first instance, to construct these reservoirs, dispose of the land to settlers, charge the use of the reservoirs to them and when reimbursed for the cost turn over the management and control to the settlers and water users.

That is a magnificent conception, worthy of the American people. It has no suggestion in it of that paternalism that characterizes the great works of England, in Egypt and the east. It is a development of the legal status of present rights and by the prospect of middle profits to divers interests, but by the tenacity with which many in many instances from mere sentiment cling to notions and distinctions which would be of no practical value if the hopes of our people are realized by the construction of the reservoir.

It would seem a simple plan to at once define and adjust the existing rights and supplement them with the added reservoir rights, thus not only making up any existing deficit but doubling the area of adequately irrigated lands.

The result would be the elimination of any disputes between users of water from the natural flow and those of the stored water. To leave a distinction between these two sources of supply is a standing menace to the harmony and hence to the prosperity of the community. The conflict would be irrepressible and in its very nature interminable. Not only would these disputes now existing among water users be at once settled and disposed of, but the energy and money and time expended in those disputes would be available to promote the progress of the people.

The reward held out for this settlement promptly and on some equitable basis is the construction by the government of the reservoir. The basis is outlined in the act itself, and it is that the water users shall own or control all the means of storage, diversion, conveyance and distribution of the water; and that their right to the use of it shall be measured and limited by their needs for water.

The system is simple and concededly the ideal. Nothing stands in the way of its accomplishment but selfishness and the code of a few that success in life is the attaining of something for nothing. It is too perilous to attempt any plan where individual or corporate prospect or hope of profit is an element between the source of supply and the ultimate water user.

Hundreds of instances of disaster to promoter and consumer as a result of such a system can be cited. Hundreds of thousands of capital have been lost, hopes have been blasted, the most precious of communities hopelessly destroyed by such attempts.

The application of sturdy American common sense and common honesty will soon solve the problem. Greed and contention without regard to right will have its fabled result.

What is the right thing to do? Having ascertained it, then all should unite to do it. It requires no consent to do the right thing, for a man can't have rightfully that in the having is wrongful, and he cannot concede that he does not have it.

There is a mistaken notion that a long continued practice confers a right—a vested right, and that that right is one protected by law. It is not and cannot be so. No right contrary to the public policy and inimical to public welfare, however long enjoyed and tolerated, can become a vested right, and when it stands in the way of public good it must be sacrificed to the mere tolerance by the public confers no right and abuses do not ripen into rights by mere custom.

A grander opportunity was never offered a community than that now offered to this valley.

Unabashed by the apparent difficulties the people are at work earnestly, honestly and courageously to solve the problem which will not only in its fulfillment astonish the nation and justify a hundred fold its investment, but be the plea of a happy, prosperous, progressive and contented people.

Many plans are being formulated, some by organized and some by individual effort. Out of them all as they tend to a common good the natural forces of evolution will disclose the best.

The experience of thirty years has demonstrated the fertility of our soil, it seems exhaustless. Its adaptability to the raising of many of the citrus and most of the deciduous fruits has been proved by actual results. The long growing season makes it possible to obtain a succession of crops from the same land during the same year. Four and five crops of alfalfa can be cut annually. Railroad communication is being rapidly extended, not only opening up new and extremely profitable local markets for our cheaper products, but facilitating and cheapening the transportation of our higher priced products to the more distant markets.

Already we feel the buoyancy excited by the hope of the early construction of the reservoir and confident are we of its realization.

Arizona Incorporation Laws

Arizona has outrivalled New Jersey in its fame for liberality in the matter of incorporation laws and great numbers of corporations in the past year or two have availed themselves of the advantages offered by incorporating under the laws of this territory.

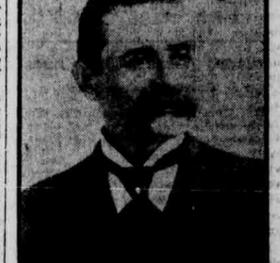
At a time when all the business interests of the country are being consolidated and most transactions are being carried on by corporations, the incorporation laws of any state or territory are of great importance. If it were left to individual enterprise very few of the great business undertakings which have contributed so largely to the growth of the country and the welfare of its people could have been undertaken; it is only through combined effort that great results are being accomplished.

The territory of Arizona is fortunate in its corporation laws. They are simple, effective and liberal enough to be corporations, but strict enough to keep them within proper bounds and to prevent incorporation at little expense, thus enabling people of limited means to secure the advantages of becoming incorporated.

The procedure in incorporating is very simple. Articles of incorporation are drawn, stating the names of the incorporators, the name of the corporation, its principal place of transacting business, the general nature of the business proposed to be transacted, the amount of capital stock and the highest amount of indebtedness to which the corporation is at any time to be subject. These articles are signed by the incorporators and acknowledged by them. They are then filed in the

file of the county recorder of the county in Arizona in which the principal place of business of the company is located, and a copy, certified by the county recorder, is then filed in the office of the secretary of Arizona, who issues the required certificates. The articles are published six times in some newspaper of the county in Arizona where the principal place of business is located from an affidavit of such publication is filed in the office of the secretary of Arizona. An agent, who has been a bona fide resident of the territory for at least three years, is appointed by the company for the purpose of accepting service of legal process for it, and notice of his appointment is filed in the office of the secretary of the territory.

In many states and territories peculiar prohibitive restrictions are placed upon the formation of corporations. It is frequently required that some of the incorporators, directors and officers shall be residents of the state of incorporation; that an actual business office shall be located there, and that large taxes shall be paid in Arizona. The laws have been more liberally drawn and these disadvantages are avoided. Any number of persons may form a corporation for any lawful business and neither the incorporators, directors nor officers are required to reside in Arizona. The office of the company may be located and the business conducted anywhere, the provi-



B. HEYMAN
Chairman Territorial Statehood Committee

son as to the appointment of a resident agent for acceptance of service of process being sufficient to prevent the company from reaping any liability which it may incur.

Corporations may be capitalized for any amount and no part of the subscribed capital is required to be paid in at the time of incorporation. There is no law as to the number of shares of stock a stockholder must own in order to be eligible as a director. Corporations are also permitted to issue bonds and preferred stock and freedom from publicity in private affairs of companies is assured, as no statements are required to be filed or published. Corporations may acquire real and personal estate anywhere and to own stock of other corporations.

Among many other advantages corporate existence may be renewed indefinitely in periods of twenty-five years, amendments to the articles may be made and the capital stock increased or decreased at any time. The corporations may operate a business on the day certified copy of its articles is filed in the office of the secretary of Arizona, three months after that time being allowed for the publication.

The Arizona law provides that when it is so stated in the articles of incorporation the private property of directors and stockholders is entirely exempt from the corporate debts. This is an extremely important provision and one that is not contained in the laws of many of the states. Another very important advantage of the Arizona laws is that no right is reserved to the legislature to alter, amend or repeal the laws so as to affect in any way corporations already organized. In the absence of the reservation of such a right it is impossible for the legislature to hereafter in any way affect corporations organized under the present laws.

This recalls the days of Chief Justice Marshall and Daniel Webster, for it was in the Dartmouth college case, argued by Webster and decided by Marshall that it was held that a corporation once organized could not be affected by subsequent laws unless the right to vary the state's contract with the corporation had been reserved.

The total cost of incorporating in Arizona may be approximately stated as \$56, which includes all the fees of the county recorder's and secretary's offices, the cost of publication of the articles and the compensation paid for an agent for the acceptance of service of legal process. In no state in the Union are the expenses of incorporating so small. Most of the states impose large taxes on the formation of corporations,

which in many cases prevents poor men from taking advantage of the corporation laws. Owing to the liberality of the Arizona statutes, incorporators have organized a large number of corporations under them and Arizona companies are now operating in every state of the Union, in Canada, Mexico, Central America, South America, and even in Europe. Every new gold field and oil region sends into Arizona many companies. The oil wells of California and Texas are worked largely by Arizona corporations, as are the gold mines of Tonopah and Thunder Mountain. The present secretary of Arizona has gained a reputation for the prompt and satisfactory manner with which business entrusted to his office is dispatched.

AN ALMOND ORCHARD IN SALT RIVER VALLEY

of an old system to the demands of a new civilization. And in this lies the allurements. We are unhampered by the habits of the older regime and we reject its teachings.

AN ARIZONA IRRIGATION DAM, SALT RIVER VALLEY

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PHOENIX AND VICINITY

THE TERRITORIAL CAPITAL IS A THRIVING CITY

The Salt River Valley is the Most Favored Section of Arizona—Its Advantages Described and Illustrated—A Famous Health Resort

The advancement of Phoenix is a subject of interest, but everything said of Phoenix must also apply to the whole territory...

Phoenix has risen, not from the ashes, but from the sands of the desert, and the traveler who forms his opinion of Arizona from a flying trip across the desert by rail would be greatly and agreeably surprised...

Phoenix is a city of about 10,000 inhabitants, and is surrounded by an agricultural country, which, under the new irrigation laws and with the assistance of the national government, will be extended, and much that is now unproductive will be brought under cultivation...

For the enlightenment of the untraveled public, who base their opinions of Arizona on the caricatures sent out by the comic and other papers of the country, I would say that the Arizona depicted by them does not, and never did exist. Not 1 per cent of the mature population are natives of the territory, but are representatives of the most enterprising people from the largest towns and cities of the United States.

The people of Arizona are intelligent, enterprising and law-abiding, and will compare favorably with any community, as is evidenced by our fine schools and school buildings, our live churches of all denominations and a people ever ready to work and pull together for the advancement of the territory, as well as for their own city.

Phoenix has steadily advanced, from the day in April, 1874, when it received its patent from the United States government up to the present time, in spite of many obstacles it has had to overcome. Instead of a small adobe village, it is now a distinctly American city of modern business buildings and comfortable homes.

With statehood in the near future, water storage about to be accomplished, railroads coming this way and eastern capitalists interested with us, we shall within the next ten years, build up a city that any American citizen may be proud of.

It has been said that western towns are either miniature cities or exaggerated villages. Her residents consider Phoenix included in the former class. She is essentially modern, founded though she be on the ruins of a pre-Columbian civilization from which she has risen, Phoenix-like, to the fame of the "Chicago of the Southwest." Here there is none of the languor of the southern, nor trace of the provincialism of the middle west, and only enough of the Mexican and the Indian to make picturesque the poorer quarters of the city.

Hither have come the brightest, professional and commercial, and the visitor soon acknowledges that he finds those qualities that mark the most favored communities of the states of the Union. The inception of the community is within the memory of a...

of its present residents who find their "miniscule" covering a scene of transformation of Rip Van Winkle's marvels. The new Phoenix is a beautiful city of trees and flowers and homes. It is the capital of Arizona and the seat of Maricopa county. Its population is about 15,000, although the presence of a large transient population, composed of tourists, health-seekers, farmers, miners and cattlemen from all parts of the territory, gives the streets at times the busy aspect of a town twice its size.

There is no doubt of the commanding position of the city. From her gates now goes a large part of the food supply of the southwest, and all the southwestern interests and industries center within her. Primarily on

a foundation of successful agriculture, grazing and mining contribute as well to the success of commerce, while she is already widely known as a health resort. The city has no "boom" population. It has grown only as population and business expansion compelled.

Her prosperity is firmly seated and may not be easily disturbed, although for two or three years her growth has been checked while her people have strained many an effort in bringing about those great industrial improvements which are prerequisite to reaching the zenith of her glory. The metropolis of Arizona is easy of railway access, branches of two transcontinental railroads terminating at this point. The Santa Fe, Prescott and Phoenix railroad, a branch of the Santa Fe Pacific system, reaches it from the north, and the Maricopa and Phoenix and Salt River Valley road leaves the Southern Pacific at Maricopa and comes into the city from the south.

Over either road the traveler, who has spanned a territory of magnificent distances and miles of desert wastes, awakens to an oasis which quickens those feelings of delight that an Arabian camel driver must experience when the foliage of a Sahara watering place is spread before his caravan.

To the uninitiated the country through which the traveler speeds in coming down on this picturesque spot, is a veritable enigma. It embraces a land of torrid deserts and fertile valleys—the best and the worst in Uncle Sam's domain. Arriving at the capital the traveler is at once impressed with a sense of new environment. Perhaps in no place in the country is the transition from the temperate to the torrid, more properly speaking, the semitropical, so precipitate.

A hundred miles north of Phoenix the peach orchards are early in spring at their peak. Great banks of bloom seem to vie with the dawn in delicacy of tint and exquisiteness of color. Nearing the city, while the drooping, frost-like foliage of the graceful pepper tree lends a dreamy softness to it all, alongside these flourish the olive and the almond, the fig and the orange, all blissfully unobtrusive in their doing anything wonderful in transforming a recent desert into a present paradise.

From Ashfork, on the Santa Fe Pacific to Phoenix, the country is interesting. The train passes through miles of a somber juniper forest, which reaches farther north into great unbroken pine forests stretching to the Mogollon plateau, and the white-capped San Francisco mountains, which rise in natural majesty to a great height. Over Hell canyon, a mighty gorge, crossed by an iron bridge, is a rare bit of rugged scenery, awful in its grandeur. An hour's travel brings the coaches to the old Banghart ranch, where the first capital of Arizona was established. The Junction claims all attention, for here a branching narrow gauge road conveys supplies to the famous United Verde copper mines, and returns with loads of copper for shipment to the coast at once the presence of the chief industry of the territory.

Over a stony trail the train then winds its way through massive granite formations, culminating in the Point of Rocks, a reminder of Scottish crags. Here branches another railway to tap the auriferous riches of the Bradshaw mountains on the east, and a little farther south the historic Whipple Barracks rise before the eye. The immigrant is then approaching the beautiful mountain city of Prescott, once the capital of Arizona, and southward again opens another belt of timber.

Over heavy grades the engine labors until the summit of a mountain range presents Iron Springs, the summer resort of Phoenix, when the slope is descended in an equally precipitous manner and the railroad sweeps down upon Skull valley and Kirking, the scene of exciting pioneer wars. The great Congress gold mine is in sight as the train passes Congress Junction. Wickenburg, a lively mining camp, looms up when the Maricopa county boundary is passed and the famous Hasavampa river, whose waters are said to put the lie on the tongue, is next crossed. Desert of forty miles makes welcome the sight of such verdant spots as Peoria, Glendale and Alhambra, which, in a way, prepare the deservingly traveled for the wealth of bucolic scenery to follow and the contrasted magnificence of the Salt River valley.

Over the Maricopa and Phoenix railroads, leading from the Southern Pacific on the south, the traveler passes through scenes of considerable variety. The journey is only one of thirty-five miles, but that short distance

crossed of sandstone has produced a field of a gun club that holds regular "shooting convales" every tournament and steering-ry is seldom neglected during the winter months and the visitor then is treated to an exhibition at once realistic and exciting.

A drive to the beautiful town of Tempe and Mesa is always entertaining, while the Pantheist or the pragmatic may stray for a greater distance in any direction and find a myriad of wonderful things which make up romantic and industrial central Arizona. Radiating from Phoenix are various routes that, at greater distances, lead to places of new and novel interest. Railways lead to the famous Grand Canyon of the Colorado and to the mining camps of Congress and Jerome, which show gold and copper mining conducted on the most elaborate scale, and at a shorter distance are the Castle Creek hot springs, the curative properties of whose waters have drawn recruits from Carlebad,

of the canal system, and whose lucid waters indicate a misnomer in its appellation, is soon crossed and a few minutes' journey brings the traveler through another expanse of verdure and to a great southwestern Mecca.

Nowhere is the tourist and pleasure-seeker received with greater warmth of welcome than in Phoenix and neighboring towns. He is entertained to the fullest resource of the region—an entertainment unique in many ways and "spite with interest, because it is flavored with all the picturesque features of Arizona. Indians in their native simplicity, Mexicans as they live in Sonora, and a wealth of peculiar and curious scenery contribute to his pleasure, while the guest suffers none of the vicissitudes that a town, purely pioneer and western, involves. Life in the city is free, while country life affords a charm of environs, wild yet tame. In many a glen, canyon and Craig the hand of man is unseen; in many a pre-Columbian ruin the touch of vandalism is absent; tributary streams roll on, unfettered by the masonry of irrigators, and parts of the valley blossom in myriad colors. But above all is the security which good American government endows and risk of life in the wild mountain fastnesses and pretty recesses is a matter which has passed into the realm of the quaint, interesting and sanguinary traditions of the Salt River valley.

Among many points of interest within driving distance are the ruins of the ancient Toltec cities, occurring at many points in the valley, the Stage pass, which leads into the Indian villages on the Gila after a delightful drive of fourteen miles; Hole-in-the-Rock, seven miles east of Phoenix, where the

of modern charges. In the restaurants, where the service is not a la carte, the market charge for a meal is 25 cents. The meals will be found well stocked with the best of meats, poultry, vegetables and fruits, and prices will be found little, if any, higher than in the east. In the early part of the winter it is usually possible to rent furnished houses (country board is always to be secured on conveniently located farms.

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ARIZONA CLIMATOLOGY

PHOENIX THE PERFECTION OF WESTERN HEALTH RESORTS

A Greater Diversity of Climate to Be Found Within a Reasonable Range Than Obtains Anywhere Else on Earth

The fame of Phoenix and the Salt River valley as a health resort has been spread by medical men and health seekers. The town would have been a little Indian village had it not been for certain peculiar geographical and meteorological conditions. But there gave the locality its first recognized merit, and it stands today without a rival as a resort of low altitude and the driest of climates, where the sun shines the greatest possible time.

The climate of the locality is said to consist of the average value of the current weather conditions, with their ranges, taken in connection with its altitude, latitude and topography, soil and vegetation. The climate of this valley differs from that of places in the same latitude and elevation very markedly because of its topography. The Salt River valley is geographically a part of the great desert plain of the south and west of Arizona, but climatically it differs from most of the region because of its situation with reference to certain ranges of mountains and its soil and vegetation. The climate of the valley is unique. While there are other good climates, there are none presenting exactly its combination of conditions. These features are the lowest relative humidity, the lightest wind movement and highest annual temperature in combination. No other region even approximates it. Solly, in his work on "Medical Climatology," commenting on these lines, says: "An inquiry into the climate of Arizona discloses the fact that it is climatically distinct from each of its neighbors—New Mexico and California—and has natural laws of its own, although these laws are modified, in

of the year. Others spend most of their time in the valley, journeying in the summer to some less torrid region. A day's ride conveys one to a climate paralleling that of the Rocky mountain region and to a section of rich Alpine scenery, furnishing a trip of recuperation which fortifies one against rather prostrating but really the more healthful summer days in the valley.

Arizona is a vast territory, mostly embraced in the Rocky mountain plateau, and presents physical features found in no other subdivision of the United States. With an extreme breadth of 335 miles from east to west and length from north to south of 400 miles, with an area of 35,000 square miles at its southwest corner, one will find within its confines any desired climate.

With this great diversity of physical and climatic conditions, it is no wonder that the climate of Arizona is as little understood as are its unlimited mineral deposits, its inexhaustible soil, and its capacity to produce and mature almost every known plant of the temperate and semi-tropical zones, alongside of fruits hitherto grown only in the tropics. Within the borders of this territory is produced in miniature almost every climatic and physical feature of the North American continent, and its diversified products are here brought to as high a state of perfection as in their native location.

That the diverse climatic and physical conditions of this unique corner of the earth may be understood, the United States weather bureau at Phoenix has set off the territory into three divisions, cutting off the western eighty miles, throwing the counties of Mohave and Yuma to the west of that line. He then separates the remaining portions into the northeastern and southeastern divisions. Much of the land in the western division does not exceed 500 feet above sea level, is practically a continuation of the Mohave desert in California, and essentially tropical. This region is free from frost, is quite dry and when irrigated from the Colorado river, which forms its western boundary, or its tributaries, will be found almost unlimited in fertility and in the production of such crops as wheat, corn, alfalfa and such fruits as apples, peaches, grapes, etc. The surface of these two counties is covered by broken mountain ranges, reaching, of course, a much greater al-

1100 feet at Phoenix and 2400 feet at Tucson. In the valleys, lower mesa and foothills is found the mild, salubrious climate that has made the Salt River valley probably the world's greatest sanitarium.

It is not a good country for doctors. There are able practitioners in Phoenix, Tempe and Mesa, but not 25 per cent of their practice is with the permanent population. The Salt River valley has been found and is now acknowledged a healing sanitarium for pulmonary and bronchial affections that have not passed to an incurable stage, while asthmatic, rheumatic and catarrhal diseases soon disappear in the warm, dry atmosphere. There are residents in the valley hundreds of individuals who came here mere wrecks from disease and who are now sturdy and strong, rejoicing in a life that once seemed nearly gone. The main reason for the seemingly miraculous cures effected lies in the fact that in Arizona, the best of physicians, nature itself, is permitted to work on the sufferer. In the colder lands an invalid is kept in fever-heated rooms, remote from every draft. Here he spends his days, and sometimes nights, out in the bracing air, in which bacteria and bacilli find no substance. Clothing is light and exercise is a pleasure. Every local condition favors patient and physician and serious, indeed, is the case that finds no relief. It is easy to see that malaria and typhoid diseases cannot flourish under such conditions. For children the valley is marvellously healthy. Mortuary returns show that not more than one-twentieth of the deaths are those of children under 5 years of age. Elsewhere statistics show that one-third to one-half of the children born die before the fifth year.

One of the most unique, one of the most sensible and one of the most rapidly growing institutions of this favored valley is a little tent city, located about ten miles from Phoenix, where the colonists are taking the sunshine and out-of-door route to health. It is a colony of invalids, whose example has been so marked that in the past several years the tented city has grown to considerable proportions and for a smaller scale sanitarium, but now form clusters in every part of the valley. It is a generally accepted theory since recent comprehensive investigations into the causes and cures of the disease, that the white plague is to be stamped out only by segregation of its victims and an absolutely out-of-

winter are cool, sometimes cold. There is occasionally a day when ice forms in small cakes here and there. On the desert blankets are a necessity all winter. Yet with the rising of the sun, the general sprit again asserts itself. This difference of temperature between night and day is possibly the one exception to perfect climatic conditions. Forewarned, however, in forenoon, and with plenty of bedding and warm night garments there is no danger of taking cold.

It is a strange thing about this desert life that it charms, charms, and grows with acquaintance, and one who spends some time on the desert is said to be never quite happy elsewhere. The summers are hot, there need be no mental reservations about that statement. During days in July the thermometer registers to suit the caprices of the weather prophet anywhere from 88 to 100 degrees, but the absence of humidity robs the torridity of its force which are visited on the close, oppressive thoroughfares of many eastern cities during the heated period. There are no reservations about that statement. Ranchers go about their work suffering no inconvenience.

Although the majority of health-seekers who take their winter homes on the coast of Southern California or the pines of Iron Springs or Prescott or Flagstaff for midsummer days, those who brave the heat and remain here to derive the greatest benefit, this season. The intense heat seems to heal the lung tissue and destroys the germs. Sufferers from kidney trouble and rheumatism also make their greatest gain in summer.

While nearly every ranch in the valley stands ready, for a consideration, to open its doors to the invalid, the best results are to be attained by tenting on the desert itself. The ranches must be irrigated at stated intervals. The desert, no man's land, is a desert.

Although the camper, assured of squatter's sovereignty, may set up his canvas establishment where he will, the question of a convenient water supply leads one to select a site near a ranch. A quarter will pay for a barrel of wash water, hauled each week on a stone boat from the irrigation ditch, while another two bits will keep the swimming tub of Mexican earthen water jar, filled and provided with water for cooking from some adjacent well. Other supplies also are easily obtainable. The Indian, being in the reservations wagon loads of mescal and ironwood, fuel which makes excellent and enduring fuel, which are retained at very moderate figures. The same nature is the most liberal, where he who will can gather for himself the floss and jessam of the desert.

Fruits may be obtained at the orange groves at a reasonable price, and of delicious quality. The roll call of native fruits includes oranges, grape fruit, lemons, apricots, peaches, pears, pomelos, grapes, nectarines, plums, berries, and melons galore. Rich Jersey milk and butter may be obtained at the ranches, and honey, delicious as the same, may be secured at the apiaries. The best beef and mutton in the world, a horse and some sort of carriage, and a good solid mountain pony, which is a delight under the saddle, and a family friend, in front of a two-wheeled "Democrat," or much less than a fair family horse in Chicago. Pasture for the horse is close at hand.

Neither horns nor shade are a necessity for the horse, but a brush shed or Indian vataw is an important adjunct to the tent if one would be comfortable. Under its kindly shade the hammock is hung, the table, the water jar hung, and nearly all the operations of daily living and comfort carried on with the regularity and smoothness of an outdoor life as Kipling pictures it in East India.

Date Culture in Arizona

Thousands upon thousands of acres of land in the central part of Arizona, including particularly parts of the Salt River valley, until now have been cultivated for the purpose of date culture. Conditions unfavorable to other forms of vegetation are most conducive to the growth of the date, as it is grown in Africa, and in this way will rise one important agricultural industry in this valley.

Practically all the dates consumed in the United States are imported from across the sea. In Phoenix, however, date culture has risen to one of commercial importance and the most desirable and profitable fruit of the date, as it is grown in Africa, and in this way will rise one important agricultural industry in this valley.

The government is going into the business of date culture on a large scale. At the experimental station, north of Phoenix, the date has been planted the largest date orchard in America and perhaps in the world. Five acres have been planted there, of various brands and species imported from Africa, besides about one thousand seedlings.

The department of agriculture seems to have no doubt that the date plant will ultimately solve the problem of what to do with the arid and alkali lands of Arizona and the western localities. Experiments, which have been in progress for several years by the government, and by private growers, have demonstrated the great possibilities of the industry, but renewed interest being taken in the date plant introduction of the department of agriculture. Professor D. G. Fairchild, agricultural explorer for the department, has been traveling in Africa, and has procured from the delta of the Nile a number of suckers or offshoots of the date palm, which he has shipped to the department and which are being distributed to the southwestern part of the country.

The date palm, although grown probably only in arid and semi-arid regions, is not in the proper sense of the word, a desert palm. It requires a supply of water at the roots, and at the same time it delights in a perfectly dry and very hot climate. The date is able to stand much more cold than the orange tree, but not so much as a peach tree.

While the culture of the date fruit is new in the United States, the date palm has long been famous as the world's greatest sanitarium, and the same may be claimed of most of the southwestern quarter. In the center of this semi-tropical region, between Yuma and Tucson, is the Salt River valley. Phoenix, capital of Arizona, is the railroad and commercial center.

TEMPE IS PROSPEROUS

Its Climate and Surroundings Are Perfect—Known as "The Athens of America"

The town is one of the principal shipping points of the territory, as it is the outlet of the whole south side of the Salt River valley. The country surrounding Tempe and contributory to it is the wealthiest and the most developed. The Tempe board of trade recently issued a statement, which describes the Athens in this manner: "The town was first settled in 1871, and was originally called Hayden's Ferry, but the present name was given

it, owing to the beauty of its location, resembling that of the Vale of Tempe in Greece. The town of Tempe was incorporated in 1896, and enjoys the advantages of city government at a remarkably low cost. Large deposits of decomposed granite are near at hand, and for a number of years all the money collected from city taxes has been spent in covering the streets with magnificent road material, and as thus macadamized they are the best in the southwest. Bonds for \$20,000 have been voted by the town, and a municipal system of water works has been installed with a reservoir located on the hillside, 250 feet above the streets. The whole town is well lighted by electricity, the business structures are substantially built of brick or brownstone, and the residences are surrounded by beautiful shade trees and well kept gardens.

The religious denominations are well represented—the Congregationalists, Methodists, Baptists, Methodist Episcopal South and Catholic churches all have creditable edifices and large congregations. The Masons, Odd Fellows, Good Templars, Workmen, Woodmen and United Moderns are the fraternal organizations represented by lodges here. This was never a wild and woolly town, and the social conditions here are identical with any eastern town of like size. Within the town limits, according to a census taken in May, 1901, there is a population of 1100. "Pardonable pride is felt in the educational advantages offered, and the citizens of Tempe claim for their town the title of the 'Athens of Arizona.' Here is located the normal school of Arizona, with an enrollment of 140

weeks ago. This line, to run from Phoenix to Benson, Arizona, passes very close to the townsite and will add an important stimulus to all forms of commerce. Thrifty town of Mesa. Center of a Rich Farming Section in Southern Arizona. Twenty-two years ago a caravan of Mormon people from Utah settled on the land which is now covered by the lively town of Mesa, also on the south side of the Salt River and nine miles east of Tempe. The name of the town was derived from the topography of the country—the Spanish word, Mesa, meaning table. The country surrounding Mesa is high, flat and nearly level. The town is situated on the mesa that is 100 feet higher than Tempe and 180 feet higher than Phoenix. The Maricopa and Phoenix and Salt River valley railroad enters the place and runs two trains to Phoenix daily. The town is situated in the center of a thickly settled country of small farms, on the outskirts of which district are large grain and cattle ranches. The Mesa country is thrusting itself forward as a fruit section. There are more large and small orchards, vineyards and nut groves on the mesa than anywhere else in the territory. The Mormon is a small farmer and the highest state of cultivation is reached

ARIZONA NORMAL SCHOOL AT TEMPE

It is owing to the beauty of its location, resembling that of the Vale of Tempe in Greece. The town of Tempe was incorporated in 1896, and enjoys the advantages of city government at a remarkably low cost. Large deposits of decomposed granite are near at hand, and for a number of years all the money collected from city taxes has been spent in covering the streets with magnificent road material, and as thus macadamized they are the best in the southwest.

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The principal source of water supply for the country adjacent to Tempe is the Tempe canal. The lands under this canal are more abundantly supplied with water for irrigation than any other section of the Salt River valley, and at a lower cost per acre to the farmer. These lands were irrigated at an earlier date than other lands since it is claimed from the desert, and they, therefore, have a prior right to the water in times of scarcity. The canal is managed on a co-operative plan, each farmer owning a share in the canal and the only costs to him are the actual expenses of repairs and maintenance of the system, which average less than 50 cents an acre per annum.

Thirty thousand acres of land are cultivated under the Tempe canal, and of this acreage the greater part is planted to alfalfa. Over 1000 cars of baled hay are shipped annually from Tempe, and this represents but a small portion of the hay crop, since thou-

sands of cattle are driven from the range each spring to be fattened and shipped the next winter to markets of California or Kansas City. The dairy herds also consume large quantities of alfalfa, and Tempe is one of the principal shipping points for dairy produce. Alfalfa, a leguminous plant, so stores up nitrogen that a alfalfa land yields enormous crops of barley, wheat, oats or corn. Land is within easy reach, ranging in price from \$40 to \$100 per acre, with a pro rata water right in Tempe canal. The most improved of modern farming machinery is in use, materially reducing the cost of farming. From the prospecting immigrants to Arizona, who have some capital and plenty of energy, Tempe and its vicinity deserve careful consideration. Tempe really already is advancing in great strides, owing to the construction of the Phoenix and Eastern railroad, which was inaugurated a few

Expert's Opinion on Climate

Dr. William Lawrence Woodruff.

Thousands upon thousands of acres of land in the central part of Arizona, including particularly parts of the Salt River valley, until now have been cultivated for the purpose of date culture. Conditions unfavorable to other forms of vegetation are most conducive to the growth of the date, as it is grown in Africa, and in this way will rise one important agricultural industry in this valley. Practically all the dates consumed in the United States are imported from across the sea. In Phoenix, however, date culture has risen to one of commercial importance and the most desirable and profitable fruit of the date, as it is grown in Africa, and in this way will rise one important agricultural industry in this valley. The government is going into the business of date culture on a large scale. At the experimental station, north of Phoenix, the date has been planted the largest date orchard in America and perhaps in the world. Five acres have been planted there, of various brands and species imported from Africa, besides about one thousand seedlings. The department of agriculture seems to have no doubt that the date plant will ultimately solve the problem of what to do with the arid and alkali lands of Arizona and the western localities. Experiments, which have been in progress for several years by the government, and by private growers, have demonstrated the great possibilities of the industry, but renewed interest being taken in the date plant introduction of the department of agriculture. Professor D. G. Fairchild, agricultural explorer for the department, has been traveling in Africa, and has procured from the delta of the Nile a number of suckers or offshoots of the date palm, which he has shipped to the department and which are being distributed to the southwestern part of the country. The date palm, although grown probably only in arid and semi-arid regions, is not in the proper sense of the word, a desert palm. It requires a supply of water at the roots, and at the same time it delights in a perfectly dry and very hot climate. The date is able to stand much more cold than the orange tree, but not so much as a peach tree. While the culture of the date fruit is new in the United States, the date palm has long been famous as the world's greatest sanitarium, and the same may be claimed of most of the southwestern quarter. In the center of this semi-tropical region, between Yuma and Tucson, is the Salt River valley. Phoenix, capital of Arizona, is the railroad and commercial center.

HERD OF CATTLE AT MESA

Students. Among schools of its class the normal ranks high, a full year's work has been recently added to the course of study, and the services of its graduates are eagerly sought in the territory. The original building of the normal school building was erected in 1880, and is a one-story brick structure with broad verandas on all sides. It cost \$50,000, and was made sufficiently large to meet the growing requirements of the territory.

Located on the Maricopa and Phoenix railroads, with a branch line here to Mesa City, and in the heart of one of the richest agricultural districts in the southwest, the usual lines of business are well supported. There are two banks, a water power flour mill, large hay and grain warehouses, an ice factory and creamery near town, and all the other lines of trade are well represented. There is a newspaper, the Tempe News, published daily and weekly. The surrounding country was one of the first districts in the Union to be favored with the free rural mail delivery.

The principal source of water supply for the country adjacent to Tempe is the Tempe canal. The lands under this canal are more abundantly supplied with water for irrigation than any other section of the Salt River valley, and at a lower cost per acre to the farmer. These lands were irrigated at an earlier date than other lands since it is claimed from the desert, and they, therefore, have a prior right to the water in times of scarcity. The canal is managed on a co-operative plan, each farmer owning a share in the canal and the only costs to him are the actual expenses of repairs and maintenance of the system, which average less than 50 cents an acre per annum. Thirty thousand acres of land are cultivated under the Tempe canal, and of this acreage the greater part is planted to alfalfa. Over 1000 cars of baled hay are shipped annually from Tempe, and this represents but a small portion of the hay crop, since thou-

sands of cattle are driven from the range each spring to be fattened and shipped the next winter to markets of California or Kansas City. The dairy herds also consume large quantities of alfalfa, and Tempe is one of the principal shipping points for dairy produce. Alfalfa, a leguminous plant, so stores up nitrogen that a alfalfa land yields enormous crops of barley, wheat, oats or corn. Land is within easy reach, ranging in price from \$40 to \$100 per acre, with a pro rata water right in Tempe canal. The most improved of modern farming machinery is in use, materially reducing the cost of farming. From the prospecting immigrants to Arizona, who have some capital and plenty of energy, Tempe and its vicinity deserve careful consideration. Tempe really already is advancing in great strides, owing to the construction of the Phoenix and Eastern railroad, which was inaugurated a few

weeks ago. This line, to run from Phoenix to Benson, Arizona, passes very close to the townsite and will add an important stimulus to all forms of commerce. Thrifty town of Mesa. Center of a Rich Farming Section in Southern Arizona. Twenty-two years ago a caravan of Mormon people from Utah settled on the land which is now covered by the lively town of Mesa, also on the south side of the Salt River and nine miles east of Tempe. The name of the town was derived from the topography of the country—the Spanish word, Mesa, meaning table. The country surrounding Mesa is high, flat and nearly level. The town is situated on the mesa that is 100 feet higher than Tempe and 180 feet higher than Phoenix. The Maricopa and Phoenix and Salt River valley railroad enters the place and runs two trains to Phoenix daily. The town is situated in the center of a thickly settled country of small farms, on the outskirts of which district are large grain and cattle ranches. The Mesa country is thrusting itself forward as a fruit section. There are more large and small orchards, vineyards and nut groves on the mesa than anywhere else in the territory. The Mormon is a small farmer and the highest state of cultivation is reached

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ALFALFA PASTURE, SALT RIVER VALLEY

Alfalfa pasture, Salt River valley.

Alfalfa pasture, Salt River valley. The alfalfa pasture in the Salt River valley is a sight to behold. The fields are a vibrant green, and the air is filled with the sweet scent of the crop. The farmers are busy harvesting, and the scene is one of industry and productivity. The alfalfa is a vital part of the local economy, providing feed for the many cattle and horses that are raised in the area. The Salt River valley is a fertile region, and the alfalfa pasture is a testament to the hard work and dedication of the farmers who cultivate it.

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RAISIN MAKING IN SALT RIVER VALLEY

Raisin making in Salt River valley.

turn, by the climatic influences of both the Pacific coast and the Rocky mountains. The Salt River valley has only two seasons. Summer commences in June and lasts till about the middle of September. The rest of the year is what an enthusiastic visitor might term "a seemingly perpetual springtime." Summer time is hot, although not with the oppressive "smuggishness" of the dog-day atmosphere of the lower valley. In the east and the Mississippi valley, in the east in summer the wet and dry bulb thermometers register about the same, for there is little evaporation. Here the two are thirty degrees apart. Even though the weather bureau chronicles temperature that reaches maximum of 111 degrees, the sensible heat at the same time will be found less than 90 degrees. Thus it is that true sunstrokes are unknown, and that the laborer works from sunrise to sunset in most fervent of the heat. The winter is a season of the rarest charm. In Phoenix are known the lowest temperatures of the valley, yet seldom does the mercury ever fall below freezing point. The new-comer disappears himself in the lightest of clothing and exults as he thinks of the snowbound land that he has left behind. In December the house windows are open and the birds already twitter in the trees, that still retain their verdure, and Christmas parties are a form of diversion unique to the visitor, yet delightful. There may be a little rain in August or September; there may be considerable rain in December or January, but it falls in torrents and soon is gone. The annual mean precipitation is six inches. There is almost no wind. Nothing in nature

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IN SOUTHERN ARIZONA

MARICOPA COUNTY IS THE AGRICULTURAL CENTER

A Magnificent Region of Country, With Flowing Rivers and Irrigating Canals—A Veritable Oasis, Rich in Minerals

If Southern California is the American Italy, Southern Arizona is the American Persia...

Union. Indeed, here we have a breezy, liberal spirit in the very atmosphere...

Maricopa county, the most populous and one of the most wealthy counties in the territory...

equal in size to the modern canals, and here their corn was reaped from the very land into which the Caucasian invader now thrusts his plow...

The Salt River valley is to be reached by both the Santa Fe and Southern Pacific systems...

more than likely that this new project in time will be a connecting link of the first transcontinental railroad...

The Arizona Indian of today is no longer savage. He still picturesque, but he is rapidly being merged into a most ordinary division of the body politic...

Transportation Facilities The Salt River valley is to be reached by both the Santa Fe and Southern Pacific systems...

Poultry

There is little thrift in the household of a Salt River valley farmer if the chickens do not prosper...

Ostrich Farming

Ostrich raising is properly a portion of the livestock industry of the Salt River valley...

The Ancient Races

The greatest pre-Columbian ruins in existence dot the valley with their evidences and, in fact, many great stretches of land in the Salt River valley today are covered by prehistoric dwellings...

served in crypts and in curious cemeteries. Just below the surface are found row upon row of square jars, some filled with incinerated human bones.

Town of Maricopa

The famous old town of Wickenburg, in the county of Maricopa, is the oldest in the territory...

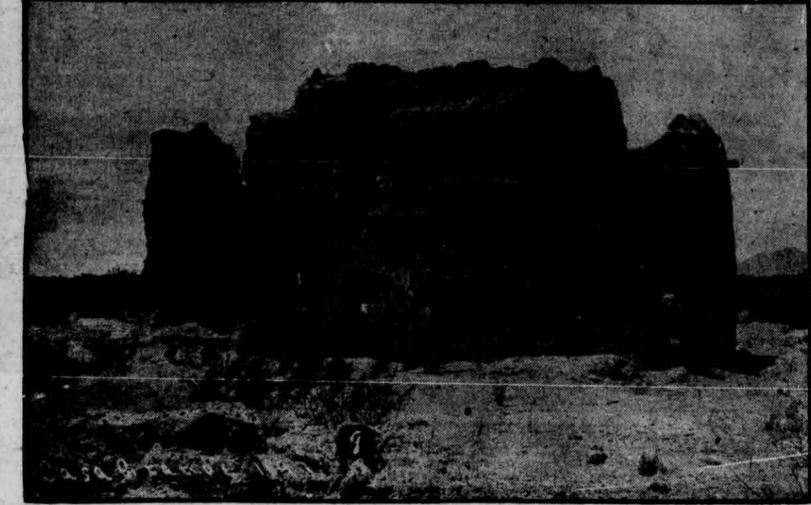
The Old Vulture mine, one of the most famous in the world, was the means of starting this town...

600,000 acres of land susceptible to irrigation, of which amount 1,000,000 acres have been utilized for farms and homes...

The limit of the growth for the valleys of southern Arizona will never be reached until the storm waters of the mountains have been impounded and held for use at will...

first instance to construct necessary reservoirs, dispose of the land to settlers, charge the cost of the reservoirs to them, and when reimbursed for that cost turn over the management and control to the settlers and water users...

Of all the reservoir sites in the arid west the Tonto site seems destined for earliest federal favor...



REUNION OF CASA GRANDE

The dawn of the twentieth century if it had not fallen in the hands of the Anglo-Saxons. In this southern territory is the coming agricultural empire of the continent...

The present session of congress, the recent visit by the sub-committee of the senatorial committee on territories has inspired the people with new confidence...

Under the magic touch of water, Maricopa county, containing the beautiful Salt River valley, is on the verge of entering into a new and important era...

The main line at Ash Fork, passing through Prescott, Kirkland, Wickenburg, Peoria, Glendale and Alhambra, with branch railroads from Jerome Junction to the great mining camp of Jerome...

The Phoenix and Eastern railway, now under course of construction, will furnish an entirely new and much-needed outlet for Phoenix...

There is little thrift in the household of a Salt River valley farmer if the chickens do not prosper...

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A HERD OF BEEF CATTLE

A gold bullion in that section by stage coaches under armed escort was a picturesque sight that furnished rich material for the history of the territory...

absorbing problems with which the people of this territory have to deal. Confronting the consideration of the question to the solution of the difficulties which confront the people already here, it is extremely important...

It is reason to believe that the secretary of the interior will be anxious to appropriate the first moneys used in reservoir construction to the building of a reservoir, whose success is a scientific conclusion and whose success will remove reservoir construction from the era of speculation...

The typical western cowboy is about to pass. With small ranches and wide

the man for the most part in mountain fastnesses of Arizona. Even the bloody Apaches have been dealt with so summarily that many of them wear an air of submission, and there is nothing in their conduct to recall the scenes of the stirring encounters with those blood-thirsty savages.

through the efforts of the progressive citizens of this county, were secured. A few days ago the first spike was driven, and now the line extends beyond Tempe. All surveys for this road are completed and the engineers are performing the work far in advance of the construction crew.

the long ago irrigated crop of corn and beans, and at intervals are the ruins of the pueblos wherein the toilers lived. It is probable the canals served as well for transportation purposes. Beyond the valley in the Superstition, Verde and Sierra Ancha mountains are to be found the finest of cliff dwellings of the south.

Alhambra, Glendale and Peoria are suburban towns to the northward of Phoenix in the Santa Fe, Prescott and Phoenix railway, which have assumed more or less importance. They are shipping points for fruit, cattle, grain and hay. Near Glendale lie the most extensive orchards of deciduous fruits in the valley and near its railroad station are packing houses for the packing and drying of orchard products.

The Salt River valley is to profit much by water storage. The day is not far distant when the upper lying mesas and the outlying plains, to the extent of fully 200,000 acres, will be added to the domain at present cultivated in the vicinity of Phoenix. The land that may be reclaimed is of the finest quality, suited for the growth of a long list of profitable and horticultural products.

To enjoy the proposed emoluments the water users of this valley will necessarily have to merge their interests, which is in itself a delicate matter. Various plans have been evolved, the most popular of which seems to be for the canal shareholders and non-shareholders, both of whom own the lands of this valley, to pool their interests in obtaining control of the canal, for unless the waterways are owned by the land owners for whom the water is appropriated, the secretary of the interior has no authority for providing water storage culverts. Plans have been suggested for obtaining control of the canals. One is to buy them outright, which seems quite unlikely in view of the enormous cost which would

ness his sphere of usefulness is disappearing and the new generation of women are looking around for occupation. There is, however, do there remain as many typical cowboys as in Arizona, where there are still vast ranges and great cattle ranches whose boundaries extend to the last maverick within the range of the cowboy's lariat.

that take from the rivers' supply and distribute the life-giving fluid far out upon the fertile plains. Here in the Salt River valley the visitor may drive in a day past 100,000 acres of growth with grass, alfalfa, vines and fruit trees, and to every acre has been diverted water from its irrigation works.

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PIMA INDIANS AT HOME

PICKING EGYPTIAN COTTON AT STATION FARM

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Its future is dependent almost entirely on great irrigation enterprises designed to tap the Salt River and water the vast area of fertile land tributary to the Southern Pacific railway.

of the upper Salt River and Tonto creek, the largest artificial lake in the world. From a store the new and plain will be irrigated. An abundance of water will be secured for every acre under cultivation in the main valley and the highest degree of prosperity will be assured.

while the third and perhaps the most likely is to hire the canal companies to deliver water at a fixed sum. Already a water-users' association has been formed to solve these problems and make it possible for the farmers quickly to reimburse the federal expenditure upon the completion of the dam.

CHLORIDE MINING CAMP IS BOOMING

made possible by the water power thus developed. It is estimated that this reservoir will supply, on average, a flow of an additional 20,000 acres by pumping water from the desert, thus putting under a magnificent system of irrigation nearly 200,000 acres of land in the Salt River valley.

There are, in round numbers, 200 miles of main canals and 900 miles of laterals now in operation. Two hundred and fifty thousand acres of advantage of the foregoing land lying under the canal system require no other main canals. There are now too many laterals in use. Some of these will be abandoned and some improvements made in the manner of delivery. These conditions gradually are being bettered and by the time a reservoir can be completed they will be properly arranged.

Salt river is the main artery of the valley and the canals are the blood vessels that bring life, ever-renewing, to the soil. The canals of the valley have a total capacity of about 130,000 miners' inches, a flow approximating 1,000,000 gallons a minute. Most important is the Arizona canal, forty-seven miles long. It heads near the junction of the Verde river with the Salt, twenty-eight miles to the eastward of Phoenix. It skirts the foothills to the north, serving to bring irrigation to an enormous area of land well suited to all purposes of agriculture and horticulture. Taking water from the river at a point that secures the greatest economy, it is utilized as a feeder for the Grand, Maricopa and Salt River valley canals, lower-level ditches of the same irrigation system. The canals of the southern side of the valley, completed in order of location, the Highland Mesa Consolidated, Utah, Tempe and San Francisco. The Consolidated is the largest, approximating the Arizona canal in initial capacity. It divides into three branches, one of them the old Mesa canal, another a high-line canal designed to irrigate the rich plain to the eastward and another a low-line canal, and a third water-power branch. The Tempe canal, the oldest and most important of the south side water ways, irrigates through its three arms a large extent of the most valuable and most productive land in the valley.

Mining in Maricopa County

The mining industry of Maricopa county, which gave rise to the establishment of the town of Phoenix, has been much neglected since Phoenix emerged from swaddling clothes. It has been relegated to one of the last of the industries in relative importance, although hidden in the mountain ranges within eight or ten miles of the city are treasures destined before the end of a decade to make known their importance. In fact, it has been asserted by mining men in this county that the importance of this industry in time will eclipse that of agriculture and cattle raising, now by far the most important occupations of the county. Wickensburg, which is located just south of the Yavapai county boundary line and which is in Maricopa county, is the seat of great mining activity, although the contributors to the county's present are Yavapai county mines. There are regions, however, in Maricopa county tributary to Wickensburg which some day will contribute to the mineral wealth of the county. It is a peculiar fact that the people who live in Phoenix and other towns of the Salt River valley give little thought to mining and in fact, few of them have any intimation, whatever of the greatness of the mines now in the embryonic stage. The little property in the hills, only eight miles from Phoenix, and which are plainly visible from the streets of the town, have in them the foundation of a great industry which will make the cattle industry of this valley seem less important. Phoenix was founded thirty-five years ago by reason of its agricultural position, yet the mines near Wickensburg, which are the basis for the agricultural activity which was inaugurated in this valley then. The town was a convenient station between the Verde mine near Wickensburg and the Salt River valley, and the farmers following the example of the Indians who had outlined rude irrigation works here, watered their little fields from the waters of the Salt River and sent their produce to adjacent mines.

A fact little known is that across the Salt river, within eight miles of town, is a tunnel running into the mountains side 250 feet, which formerly was known as the Todd mine. Many thousands of dollars of gold were extracted from these workings and treated on the banks of the Salt river, while the gold obtained in that manner was invested in the construction of some of the best business blocks standing in the town today. The Phoenix mine, a few miles north of town, produced many thousands of dollars from the surface, and although the vein was lost the development work is being prosecuted seriously by wealthy New Yorkers, who will relocate the ledge at any cost. There is a mysterious property known as the Gold Hill mine, nine miles east of Cave creek and said to be owned by Senator W. A. Clark, which, if its probability is a rich producer. Recently a gang of Montana workmen went to work on the property, which has been idle for a number of years. Several shipments of ore were made from the mine, but as to this working no information has been available other than that the ore is shipped under guard and in double-sewed sacks and treated in the east. The opening of the tunnel is protected by an iron door, near which is the house of a guard, who for a number of years has been stationed there to prevent inspection of the property. The Mexican mine in the same district has produced probably a half million dollars of gold since the King, the Mammoth and the Bulldog mines, near Mesa, were included within the boundary lines of Maricopa county, the mineral productions of this district were an important factor to its growth.

Where the combined erosion of the elements and the ancient lake have worn down to the solid formation, a great deal of mineral indications is present. Taking the foothills of Superstition mountains on the south side of the Salt river as a district, exists profuse indications and some developments of gold, silver, manganese and bismuth in the older rocks, while in many cases a sedimentary copper is found along fault lines. North of the river at this point the Indian reservation extends the prospector, but a notable feature is the McDowell mountains, which seem clearly out of place. Being a red sedimentary formation of igneous origin, but flanked by granite and porphyry; continuing farther to the north comes Lime creek and the Sierra Alta sections, where the formation differs from the general Verde formation, contrary to natural expectations. Camp Creek is rich in its diversity of minerals, but the ores are largely sedimentary. Sierra Alta is a tremendous deposit of boronite, one of the richest of the copper ores, permeating a mass of hardest diorite. South from that point is Cave Creek country, which will without question develop mines of importance. The ore here is slate and porphyry formation, and is rich in gold and copper rocks, which occur in contact seams. To the east is the Four Tank district, where occurs gold, silver, copper and lead in still greater quantities. Circulating to the west are the Lower Bradshaw and Vulture districts, probably regarded as extensions of the Yavapai county regions. The White Tank mountains, thirty miles

west of Phoenix, are the most prospectively of Phoenix people. They consist of granite and gneiss, and are cut by clearly defined dikes of iron. As is almost invariably the case with this type of iron dike, the copper solutions rising from precipitate in contact with the granite, cause it to become an iron capping to the great number of copper veins. This character of deposit runs high in metal, but not enough work has been done to determine the extent of the ore bodies. Mica in paying quantities is also found at the north extremity of these mountains. Northwest of these is Osborne range, well known for lead minerals and porphyries. South of these are the Patrella mountains, a high precipitous spur containing quartzite, schist and shale, and marked by granite. Almost through the entire valley can be traced a vein of mineral bearing quartz of varying width, carrying considerable values in gold, silver and copper. The deposits are in contact with the granite, but it would appear that a considerable slice is taken off of the southern end of these mountains by the reservation line, and a triangular section toward the middle of the range is also appropriated by the redman. Pegmatite granite cuts this range transversely in a number of places, and in these granites are found a variety of minerals, including bismuth, cassiterite, magnetite, as well as garnets, tourmaline, mica and epidote.

The Salt river range of mountains, extending twelve miles east and west, south of Phoenix, are granite spur-like eruptive cappings and igneous rocks, and in places exhibiting metamorphic limestone. Gold and iron pyrite is characteristic of the northern slope, while on the south side ariferous deposits are found free in eruptive porphyries.

The Hillside Mining District

Among the more promising mines of northwestern Yavapai county might be mentioned the Hillside group of mines, located near Hope peak. This district has long been famous for the richness of its deposits of gold and silver. The Hillside is a true fissure vein of good width, with well-defined walls, and the ore is practically continuous.

The mines in this district are said to be the richest in the country, and it is safe to predict a great future for them. The surrounding country, sloping gradually towards the southwest, is abundantly supplied with pine timber. Mr. J. R. Beaton, chairman of the board of supervisors of Yavapai county, owns a promising group of claims in this district.

Maricopa County Agriculture

Agriculture has reached a point in the Salt River valley beyond which little progress can be made before the consumption of water storage. After the water of the Salt River valley is applied to the opportunities in this valley are almost limitless. The valley is six weeks earlier in the market with apples, grapes, oranges and peaches, thus assured of securing a ready market for its products. The early fruits always command the highest prices and most ready sale. In the last two or three years, the fruit industry has retrogressed on account of water famine and horticultural pests, but the farmers have learned many lessons and the Salt River valley, which has become the fruit basket of the county, is being shipped in some instances as far as London, will in time be one of the most famous regions in the world for its fruit.

The extensive fields of alfalfa in the valley afford fine opportunities for the fattening of stock, of which the stockmen of the various counties have taken considerable interest. Alfalfa now is a profit to the farmer, affording a ready source of cattle driven in from surrounding ranges. Alfalfa now is king in the southland and the best alfalfa in the valley is produced in this valley. A farmer can and does in average seasons raise an acre from \$25 an acre from his easily attended alfalfa field, more than the farmer who does this double his investment, marketing his crop on its own feet instead of by weary wagon haul.

Yes, there are farmers in Arizona's southern valleys, and among them the Salt River valley, who get along with only one alfalfa to properly keep two horses, a cow and a run of chickens. When the barley usually profitable, and when properly grown and intelligently irrigated produce from 1500 to 2000 pounds to the acre. Both of the cereals to secure the best results are sown before the Arizona winter sets in, and they return the best yield when sown in ground that has been irrigated and then plowed. Oats, save under exceptional circumstances, fail to mature their grain, though the wild oats grow luxuriantly and are esteemed for hay.

Almost infinite is the list of special field crops that may be raised in this valley. Perhaps in days to come sugar beets will occupy an acreage in the place next below alfalfa. In saccharine beet the purity of the Arizona beet has thus far come from localities with latitudes above 2900 feet. Sugar cane here thrives in all luxuriance, as the sorghum. Both have been utilized in the manufacture of molasses. Sorghum is one of the most profitable crops when grown for fattening cattle. The feeders secure the most economical and healthy results when they combine sorghum with alfalfa hay.

The orange, queen of fruits, is at home in the Salt River valley. Six hundred acres of oranges have been planted in the valley, and success has been invariable where the limits of the valley's upland thermal belt have not been overstepped, and where the orchards have received proper attention. The orange crop is as certain as alfalfa, and is by far the most profitable of all the valley products. There has never been a failure in the normal belt of the 40-year-old oranges here, and they have been grown. Success has also come to the growers on the upland about Mesa. The fruit is now shipped from Phoenix by the carload, and is in demand for the Christmas holidays, and therefore finding the best market of the year at the best prices paid. There is much to be said for the orange, which is a superior, its flavor exceptionally sweet and delicious. It is fully ripe by December 1, fully colored and matured six weeks at least before the oranges of Southern California. The most conservative statement of the profits of orange culture in Arizona has a flavor of "boom literature." In this valley the oranges are the most profitable of any fruit. They begin to bear at three years and at five years produce about 150 oranges to the tree. This sold at from \$3 to \$4 a box in Phoenix means an income of from \$4 to \$5 a tree, or \$300 to \$400 an acre. Matured orchards will readily double this income. The usual Christmas price in Chicago for Arizona oranges is \$1.00 a box.

That there is money in apricots is shown by the experience of a shipper

during the season of 1909. He gathered up something less than a dozen carloads of the Royal variety and cleared, after paying for his fruit, picking, packing, freight and commissions, an average of \$1000 profit on each carload. In a carload are 1200 crates. Each crate sold in Chicago for \$1.75. His fruit cost 20 cents a crate in the orchard and 33 cents a crate to get to Chicago. The individual who is incredulous can do his own figuring. As with oranges, the apricot crop of the valley leads the market. The Newcastle variety ripens May 10 and the Royal, the best of all, are about two weeks later. Apricots are among the most popular of fruits, and those grown in this valley are as delicious as can be found. Immense quantities are demanded for the markets of the southwest, more than a carload being shipped by express during the season to points in Arizona and New Mexico, and even into California. Most of the valley crop is dried and in this form is nearly as profitable as when handled green.

Almost every known variety of peach is cultivated and the fruit is to be found in the markets of Phoenix from May 10 to Christmas. The best of the peaches, mainly of the clingstone varieties, are notable for exceptional size and flavor. The trees of all varieties bear heavily and uniformly.

Pears of special varieties have been found profitable to the grower. The crop of 1899 was especially large, a number of carloads of the fruit having been shipped to various markets.

While almost all members of the plum family flourish in the valley's soil, there is little doubt the best results have been secured in the cultivation of the Prunus Simoni. Almost any grower who has ever tasted it will declare it the most delicious of delicious fruits. The tree is here a sure bearer and a heavy cropper, and its fruit has never yet been filled and it is doubtful if it ever will. The Prunus stands shipping well, is shown in the fruit and brings a price that makes the orchard a very profitable investment. The Japan varieties of plums bear well. The growing of almonds has been demonstrated successful and completely profitable. The owner of a four-acre tract immediately south of Mesa this season cleared \$8000 on his crop and is assured of even better returns for succeeding years. The crop is an easy one to grow, care being necessary only when the blossoms are forming in the early spring. Arizona almonds are remarkably thin-skinned and command the top price in the market.

Olive trees are widely grown in the Salt River valley for shade and ornamental purposes. The climate and soil are alike congenial. Indeed, this year the population of the county has increased in any merchantable quantity by the young trees of the several orchards planted. All indications show the olive growing in this valley to be one of the leading industries of the future. Picking and oil-pressing works have been established for handling the crop.

In many parts of the valley fig trees are being planted, and the delicious fruit is to be had for the taking. Every farmhouse has even more than enough for supply. The extreme delicacy of the fruit forbids shipment in its green state, though the best methods of packing have already been developed. The vineyardist of the Salt River valley has already found his "long suit" in grapes. He is growing the seedless varieties of the largest size, and the deepest satisfaction is being derived from the very earliest of grapes to reach the metropolitan market or dried raisins, there is money in them. The general quality of the country is well adapted to grapes without seeds, and is willing to pay well for them. The industry of curing raisins has assumed considerable proportions. The grapes of southern Arizona are of a high quality, sugar than are those of other grape-growing regions, the raisin thus being given the highest quality. Nearly all the raisins of the valley are grown. Wine and brandy are made, and sold in large quantities. Experts have declared that the Salt River valley will be renowned for the quality of its heavier wines, and that the saccharine in the grapes will militate against the production of the lighter grades of clarets, Burgundy and sherry. The manufacture of excellent quality. Phylloxera and other diseases have never troubled. There is something in the dryness of the atmosphere or in the method of watering the vines that seems to absolutely prevent the growth or spread of insect pests. The first grapes seen in the eastern markets are those shipped from the valley.

Strawberries can be successfully raised a greater portion of the year. They are a delight to the epicure, far more delicate in flavor and texture than any other fruit raised in the United States. Beside them the familiar sharp berry of the eastern states is dry and tough and tasteless. By expert methods throughout the southwest, within the range of the keeping qualities. The demand seems never to be filled, and the growers who are producing in the valley are doing well. The berry patches are fast becoming a permanent feature of the valley, and are of good quality.

Beekeeping is one of the most profitable of the Salt River valley, and is of good quality, and is principally sold to confectioners and bakers' uses. About 10,000 hives are maintained in the valley. The average yield of a colony is often exceeded, two hundred pounds being no unusual amount in good seasons. The bees are mainly of the yellow Italian variety. The colony is so well adapted for the production of honey that every suitable place in the valley is being taken up by the bees that have escaped from the appliances of the valley, the busy insects doing their part toward making the land one that shall "flow with milk and honey."

The Arizona Agricultural Experiment station has come to be looked upon as one of the most important institutions of the territory. The work is of a scattered nature owing to local conditions. The office and laboratories are located at various points of the territory. At Tucson, the station being under the management of this institution. Here is located the chemical laboratory where analyses of soil, water, and feeding stuffs, and of other matters pertaining to station work are made, and the botanical laboratory, where the studies in the field of agriculture are done. Here also are a complete set of meteorological instruments that are used in making records in connection with the meteorological studies of the station.

Near Tucson is located the range where experiments are being made in vine and fruit raising. By fencing a large tract and treating it as a vineyard in different ways, an attempt is made to ascertain what can be done toward the improvement of the run-out ranges of the territory. Near Tempe is located an experimental date orchard. There are planted several hundred date trees that have been imported at great expense from Northern Africa by the government. A large number of varieties are included and the object is to test which is best adapted to Arizona. In a few years the fruit will be large enough they will be distributed to those who desire them at a nominal cost. The fruiting well in connection with the station is conducted at

Chloride, the thriving town in the mining district of that name, is situated at the terminus of the Arizona and Utah railroad, which connects with the Santa Fe at Kingman.

Chloride has long been known as one of the leading mining camps of Arizona and is surrounded by some of the richest mines in the territory. The Newcastle variety ripens May 10 and the Royal, the best of all, are about two weeks later. Apricots are among the most popular of fruits, and those grown in this valley are as delicious as can be found. Immense quantities are demanded for the markets of the southwest, more than a carload being shipped by express during the season to points in Arizona and New Mexico, and even into California. Most of the valley crop is dried and in this form is nearly as profitable as when handled green.

Almost every known variety of peach is cultivated and the fruit is to be found in the markets of Phoenix from May 10 to Christmas. The best of the peaches, mainly of the clingstone varieties, are notable for exceptional size and flavor. The trees of all varieties bear heavily and uniformly.

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THE LELAND MINES

The Leland group of mining claims

is owned by the Mohave Gold Mining company of Arizona and is situated in the San Francisco mining district, in Mohave county, about sixteen miles northeast of Needles, Cal. About twenty-eight miles southwest of Kingman and about twelve miles east of the Colorado river, where there is an abundant water supply.

The group consists of nine claims viz: Leland, Leland, No. 2; Boston, Mitchell, Whaleback, Oro Fino, J. B., No. 3, 409.23; Mitchell, \$18.53, and the

mineral veins comprise white quartz mixed with spar and carrying some granular magnetic iron. The country rock is bluish gray porphyry and is quite hard. The ore in all these veins is free milling gold ore and can be easily and cheaply worked.

Mining is done on this property by means of tunnels, of which there are five. Tunnel No. 1 carries ore values averaging \$50.45; No. 2, averages \$23.33; No. 3, \$69.23; Mitchell, \$18.53, and the

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Santa Fe, to the Leland and other mines, and work is expected to begin soon. Good wagon roads already connect this camp with both Needles at Kingman.

Fuel oil is delivered at Needles at from 60 cents to 65 cents per barrel, thus putting within easy reach of the camp the cheapest fuel in the world. The cost of mining, transportation and milling will be about \$4 per ton.

A corporation has been organized

under the laws of the state of Delaware to operate the property, and the directors propose to sell sufficient stock to erect a forty-stamp mill and put the mines on a dividend-paying basis. J. A. Turner, 381 Bullitt building, Philadelphia, Pa., is the manager of the property. He is a practical mining man of many years' experience, and having plenty of capital at his command is bound to bring the mine to the front as one of the leading mines of the territory.

There are three separate veins upon the property, all fissures, with fairly smooth and well-traced walls. The

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CITY OF KINGMAN

And Kingman will profit by it to a remarkable degree.

About Mohave County

Mohave county lies in the northwestern part of Arizona, its western boundary being the Colorado river. A line running through its center and carried eastward would pass through the middle of North Carolina. While the great portion of its area is at considerable altitude, yet it is by no means all mountainous. It consists, on the other hand, a series of broad, gently sloping valleys, abrupt ranges of hills and mountains, deep canyons and numerous water-courses. Its total area is 13,421 square miles, of which the greater part is actually greater than that of Massachusetts and Connecticut combined. The county's population is between 5000 and 6000. The main line of the Santa Fe route traverses the county from east to west and has made possible the great development of mineral wealth in this section. In truth, until the advent of the road, it was an unknown land, peopled only by the Supai, Hualapai and Mojave tribes of Indians. With the advent of the road, and the opening of the territory to the world, the fame of this new country began to be noted abroad and the usual influx of gold seekers followed. The Santa Fe aided in the development in every way, and consistently good, well known and the development of the country meant the material advancement of its own interests. From Kingman, northward, another line of railway was subsequently built, connecting the rich mines in the Chloride region

with the main line of the Santa Fe. This road is the Arizona and Utah railroad.

Of course, mining is the chief industry of Mohave county, but stock raising is progressing so satisfactorily that it now forms no mean portion of the wealth of the county. Manufacturing will soon be learned it and increased for Mohave county is fortunately situated than any other county in the territory, perhaps, from the fact that the Colorado river enters from the confine of the Grand Canyon of the Colorado, on its western border, and skirts it for a hundred miles or more, only awaiting the will of man to harness it and create all the power the entire county could possibly use. The agricultural future of the county is assured, from the same source, just as soon as the Colorado will settle its broad valleys and a demand for an irrigation system of magnitude be created. The

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KINGMAN AND MOHAVE COUNTY

Nestling in a pretty valley, sixty miles to the northeast from Needles, Cal., bathed in almost perpetual sunshine and balmy breezes, lies the pretty little city of Kingman, the county seat of Mohave county—one of the richest mineral sections of the great territory of Arizona. Although just off the edge of the Colorado desert, a few miles, yet its elevation of upwards of 3000 feet gives Kingman a delightful climate, while the development of a high quality of soft water at reasonable depth has supplied the town with an abundance of water, so that it is a sparkling region of green to greet the eyes of the dusty traveler who has journeyed through the desert sands.

Kingman has wide and regular streets, substantial buildings and is the center of commercial interest for the entire county, which, as before stated, is one of the most important in the territory. There are two pro-

gressive, wide-awake newspapers, the Mohave County Miner and Our Mineral Wealth, both staunch advocates of the claims of Arizona for statehood and ardent exponents of its progress.

There is a handsome schoolhouse, courthouse and other county buildings, a number of churches and two brick business blocks, as well as a magnificent Harvey hotel, all of which have been added to Kingman within a comparatively few months. The town depends chiefly for its business support upon the numerous productive mines, within a radius of less than sixty miles, but there are also growing industries in agriculture, stock raising and fruit growing that are becoming of considerable importance. The development of water in Kingman proper has shown not only the abundance of water to be had for the drilling, but also the marvelous productivity of the soil, when irrigation is possible. This will lead to more extensive experiments in the immediate future, and it is almost a foregone conclusion that before many years a wonderfully rich farming section will be developed in the territory.

Toward the north, perhaps fifty miles, is the White Hills mining camp. A prosperous town has grown up around the mines, among which are some of the best paying properties in Arizona. Thirty miles still farther north are the rich placer diggings of Temple Bar, about which so much has been written. The unlimited supply of water and water power afforded by the Colorado river at this point makes possible any sort of mining venture,

for shade, for fuel and for timber. are published in the "Timely Hints" of weekly commonly grown in California and other regions where they have been tried, but it has been ascertained that a few species are well adapted to the climate, one especially promising to be a very valuable one

no matter how grand a scale it may be projected. It is quite within the range of possibility that electric power may be developed here and transmitted to Kingman and other surrounding towns, to be used in manufacturing, lighting, etc.

Twenty-six miles south of Kingman, and connected with it by an excellent wagon road, is the progressive mining camp of Gold Roads. Snow Ball, Leland and Gold Hill camps are all within a radius of seven or eight miles, this is one of the sections that will be eagerly taken up by eastern capital the moment statehood is achieved and property rights and titles become securely prospected. There are some of the best mines and prospects here to be found anywhere in the west. All that is required is confidence in the stability of things, and capital will erect mills, engage labor, open and operate these rich mines and put them all at once upon a profitable

great Hualapai valley, to the north of Kingman, spreads out its half a million acres to the view of the transcontinental tourist from the car window. The spring rains cause it to become verdant as a garden, affording pasture for myriads of sheep. The soil in this valley has been found to be upward of 100 feet deep, where bedrock was struck. This and the Sacramento valley are still both open for settlement.

Almost the entire county is a belt of rich mineral wealth. The principal camps, thus far deserving mention are Chloride, Cedar, Cebat, Gold Hill, Gold Roads, Leland, Mineral Park, San Francisco, Signal, Silver Creek, White Hills and Snow Ball. Unusual activity pervades all of these localities at this time, and the coming winter will witness an influx of eastern capitalists who will so materially increase the development of the rich claims, as to bring Mohave county rapidly to the fore as one of the richest mining sections of the southwest. The mines are no recent discoveries, nor are they land, peopled only by the Supai, Hualapai and Mojave tribes of Indians. Mining began here as far back as 1860. The development proper, however, covers but a brief period of years, notwithstanding which, hundreds of thousands of dollars of value have been taken out. New railroads are projected—many of them actually surveyed—and when built will bring scores of new mines on the direct line of transportation. There is little or no snow in any portion of the year, and except possibly July and August, when it is hot, the mines can be worked the year around.

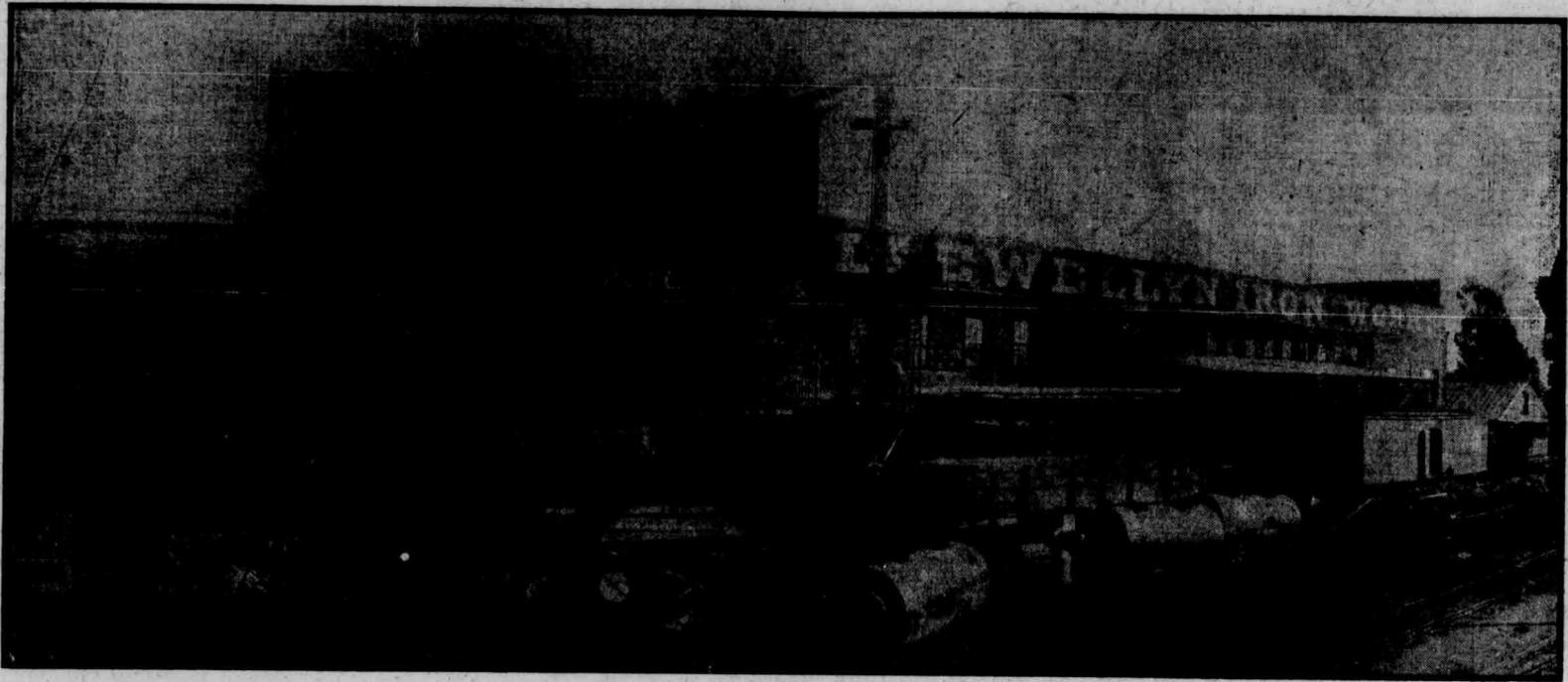
The results of all these experiments ment farm, but there is reason to believe that future legislatures will recognize the value of the work that is being done by the station, as to make the necessary appropriations for buildings and for other improvements.

LOVED DAMON.

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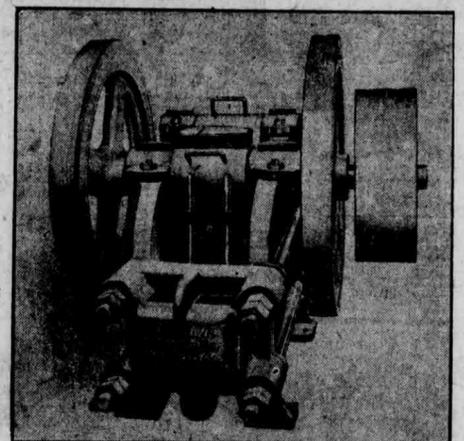
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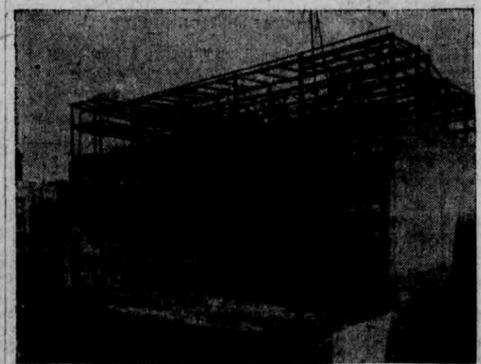
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MID-WINTER NUMBER

ARIZONA

PRESCOTT AND CENTRAL ARIZONA

Yavapai county, the treasure county of Arizona and one of the oldest subdivisions of the territory, after passing through alternating periods of prosperity and depression, now is emerging from a renaissance into an era whose golden awakening is making itself felt in the capital centers of this country. No longer hampered by the savage Indian and harassed by the ignorance which characterized the early mining operations this rich mineral section of the southwest is forging rapidly to the front and gives every indication of the opening of vast treasures, which shall enrich its country beyond that of any other equal area in the country.

From the first settlement of the territory no section has been more favored or sought after than Yavapai county. Its natural advantages have directed capital and enterprise has been conspicuous in developing the country. Richer in a great variety of resources than any other portion of the territory, possessing a climate free from the extremes of heat and cold, it is but natural that the first north and south railroad possessed by the purpose of developing the resources of this favored region. No other portion of the southwest has secured so large and so desirable increase in its population during the past few years as has this county. While there are isolated instances of a few sections having under the excitement of a boom directed for the time being attention, the growth of this portion of Arizona has been a steady one, permanent and stable in its character, and almost free from the feverish intoxication of speculation, which so often forms the only basis upon which new regions of the west are brought into prominence, to be maintained there until the schemes of unscrupulous speculators are consummated, and then allowed by their boomers to lapse into their former obscurity.

In a recent report to the secretary of the interior, N. O. Murphy, then governor of the territory said: "At present in writing a satisfactory idea of a frontier settlement is a most difficult matter; the causes which call such settlements into existence may be narrated and its growth may be explicitly set forth with conscientious observance of statistical minutiae, yet the impression created may be far from being approximately correct. Within less than a quarter of a century more people have found homes within a radius of 100 miles of Prescott than lived along the entire Atlantic coast of North America the first half of the century following the landing of the Pilgrim Fathers."

Yavapai county presents wondrous sketches of scenery to offset the pragmatic feeling with which one views the mountainous treasures of mineral. Far up in the mountains most of the settlements and towns are surrounded by verdant clothes of pine and the blossoming shrubbery which contributes to the fragrance of the general and perennial breezes. A great mantle of snow already has enveloped the Yavapai mountains this winter, and no snowy spectacle can eclipse it in grandeur. The vast ranges of cattle, as well the mountain sides dotted by prospects and mines, breathe the air with prosperity,

of changing scenes, the like of which is seldom equaled. Following its sinuous trail, which winds around the precipitous mountains on a road barely wide enough to admit the railway ties, the passenger ascends and descends sharp grades, peering now to mighty depths down the sides of the precipitous mountains, and again spanning a great chasm, gorge or canyon on one of the high trestles which alternate with mountain grades in forming the road of this safe, but seemingly dangerous, route. Everywhere along the route are changing geological formations with copper stains, displays of quartz, and rich evidences of the mineral wealth which pervade the whole region. But the culminating feature of the trip, the approach to the United Verde, one of the greatest copper mines in the country, the uninitiated sees only the great copper works, the mounds and massive slag piles to indicate to him the vast treasure concealed under the only mountains in the whole journey which cover their evidences of mineral richness in a growth of verdure and which hide the vein of croppings under sedimentary deposits.

Further south, through the Point Rocks, with their bits of rugged and rocky mountain scenery down to Fort Whipple and through Prescott, there is a panorama of scenic variations, while on toward the southern valleys of the territory over a summit of great altitude and through forests of pine and juniper, there finally spreads before the vision of the tourist the first evidences of that agriculture which is so valuable an adjunct to the mining industry and the cattle ranges where one of the chief industries of the territory flourish.

The city of Prescott at once recalls the story which thrills the small boy in the fourth reader. Thumb Butte, the scene of a famous bit of gratitude of an Indian to a white man, stands out in bold relief. Here it was that an early white settler who, touched by pity had fed a starving Yavapai, while on toward the southern valleys of the territory over a summit of great altitude and through forests of pine and juniper, there finally spreads before the vision of the tourist the first evidences of that agriculture which is so valuable an adjunct to the mining industry and the cattle ranges where one of the chief industries of the territory flourish.

Leading from Prescott are magnificent drives over the mountains; through the pine and juniper forests to Granite Dells through the historic Fort Whipple, is a drive which enthralled the tourist, taking him from one bright but fearful scenery to another over rugged crags and down steep mountains, finally placing him in one of those beautiful dells whose creek and velvet layer of grasses are almost hidden by the overhanging branches of large trees. In any direction from Prescott one encounters new features of interest on each trip, and it is a fact well known in Prescott that those who have lived in the town since childhood days never tire of the scenery which envelops the mountain community.

Fort Whipple, the famous citadel of early and strenuous Indian warfare in Northern Arizona, is on the verge of rehabilitation. By the first of the year actual construction will be begun in the replacement of the old officers' buildings and barracks, and substantial structures for the accommodation of a battalion which will occupy the fort. All the plans have been devised and the

timely perhaps with a regiment, will be no small source of income to Prescott, and will contribute much to the apparent liveliness of the place. One of the chief advantages, however, is the fact that it will add a new point of interest to the many visitors who reach Prescott, while a military band and the glitter of shoulder straps and swords will contribute much to the pleasure and society of Prescott.

Since the days when General Crook and General Lawton, in their fiercest and thrilling warfare against the blood-thirsty Apache and kindred tribes of northern Arizona, when Fort Whipple was a source of protection to the settlers who blazed the trails into Yavapai county, this old garrison is replete with tales of romance and blood-curdling adventures with the red skins. Deeds of valor and of daring, which had their origin in the stronghold which overlooks and which affords a natural protection to Prescott, fill the pages of many



THE CITY OF PRESCOTT TODAY

of stones and highly polished and decorated pottery and surpasses the work of the modern aborigines. The prospector marvels at the ruins of former habitations, usually in vain over the mysterious pictographs and hieroglyphs cut deep and lasting into the gloomy walls that rise ominously like tombstones in the mountain canyons.

The voices that were hushed in the silence of the centuries ago find but feeble utterance in these sign writings. There is every reason to believe that the entire southwestern region was once densely populated, the ruined habitations pointing to ancient occupation in almost every square mile of Arizona while the population of Yavapai county certainly was far greater than the numbers who now inhabit that subdivision. In the processes of the equinoxes, say the scientists, the climate in these thousands of years that have elapsed

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THE CITY OF PRESCOTT TODAY

has experienced radical changes, or ruined villages abound in districts where today there is not a drop of water to be found within twenty miles or more. Yet there is indication that radical as may have been the change of climate, and the topographical changes which in themselves may have been responsible for the obliteration or the expatriation of these races, peculiar conditions now probably resemble those of the prehistoric era.

Prescott herself is built upon the site of a prehistoric city, and many relics of antiquity have been unearthed. In Chino valley, twenty miles to the north, many interesting ruins still are extant, and human skeletons have been excavated from them, as well as many large ovens filled with charred corn and beans, some of these ancient dwellings show clearly the marks of a fiery lava that swept over them in the days of volcanic activity.

In the vicinity of Walnut Grove, twenty-five miles south of Prescott, the ruins of large stone buildings are found

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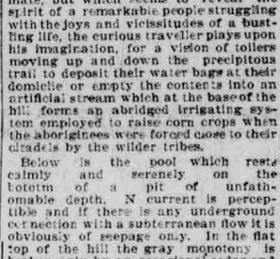
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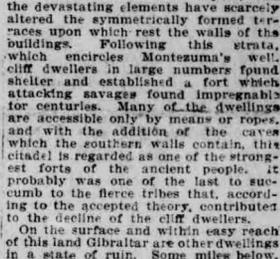
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PRESCOTT BEFORE THE FIRE OF 1899

Tourists find no more beautiful country in Arizona, and he who in spending a vacation in the pine-clad regions of Yavapai county suffers of ennui was born blasé. In entering the county from the north the railway coaches pass through a variety of scenery, each absorbing in its interest, because each is peculiarly Arizona. In entering the territory from that direction it is in Yavapai county that the visitor encounters his first glimpse of the great mining industry. For at Jerome junction, where a narrow gauge railroad branches on the Santa Fe, Prescott and Phoenix railway, there are the evidences of the enormous transportation of supplies and bullion to and from the world-famed mining camp of Jerome.

This narrow gauge railway, by the way, presents one of the most remarkable engineering achievements in the country, and at the same time conveys the passenger through a myriad



PRESCOTT BEFORE THE FIRE OF 1899

of preliminary work performed and the process of rehabilitation is under the direction of Major Wolcott. It may be four or five years before the reconstruction is completed, and in the meantime Company L of the Eighteenth Infantry is occupying the fort. F. M. Murphy, a prominent Arizona capitalist, a citizen of Prescott, who labored assiduously for years in inducing the war department to rehabilitate this garrison, is largely responsible for the official directing it.

There are many features of the place which have appealed to the war department, for a fort of any magnitude is to be maintained in the southwest there is no more feasible point than Fort Whipple. There are hygienic and point more strongly than any other.

The reconstruction of this garrison is a boon to Prescott in many ways. The city has passed the stage in which it regards this military post from a pecuniary standpoint, although the garrisoning of the fort with a battalion and ul-

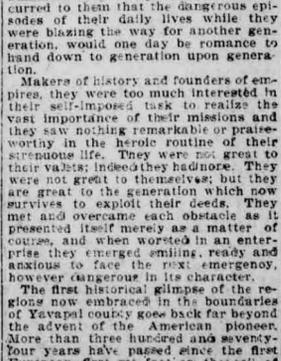


PRESCOTT BEFORE THE FIRE OF 1899

The board of directors is composed of F. M. Murphy, Prescott; Edw. P. Ripley, Chicago; Victor Morawetz, New York; Edward J. Berwind, New York; Thomas P. Fowler, New York; R. Somers Hayes, New York; Charles Steels, New York; Benjamin P. Cheney, Boston; E. B. Gage, Prescott.

The members of the executive committee are F. M. Murphy, E. P. Ripley, Victor Morawetz, R. Somers Hayes, Charles Steels.

The general officers are F. M. Murphy, president and general manager, Prescott; E. D. Kenna, vice president, Chicago; J. H. Emmert, assistant to the president, Prescott; Victor Morawetz, general counsel, New York; T. J. Norton, general attorney, Prescott; W. A. Drake, general superintendent and chief engineer, Prescott; Wallace Fairbank, secretary and treasurer, Prescott; L. C. Deming, assistant secretary, New York; H. W. Gardner, assistant treasurer, New York; J. J. Wragovich, auditor, Prescott; H. P. Answalt, gen-



PRESCOTT BEFORE THE FIRE OF 1899

eral freight and passenger agent, Prescott.

An able corps of officers assist Mr. Murphy in the conduct of this railway. The road has been so liberal in its policy as to contribute substantially to the growth of tributary regions which were held in check by the sluggish action of stage coaches. Among its freight are heavy shipments of ore sent out to smelters, with a graduating scale of rates which enables the company to assist more surely in the upbuilding of every region along its route. Losing money in conveying ore, the way grade over the company thus encourages the full exploration and development of a region and reimburses its losses upon high grade routes. Its shipments constitute the chief output that is transported by this railroad, but cattle shipments also are an important factor in its business. While in reaching settled communities and in opening others the road secures the transportation of many carloads of



PRESCOTT BEFORE THE FIRE OF 1899

on the elevated mountain slopes. On the Rio Verde and all through the wild mountain fastnesses south of the Erieas, these ruins are encountered in profusion. On the Lower Verde, sixty miles below old Camp Verde, are the some remnants of a gigantic fortification from the mound of fallen stones that some of these building walls stood to the height of fifty feet. This ruin contains partitions on the ground floor far beneath the floor of the upper story, and has been discovered a human skeleton of a man who measured more than seven feet in height.

These people have not perished in warfare, but succumbed to volcanic fire in greater numbers and in a awful manner as the victims of Pompeii. Theory upon theory has been advanced by ethnologists and other scientists as to the origin and customs of these primitive



PRESCOTT BEFORE THE FIRE OF 1899

people, and numerous have been the conjectures of the agency that has completely blotted out the great and powerful race. Indelible, however, as are their rock sketches, as carefully hidden as the ridge of the Sphinx, is the study of their rise and decline.

For countless centuries the lucid waters have maintained the same level in a phenomenal well in this region, which once furnished the aqueous supply for the ancient and celebrated people, and which today is the center of attraction for hundreds of ethnologists and curiosity seekers. Twelve miles above the old and historic Camp Verde, on the Rock Verde and beside the wagon road that leads to Flagstaff, is located Montezuma's Well, one of the most marvelous of the natural wonders of the territory.

Rising in an unpretentious and gentle manner, a hill a hundred feet above the surrounding country first breaks into the vision of the traveler bent on seeing one of those monuments to the pre-historic man in America, and disturbs the monotony of the whole country. It is near the bank of Beaver creek and there is little or nothing about the hill to attract the attention of the sightseer, but the gray malpais with which the ground is his range to dilate and, like a Balboa, stands transfixed by surprise equalled only by the rare beauty of the scene before him.

Here, in the presence of the most ancient habitations known to this continent, towering over waters once fed by unknown sacrifices, and inclining his head in prayer, the visitor in a picture inanimate, but which seems to reveal the spirit of a remarkable people struggling with the joys and vicissitudes of a bustling life, the curious traveler plays upon his imagination, for a vision of toilers moving up and down the precipitous trail to deposit their water bags at their domicile or empty the contents into an artificial stream which at the base of the hill forms an abridged irrigating system employed to raise corn crops when the aborigines were forced to use their ditches by the wilder tribes.

Below is the pool which rests calmly and serenely on the bottom of a pit of unfathomable depth. No current is perceptible, and if there is any underground flow it is with a subterranean flow it is obviously of seepage only. In the flat top of the hill the gray monotony is broken only by an occasional cedar and a well-like lake about four hundred feet across, with perpendicular walls straight down to the most blue and crystalline waters. A fringe of peacock green skirts the waters' edges, and water lilies float majestically upon the surface. These plants alone survive to establish the semblance of animation. With the last of the Cliff Dwellers disappeared every other form of life. Not a fish, natural or unnatural, lives to bear mute evidence of the activity which once overhung the well. The lilies which have rescued the scene from still death have served the greater purpose of preserving it from vandalism, for the Apache Indians, who have roamed the hills and mountains perhaps for centuries, long ago conjured one of the strangest of their strange beliefs, and while the lilies live not one redskin of that brave tribe dares to invoke the wrath of that omnipotent spirit who in their fancy seeks to drag the last member of the tribe down through the pool into the furious and sulphuric bowels of the earth.

The smooth surface of the water, where relieved of layers of lilies, re-



PRESCOTT BEFORE THE FIRE OF 1899

distinctive mining camp, with a normal population of over 3000 souls; Congress with 1000; Crowned King, McCabe, Ash Fork, Congress Junction, Mayer, and many smaller places. In addition to these "camps" there are thousands of souls scattered over the mountains. The educational facilities presented by Yavapai county are excellent and far surpass even older settlements. For instance, at the present time, more than fifty school districts are maintained in the county with an aggregate attendance of over 1500 pupils, and calling for an annual expenditure of over \$42,000 to sustain them. The most attractive feature of Yavapai is its climate—language cannot do it justice. The extremes of heat and cold are rarely felt. Yavapai county has a present area of 8000 square miles.

In no other quarter of the globe, unless it be on the lofty plateau of the

Andes in South America or of the Sierra Madre in Mexico, can so faintly be felt...

agricultural land valued at \$117,503.17, with improvements thereon assessed at \$55,787...

probate judge, C. P. Hicks; school superintendent, C. F. Cox; assessor, Joseph P. Dillon...



GENERAL B. W. LEAVELL, ADJUTANT GENERAL OF ARIZONA

But while the mean annual temperature of the most prominent sanitariums of Southern California is almost identical with those of Prescott...

operation many thousands of acres now brown and barren, though blessed with soil of the utmost fertility...

has developed a remarkable circulation not only in this territory but in the east. The Journal faithfully chronicles the mining developments of Yavapai county...

Grazing But the resources of Yavapai do not stop at mines and agriculture. The entire surface of the country is grazing ground...

THE MINES OF YAVAPAI COUNTY A Mineral Section of Marvelous Wealth and Promise

If Colorado or any of the better known mining states could furnish a parallel to the present rapid development of the mineral resources of Arizona...

territory and who operate from their desks outside of the territory, launch the scheme. The diligence of Uncle Sam in procuring corruption in the mail service...

For instance, not long ago a \$2,000,000 company was organized to take over a number of dormant properties on Fryer Hill, Leadville...

The distinction between legitimate and fraudulent mining is one which cannot be closely drawn except by a knowledge of the intentions and capabilities of the promoters...

At historic Tombstone, in Cochise county, the greatest new mining enterprise to be found in the United States today is starting the period when it will place Arizona far up on the list of mineral producers...

As a rule, although this may not always be true, those who are achieving the greatest results in Yavapai county and in most other parts of Arizona...

In Yavapai county great undertakings are under headway, and yet no great ripples of excitement have been created. Great mineral producers have sprung up in this county almost before the people have been made aware...

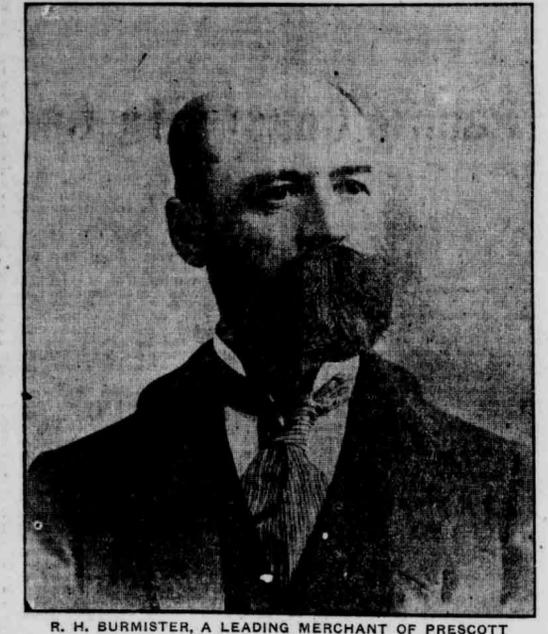
A ride over the Prescott and Eastern railroad from Prescott to Mayer and from Mayer to the Poland mine, and an observation of the activity throughout the section tributary to that line...

which the treasure house of Lynx creek is to be unlocked. The road terminates at the Poland mine. The Poland alone warrants the construction of the railroad...

For a better comprehension of what it means for a railroad to penetrate a mining country, it should be borne in mind that the region tributary to the Prescott and Eastern is not new to the miners and prospectors...

This great tunnel, which is boring through the mountain from the terminus of the railroad to the Lynx creek basin, is the most ambitious undertaking of the kind that is to be found in all the western country...

When finished it will form the key to the Lynx creek side. When finished it will form the key to the Lynx creek side.



R. H. BURMISTER, A LEADING MERCHANT OF PRESCOTT

six weeks' grass, or summer grass, shoots up with wonderful luxuriance, and the cattle revel in it while it lasts...

site of the ruins of this historic old town has risen a modern and up-to-date city of substantial business structures...

The Brisley Drug Company About twelve years ago Harry Brisley arrived in Prescott with his wife in search of a good location for the drug business...

Distances in Florida One of Senator Quay's party once, in Florida, went alligator hunting, and as often happens with the uninitiated, he got lost...

There are several reasons why there has been so little mention at home and abroad of the Poland mine...

Representatives of the postoffice department who recently inspected the conditions in Arizona pertaining to fraudulent mining schemes are responsible for the statement that it has been some time since one of these "wildcatting" expeditions has been fostered...

25 Good Reasons

Why the Shares of :

The Poland Extension Gold Mining and Milling Co.

Are the Best Investment On the Market at

Per Share 50c Per Share

- 1st. Capitalization very low. 2d. Fifteen mining claims—over 300 acres. 3d. Large treasury reserve. 4th. Special reserve fund of 500,000 shares. 5th. Railroad depot on the property. 6th. Smaller within ten miles. 7th. Company has its own townsite. 8th. Company owns its own water system. 9th. Company owns its own electric light plant. 10th. Timber valued at \$100,000. 11th. Company building its own mill. 12th. Vast bodies of milling ore are already blocked out. 13th. Poland vein for over 3000 feet already exposed. 14th. Complete assay office and building. 15th. Company owns its own store with a \$3000 stock of goods and no indebtedness. 16th. Large Rand Air Compressor supplying power for Ingersoll drills. 17th. Company's boarding house feeding 75 men daily. 18th. Engine house, blacksmith shop, bunk house, boarding house, office, all erected. 19th. Concentrating mill when completed will have capacity of 150 tons per day. 20th. Conservative and economical management. 21st. Expert's report values property at \$1,000,000. 22d. Large force of men working day and night. 23d. Property adjoins the great Poland mine. 24th. No salaries paid officers until company is on a dividend paying basis. 25th. No bonded indebtedness. All current bills paid to date.

Why not join us in developing a grand mining property which, under proper conditions, should be paying dividends within a year. The stock, in our judgment, should be worth par.

Besides, when you purchase this stock, your investment is guaranteed by half a million of shares of our personal holdings in six operating companies, deposited with a prominent Trust Company for your protection.

Write Us for Prospectus and Maps Chas. J. George & Co. FISCAL AGENTS FOR THE Poland Extension Gold Mining and Milling Co.

Henne Building Los Angeles Tremont Building Boston Metropolitan Life Building New York

Though Yavapai is essentially a mountain land, except a portion in the extreme southwest, where the outlying spurs of its mountain ranges merge into the great westward and southward plains of Yuma and Maricopa counties...

It will thus be seen that in regard to the real necessities of life, Yavapai lacks only the luxuries of the tropic climes, such as tea, coffee, and spices. With cattle enough to feed ten times her population, farming land on which she can raise all her cereals and vegetables...

It costs \$20 a year to dust the books in the library of the house of lords.



THE FIRST CAPITOL OF ARIZONA

will be equipped with a double track railway, the motive power of which probably will be either electricity or compressed air.

mine, the most extensive mining operations in this district are now being conducted by the Penn Gold Mining company, which owns holdings that have been known as the Mulholland, Payorita and Golda Belt, located over thirty years ago by S. A. Davidson.

of the count and already mining engineers are beginning to calculate at what depth the temperature of the workings will forbid the miners pursuing the ledges further into the depths of the earth.

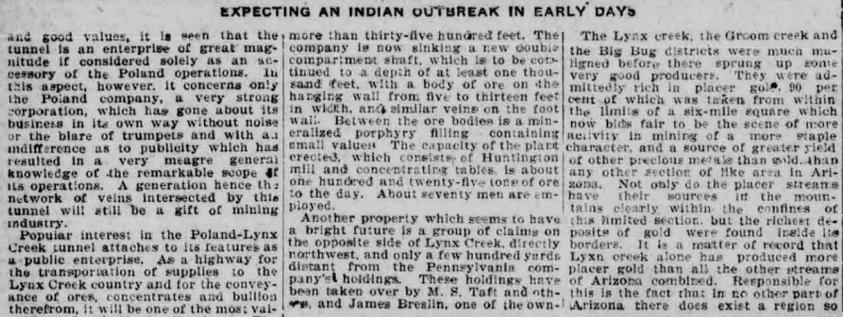
The misapprehension concerning the continuity of Yavapai county ledges was the principal reason why the country so long remained under a cloud from which it is now just emerging.

Primary, of course, the tunnel is to develop in the most complete manner the dozen or more veins which traverse the properties of the Poland Mining company, all of which will be intersected at depths ranging from 50 to 900 feet.

The main shaft on the Mulholland is down 500 feet and the drifting done on the different levels amounts to a large amount of work.

Providence, a picturesque town of 400 inhabitants, is situated on the upper Big Bug creek, a mile and a half below the Poland mines.

On the Postmaster and New Erie properties a 600-foot tunnel is being driven through the mountain. The Annie, owned by Fairbanks, Morse & Co. of Chicago,



EXPECTING AN INDIAN OUTBREAK IN EARLY DAYS

and good values, it is seen that the tunnel is an enterprise of great magnitude if considered solely as an accessory of the Poland operations.

more than thirty-five hundred feet. The company is now sinking a new concrete compartment shaft, which is to be continued to a depth of at least one thousand feet.

The Lynx creek, the Groom creek and the Big Bug districts were much maligned before there sprung up some very good producers.

Popular interest in the Poland-Lynx Creek tunnel attaches to its features as a public enterprise. As a highway for the transportation of supplies to the Lynx Creek country and for the conveyance of ores, concentrates and bullion therefrom, it will be one of the most valuable trade arteries in all Arizona.

Another property which seems to have a bright future is a group of claims on the opposite side of Lynx Creek, directly northwest, and only a few hundred yards distant from the Pennsylvania company's holdings.

On the Postmaster and New Erie properties a 600-foot tunnel is being driven through the mountain. The Annie, owned by Fairbanks, Morse & Co. of Chicago,

Quiet Operations An examination of the mountain climbing branch railroad to the Poland, at the manner in which the same has been developed and equipped, at the tunnel and the country which it will serve, leaves to conviction that these comprehensive projects have been conceived by men who had an acutely intelligent grasp of the situation.

ers has taken active charge of the development work. There is capital behind the operations, and development is progressing in a lively manner.

The Little Jessie mines are among the most important in the Big Bug district. One group comprises three mines, the Little Jessie, Little Jessie, and Ella—with a total length on one continuous vein of three thousand feet.

Lynx Creek District Lynx Creek, one of the oldest districts in Yavapai county, is seven miles south of Prescott and embraces a stretch

For four or five years there were comparatively few operations on Groom Creek, of which the Lynx Creek district is practically an extension.

The plant is equipped with one of the best gasoline hoists in northern Arizona, as well as winzes. The machinery is all snugly covered with frame buildings.

of pine-covered hills and spurs on the north slope of the Sierra Prieta. Lynx Creek has been the richest gold-bearing stream in Arizona and still gives up much auriferous sand.

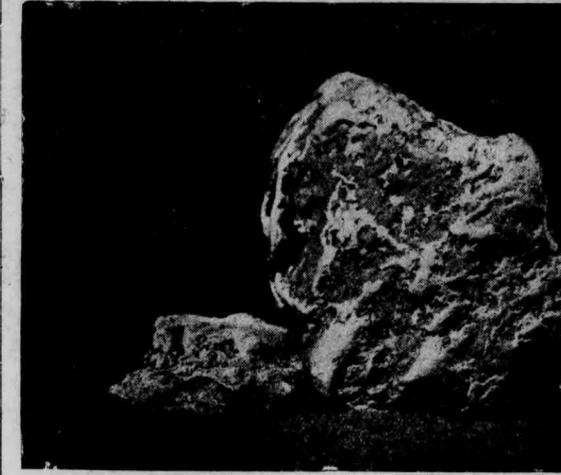
THE UNITED VERDE COPPER MINE nized as a mining district of great possibilities. One after another the Groom Creek claims were taken hold of by men backed by ample capital and today there are a dozen steam hoists in operation and three or four stamp mills pounding away on good grade ore.

favorable reports followed. Yet in Yavapai county the old theory which arose spontaneously and without the slightest foundation, that Arizona mines are shallow, has been exploded. It is true that many properties in Yavapai county, rich on the surface, have run into base ore at the grass roots or at greater depth, and such are the experience in mining of two or three decades ago, acted obstinately on the little plants that were installed to treat only the rich seams, pay streaks and surface ores.

As far from the work at the Poland

As far from the work at the Poland

As far from the work at the Poland



YAVAPAI GOLD NUGGET (HALF SIZE)

threaded with gold bearing veins and leads as that immediately tributary to these creeks.

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The plant is equipped with one of the best gasoline hoists in northern Arizona, as well as winzes. The machinery is all snugly covered with frame buildings.

As far from the work at the Poland

As far from the work at the Poland

OIL SMELTER MINES DOUGLAS, LACEY & COMPANY Bankers and Brokers 66 Broadway, 17 New Street, New York

Mexican Mining Investments and Mining Properties a Specialty Mexican Offices, Calle de Cadena 14, Mexico City, Mexico

J. S. Acker & Co. Suite 4, Union Block Prescott, Arizona Real Estate and Investments

Pacific Coast Mfg. Co. Los Angeles, Cal. Leyner Air Drills Air Compressors Steam Engines Pumps Boilers Rail Oil Cars Buckets Corliss Engines

American Smelting & Refining Co. Prescott Agency Purchase Gold, Silver, Lead and Copper Ores W. M. CLAYPOOL, Agent

gold from the rich surface groups where the crown of the ledge had oxidized and released its glittering treasure. There was trouble between McCabe and owners of adjacent ground and it was left to a committee of arbitration as the most suitable judiciary at the time, and the matter finally was settled when a man named Hatfield accepted a horse in exchange for a mine which since has produced rich stocks of gold bullion.

railroad will reach, contain Crowned King, a famous mining camp located in the southern part of Yavapai county and about forty miles south of Prescott. At one time Crowned King was considered one of the most thriving and progressive mining towns of the territory. It is now passing from the gloom which shrouded it for several years and emerging into a revived liveliness which promises to eclipse its palmy days.

The cause of the temporary abandonment was the closing down of the Crowned King mine and mill. The Crowned King company became involved in litigation with one of its stockholders.

and the middle is not yet cleared. Up to the time of the unfortunate litigation and under the management of George P. Harrington, a heavy stockholder, the Crowned King was one of the largest producers of gold in Arizona and in operation now, it is believed it would rank high in the list. Several famous bonanza ore chimneys were uncovered in the property, but the differences are settled shut-down a chimney of \$164,000 ore was opened and worked out. The resources of the property, however, do not depend upon these rich chimneys, but upon large bodies of fair grade rock. The only work now done on this mine is the hoisting of water, and it is understood that unless the differences are settled shortly this will be stopped. Here surely lies a mountain of precious metal the extraction of which litigation only precludes.

The camp now consists of two saloons, two restaurants, a store, postoffice, a couple of residences and two or three company buildings. There are at present probably two hundred inhabitants in the town and vicinity. River telephone companies have put lines into the town and communication by phone is obtained with all towns of importance in Arizona. The advent of the new railroad, which is building from Mayer, a station on the Prescott and Eastern railroad, is looked forward to by the prospectors and residents as a salvation. This road is expected to be completed to within twelve miles of the town, and work on it is rapidly progressing. Mines which have been worked, but closed down on account of the high freight rates, will resume operations, and others which have been recently discovered will commence work. The mines here and the railroad is building to them.

About two miles south of Crowned King lies the ruins of the once-famous town of Bradshaw. In the early days this town had a population of over two thousand, and was one of the largest in the Territory. Operations have recently been resumed on this property and the owners are confident that they still have a mine.

South of the Tiger lie the Oro Bell and Gray Eagle mines, which are now being worked. A number of years ago the Oro Bell mine was successfully operated and a mill constructed. The present company, under the management of George P. Harrington, of the Crowned King company, is overhauling and renovating the mill. The mine is considered a rich gold ore on both claims and will shortly commence producing for the market.

South of the Oro Bell lies the Old Lane, once famous for its output. M. A. McKinley and J. M. Nolin, the present owners, have developed ore which gives assay returns that sound like a fairy tale. The Union mine is only a short distance from the Crowned King. This mine has been operated for years, and has been a producer. About a year ago a sale was made of the Union to a corporation composed of Michigan people. The company reentered the old workings and were just getting started when the supervision of C. J. Kimball, under Frank Andrews, the Detroit banker, appropriated their development fund, and operations were necessarily interfered with. It is understood that the company will resume work shortly and place the mine on a paying basis.

The Lincoln Gold Mining company is operating this group of mines on the north side of the Crowned King hill, and is running ore through its mill daily. Other mines being operated or about to commence operations are the Centalack, the Saratoga, Eclipse, Neptune, Discovery, Cougar, North Pole, Lyda, David Transit, Jersey, and many others, all of which give promise of making rich mines. Some have been worked and produced, but the most of them are still prospects.

Camp of Jerome
The greatest copper camp in Arizona, and destined to be the greatest in the world. That is the domestic definition of Jerome today, and one that merits more hospitable entertainment than is usual, according to the bombast of a visionary boomer.

Jerome has no boomers. Even its newspapers treat of local affairs and their progress with quite a dignified assurance, according to the hackneyed assurances to capital and immigration so common to the newer west.

Immense deposits of copper, the extent of which can be yet only be guessed at, have inspired the camp. They now nurture it, and should they "pinch out" Jerome would quickly become one more "City of the Dead," to vanish from the view like a wind-tossed bubble.

A recent damaging fire in the workings of the United Verde, the great copper property of Senator W. A. Clark of Montana and Arizona, and the mainstay of the camp as well as the capstone of the copper market, perhaps, are responsible for the closing down of the mine several months ago. How long it will closed and the exact course leading to the shutdown are affairs which have not been handed to the public, for the policy of the United

Verde Copper company is to conduct its business in its own quiet way. It is pretty generally understood, however, that the mine will be reopened whenever Senator Clark wishes it to be, and until that time shall come there will be little activity in the camp. Hundreds of men employed at the workings have distributed themselves in various camps in the west, but a thousand or more will start on their journey when it is announced that the United Verde is to be reopened.

There is probably no other mine in the world about which so much has been printed. The policy of semi-secrecy

maintained by the management has simulated guessing, and sundry newspaper writers have allowed their fancy to run riot. Not long ago a mining publication announced that Senator Clark had refused an offer of \$200,000 for the United Verde. Inasmuch as this sum would be more than a fair price for the best copper mines of the world and the United Verde is beyond question entitled to a place in a list of the world's half dozen best mines.

The ores are claimed to average ten per cent copper and carry good values in gold and silver. The copper is not profit as is so frequently stated when explaining that the gold values pay the expenses of treatment. The mines are of such phenomenal width that the mine has been opened to a depth of six hundred feet only and above the six hundred foot level there are reserves sufficient to maintain production and yield some ten million pounds per annum for some years, while diamond drill borings have shown the ore bodies to extend to a depth of at least 3000 feet. The mine is a monstrous lens of sulphide ore, and is practically a single stop, though necessarily subdivided to leave pillars for support. The very immediate ore body provides a source of great trouble to the management as the smelter and other important buildings have been constructed immediately above the ore, and repeated caves have done much damage to the works on the surface as well as drawing a number of shafts.

The ore is so rich in sulphur that considerable heat is generated, and more or less trouble is had from spontaneous combustion. Owing to the mine's consisting of a single lenticular mass of ore, supported by pillars, when caught at inception they can be extinguished, otherwise it is necessary to control them by masonry bulkheads immediately to burn out or die out from lack of oxygen.

The available room at Jerome is small, as the mine and town are in a narrow gorge with steep hills on either side. This gave rise to the location of the reduction plant over the mine workings. The ore is heap roasted, the roast piles extending for a mile immediately above the mine, and over various paths of a mountain side.

The task of securing access to the United Verde mine and underground workings is difficult. Only a written order from Senator Clark will permit a visitor to go into the mine, and such orders are infrequent. Minority shareholders in the company have appealed to the courts in vain for the privilege of going underground.

There are figures which show the net profits of the United Verde mine when in operation to amount to something like \$200,000 per annum, but Senator Clark's profits in Jerome are handsomely reimbursed by revenue from a narrow gauge railway, the only means of transportation to the San Francisco and Phoenix, which is the outlet, and from stores, hotels, boarding houses and other Jerome holdings. Thus many possible profits of the mine have been realized, do not reach a division among the minority stockholders of the United Verde copper company, but are deposited with minor companies to swell the assets of the senator.

The theory for sometime was entertained that the United Verde property embraced all out all the copper-bearing land around Jerome. The mine employed about 1200 workmen and was responsible for a camp of about 3000. In the last two or three years, however, the United Verde has not been alone responsible for mining activity in the Verde district. G. W. Hall has secured millions of dollars in development adjacent holdings, and on Mingua mountain, two or three miles away, large ore bodies have been opened in the Iron King property and the Copper Chief, which adjoins it, and which is owned by Senator Clark. There are many other properties in the region under course of development, some of which are quiet now on account of the copper slump. Among them are the Verde King, the holdings of the Bancroft Copper company, and those of the George A. Treadwell Mining company.

Cripple Creek of Arizona
There is a richly mineralized region embracing the Congress gold mines and adjacent holdings and the mines that lie to the west of Wickenburg and the Oro Grande district, which is coming to be known widely as the "Cripple Creek of Arizona," this region embraces the great "Cripple Creek" gold mine in Arizona, and several others which apparently will be fair rivals. Several of the most important gold mines of that section are located not a few miles from each other. The combined product of the region today amounts to several million dollars in gold. Mining men fall in their calculations on the output of Cripple Creek is not equaled within a decade.

The Congress gold mine, operated by the Congress Consolidated Mines company (Limited), and located in the southern part of Yavapai county, is not only the greatest gold mine in Arizona, but it is the most complete and the deepest and regarded as the most logical gold mine in the southwest today. In every way the Congress fills the ideas of the geologist and of the miner who has been taught that certain formations bring forth gold, and that the gold mine is good unless it has a ledge that dips promise of reaching down into the bowels of the earth. The Congress rock is

granite and the dyke, wherein the ore body lies, is not only marked, but no prospector could fail to see it. The dip of the vein is regular and regular in proportion of iron pyrites to quartz and of gold to iron pyrites. For every day two hundred tons of ore are delivered at the mill and are concentrated into one, the concentrates uniformly running \$160 to the ton. Occasionally pyrites are found in the mine pure enough to ship to the smelter without concentrating.

The corporation operating this immense holding is headed by E. B. Gage who is president and general manager.

The water supply is from Martin's creek about one hundred thousand gallons a day being pumped to the camp over the five hundred foot divide. The mill alone uses fully three hundred thousand gallons a day; the balance is secured by settling the slimes and pumping back the water to the reservoir above.

The camp's water supply is a source of never ending interest to the visitor. In front of the company's store is a "one inch faucet" and from it the residents of the "upper" or mine camp get their water for all purposes. Here a sharp-eyed clerk keeps close watch, book in hand. Each miner's family is entitled to a certain allowance, and then there are rates by the barrel. The family water reservoir in all cases is a shallow tank, and the water is carried down the empty barrels up the hill to the company's store and load up with their fifty gallons. On their homeward trip, down the rocky streets, gravity does all the work save that of guiding the revolving tank. Those who have not attained to the dignity of owning their own tank wagons make use of the children's toy wagons, within each setting two five-gallon oil cans.

There are three towns about the mine, with the adobe school house midway between the two that really comprise the camp, the third being the railway station three miles below. The town has little use for water save for fire purposes, for three-fourths of its buildings seem to be occupied by saloons. The camp immediately around the mine has no saloons as their presence is forbidden by the management. It has a number of neat cottages and several substantial business buildings, and is in marked contrast with its neighbor and appendage.

The Congress Gold company has its main railway line crossing the three miles from the junction on the Santa Fe, Prescott and Phoenix railroad, and a magnificent Brooks oil-burning locomotive, fully as powerful as any on the main line. By means of a switchback car of coal are pushed far up on the hillside, where they will be unloaded by the boilers.

The camp has a picturesque location, in a little valley that indents a spur of the Date creek hills. The hills about are of the roughest and wildest description, with hardly a smooth surface visible anywhere, the slopes covered with masses of black granite that look like lava ejected from some nearby volcano. To the southward there stretches away a vista that ends with Vulture peak and with the lofty Harqua Hala. To the left peep out the tops of the westernmost spurs of the Bradshaw range, including the famous Antelope peak, where was found the first placer gold of northern Arizona. Over all is the dom-

inant roar of the great mill, hammering away for its owners day and night, singing a song that is restful in its monotony and that lulls the visitor to sleep as does the drowsy hum of bees in mid-summer.

Senate Gold Holdings
Developments in the last few months indicate the approach of another Congress mine on property that is adjacent for within seven hundred feet of one of the big shafts of the Congress mine. The Senate Gold company, organized by prominent Le Roy, New York, capitalists, has penetrated large bodies of ore in four parallel veins and indicating that the mineral resources of that region are almost inexhaustible. The officers of the company are O. F. Woodward, president; S. P. Hooker, secretary and treasurer; and C. N. Keener, all of Le Roy, New York. Although the work was not begun before last March it has been continued without cessation up to the present time and about three weeks ago a big strike was made which experts announce to be one of the most important within several years. The operators now have about three hundred and fifty feet of shafting and four hundred feet of countered in the vein. The character of rock encountered in what appeared to be large deposits and penetrated at the 300-foot level, compares very favorably with the very fine out of the deep workings of the Congress property, while the ore is of a better quality than that which was encountered in the shallower workings of the Congress.

The shaft has been driven into the deep waters and the supply now will prove a valuable adjunct to the operation of the mine when the property is better developed.

When sinking began the ledge was three feet wide, but at the present depth it displays a width of fully eight feet between walls, which immense pure white quartz, in this quartz gold is not discernible, but the horn blinings out a myriad of colors. At depth sulphides have appeared and this character of rock is an indication of the permanency of the vein. At present a twelve-horse-power gasoline hoist is running and the management is confident of continuity. The shaft is being pushed down at the rate of three and a half feet every twenty-four hours. A few weeks ago an order was placed for a fifty-horse-power Fairbanks-Morse air-compressor.

Capital is available to push the development of this property as rapidly as is consistent. Charles H. Akers, a well known mining man, promoted the Senate Gold company enterprise, and today is the Arizona representative of the concern.

The Octave Camp
Only a few miles away is the Octave camp, which has had a mushroom growth. This camp affords an example of rapid evolution of a prospect to a mine, with few years ago the Octave, when a prospect, could have been purchased for a song. A little later it was purchased for \$30,000, which today is regarded as a small sum in comparison with the value of the mine. Many thousands of dollars, however, were required to open this property to the public, and it is now being developed by the Octave Gold Mining company.

The Octave mine is probably the most recent of the more important properties of the territory and naturally the most modern in its equipment and improvements. Cheapness of production has been attained, while the operations at the camp move along with smoothness and regularity. The workmen are quartered in pretty cottages and are so metropolitan that the workmen enjoy more than reminiscences of city life.

The Octave Gold Mining company was formed under the laws of Arizona by eastern capitalists, all or nearly all of whom were and are interested in the oil industry. Their principal office is at Pittsburgh, Pa. C. P. Collins is president, Harry Henney secretary, A. E. Hurley assistant secretary, J. B. Leonard vice president and general manager and J. R. Allen manager. Some of the stockholders of this corporation are identified with the Standard Oil company, while most of them have large oil interests in various parts of the country.

The Octave mine is situated ten miles in an easterly direction from Congress Junction in the foothills of the Rich Hill country at an elevation of 3500 feet. Rich Hill in the early days attracted great attention. It is well remembered that a group of miners directed to this hill by a grateful Indian who, however, betrayed the secret of his tribe in expressing his gratitude, picked out great nuggets and coarse gold from the crevices of the rocks with their pocket knives. In glittering nuggets and coarse gold \$200,000 was thus extracted. When the rich rocks on the surface played out, however, mining activity ceased; at that point until the Octave Gold company invested thousands and located the mother lode, which had been so liberal to these frontier characters.

The Octave has five shafts sunk on the vein which dips about 27 degrees from the horizontal. There are at present two working shafts each 1200 feet deep. There is in the neighborhood of four and a half miles of development work. The reduction plant consists of a forty-stamp mill and the values are recovered by amalgamation, concentration and cyaniding. The company now is engaged in the installation of marine boilers and a compressor capable of running thirty air drills.

The property formerly was in two groups. It is a fissure vein in granite and the ore runs from twenty inches to eight feet. No water was encountered until a depth of 1200 feet had been attained and at present 3200 gallons is pumped daily. The values have continued uniformly from the surface and if anything they have improved. They have always been considerable enough to afford very handsome dividends on the investment. The percentage of sulphides in the ore has increased, while the grade has remained the same. The mill is treating, on the average, about one hundred and thirty-five tons a day, and a large amount of reserve ground is being opened and prepared for stoping. The mill is

controlled by the valve. With a stamp and a drop of nine inches it is possible to fill the mortar with ore until the stamp has only one-half inch drop and still the stamp and valve will operate as perfectly as it would with a full drop, accomplishing an entirely new operation, while in turn the piston is

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plant is now among the largest in the territory, and doubtless will be considerably increased shortly so that the Octave will rival the production of any other gold mine in Arizona.

The ore, after passing the stamps, passes over plates which amalgamate the free gold, after which all sulphides are concentrated and the concentrates shipped to the smelter. The tailings of the vanners are conveyed to the cyanide plant where they are automatically deposited in tanks and cyanided. All of the values are recovered except about fifty cents per ton which remains in the tailings. The percentage of sulphides is sulphide of iron, galena, while a very small trace of copper is present. The plant is being increased in its capacity by the addition of a large straight line air compressor of a capacity of fifteen hundred cubic feet of free air per minute, and the compressed air will be pumped from the mill to air drills sufficiently to see the development work far ahead of the stoping.

Crown Point Mine
The Crown Point mine is located twenty miles north of Wickenburg, in the Black Rock district, and in the same region, is the promising group owned by Colonel Alexander O. Brodie, now governor of Arizona. It is a unique camp, and many of the employees are rough riders. It is said that no rough rider who has applied for work at the Crown Point has been rejected by the owner. The camp is a rough rider of extended fame, takes pride in the troops that have been gathered about him though they exclaim that they are not rough riders. The mine is in a granite formation. The ore is half concentrating and half free, and carries gold and lead. It is located in the foothills of the Bradshaw mountains, and Jack Hanon, the superintendent of the mine, is now engaged in the construction of a wagon road to Wickenburg, which will greatly facilitate the conveyance of supplies to the mine.

The main shaft of the Crown Point mine is down about three hundred and eighty feet and is equipped with a total development work represents about 2500 feet. The property is well improved for the stage development has been completed. The mine is a large stamp mill which pounds ore when water is available, but all the water that can be secured is taken up from the mine to supply this far has not been very liberal.

In this district the Buzard's Roost and the Casey mine are about to be opened as producers, and the O'Brien mine, which for many years has been treating ore derived in the process of development, is equipped with a stamp mill.

Wickenburg Region
The town of Wickenburg, in northern Maricopa county and dependent upon the Verde river, is a country liberally supplied by nature's auriferous gifts.

The founder of Wickenburg—Henry Wickenburg—was the discoverer of the Vulture mine, which once contributed liveliness to the town. The Vulture, in its palmy days, was the greatest gold mine in Arizona. It has a recorded production of \$20,000,000, yet its actual production was many millions greater. In those days of hazardous mining in this country, where a single misadventure and desperadoes frequently intercepted the transportation of bullion and ore, and the free flowing coin induced laborers to tend far away from their homes, the Vulture mine was a place where the men were kept busy and the women were kept busy to satisfy an enthusiastic community.

The bursting of a pipe line, a dreadful and fatal cave-in of the mine and a change in the character of its ore, put a stop to its work. The mine was abandoned and the various interests controlling the venture have conflicted and no plan yet has been carried out for the resurrection of the mine. For although the character of the ore has changed with depth, yet human knowledge of mining has changed and modern processes may one day take up the link and create a mineral production for the property which will equal the output of the palmy days. The reputation of the mine has suffered by mismanagement and incomplete schemes for its resurrection, but mining engineers and experts have abiding faith in the merits of that old mine.

The Oro Grande
One of the most remarkable mineral discoveries in Arizona took place along a path which had been trodden by prospectors for years. Two prospectors finally took their cue from the massive outcroppings, begun dipping in an abandoned and shallow shaft which showed copper stains and soon began picking up rich gold rock in the property which is now known as the Oro Grande. The Oro Grande mine lies about a mile and a half east of the Hasayayapa river, four and a half miles from Wickenburg, which is on the Santa Fe, Prescott and Phoenix railway. The opening of this property gave rise to sensational reports concerning the extent of the ore body and the richness of its rock about a year ago, singularly most of the assertions made in these enthusiastic reports concerning this property, then a more prospect, have been verified. The Oro Grande, by mining experts, is regarded as a mammoth low grade property, and much expert opinion accords it a prominent place in the future list of Arizona gold producers.

The vein runs northwest and southeast and the outcroppings are very prominent. The croppings consist of a quartz porphyry that is very strong and in brown hematite of iron. These croppings can be traced nearly for a mile, and the dipping along the course of the vein indicates the con-

ditions of the vein. The vein is a fissure vein in granite and the ore runs from twenty inches to eight feet. No water was encountered until a depth of 1200 feet had been attained and at present 3200 gallons is pumped daily. The values have continued uniformly from the surface and if anything they have improved. They have always been considerable enough to afford very handsome dividends on the investment. The percentage of sulphides in the ore has increased, while the grade has remained the same. The mill is treating, on the average, about one hundred and thirty-five tons a day, and a large amount of reserve ground is being opened and prepared for stoping. The mill is

in the character of the ores which form one end of the vein to the other, are similar to the rocks in the workings of the mine. The main working shaft is now down over 300 feet, and drifting and cross-cutting running in various directions from the base are more than 3000 feet. This work has exposed the ledge a distance of over a thousand feet, and cross-cuts run at regular intervals along the ledge from the three different levels in the mine, showing an average vein width of 120 feet. It is estimated that there are 300,000 tons of ore in sight. The average of a number of assays made in the workings thus far amounts to about \$70 to the ton, but by a thousand or more has been attempted upon the thousands of tons of ore that are blocked out.

There are pay streaks in the property, and it is unlikely that any other vein opened in that section, accounting for the fact that the average prospector paid little attention to it in his search for ore. The ledge has been distributed its millions of gold to the placer creeks below. In the discovery of the Oro Grande, however, the finding of the mother lode, doubtless, has been made.

The property passed through the usual stages of litigation incident to the discovery of a bonanza. George B. Upton, B. O. Hatfield and G. E. Smith, the latter of Clinton, Ia., ultimately obtained practical control of the property, and before it was opened Hatfield parted with his interest for \$100,000.

The Weaver District
The gold properties of the Weaver district, located in the "Creek" already re-

garded, are celebrated for their richness and the free gold is very coarse. The placers are located at the base of the mountains and west of the Haystack at the foot of the Rich Hill at Stanton. They have been worked for more than thirty years. The deposits of gravel are broken from a neighboring ledge that must be very rich.

The Rich Hill channel is noted for its coarse gold, and in this region great nuggets have been discovered. It is not an uncommon thing to find a nugget worth \$300 or \$400. A number of large nuggets have been discovered, and one nugget is said to have been worth \$1000.

In this section Charles Geunow owns a group of valuable quartz mining claims in the mineral belt which includes the Oro Grande, the Planet-Saturn and located on the Levathian ledge. He owns the great western extension of the Levathian, the property of Mr. Clark Churchill. The Levathian itself is a well developed holding and it is understood that negotiations are pending for its sale.

THE IDEAL COMPANY
What promises to be a boon to the mining industry of Yavapai county is being introduced by the Ideal company in the shape of a steam stamp mill, which operates by a unique, original and efficacious process. E. L. Sharp-needle, President of the Ideal company, and is now engaged in introducing the new stamp.

He manifests his confidence in the stamp by undertaking to prove its merits before placing it before the public. The Ideal company, which for some time has been engaged in the development of some very promising properties in the Thumb Butte district, near the summit of the Sierra, in a range of mountains, will soon install one of the Ideal stamps at its property. When in operation mining men will be invited to visit the plant and investigate the stamp.

While the idea of a steam stamp is not a new one, the construction of the Ideal steam stamp makes it entirely original, embodying many advantages and features. In the experiments thus far made the Ideal stamp has been found as perfect as its name indicates. It will accomplish more in the cheap and satisfactory reduction of the ores of Yavapai county regions than any mill heretofore introduced. It is constructed with open stamp in the battery, which permits of three screw openings, placed on three sides of the mortar, one side of the mortar being used for the feed. The rod is rotated one-eighth of a turn, giving an upward stroke, but the downward stroke does not rotate, but strikes a straight and powerful blow on the rock. One of a number of advantages that the Ideal possesses over other steam stamps manufactured in the manner in which the cylinder is hung, permitting as it does, a vibration of the stamp rod without causing undue wear of the cylinder and piston head. The valvular and stamp features of the mill are strong points. The valve is simply a piston valve operated by steam pressure and controlled by the piston in its operations, while in turn the piston is



DRIFTING, IN THE SENATE GOLD MINE

SAFETY IN MINING

Guarantee Offered by Charles J. George & Company for the Protection of Their Clients

(From "About Town" column Boston Herald, November 2, 1902.) Never in the world's history has there been a time when mining as a business commanded the attention it does at present. While that statement is true in an international sense, this article deals with the subject as viewed from the conditions existing in our own country, where the natural resources are greater and more promising than can be found in any other portion of the world. It is a fact for the reason that in the United States mining occupies the attention of the great financial mind to a greater extent than any other line of business.

The attention of the writer has been recently called in this connection to the firm of Charles J. George & Company, bankers, brokers and financial agents, with paid-up capital and surplus fund of \$150,000, who rank second in the country in the list of successful developers of mining industries. The present prosperous situation in the mine presents a house with a record of successes in the mining field, with no failures, and has numerous clients, representing all classes throughout the country. They can point to a list of six different properties they have successfully developed and financed, and which represent an actual cash outlay of nearly \$400,000 in machinery, mining apparatus and development work, and upon which there is not a dollar of indebtedness and all property is patented and owned in fee simple.

This house in offering any stock they may have for sale—not only point to the above situation—but as a further evidence of good faith have provided a plan for the protection of their clients that no other brokerage house in the country has offered, or perhaps are in a position to offer. Their plan, briefly stated, is this: They say to a prospective purchaser of stock in any one of their companies that if, for any reason, the particular stock he may purchase becomes inoperative (a contingency they do not expect), he may exchange it dollar for dollar for stock in any other company on their list that is operative and more desirable. Or, in other words, he may depend upon the prosperity of the entire group to protect him in whatever he may wish. To insure to their client the proper fulfillment of this arrangement they have deposited with the Los Angeles Trust company of Los Angeles, Cal., a trust fund of 500,000 shares, representing the entire group of properties they have developed. These shares were the personal holdings of Charles J. George & Company, and thus furnish an absolute guarantee that the terms of the agreement will be carried out—the trust company being a party to the agreement—and of undoubted responsibility. The plan appeals strongly to the writer, as it appears that their clients are thereby absolutely protected.

It is not possible in a brief article to give in detail the exact details of this equitable plan, but they can be obtained at the firm's Boston office in the Tremont building, or at their New York office in the Metropolitan Life building, or by writing direct to their Los Angeles office. Charles J. George & Company will be pleased to furnish the highest bank references upon application. The companies this house has developed are as follows: The Poland Extension Gold Mining and Milling company, the Verde King Copper company, the Lincoln Gold Mining and Milling company, the Americas Gold and Copper company, the Mira Grande Mining and Milling company, the Little Louise Mining, Milling and Reduction company. In conclusion it should be said that Charles J. George & Company control and personally manage any company they have placed before the investing public for their consideration.

A Letter of Acceptance From Mr. Clyde H. Osborne, Our New York Manager DENVER, Colo., Sept. 15, 1902. Charles J. George & Company, 402 Fenne Building, Los Angeles, Cal.—Gentlemen: Last winter when you tendered me the management of your

Gold and Copper company. But I shall take them all in by the latter part of this month. In conclusion, I wish to express to you my hearty thanks for your hospitality and the very cordial treatment which I met with at the hands of yourselves and your employees, and trust that our existing cordial relations will continue. Yours very truly, CLYDE H. OSBORN.

Mr. Ferguson (with a groan)—Laura, my head aches as if it would split. Are there any of those headache powders in the house? Mrs. Ferguson (full of sympathy)—I'm so sorry, George, but there isn't one left. How would some of my face powder do? How would some of my face powder do? New York Tribune.

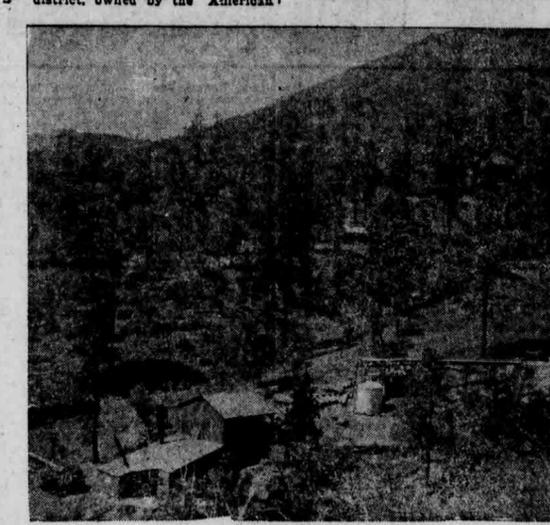
HEALTH IN THE DESERT

CONSUMPTION CURED ON THE PLAINS OF ARIZONA

The Cure Attended by Many Pleasures So That Treatment Becomes Only a Delightful Period of Recreation

During the last few years there has been a growing conviction among physicians and students of climatology that the dry, hot desert offers the best possible environment for the consumptive or the individual possessed of tubercular tendencies. Happily for the health seeker whose purse is shallow and whose waning strength makes him hesitate to face the fears and dangers of an ocean voyage, expatriation to Egypt or the Orient is no longer necessary.

In the southwest corner of our own land lies a natural sanitarium whose advantages far outnumber those offered by a residence abroad. Indeed, fully is this recognized in the United Kingdom that many eminent physicians are now ordering their patients to Arizona in preference to Nice, Mentone, the high Alps, or the deserts of North Africa or Arabia Petraea. While the aridity of the country and the intense, tropical heat of summer have furnished the pegs on which humorists have delighted to hang their quips and gibes, especially during the recent trip of the presidential party to the Pacific coast, these very climatic characteristics ren-



der Arizona the mecca of the weak-limbed people of both hemispheres. "We've got the climate," is the oft-heard Arizona slogan, and even detractors say "Amen!" In the Salt River valley the benefits accruing from residence in an ideal climate are further enhanced by the opportunity of living out of doors twenty-four hours a day and almost every day in the year. In every direction one comes across isolated camps or small desert colonies of health seekers, whose tents gleam white against the rugged purple buttes or somber mountains that rise abruptly from the sea of sand. Specially attractive among these desert hamlets, for beauty of situation, su-

perior sanitary advantages, nearness to the fruit belt of the territory, and for the culture and hospitality of its few resident families, is the little town of Scottsdale. One attractive bungalow half hidden among luxuriant palms and pepper trees, the residence of Howard L. Underhill of New York; the well fruited ranch of Chaplain Winfield Scott, United States army; two or three neat adobe cottages, the village post-office and city district school, and all the rest, a more or less ephemeral canvas city, housing, in all, about one hundred souls. Squatters by sovereignty, each tent holder pitches his establishment as he will, the majority preferring to be within reasonable access of one of the ranches where excellent board or cream, milk eggs and water may be obtained. These tents vary in size from nine by seven feet, while they are so well put together that the ordinary sized ones may be easily loaded on hay wagons and transported with the same facility that enables the Arab to fold his tent and "silently" head away.

ADDITIONAL PHOENIX AND SOUTHERN ARIZONA

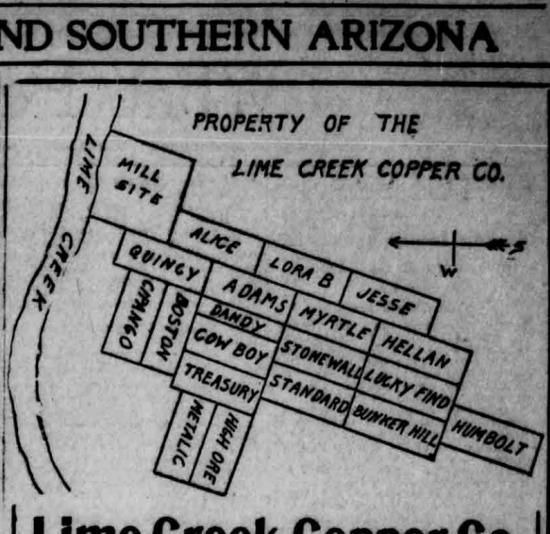
perior sanitary advantages, nearness to the fruit belt of the territory, and for the culture and hospitality of its few resident families, is the little town of Scottsdale. One attractive bungalow half hidden among luxuriant palms and pepper trees, the residence of Howard L. Underhill of New York; the well fruited ranch of Chaplain Winfield Scott, United States army; two or three neat adobe cottages, the village post-office and city district school, and all the rest, a more or less ephemeral canvas city, housing, in all, about one hundred souls. Squatters by sovereignty, each tent holder pitches his establishment as he will, the majority preferring to be within reasonable access of one of the ranches where excellent board or cream, milk eggs and water may be obtained. These tents vary in size from nine by seven feet, while they are so well put together that the ordinary sized ones may be easily loaded on hay wagons and transported with the same facility that enables the Arab to fold his tent and "silently" head away.

The one stationary thing about these canvas establishments is the brush shed, or Indian raia, which forms a most important feature in the scheme of daily living. Under its kindly shelter the table is set, the hammock swung, the steamer chair placed and the water barrel entrenched. From April to October or November the cold find here an abiding place as well for all Arizona sleepers out of doors at least half the year. During the remaining months a system of

adjustable screens on the tents enables one to sleep wholly or in part in the open air as the weather demands. All the tents have board floors and baseboards, while some have shingled roofs and wind-downs. The side walls of heavy canvas roll from bottom to top. Good tents may be rented from \$3 a month up, though most people prefer to buy their own, as they can be readily sold when no longer needed. New tents may be bought and placed at a cost of from \$15 to \$100, depending upon size, material, the fly and the labor required in their erection. There are several complete canvas establishments, with servants' quarters, stables, dining hall, etc., scattered throughout the valley, but these belong to New York, Boston and Kentucky millionaires, and are the exception, not the rule. The brush sheds are usually built by the Pima Indians from the reservation near by, who follow their own tribal fashion in architecture. Stout cottonwood poles notched at the top serve as support for the roofing of arrow wood and cottonwood branches, brought from the banks of the Salt river. Furnishings are usually simple. A comfortable cot and bedding, a Navajo rug or two for floor or bed (and splendid rugs can be obtained from the reservation at an absurdly low price), a stove, a set of drawers or home made cupboard, an ice box and two or three chairs, and the conditions for comfortable living are assured.

Luxuries are added to necessities to purple buttes, whose peaks are topped by young English schoolmaster takes his luxury in the form of a set bath tub. Living is not as expensive as one would think. The most delicate mountain chops in the world retail at fifteen cents a pound in Phoenix; a porterhouse steak, thick juicy and tender, for twenty-five cents; beef's tenderloin the same; fresh eggs at twenty cents per dozen, and fresh vegetables all the year around, less than they can be bought in the New York markets. Game is plentiful, and rich Jersey milk sells at five cents

quart. Artificial ice may also be produced in town. As nearly every one keeps a horse, and driving is one of the favorite amusements, there is little trouble in getting the marketing done. Horses are cheap. Indian ponies are often obtainable for ten dollars; mountain ponies range from fifteen to twenty-five dollars, and blooded stock can frequently be bought for less than fifty dollars. Many of the horses are trained both for the saddle and driving. Ad the women ride across-saddle, divided skirts, a suit waist and sombrero with hat band and best of Mexican carved leather constituting the costume par excellence. Nor is life in a desert colony the tame, monotonous round that one might imagine. The camaraderie established in a community where individual interests are so closely allied is especially close and cordial. The Dartmouth representative exchanges college bon-mots with the Cambridge fellow, while both bend trained intelligences to the fascinating study of bees. Harvard and Stanford find that they have much in common besides symptoms, while the bachelor maid from San Francisco hobbles over fashions and "trivials," new books and desert flora, with the girl from Brooklyn. The broad shouldered young preacher from Missouri plays Nimrod with excellent success, and comes back to share his partridge and pigeons with the little maid of Arcadia and her mother, who camp close under Camel's Back; while the soldier boy who lost his health at New Orleans's ill managed camps finds a new lease of life and occupation getting in filling half of the photograph album in the town. There is an excellent riding club at Scottsdale, its members securing the best-covered sands and gravelly mesas for miles around. Golf links stretch over the desert, but golf is not specially popular, and the



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What People Are Doing, the World Over

LITTLE YARNS

Amusing Incidents and Experiences of Real Life

The Only Place

It was on a cross-town car. One hundred and twenty-five passengers were aboard, bound for the Port Lee ferry. They had been talking about the ship on which each had come to this country, and the different ways in which they had worked for the easy way that they could manage some, or the more difficult means employed to subside others, when the young man who pointed out of the window and exclaimed:

"An' shure, now, wat be that ere bridge yonder?"

The elevated structure which is being built to connect the tracks of the Manhattan valley had called forth this outburst. Here, on the side of the natural depression in Manhattan island, the subway had come to the surface to cross on an elevated structure.

"An' now, ah wat be ye askin' me seeh a question," said the other, "don't ye know as that be the subway?"

"Oh, faith, an be that the subway?" remarked the first speaker, who was overwhelmed by the answer he had received. Then, after her surprise had abated a little, she added:

"Ah, faith, an it be only in New York that one be after seekin' an under-ground railway, an' a passenger an' an elder immigrant.—New York Tribune.

The Password

Booker T. Washington recently told a gathering of negroes that one of the great faults of his race was a disposition to exhibit knowledge and ability in all circumstances, and asserted that until the negro learned not to display his vanity he was useless in any confidential capacity. By way of illustrating this story which, he said, might be or might not be apocryphal, but which was good enough to be true, General Sherman had been told that the soldiers of a negro regiment in his command were very lax when on sentry duty, and showed a fondness for passing doubtful persons through the lines just to indicate their power to do so. To ascertain if this were so he muffled himself one night in a cloak and tried to get past a black sentry. After the sentry asked "who are you?" a friend, and the "Advance, friend, and give the countersign," had been exchanged, Sherman replied:

"No, sah, was the polite but firm response.

"Madford."

"No, sah!" Sherman next tried.

"No, sah! No, sah!" said the negro, determinedly. Then he added: "Now, seeh heah—yo' can go fru' the whole blamed loggery, but I want Sherman he done say that nobody can get pas' me wifout sayin' 'Cambridge!'—Philadelphia Ledger.

Suitable

Wu Ting Fang, the Chinese diplomat, whose delay in leaving the United States to undertake an important work in China is a cause of genuine pleasure to American friends, is a man of high standing. When the game first invaded Washington he often was invited to play, but invariably refused. One evening he came to a certain house and found several young men actively engaged in betting celluloid spheres back and forth. He was pressed to join them, but would not, whereupon the players, who were pertinently insinuated that Mr. Wu did not care to expose his ignorance of the sport.

"Oh, I know the game," said Mr. Wu. "Everyone in China knows it. It was invented many thousand years ago in my country by a bonze, or priest, named Ping Pang. Your name for the game is corruption, and your bonze is a great philosopher, and spent his time in inventing work for all classes of people. Finally he found several occupations. To these he determined to assign an amusement, as they were not fitted for work, so he evolved this game." "And would you care to play?" asked the impatient youth.

"Children and imbeciles," replied Mr. Wu.

Serious Mixing of Letters

A well-known citizen of Clay Center had been invited to an evening party. He wanted to go, but his wife declared that she had no gown suitable for the occasion, and she begged him to send "gowns" to her hostess. The man went down to his office and penned this facetious note of declination:

"We regret that our time and invitation were declined for all the conventional reasons, but the real reason is that half the family has nothing to wear. My wife's latest dress is over three hours' old, and her hair is twelve hours' out of date. You will appreciate the hopelessness of the occasion and excuse us.

He thought this pretty good, and he determined to write a note to his wife also explaining that he would not be at home for an early dinner, as she had asked him. He said in this note:

"I have turned down your invitation because I am going out to another evening party where the guests are not expected to wear anything of importance. Sorry I won't be there to kiss you good-night."

And then the fool man carelessly sent his wife's note to the hostess and the hostess note to his wife.—Clay Center Times.

Her Prompt Apology

A philanthropic lady visited the asylum at Kingston, Canada, not long ago and displayed great interest in the inmates. One old man particularly gained her compassion.

"And how long have you been here, my man?" she inquired.

"Twenty years, was my reply.

"Do they treat you well?"

"Yes."

After addressing a few more questions to him, the visitor passed on, but she noticed a broad and broadening smile on the face of her attendant, and on asking the cause heard with consternation that the old man was none other than Dr. Clark, the superintendent.

She hurried back to make apologies. How successful she may be gathered from the fact that she was never again seen by appearances again.—Brooklyn Life.

Relative Wear

The New England town meeting is ever a source of anecdotes, and one that may be repeating comes from Wellsley, Mass., noted for a college and, until his recent death, for one Solomon Flagg, who attributed his forcible healthy years to the fact that he always used tobacco and liquor—if the liquor was good.

Flagg was town clerk, historian and the traditional wily of the town meeting. At one of these March gatherings the management of the poor farm was under criticism, and someone had made bold to defend the superintendent, Robinson by

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The action of Roentgen rays in destroying bacteria has been a subject of experiment by Dr. F. B. Ford, since 1898. He has shown that the organisms, including the cholera germ, were killed by an exposure of twenty to thirty minutes on a plate. He has also shown that the organisms were not affected. It has been proved that the bactericidal power is not due to the fluorescent light, heat, ozone or electricity, nor is the culture medium altered. The conclusion is not justified that the rays destroy bacteria in the body, and disease-inoculated animals exposed to the rays die sooner than those not exposed. The successful treatment of certain infectious skin diseases seems to be due to some other effect than killing of bacteria.

Insects think as truly as men do, although not, of course, on the same scale. This is the belief of M. Forel, a French theologian who has been making observations of ants and bees for relaxation and debris of years. This became a sort of bed from which sprang the roots, and in time produced the upper tree. Con-

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Insects think as truly as men do, although not, of course, on the same scale. This is the belief of M. Forel, a French theologian who has been making observations of ants and bees for relaxation and debris of years. This became a sort of bed from which sprang the roots, and in time produced the upper tree. Con-

PERSONALITIES

Doings of People Who Are in the Public Eye

President Francis, of the world's fair, St. Louis, has received from General Corbin an encouraging report of the interest manifested in the Louisiana purchase exposition by those persons in Europe with whom the American generals were in touch during their recent trip. General Corbin says that the American generals were much impressed with the fact that comparatively few whom they met in either England or Germany had visited the United States. On inquiry, the Americans learned that out of nineteen members of the English cabinet, secretaries and under secretaries, but two had visited America; and that of the prominent generals of the English army, none had been here. They are, therefore, very strongly inclined to encourage such visits of the part of these high officials.

For a man who at times writes so well about women Anthony Hope seems curiously impervious to feminine attraction. His popular novel, "The Bachelor Flapper," the Thames and Avon edition, London, the rooms being furnished in old-fashioned mahogany. The work is being written with a number of rare colored prints, which will be given to a discriminating collector. He is also fond of sport, and was formerly an enthusiastic and prominent football player, but of late years has abandoned that stressful sport in favor of golf.

Letters from Europe announce the approaching visit to this country of Siegfried Wagner, son of the great composer. The trip is described as a professional one, yet it is really a summer tour of concerts, but it is generally understood that his purposes are more of a missionary character. His purpose, it is said, is to advertise by his presence and the music which will be given to his sayings and doings the performance at Bayreuth.

The French government has adopted a system of passenger insurance on state railways. The purchase of a penny ticket confers the right of \$2000 in case of death or permanent injury, from \$500 to \$1000 for minor injuries, and five francs a day while the injured person is unable to work as the result of an accident on the railway. A passenger may purchase any number of tickets up to ten.

Over in Michigan they seem to have rather poor opinion of Governor Biles' powers as an orator. One leading newspaper declares that he is the very poorest speaker "that ever was or will be." Ridding this so far as known the governor has only been once before the people. That was by an English agitator who managed to crowd three grammatical errors into two words—"Them's them."

The appointment of Theodore Lewald as imperial commissioner for Germany to the world's fair at St. Louis in 1904, has been announced officially. Herr Lewald is authorized to select a site and arrange for the construction of the German building. When this is completed he will start the work of collecting exhibits. Germany's appropriation will be \$500,000.

Chester Alan Arthur, son of the late President Arthur, has returned to this country with his wife and sister after an extended visit to Europe. He will take up his permanent abode in New York. Mrs. Arthur, a California heiress, was prominent in the American colony in Paris last spring, and was called "the prettiest American in Paris."

General Andre, French minister of war, is quoted as saying to Captain Bismarck, who is visiting the American uniform is the best yet invented.

Surgeon General Walter Wyman of the public health and marine service attributes in great measure to the pedestrian exercise of his college days. At that time he was also a baseball player, and he points with a crooking finger on his left hand a relic of his career as shortstop.

Postmaster General Payne is considering the idea of placing portraits of the late Dr. Charles F. McDonald on money order blanks. Dr. McDonald was the first head of the money order service and he was its originator. He left by will \$2000 to the postoffice department to be used in any way which might improve the service.

Among recent visitors at the world's fair grounds was A. Joyce, the Japanese lecturer. The gentleman is now making a tour of the United States, but expects to return soon to Japan, where he will deliver a series of lectures on the world's fair, giving stereoscopic views of the grounds and buildings of the exposition.

Lord Kitchener has been picturesquely described by a young Canadian officer, who remarks that he is a man of deliberate deliberateness that would be enough were it not for the impression of tremendous physical strength, capable of being gradually roused into irresistible activity.

Florence Nightingale, the heroine of the Crimean war, is to be honored by King Edward as one of the great women of her time by having conferred upon her the new Order of Merit.

Dr. Lorenz will have conferred upon him the degree of LL. D. by the Northwestern university as soon as he returns to Chicago from his tour of the country.

Blair Irwin, one of the few survivors of the "Charge of the Light Brigade," made memorable by Tennyson, now lives on a small farm near Sharon, Mass.

A number of Ceylon trees and shrubs are being sent to Bulawayo to be planted around Cecil Rhodes' tomb in the Matopos Hills.

General Nelson A. Miles is said to be negotiating for the purchase of a large country place near White Plains, N. Y.

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The French etcher, the most distinguished artist in the world with the steel point, is shortly expected in New York. The Society of Agriculture of the Nord at a recent meeting declared that the etched portrait bids fair to supplant the oil painting in the favor of industrial kind. It may be observed in this connection that portrait etching is only in a state of infantile development in this country, but when the performance of excellent artists is taken into account, the work of the artist will increase commensurately. The cost of the plate is fixed by the artist's reputation, but few who follow in this line are able to produce a picture to hazard a portrait for less than \$1000. It is understood that the life-size bust picture of Mr. Morgan (with probable 100 proofs) is to cost twice that sum.

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Hints of the Newest Fashions

Women and Home

Idea for the Dinner Table



BLUE VELVET DINNER GOWN FROM DOUCET, PARIS. IT IS TRIMMED AND FLOUNCHED WITH CUT DESIGN OF THE VELVET APPLIQUE LACE. THE STOLE AND MUFF ARE OF TAFFETA AND FUR.

was that beautiful shade and quality of satin. She purchased two yards of double width all over lace and covered the whole thing with it. The pink showed just enough through the yellow net to give a charming salmon pink shade.



Three-quarter Suit. The sketch shows one of these. It consists of a three-quarter length coat of black broadcloth with a collar of sable. The front is bloused into a fitted and braided belt, and the long sleeves in front are cut away a bit to show underneath the skirt which is of the same cloth and trimmed to match the costume. The skirts of the coat are tucked down the back, but are plain on the sides and front. The upper half is tucked to correspond down the middle of the back and front. These tucks are of course stitched perfectly close. This is a very handsome style when made up in velvet.

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Another point worth mentioning—lats are growing larger and larger as well as flatter and flatter, so that on the heads of some tiny women they resemble huge birds with outstretched wings. The very latest millinery craze, by the way, is a fluffy white felt applied here and there with ermine tails. If you have dark hair, by all means invest in one.

Lace trimmings are so popular that a woman who can construct them at home is fortunate. The sketch illustrates a wheel pattern in crochet. It may be used as a border for a child's collar. Soft ceru linen thread No. 100 and a fine steel crochet are required to construct it. These are the directions for crocheting the lace:

Make 12 chain, join round. First row, 32 treble into circle. Second row, 1 double crochet into each stitch of last row. Third row, 12 chain (3 chain stand for 1 treble), 1 treble into fourth chain from needle, 17 consecutive treble under remaining chain, 2 chain, turn work, 1 double crochet into each treble, turn work again, * 5 chain, miss 1 double crochet, 1 double crochet into

The Family Circle

[Address all communications intended for this department to "Editor Family Circle," Herald office.]

The latter-day theory, held by many of our wisest men, that heredity is of no particular consequence (that is to say, its value in establishing character is greatly overestimated), while environment and education, particularly the former, are everything, throws an added responsibility upon the conscientious young mothers who ponder how they can bring up their children to be the best that is in them. Pleasurable employment and the sense of helpfulness are two of the pretty instincts of unspoiled childhood that it would be well to cultivate, and to make for their mother a delight to them to bestow gifts upon those they love is a strong characteristic that should be encouraged as much as possible. On the other hand, such little attentions must never be allowed to become a wearisome obligation, as is often the case with Christmas gifts which are usually tucked away in hot haste at the last minute and are concealed in anything but a Christmas spirit by the harassed little donors.

The time that is bestowed upon work for others should be made as pleasant as possible. If the family is large enough, or if there are other children in the neighborhood, a sewing bee might be held for a short time every day, and an interesting book read aloud, to the little workers, who, by taking time for the forenoon during the long vacation days, can complete their gifts at leisure, and greatly enjoy the preparation. Another point for children to consider in the preparation of Christmas gifts is the really useful. So much trash is given and accepted with simulated pleasure that would develop tact and thoughtfulness if children were taught to discriminate.

There is no one, however rich or surrounded by luxury, who does not experience the small needs of humanity, and whatever supplies such needs never comes amiss. Even a multimillionaire needs a handkerchief, not to mention a half dozen neatly embroidered by his little daughter, would be sure to be of use. A nice and eminently useful present for a young child to make for her mother is a set of ragbags. Four are a good number, and they should be made of graduated sizes. They may be made of strong white calico, each marked with its number and name.

A little boy might make a very nice bath mat for his mother at the "work hour." Cut a piece of burlap of the size and shape desired, and overcast the edges so that they will not unravel. Then with a good-sized crochet hook pull a long strip of cloth, but narrow, through the loose mesh in small loops along the edges of the mat, until it is smooth; then cut the loops. In this way a border may be made of a color and the center may be of white, with geometric figures of the same color as a border. An eastern floor rug will serve as a motif for suggestions, which can be drawn on the burlap with a soft pencil. Really pretty floor rugs can be made with wool, but they are a little more expensive. The rug, cut about an eighth of an inch wide. They need not be sewn together, as the tops underneath can be cut off afterward, and the pieces, if desired, may be supposed, but make a soft pile after they are cut. These are only a couple of the many suggestions, that might be made to give practical value to the child's work. The only thing will serve to point the moral of the suggestion.

A woman who calls her cottage "Mon Bijou" has had her bedstead and bed dressed in novel fashion. The bedstead is a rose and white bedroom with a few touches of gilt that has a decided air of a strictly French apartment. The bed is of white, and the money has been expended upon it. She has covered the walls in white cretonne, with a four-inch strip of pink roses, which occurs at intervals of two and a half. The woodwork is white and the picture molding of white makes a cove, and it and the ceiling are white.

The bed is of white wood and a panel of cretonne well covered with pink roses has been inserted in the head and footboards. The coverlet is of the same fabric. The room has white and gilt frames and are upholstered with the rose cretonne. An effective screen has been placed between the bed and the upper portion of the room. The room is furnished with pink pillows, and the lounge, which is covered with pink denim, and the pink denims is used for the heavy window drapes and portieres. The floor is covered with rose pink filling. The ash curtains are of Brussels net trimmed with rennaissance braid, a medallion of lace inserted in the center. The bed is of white, and the fittings of plain pink porcelain. The dressing table is of white and gold, the top covered with a bit of pink damask edged with gold braid. The room is furnished with a pink and white enamel paper.

If dictation not quite in accordance with its subject may be pardoned, a certain "tea face" may be described as the "tea face."

It is seen on nine of every ten women at any afternoon tea, and it is a strenuous, rapid expression which once observed can never be mistaken for any other intent of countenance. Young girls are not afflicted with it. Their unobtrusive omnivorous propriety for social gatherings and their merry, buoyant spirits enable them to enjoy even tea.

By the women who are perpetually attending the functions of which it is only No. 2 or 3 on an afternoon list, of four or five—these women assume the tea face like a mask, and with it hide their weariness, their preoccupation or their dissatisfaction. There are no variations of the tea face. Its hallmark is the determinedly animated smile, the forcedly cheery glance.

If architecture may be described as frozen music, then the tea face is frozen vivacity. The eyes have an uninterrupted sparkle, the head has a permanent sudden tilt of interest and expectancy, while the smile looks as if it had been done up in curl papers over night.

As a rule, it is but a mask, and the real woman is ever surreptitiously looking out from the corner of her eye in search of some special thing that really interests her. It may be only the clock on the mantel, it may be the candor of the hostess, it may be a social lion, but always the woman with the true tea face will expose her secret interests or ambitions by her volubility and hasty surveys from her unobtrusive eyes.

But it is a good thing, this face. Suppose for an instant the guests at a tea showed on their countenances their true agotism instead of a genial, cordial pretense of altruism. Suppose, when we greeted a woman with the latest thing in handshakes, we caught in her face her enmity, her curiosity, her indifference, or her impatience.

Instead of this we meet a delightful and an exaggerated assertion of interest in our welfare and a demonstration of unbounded joyousness—and we are grateful.

The Chatelaine

Our merchants can't keep up with the demand for plain petticoats. They have most of the very gay ones which they've invented in, but the deeper green and blue ones in smart combinations were gone in no time. It seems there's a woman waiting for every one as it comes in. These dark and rich plaids are edged as to the flounces with tiny black taffeta ruchings. A very handsome one in one of the bright red Tartans has a flounce made up of tiny faded roses, all set together with red silk cords. A dainty bit of a ruche, also in plain red taffeta, edges this flounce. These plaid petticoats are very swager. Quicker City femininity, however, draws a handful of the gay combinations, and chooses the dark rich ones.

Quite the latest petticoat isn't plaid at all. It's of a handsome black moire, and it is smart rather than heavy and "dowager." Its eight gossamer are finished off with a dust ruffle. Over the top is a six-inch ruffle edged with a clever little ruche and over this falls the flounce proper, an accented, Van Dyke affair, which is edged with a tucked ruffle. This little ruche is finished with a little ruche. As you can readily imagine, this petticoat, which costs \$18, is a truly magnificent garment.

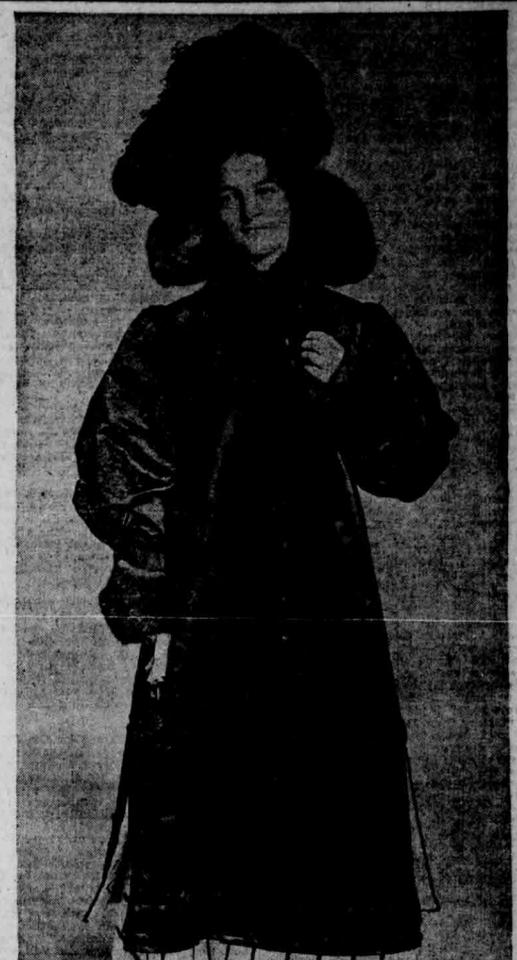
One of the most radical changes that more than matches the new overskirt idea is the huge, hideous sleeve that makes a revolution in the shoulder line. It seems quite in harmony with the other features of the coming season that the old, long, sloping shoulder should come back, and the new sleeve, that is but a premature hint of what the city autumn style will be, it will surely "go" for the sleeve that has been in vogue for a year past has prepared the way for the more exalted one that is coming. The tiny puff at the wrist seemed ugly enough when it first came in, but the new shape is a large bag between the elbow and the hand with the top of the sleeve flat and loose.

A stylish French picture hat is made of satin-brad Panama, with an open lace-straw edge. It is trimmed with the other features of the coming season, two large pink Cherokee roses, and a bunch of hazelnuts. The nuts are of the pale green urpice color, with matching foliage. A fringe of moderately wide lace, edging a scarf drapery, falls from the extreme edge of the hat-brim, half veiling the wearer's face.

White liberty ribbons in very wide widths are much used for sashes, either twisted several times around the waist and brought into a large, soft bow just at the breast, or tied once around the waist and falling into long ends at the back of the skirt.

The triple skirt shows itself more frequently as the season advances. Another skirt considered very smart is made in six sections, each one cut circular and widening to a generous flare in the lower portion, which, with the top one, is richest of all, the four remaining ones being graduated in width. The edges are finished with a stitched band.

The latest novelty in the way of correspondence paper promises to be quite popular. The novelty consists in having the letter sheet very much longer than it is wide, the length being such that the sheet must be folded twice instead of once in order to fit in the envelopes.



THREE-QUARTER LENGTH CARRIAGE COAT OF HEAVY PEAU DE SOIE WITH BANDS OF VELVET. COLLAR, CUFFS AND REVERS OF MINK FUR.

A Woman's Way and a Man's Way

MR. AND MRS. WESTFLAT such a looking sight as that place is in your life, and it's perfectly awful, and—ah, tish-tish-tish!

Here little Mrs. Westflat's breath was exhausted, and she had to wait till she had filled up enough to talk again. Then she continued:

"And well everyone of us get our death of cold from the dampness, and the baby not over the measles yet, and Tommy subject to croup. It's just dreadful, and I wish I had never moved here, so I do, and if it isn't fixed at once we'll have to move our right away. I never saw such a place as this, where nobody can ever get anything done, and my nice linen towels all stained up with the drip through the plastering, and not a dry place to set your foot in. It's terrible, and I'm so put out about it, and it's a perfect nuisance, and I'm almost dead. Send some one right away this minute to fix it, will you?"

"Yes, madam."

"Right straight away, now, mind you, I think it's perfectly shocking, and the landlord ought to make tenants sign a promise not to forget and let the water overflow in their rooms. It's perfectly disgusting, so it is, and I'm so worried I can't talk. Mind, now; you send somebody right off now."

Then Mrs. Westflat flipped out of the office, giving the door a ladylike slam to emphasize the necessity for haste. While the landlord's man was telephoning for the plumber, the door opened and Mr. Westflat walked in. He said:

"Some fool let the water overflow in the flat above us last night, and it leaked through the ceiling and made a Dickens of a mess in our bathroom. Send a plumber, will you?"

Then he walked out.

KATE BYRD.

Dressy Gowns

An all black or all white frock in the midst of an assembly of gay colors is very charming. Some of the black dresses this year will resemble coats of mail by reason of the large amount of steel and jet paillettes that are being used in their decoration. A great many applique and hand embroideries are being used, and white cretonnes and brocades appear on the fine muslins and taffetas, while some lovely dresses of pale shades will be made entirely of taffeta. There are too, some beautiful little pompadour designs in tulle, the taffeta being of so soft a make that it looks more like cretonne. It is a delightful fabric, a sort of compromise between the two. It also has the merit of being fairly serviceable, which is more than can be said of silk muslins.

Pore Old Dad

To kin soe pick up a paper
An' its "Poet's Corner" great
"Cep't ye'll see er purty poem
An' it'll be a-er-achin' little
But ye'll have a time a-sarvin' it
Eyes will be er-achin' bad.
Ere ye've overta'ed er poem
At this time for pore ole dad!

No, it isn't willful in em—
Them that write of notice dear—
That thar's never notice taken
Of her er-achin' er-achin' dear.
No, it's never meant to slight him,
But hit looks a little sad—
All the housewits may for mother,
Not a bloom for pore ole dad!

True, our mother watched above us
Till her dear ole eyes wud ache,
But ole dad, he epped to feed us
Till his back would nearly break.
Mother crooned above the cradle,
Gave us devotion all she had;
Still, that wasn't any poem,
At that time for pore ole dad!

Do not take one line from mother
When ye write the soul-sweet song,
But if thar's a word for father,
Now and then, it won't be wrong.
Pore ole soul, he's bent and wrinkled,
An' he'd know 'twould make him glad
If, while ye are praisin' mother,
Somethin' sed for pore ole dad!

—Cincinnati Commercial Tribune.

Kate Clyde's Chatter, Wise and Otherwise

THE natural tendency of woman is to be one-sided. I suppose it is her life which makes her so. I should hate to think it was her nature. When a woman goes in for anything, she goes in for it mind, soul and body, whether it be higher education or the pursuit and capture of man. If she doesn't succeed, she falls into a head by the wayside and is no good to anyone, least of all to herself.

The truth is, women are extremists. Now, I don't approve of extremists. I have met several of them lately. There was the little teacher of sloyd at the summer school which I attended last July. She was a creature literally of skin, bones and iron will. The will took the place of the color in her cheeks and the light of health she should have had in her eyes. It carried her through a day which was one continuous grind, and when it failed her in the evening (she couldn't work by lamplight because her eyes were bad) she just sat helplessly on the piazza in the midst of us and endured the frivolous moments as patiently as she could until it was time to go to bed. It was said of her that she would rather work than eat, which was perfectly true, for almost immediately the new expression vanished, and we never saw it on her face again. Question is, did she realize how much she was missing in life?

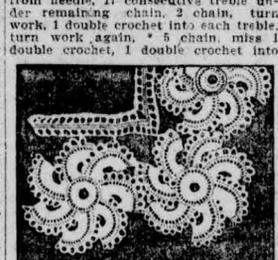
I don't know which I pity more, the woman who has so estranged herself from the things which constitute real life that she does not realize their true value or she whose circumstances have so estranged her that she longs for them in vain. Probably the latter, for at least she suffers more.

The Whyness of the Wherefore There was once a girl who allowed herself to be influenced by the present of a picture. The subject was a studio with a man playing the violin, and it was full of creepy shadows and awful sorts of thoughts. Well, she received the picture in the afternoon, and in the evening two young men called. They were of the Delmonico and Sherry dinner devouring kind, typical New Yorkers—the town is full of them. Well, this is just where the girl made her mistake. Filled with the fatal influence of the picture, she began to discourse on

the whyness of the wherefore. Higher and higher she soared. The men tried to follow her, but they hadn't been used to that sort of thing, and the first one, then the other, came back to earth with a bang. The girl had it all to herself. At last she paused to gather an opinion or so. Both of the men were regarding her in an open-mouthed admiration. Finally one of them collected his senses and said they must be going. They promptly fled themselves to the nearest cafe and shot down three highballs apiece. Did they return? Well—

The Useful Lay Figure Do you know that a lay figure is one of the most useful things you can have? She needs a pink and white complexion and a head of real hair like those in the shop windows, but she can be composed merely of a body of paper mache fashioned after your proportions and covered with black ribbed cloth. On this personage you can fit your gowns, sponges them and even dress them, while your "dumb sister" is always a convenience when you want to find out how shabby your dress looks to other people or how certain combinations of skirt, hat and waist look together.

The girl with a small income should adopt all these little money saving devices, and in addition she needs all the ingenuity at her command. Take the case of a friend of mine. She purchased a very smart pink satin blouse made in the most approved fashion, price \$8. She wore it out once and with a heartrending fatality managed to ruin it with a couple of spots. What was she to do? There was no way of repairing the spots, and she was determined to throw the waist away? Not when it



Influenced by a Picture.

Did they return? Well—

next, 5 chain, miss 1, 1 double crochet into next, repeat from * to end of row, when there will be 9 loops. Slipstitch into foundation circle, 5 chain, miss first loop of last spoke of wheel, 1 double crochet into next loop, 3 chain, 18 treble into loop of 9 chain, slipstitch into foundation circle, turn, 1 double crochet into each treble, turn work again, * 5 chain, miss 1 double crochet, 1 double crochet into next, repeat from * to end of row, when there will be 9 loops; slipstitch into foundation circle, repeat from * 5 times and fasten off. Any number of these wheels may be made to suit the length of work required.

For heading 1 double crochet into third loop top spoke of wheel, 18 chain, 1 double crochet into third loop of next spoke, 18 chain, 1 double crochet into third loop of first spoke on next wheel, 18 chain, 1 double crochet into third loop of next spoke, 18 chain, repeat to end of row.

Second row, 2 chain, miss 2 chain of last row, 1 treble into next, 2 chain, miss 2, 1 treble into next, repeat to end of row.

Third row, 1 double crochet into each stitch of last row.

Fourth row, like the second row.

The short Eton and bolero styles will continue in favor, notwithstanding the vogue of the longer newer garments.

German Toast This toast is excellent for breakfast or for one who does not like eggs, yet ought to eat them. For four slices of bread beat two eggs until well broken up but not as light as for cake; add one-eighth level teaspoon of salt and one cup of milk and turn into a deep plate. Lay slices of bread cut one-half inch thick into the beaten egg and milk and turn so that both sides may absorb some of the custard. Heat a frying pan or omelet pan, put in

Some New Dishes for Madame to Serve

one teaspoon of butter and with a griddle turner lay in one or two slices of bread; turn as soon as slightly brown crust forms. Serve on a hot plate with a spoonful of jelly and each slice if the toast is to be a sweet dish or pour a white sauce round, but not over it.

Bread should be at least twenty-four hours old for toast. The round loaves give uniform slices and as the bread is baked in closed pans the crust is not so hard. Although the bread is thoroughly baked, trim off the thin brown edge of the slices, but do not cut deep, as the most easily digested part of the bread is next to where the starch of the flour has been not only cooked but turned into dextrine. Baking powder cans and lard pails are good substitutes for patented round pans.

Salad to Serve With Game

Cut a cold boiled red beef into small strips of even size; cut celery into the same lengths and split into sections. Now chop some best rather fine and cut celery into small dice; cover each with French dressing and let stand fifteen minutes. Cut a little watercress finely and scatter through the beef and celery as it is arranged in a mound on a plate. Shape the edge with a spoon and lay the strips of celery and beef alternately about the edge, garnish with cress or celery tips and pour more French dressing over the top.

Salad to Serve With Game

Make the strips of best and celery thin and delicate and add more salt and pepper to the French dressing used for the beef than the usual rule directs. Wash the celery and lay the stalks in cold water for an hour or two. Add one-half teaspoon of vinegar to two quarts of water to make the

Some New Dishes for Madame to Serve

celery crisp. This salad looks very temptingly arranged for individual service, but it takes more time. Shape by pressing a muffin tin over the beef and celery, and the beef and celery round and lay a sprig of celery at the side of each salad.

SALAD TO SERVE WITH GAME

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ALICE B. WHITAKER

GRAYS REBORN WOMEN AND WOMEN'S CLUBS

EDITED BY FLORENCE COLLINS PORTER

Looking over a number of our large and profusely illustrated Sunday newspapers, all of which devote a great deal of space to women's affairs nowadays, one cannot but help note the wide range of topics presented in contrast to those of fifteen or twenty years ago. There is much profitable reading other than "Fashions," "Beauty Helps," "How to Keep Well" and "Physical Culture," from which one may draw conclusions that a large majority of the readers of the Sunday newspaper are women and intelligent and intellectual ones, too.

There was a time when women of advanced ideas objected to the so-called "woman's page," as calculated to draw an arbitrary line designating the special kind of reading that the feminine devotee was inclined to choose.

But this objection has now no foundation to rest upon if the columns that are supposed to be especially devoted to woman's work and sphere are to be taken as a sample; for the topics presented cover almost every subject under the sun.

Take, for instance, any of the departments under the familiar heading of "Where Women Hold Sway," "Woman's Domain," "For and About Women" and similar titles. If these are indicative of anything, the conclusion must be that women are pretty thoroughly mixed up in the progress of the world that is "making the wheels go round." There are to be found paragraphs and news items concerning "Peace and Arbitration Between Nations," "The Abolition of the Caste System," "Social Purity," "Industrial Home Reports," "Needlework Guild," "Deaconess Home Benefit," "Co-education," "Troubles in School," "Bad Spelling Hereditary," "Lecture on Cliff Footing," "Football Games," "Business Women's Clubs," "School Sanitation and Schoolroom Decoration," "Civic Improvement," "Anti-Spitting Ordinance," "Park Improvement," "Protection for Wage-Earning Women," "Juvenile Court Bill," "Traveling Libraries"—and so on through a long and varied list. The one given has been culled at random from the files of current exchanges and taken as a sample. It shows that the "woman's page" is devoted largely to other matters than fashion, folly and sensational news, because women are no longer content to be mere butterfly of fashion or unknown in influence outside the four walls of her home life. She is a vital, potent force in the world today and is being recognized as such.

Miss Zona Gale, who became prominent in the club world as chairman of many years of the Milwaukee biennial, is to be the guest of Mrs. George Drake Ruddy the last of December coming here from Redlands, where she is now visiting Mrs. Charles Kendall Adams.

Miss Gale was connected for some time with the Evening Wisconsin and went from that paper to the New York World. She is a well-known contributor to various periodicals and during the year has served as secretary to Edmund Clarence Steadman.

Mrs. Emma C. Greenleaf, formerly of Redlands, but now of Los Angeles, has recently had published by the Educational Publishing Company of Boston an attractive little book especially designed for school libraries, entitled "Stories and Tales from the Animal World." Mrs. Greenleaf is especially fitted to write for children through many years of association in school work, having been for sixteen years supervisor of schools in Chicago and also a teacher of wide experience.

The book has proved very popular and the first edition is nearly exhausted.

Bishop Montgomery, in his address before the Ebel on Monday afternoon, gave a strong illustration of what a woman's influence may be on the younger generations when he told so graphically of the old Indian woman who had fasted for fifty years for the church catechisms and prayers to her degenerate people in the mountains near San Diego.

Los Angeles club life is indebted to Colorado for many pleasant visitors from time to time and when any of these become permanent residents, as is frequently the case, it may well be regarded as a matter of congratulation, as all, or nearly all, of the club women of the equal suffrage state are exceedingly bright and entertaining. Notable among this number is Mrs. Andrew Stewart Loblinger, formerly of the Woman's club of Denver and an active and honored member who has held various offices in that large and progressive club. Mrs. Loblinger came here at the time of the biennial and expects to make Los Angeles her home.

Los Angeles didn't hear much Sunday about the "world-wide pledge-signing crusade under the general direction of the National Temperance society." It was intended to begin the campaign simultaneously in all the leading cities and towns in the English-speaking world on Sunday, November 22, with sermons in all the churches and exercises in the Sunday schools, with public meetings the following week. Pledges of total abstinence were to be secured at these meetings.

But as Los Angeles has a protracted pledge-signing temperance revival all the time since Francis Murphy took up his residence here, spasmodic efforts on special occasions are of course unnecessary.

Temperance workers of the city claim that they are greatly encouraged over the increasing interest manifested in reform movements of this kind here.

not in abolition, but in more squarely facing the fundamental questions involved, and so far as I have seen, co-education has always worked best where the most freedom is allowed.

The new twelve-story building erected by women of wealth as a home for working women in New York City is soon to be opened. It is called the Martha Washington home and cost \$350,000. Only working women are to be admitted and already there have been applications enough to more than fill the hotel twice. The board is to be \$7 and upward, but there are said to be more than 30,000 wage-earning women in New York, artists, teachers, stenographers and the like, who can afford to pay this sum.

Among the women who have subscribed liberally to the project are Mrs. Levi P. Morton and Mrs. J. Pierpont Morgan. The management of the hotel is to be under the control of a company composed of men.

Another horrifying example of the invasion of American customs in hien circles in England has recently been given. Not long ago Queen Alexandra partook of an eight-course dinner and finished it in sixteen minutes by the watch!

A commemorative service was recently held in Boston for that notable physician and universal friend of humanity, Dr. Marie E. Zakrzewska, founder of the New England hospital for women and children.

Mrs. Edna Dean Cheney, Mrs. Harriet Laughlin, Julia Ward Howe, Mary A. Livermore, William Lloyd Garrison, Rev. Charles G. Ames, Richard D. Humphreys, Dr. Emma Culbertson and Paul Carus of the "Open Court" were among those who extolled the character of this remarkable woman.

An American mother has written a letter to the London Times, in which she claims that at Oxford the students' rooms are totally unfit for habitation. The dirtiness of the rooms, beds and bedding is said to be laid directly to the fact that all the servants employed are men, and men as a rule are quite incapable of understanding all such matters.

Lord Curzon is blamed by the Bombay Gazette for his extravagant plans for the great coronation durbar to be held in Delhi some time in January, the criticism being based on the fact that half a million of people are needing famine relief and will for months to come.

But if there is blame for Lord Curzon, there are only words of praise for Lady Curzon, who is said to have a deep interest in and admiration for the higher kinds of Indian art work—her excellency's sympathetic imagination had something to do with the great Indian art exhibition in connection with the Delhi coronation durbar, and further, that at the durbar she will wear a dress of exclusively Indian manufacture. "A fortunate Delhi craftsman has the order for this dress piece, which will be in the idea of its design a gorgeous piece of silk embroidery in imitation of peacock feathers. At the instigation of his wife Lord Curzon has ordered that the "secluded women" of the families of the princes of India are to see the splendors of the durbar. A part of the amphitheater is to have a tiled screen through which, from themselves unseen, the women may see all that occurs. This is a most startling innovation and a bold thing for the vicereine to order, popular as he is, but this is not all; he has also decreed that during this festival season the art galleries of the Delhi, known to them hereafter only by hearsay, are to be open to these women only, on certain specified days. This extraordinary freedom will have its effect, along with the attendance of the women physicians and lawyers toward the liberty of Indian women.

A New York woman who won a bet at a horse race, in her excitement over the victory went away and forgot her 4-year-old daughter, leaving her sitting alone on a bench, gazing at the crowd. Now if it had only been at a club meeting, instead of a horse race, what an object lesson the incident would have afforded as an illustration of the degeneracy of parental obligation.

The prize of \$50 offered by the Women's Educational and Industrial union of Boston for the best household labor saving device invented by a woman was awarded during the recent mechanics' fair in that city.

The successful inventor is Mrs. Lydia Coale Sharpless, a Quakeress of Philadelphia, and the invention is a bread-making machine.

The chief merits of the invention are two—cleanliness in bread-making and digestibility. Mrs. Sharpless is said to have experimented two years in order to get a perfect health bread.

The machine mixes the bread very lightly and rapidly, not packing the

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"The Perfect Food"
Instead of eggs for breakfast



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starch cells, but allowing them a sufficient lightness so that they are easily converted into dextrin or sugar of starch. As now exhibited, it consists of a box or tank, in the middle of which are two rollers armed with knives that fit into each other dovetail fashion and work spirally. At the top of the tank is a perforated pan for sifting the flour through. To use the machine a sufficient quantity of warm milk and water and other needed ingredients are poured into the bottom of the tank. Next flour is put into the sieve at the top, and the rollers are set to revolving by the turning of a handle. In three minutes the bread is mixed, not packed, and is left to rise. A thermometer at the side of the machine indicates the temperature. No more raw flour need be used when the bread is risen and is ready to be put into the pans.

Chemists have pronounced the bread made by this machine to be 50 per cent more nourishing than that made in the ordinary way, because of the bursting of all the starch cells. They told her this after they had laughed at the miniature model of her machine, made, woman fashion, of bits of pasteboard sewed together. She cut out the pieces and her daughter, a college graduate, sewed them together. But the real machine did absolutely what she claimed for it, just the same. The small machine makes ten loaves of bread in three minutes. A large one—such as the United States government has bought for the navy—mixes 1200 loaves in the same time.

Other inventions exhibited by women were hygienic underwear, an "orderly clothes press" kitchen cupboard, "creeping suit" for a baby, a "wooden hand" or sanitary mixer, a jelly bag that will hold boiling hot fruit and stand squeezing without burning, or staining the hands, and a picture hanger that does away with the use of the stepladder.

Boston's latest institution is the elevator girl. She suddenly has made her appearance in fashionable downtown stores, luncheon rooms for women, dressmaking establishments and various philanthropic institutions for women that abound there.

It all came about because the elevator man at the Women's Educational and Industrial union left. Looking around for some one to take his place one of the managers suggested putting in a girl. The idea delighted the other managers and it was adopted at once. A girl was found and she is now running the elevator, wearing a neat white cap and apron. A week later a girl appeared in the mirror-lined elevator of the Young Women's Christian association. The idea "caught on" and girls got employment in elevators in other establishments. The elevator girl is fast becoming popular.

The "music class" of Riverside, under the direction of Miss Allen, is doing systematic and earnest work.

An alliance of all the women's clubs of San Jose has been formed with most gratifying results.

"I used to think I should lose my mind, my head would feel so bad."

Headache, frequent and severe, falls to the lot of a great many women. Some women look forward each month to several days of suffering with severe headache, the consequence of irregularity, suppression or some other form of womanly ailment. Other women have severe headache pounce on them like a bird of prey after the least unusual effort or excitement. Usually the headache is associated with extreme nervousness and often with the hard pains which are the result of female weakness. The amazing feature of this suffering is that it is borne so long, accepted so patiently, as if women had been foredoomed to such excruciating torment as makes life a daily martyrdom. Yet it can scarcely be wondered at that women feel there is no cure for headache, backache, nervousness, beating-down pains and other sufferings when so many of them have an experience similar to that described by Mrs. Douglass in her letter below. She says, "I tried seven doctors but received no lasting benefit." After exhausting the skill of available physicians what hope of cure can be left to a woman?

And yet there was a way of cure and Mrs. Douglass found it. She wrote to Dr. Pierce in response to his offer of free consultation, by letter. He advised her of the medicine to take and gave special directions for home-treatment, and "the result was wonderful."

"For ten years I suffered with female trouble, also catarrh of the stomach, liver, kidney trouble, and catarrh of the bladder," writes Mrs. Lottie M. Douglass, of Glenmore, Oneida Co., N. Y. "I would have had headaches and blind spells; stomach and bowels used to bloat a great deal, and I was troubled with bearing-down pains all the time. Tongue cannot tell how much I suffered from nervousness. I used to think I should lose my mind, my head would feel so bad. My heart was so bad that the least excitement, and even to turn over in bed, would cause palpitation. Had female weakness so bad for three years that I was in bed most of the time; in fact, could scarcely be on my feet at all. I tried seven different doctors, but received no lasting benefit. I was entirely discouraged when I wrote to Dr. Pierce, stating my case. He advised me to try his medicines, and I did so. The first bottle I took helped me, and the bloating began to go out of my stomach. I continued the medicine until I had taken nine bottles of Dr. Pierce's Favorite Prescription, nine bottles of his 'Golden Medical Discovery' and six vials of his 'Pleasant Pellets.' I also followed special directions for home-treatment (which he advised), and the result was wonderful. My bad feelings left me and I can work with comfort now. I give all the praise to Dr. Pierce and his remedies, for I believe they saved my life. Our family physician said I could not get well. You can publish this, for I am willing to let others know how much I suffered and what cured me when others failed."

Dr. Pierce's Favorite Prescription makes weak women strong and sick women well. It does this by curing the diseases which make women weak and sick. It establishes regularity, dries weakening drains, heals inflammation and ulceration and cures female weakness. It cures headache, backache, nervousness, sleeplessness, and other ills which are but the effects of womanly diseases.

Dr. R. V. Pierce extends to every sick woman the privilege of consulting him by letter free, in absolute confidence and perfect privacy. Address Dr. R. V. PIERCE, Buffalo, N. Y.

"I suffered for twelve years with female trouble," writes Mrs. Milton Grimes, of Adair, Adair Co., Iowa, "which brought on other diseases—heart trouble, Bright's disease, nervousness. Had neuralgia of stomach, and at times would be nearly paralyzed. I can freely say your medicines (nine bottles in all, five of 'Favorite Prescription,' four of 'Golden Medical Discovery' and two vials of Dr. Pierce's Pleasant Pellets) have cured me. I can work with comfort now, but before I would be tired all the time and have a dizzy headache, and my nerves would be all unstrung so I could not sleep. Now I can sleep and do a big day's work, something I had not done for over seven years before. You have my consent to publish this testimonial, hoping it will be the means of helping some other invalid."

Dr. Pierce's Favorite Prescription cures when other means and medicines fail. That statement is borne out by the letters published above, and by the thousands of others received from glad and grateful women. No matter how complicated the disease or of how long standing, the evidence shows that in forty-nine cases out of fifty these womanly diseases are perfectly and permanently cured by the use of Dr. Pierce's Favorite Prescription.

The dealer who offers a substitute for "Favorite Prescription," does so to gain the little more profit paid on the sale of less meritorious medicines. His profit is your loss; therefore, accept no substitute.

FREE! Dr. Pierce's Common Sense Medical Adviser, containing more than one thousand large pages and over 700 illustrations, is sent FREE on receipt of stamps to pay expense of mailing ONLY. Send 31 one-cent stamps for the cloth-bound volume, or only 21 stamps for the book in paper covers.

Address: Dr. R. V. PIERCE, Buffalo, N. Y.



Here, 'prentice I Study well that brand—
You've heard its praise on every hand!
Long years we strove
With range and stove
To make a bread the People craved;
We kneaded, mixed, we tolled, we slaved;
Financial storms we met and braved—
At length my dusty cap I waved!
I'd found the secret—
That is it!
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Flour is fit!

Makes More Bread to the Barrel



Bread that IS bread—that is eaten—that is passed to the children again and again—that is an honor to the breadmaker—that is muscle building food for the bread winner—that is rich in gluten—that "stays by" one—is made from Four X flour.

Money back after using one sample baking if you are not satisfied. Order from your grocer.

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MID-WINTER NUMBER

LOS ANGELES HERALD

SOUTHERN CALIFORNIA SECTION

The Soaring Skyline of Los Angeles

THE unprecedented amount of building and other improvements in Los Angeles during the present year has brought with it a number of the unmistakable earmarks of a great city. Among these may be reckoned as pre-eminent the large number of tall buildings which break imposingly the architectural line of the principal streets.

They have changed the low perspectives of less than a decade ago and the pedestrian now gazes up at metropolitan facades of brick and stone, decorated with fire escapes. Los Angeles now has more tall buildings than had New York City thirty years ago, and her sky line is still growing, with millions for investment, ready to build it higher. The high speed elevator, perfected within the past thirty years or so, was one of the first incentives to many-storied buildings by making it practicable and easy for business to find its way to upper floors.

But the greatest cause of the change in the sky line of Los Angeles during the year just closing has been the unheard demand for more business space. For the past eleven months the aggregate amount of the contemplated expenditure for buildings in the city was \$3,500,000. Of this fully half has been for the erection of business buildings. Over fifty brick business blocks, all of two stories and over, have been in course of erection or projected during that time, not to mention many frame buildings, one-story stores, etc.

Up to November 8 there had been issued for this year 4070 building permits, and it is expected that the time between then and January 1, 1903, will nearly balance any preceding four months since the year began. It is safe to say that December will crowd the \$10,000,000 mark. For November alone the value of permits issued has been more than \$1,500,000. The building operations for 1902 will be more than double those of 1901, which represented \$4,276,917 in value.

It is a matter worthy of wondering note that Los Angeles so far has only one thoroughly fireproof building. In many other cities of the same size the building regulations demand only fireproof buildings. In New York City nothing can be built above thirty-seven feet in the business district unless fireproof. One or two fires among some central Los Angeles buildings would show the entire wisdom of such precautions.

To the citizen who has lived in Los Angeles for the past twenty years or even ten, the busiest thoroughfares present great and progressive changes in architecture, and will continue to do so, for in less than ten years from now circumstances will probably be such as to make it difficult for the latest builder to resist a temptation to overtop the highest building previously erected.

Standing at Temple block, which once occupied the same prominence in Los Angeles as did the Broadway Centra, in New York City, the latter being the first ten-story building in the metropolis, and looking down Main street one does not note much that is monumental in the perspective.

The Bullard block still presents a modern front, but brings to memory its predecessor, the stuccoed courthouse of the old days. Next in dignity comes the cream-colored facade of the Van Nuys and then the sky line breaker, are mostly prospective. But on the east side, between Winston and Fifth street, will rise one million dollars' worth of architecture, represented by the new United States postoffice, to be erected when the entire frontage shall have been secured. It is to be hoped that this will provide adequate quarters for one of the largest volumes of postal business in the country.

Next in importance to draw farther south the business of the street and as an increaser of property values will be the depot and office building of nine stories to be erected by the Pacific Electric Railway company, for the accommodation of its interurban traffic. The structure will cost \$600,000 or more. Coming over to Spring street, in looking north, one can take in enough substantial newness in the line of present and projected business structures to warrant the assertion that Spring street will fight to the last to maintain the position of most important business thoroughfare.

Diagonally opposite the Freeman block at Sixth and Spring will soon rise the eighty-foot frontage of a three-story brick store building, to be erected for Abbot Kinney at a cost of \$45,000. It will be almost overshadowed by a six-story office building to be put up on the Alexander property at the southwest corner of Spring and Fifth, for George N. Black. Its 120-foot front will be in style much like the Douglas block. It will be of pressed brick, costing \$125,000, and will be unique as being the only building in Los Angeles having a two-story entrance, something like that of the Call building, San Francisco.

But Spring and Fourth streets will soon have a cluster of tall sky piercers that should make the corner known as "Observatory Point." Costly enough will be these stately blocks, representing a cool million for the erection of two of them. The first real skyscraper in Los Angeles will be the twelve-story steel frame building, in the style of the Italian Renaissance, to be erected by the Union Trust company, directly across from the Angelus. The exterior dimensions will be 52x86 feet.

On the northeast corner of the same streets, and covering perhaps a larger area, is to stand the ten-story block shortly to be erected by H. W. Hellman and others. It will cost the same as the Union Trust building, \$500,000.

block is to be remodeled. When this building was built in 1888, at a cost of \$225,000, it stood alone as the high building of that district, and was the wonder of the town. In the remodeling, to cost \$100,000, both the exterior and interior will be altered and two stories will be added, making it almost able to overlook its lofty neighbor, the seven-story building of the Los Angeles Trust company. Eighty thousand dollars were spent in improving this, known for many years as the two-story Burdick block. This perhaps closes the list of immediate changes on Spring, except one or two smaller new buildings in prospect and the remodeling of the Howell-Crowell building at Franklin and Spring with additional stories, to

other year, when the chamber of commerce will remove to its new building on Broadway, between First and Second. This building will be a most imposing one of six stories, with facade in light brick and stone in Grecian-French style. It will cost \$200,000. The entire first floor will be given up to the Zinkand cafe, a most fortunate location, almost opposite the doors of the new Mason opera house. This handsome four-story building, extending through from Broadway to Hill street, is now in course of erection and will cost \$60,000. Other new buildings in prospect on Broadway are a block for the Los Angeles Lighting company, the Journal building, near Franklin, to cost \$45,000, and several others north of

A number of new hotels are projected, notably an immense one in pure Spanish style, to be erected on Seventh street, opposite Westlake park. Also one at Sixth and San Joaquin, to cost \$100,000. One erected at Fourth and Olive streets during this year, a five and a half story hotel, cost \$65,000. The proposed new Southern Pacific depot at Fifth and Central avenue, to cost in the millions, has caused quite a business boom in that section, and many three-story business blocks and stores are going up. Fine residences without number have gone up during the past year and still the building of them goes on. When Los Angeles has more skyscrapers, then will come the need for more apartment houses also. But the man

Perhaps the most reliable evidence of the prosperity of the city are the bank clearings. Those of the Los Angeles Clearing House association recorded more than a quarter of a billion dollars for the banking year that closed September 31, 1902. During 1901 the clearings aggregated \$146,170,899.55, and the city stood the twenty-eighth in rank, compared with other financial centers of the country. This year the total jumped to \$225,917,730.23, which represents a gain of \$80,746,830.68 over the corresponding period of last year. If the same rate of gain continues Los Angeles will soon take its place about the twenty-second in rank, and there is little doubt but this will be so.

This is not so altogether wonderful when one looks at the figures showing the increase of population during the ten years past. The population of Los Angeles in 1892 was 55,000. Now it is estimated at 125,000.

Another important indication is the growth of the postoffice business done, which in Los Angeles has more than trebled during the past decade. The amount of postal receipts in 1892 was \$129,065. For the twelve months ended October 31, 1902, the postoffice business footed up \$382,024.25. This represents an increase of about 25 per cent over the receipts for 1901. During the month of October, 1902, the Los Angeles postoffice showed a larger increase of business than any office in the United States.

After operations begun two years ago, the San Pedro breakwater is in sight at last, though not more than a third completed. The dredging of the first division of the inner harbor will commence about January 15. By the time the three-million-dollar breakwater is completed the ocean traffic of Los Angeles will probably double, perhaps treble.

During the month of October, 1902, 310,000 tons of rock were delivered for the substructure and 1223 tons for the superstructure.

The number of vessels entering the port of San Pedro from January 1 to November 1, 1902, was 785 and the net tonnage was 283,472 tons. The total amount of lumber received at the port during the same time was 200,133,163 feet. Shingles received, 92,573,587; pickets received, 66,800,000. The increase in lumber was 1,000,000 of feet per month over last year. The total number of tons of merchandise received up to November 1, 1902, was 19,556 tons, and the number of passengers landed at San Pedro up to the same date was 26,532. The total value of imports from January 1, 1902, to November 15, 1902, was \$576,788.

In commercial lines Los Angeles is reaching out in all directions for trade. She has added one-third to the number of her wholesale business establishments during the past year, and the volume of business was doubled during the past eighteen months. In her trade with the San Joaquin valley Los Angeles has for several years been asking for equalization of freight rates north, just as they obtain from San Francisco south. After four years a concession has been made in rates and Los Angeles can compete with other supply centers successfully as far north as Bakersfield. This has resulted in a large increase of trade with the San Joaquin valley.

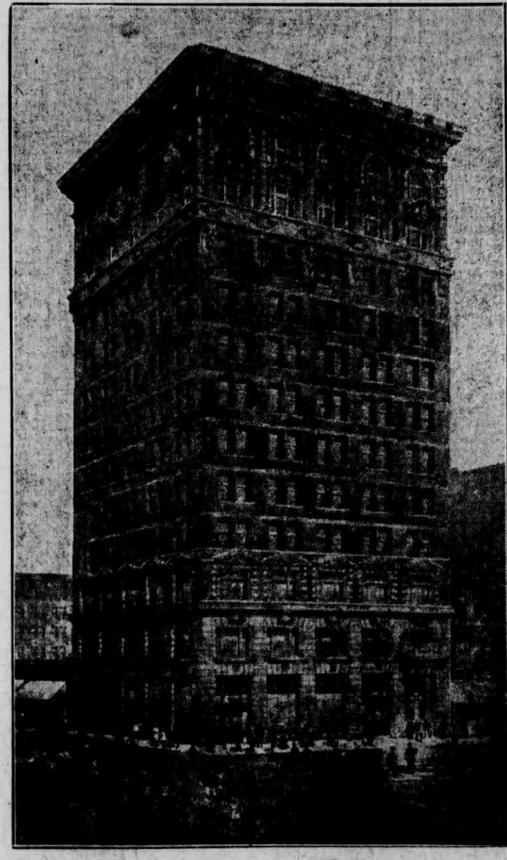
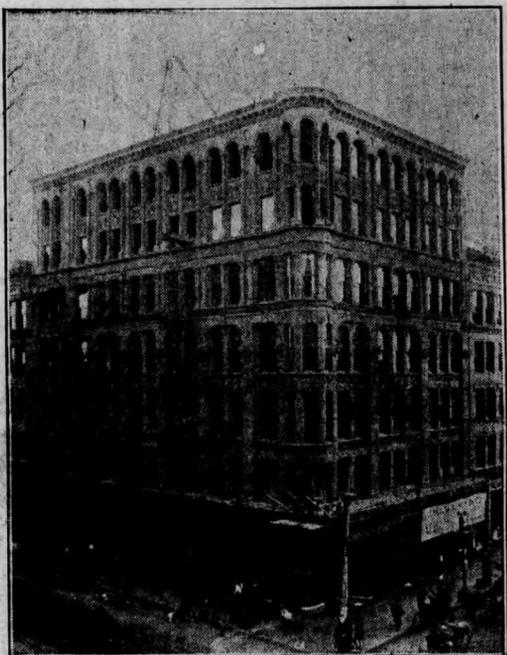
It is estimated that Los Angeles does a business of three-quarters of a million dollars per year in wholesale lines with Arizona, New Mexico and Mexico. She almost controls the lines of grocery business in supplying Arizona.

The shipments of iron to Arizona and Mexico, in mining machinery and supplies for 1902 have been double those of last year, and will largely increase as mining development goes on. The Llewellyn Iron Works now have on hand orders amounting to \$100,000 in southern and central Arizona. Sixty concentrators were sent from Los Angeles during the past year to Mexico, Oregon, Arizona and Nevada at a valuation of \$184,000. One firm here is manufacturing crucibles to send with assayers' materials to Arizona. Los Angeles at present plays the part of a fiscal center and a source of supply of machinery and material. When the smelter now being erected at San Pedro is completed, thousands of dollars which are now annually deflected from the city, will be expended here. The condition of the oil industry is improving with an advance of 20 per cent in price for the refined product.

The country around Los Angeles has produced in the past year 18,000 carloads of citrus fruits. The crop of nuts and raisins will be many carloads ahead of that of last year. Los Angeles now has 1415 manufacturing establishments of all kinds. It is no wonder that the city should stretch out with 200 miles of street car track within its limits.

Among new lines of industry may be mentioned the Auto Cycle company to build automobiles; the first wholesale dry goods concern in the city, first incorporated with a capital of \$250,000; a company for the manufacture of liquid air and oxygen with a capital of one million, and the San Pedro Salt company, capitalized at \$50,000. More extensive improvements in building were made last year in the wholesale district than in four or five years past, and all are occupied. Another indication of prosperous demand are the new furniture companies springing up every day, and three or four new firms are in existence for the sale of gas and electric fixtures.

Other things which emphasize the prosperous condition of the city are the facts that money put in house building for investment today brings a return of 8 1/2 per cent; that from Temple to Seventh street there is not a store to let on Main, Spring or Broadway, and all new office buildings readily fill up without depicting the old. Much more might be cited or said, but the sum total seems to be expressed in the statement that Los Angeles has never had a more prosperous year than 1902 and never was there a more satisfactory outlook for the continuance of a healthy and prosperous growth.



LOS ANGELES TRUST BUILDING, SECOND AND SPRING STS.

LANKERSHIM BUILDING, THIRD AND SPRING STREETS.

GRANT BUILDING AT CORNER OF FOURTH AND BROADWAY.

UNION TRUST CO. (SOUTHERN CALIFORNIA SAVINGS BANK) — John W. Parkinson, Architect.

These buildings, too, will have a more decided purchase of architecture than most Los Angeles business blocks.

The somewhat metropolitan frontages of Third and Hill by the compact building of six stories, costing \$300,000, of the Conservative Life Insurance company, and the sky line at Third and Spring is further broken by the addition of two stories to the handsome brownstone Lankershim block.

Great changes have taken place at Second and Spring and still greater ones are in prospect, for the Bryson

cost \$30,000.

From Second street, looking south on Broadway, the eye is greeted by the most perfectly proportioned and satisfying line of buildings in the city from an architectural point of view. One of these, the Grant building, at Fourth and Broadway, has just been raised from three to seven stories at a cost of \$300,000 and at the northeast corner is just being started by O. T. Johnson a well-proportioned office building to cost \$80,000. Both of these buildings are the tallest in this vicinity. Another change in this quarter will occur within an

First street, thus keeping all business from going the other way.

On West Fifth will be the new model newspaper building of the Express, to cost \$30,000. Hill street has the new building of the Home Telephone company, near Third, costing \$75,000, and at the northwest corner of Fifth and Hill is soon to be erected the California clubhouse, to cost \$200,000 and five stories in height.

Many changes have been made in the wholesale district and a number of smaller stores are going up on Main street, Spring and Broadway.

with poorly improved property bringing him in 7 per cent, of which there are many in Los Angeles, seldom puts up a sky piercer. He leaves that to the young fellow who has just bought a lot, or the man who borrows money. But the sky line of Los Angeles is creeping steadily higher each year.

Commercial Prosperity

In commercial and general lines of business Los Angeles is going ahead at a rate that is drawing much attention to the city as a remarkable financial and progressive center.



A One Day Trip Through Wonderland

"The Inside Track" of the Southern Pacific Affords a Magnificent Panorama of Southern California's Famous Resorts

The prime object of the tourist in coming to Southern California is to see something he hasn't been used to seeing elsewhere. He has ideas, more or less distorted, perhaps, from the matter he has read or formed from hearsay, and he wants to see just how nearly his ideals will correspond with the real. He knows that there are resorts galore to be visited, but doesn't know just how to go to them the best way, nor how to see the most that is to be seen in all or any of them when he does get to them.

The various lines of railroad and electric cars afford no end of pleasant sight-seeing trips. Perhaps it is but fair for all of them to say that on no two lines will the same scenes be presented. Therefore, take in all the short one-day trips out of Los Angeles and you will conclude your vacation period in Southern California with a mind fully satisfied that you have really "done" California properly and have seen all that is to be seen.

It is true that both the great transcontinental lines of railroad, by means of their numerous feeders in California, penetrate scores and hundreds of pretty valleys and towns, and many towns are made by both roads, but on a trip of a day, seeing the valleys and orange groves and ranches from the car window, different scenes will be presented from each of the roads, although the same towns may be passed through.

"The Inside Track" of the Southern Pacific company has long been conceded to be one of the most delightful bits of railroad, scenic, to be found in Southern California. It carries the traveler and sight-seer through the very heart of the most fertile and productive portion of the sunny southland, as it presents as greatly diversified a panorama of natural beauties as can well be imagined. To the pleasure-seeker to those who want to see luxuriant Southern California at her very best, the appended descriptive matter will appeal. It is compiled from late publications of the Southern Pacific company, and may be relied upon as authentic and accurate.

Starting from Los Angeles for a tour of the country served by the "Inside Track," a glimpse of the manufacturing interests of the city is had and a view of one of its beautiful parks; then the way is through "rounded hills and shimmering plain" to Shorb, the junction of the Pasadena and Monrovia lines with the "Inside Track." To the left is the San Gabriel winery, the largest in the world. On the right can be seen the Convent of the Holy Names. Eastward we pass through the suburban vil-

lages of Alhambra and San Gabriel, where is located the San Gabriel mission, founded by the Franciscan friars in 1771; thence through the beautiful San Gabriel valley, with its wealth of orange and lemon groves and orchards of prune, apricot, peach, pear and olive. To the north lie the Sierra Madre mountains—the bold peaks of Mount Lowe and Mount Wilson and the clustering

doms and Douars, then the beautiful valley of Pomona; thence through the broad sweep of San Bernardino valley, with its ramparts of high mountains, and then to the southward the vale of Riverside. Properly, these are not separate valleys, as the term is generally accepted, but a good deal of local pride and some not very large rolling hills that nowhere hide the high mountains to the north, are responsible.

In general the "Inside Track" includes some of the most attractive features of California, South of Tehachap. Facing eastward, the snow-clad peaks of Mount San Bernardino and Mount San Geronimo are seemingly your goal. Off to the left, after the green valley floor and its groups of hills, the foothills, up which venturesomely climb the orchards, then higher hills, and then the steep, abrupt ranges of the Sierra Madre and the San Bernardino mountains, with towering peaks and crests edged with pine forests. Cities, orchard-environed, are here and there; now we cross a lowland, with a broad wash and a narrow stream, or some broad bench, gradually ascending as we go eastward. To the right the mountains are nearer akin to hills and more scattered, some lie blue in the haze of the horizon; others, isolated and lower, are near at hand. Everywhere is a display of color. On a winter's day, from the car window one may gaze over an alfalfa field of green, a narrow strip of sand and greasewood, perhaps a deciduous fruit orchard, higher the deeper color of an orange grove, then the gold and brown of a granite wall, and higher still the whiteness of the mountains snow-capped; beyond and above a rift of light blue sky, and surmounting all some great mass of cumulus, white-capped cloud. It is a view often given a passenger on the "Inside Track," to whom width of valley and height of mountain wall display their greatest charms.

A little further on, the station of San Gabriel is reached, and here, almost at the door of the station, is one of the best preserved of the old missions, with a famous chime of bells. Historically the missions of Southern California are treated on a later page, and among them San Gabriel is entitled to prominence. Time has treated it kindly. At the eastern end is an area containing the chime of six bells, still calling devotees to service. Its towers, saw no civilized dwelling places at their building, and the time scarred wall and well-worn entrance speak of ancient years. The landmark of an earlier civilization with mission most peaceful, San Gabriel is worth a lingering inspection.

After San Gabriel, are passed Rosemead, Savanna and then Mount, where

There is a growing suspicion that the good people of Covina are quietly getting rich without taking the outside world into their business confidence. It is acquiring metropolitan airs, and is destined to be one of the largest of the interior Southern California cities. Four miles further east is San Dimas, a smaller edition of Covina. Lordsburg is a Dukhard settlement

head of the avenue. It is a line of great interest, and famous for the gravity car of older days, when the patient mules that had plodded up the long incline found their reward, while, with ears laid back and mouths wide open, they drank in the scenery from a back platform, as passengers on the down grade. The city shipped 1000 carloads of fruit during the past season, and there is no

wonder at its having three banks. It is almost unnecessary to mention the electric lights, sewer system, excellent schools, ten church organizations, and the other city signs. The mountains to the north of Pomona and Ontario, culminating in Mount San Antonio, familiarly known as Old Baldy, are possessed of many charming summer retreats. Chino, the pioneer of sugar beet culture in California; Cucamonga, a pretty resort and picnic place; Bloomington, a town of growing importance as a fruit center, and other small towns are passed until Colton is reached.

Colton, fifty-eight miles from Los Angeles, is a railroad center of importance. Here the Southern Pacific company's line between Riverside and San Bernardino, recently the subject of great improvements, and for which more are projected, crosses the main line of the "Inside Track." Colton, besides being headquarters for many railroad men, has other adjuncts of prosperity. A cannery gathers hundreds of hands from over the valley in the season. Granite and marble quarries, and perhaps most important of all, cement works of large capacity at Silver Mountain, employ many men. The Colton terrace oranges are at the top in market quotations. A few hotels are projected and an electric railway has been built.

At Loma Linda is one of Southern California's greatest sanitariums. The beautiful main building, with its towers, balconies and porches, is set upon a commanding mound that ends in the mountain wall to its back. Here, guarded against extremes of temperature by one of the best locations climatically, surrounded by an immediate environment of fine orange groves showing never a touch of frost, every attention that the associated work of the best Southern California physicians can offer, the invalid has every reason to hope for relief and eventual recovery.

Almost at the eastern end of the "Inside Track" under the shadow of Mount San Bernardino, lies Redlands, a dozen years ago a barren red hillside; today a city of 5000 people, with 10,000 acres of citrus and 8000 acres of deciduous fruits, and nurseries and land and water, making orchards every minute. Along the foot of the mountains in an elevated yet protected position, it is the chosen home of many New Englanders. It is a city of magnificent views. Toward the west facing it is the lovely San Bernardino valley; at its back are the two highest peaks in Southern California, Mount San Bernardino and San Geronimo; to the north, the fertile foothills and mesas of Highlands and the intermediate country, extending across to the mountains to the north. To the left, the city slopes upward, culminating in a canyon crest, where one may stand and look down as from the upper edge of a giant wall into deep San Geronimo pass, a train perhaps winding through the defile; or turn to the north and view the glory of Redlands, the exquisite

Canyon crest is a park better known as Smiley Heights, and renowned the world over for its beauty. It beggars description. There is little use in trying to tell of two hundred acres of flower garden, with a thousand varieties of trees and shrubs besides. The view, the wonderful drives, the lakes—you don't stop to count the flowers; it's enough to know that in trees they are forty varieties of eucalyptus, twenty acacias, and fifteen of palms, and the tree catalogue hardly opened. A horse and a decade ago called this deserted hill home, would feel badly lost now. As for you, it is enough that you are there.

From Redlands the "Inside Track" climbs steadily past Eastburne and its ice factory to Crafton, a famous treat half in the canyon's embrace and a favorite place for picnickers. It is not only famous as a resort, but is also the site of the great power of the Southern California Power plant that makes the city of Los Angeles hum—and it's almost seventy miles away. It is noted, too, for its oranges, cherries and apples.

Ten miles northwest of Redlands and sixty miles east of Los Angeles, on the broad slope between the mountains of the same name and the Santa Ana river, in the heart of the valley, lies San Bernardino, county seat of the county that by name reached from Colton via the Riverside branch and from Redlands via the motor line. It is now becoming famous as the "City of Mineral Springs." It is a well-built city of broad streets, well paved, and with

business blocks that would be a credit to a metropolis. It is the commercial and political center of the valley, and largely of the mining districts in and beyond the mountains to the north and east.

An entire page of space is devoted to a detailed description of San Bernardino in this section of this issue of the Herald, that will amply repay the read-

er. The business center of Riverside is in keeping with its handsome surroundings. It owns its electric light plant, and has power to sell. The opera house is one of the finest in the state, the hotels are of a high standard, and many of its business blocks of metropolitan appearance. The Y. M. C. A. possesses a handsome home. Riverside schools are wisely managed and progressive, with the artistic homes that are a distinctive feature of California's educational facilities. There are many churches and no saloons. The streets are paved, and the city is intersected with fine boulevards. A magnificent high school building, (Mission style) is now finished. The new government school for the Indians is under way.

Greatest of all avenues is Magnolia avenue, a seven-mile stretch of lovely double roadway, jeweled with the slender eucalyptus, the spreading palm, the drooping pepper and the graceful magnolia, set off with a bewildering profusion of flowers; through fragrant orange groves, white with blossoms, or mayhap golden with fruit. To the right and left are the great orange groves, and half hidden may be seen some ideal home, foliage-encompassed. Not ostentation, but art; not arrogance, but intelligence; not bitter competition, but discerning co-operation; you can see Truth well written along this wonderful way of homes. An electric car line has just been completed down the avenue, starting passengers on their trip from the Southern Pacific station. At night, when the avenue is illumined by electricity, and seemingly the stars twinkle in the tree-tops, drifting down the avenue means indeed a happy, midsummer night's dream.

The sister avenue, Victoria, is hardly less interesting.

The Southern Pacific company's depot in Riverside, within halting distance of the busiest business corner, is not excelled anywhere as a model station and equaled perhaps only by the company's stations at Redlands and Pasadena.

Returning from Riverside the homeward trip is made via the route described, taking the opposite side of the loop from Ontario west. The other side of the car will unveil new wonders to the eye.

Other Delightful Trips
Of course the "Inside Track" is not the only route afforded by the Southern Pacific company for sight-seers. Its lines to Santa Ana, through the most fertile section of Los Angeles and Orange counties; thence to Newport Beach, where excellent fishing and sun bathing are in fashion the year around, or to Long Beach or Santa Monica—

come to the American republic, and its wisemen were struggling with the question of a constitution. The church them all in detail, but when you are ready to go north—for, of course, you will visit San Francisco—the Coast line of the Southern Pacific presents a series of marvelous scenic attractions that cannot be equaled on any line of railroad in the world. Skirting the frowning brow of the mountain range for a great part of the way as far north as

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Surf, the passenger now gazes up the precipitous side of a tremendous mountain from one side of the car, and looks upon the foaming surf of the Pacific almost beneath him from the window on the other side. The sub-marine oil wells at Summerland present a picture never to be forgotten, but as a half-way place, Santa Barbara, the Mecca of the Southern Pacific company's ticket offices are at the northwest corner of Spring and Third streets, Los Angeles. Tickets and full information may be had there, or at any office of the company in any of the Southern California towns, covering any of the one-day trips out of Los Angeles or longer journeys over their lines.

Colton. Below Colton the line crosses the Santa Ana river, on a long bridge, and then close to the foothills, along great irrigating canals, passes Highgrove, formerly known as East Riverside. Highgrove is a pretty orange colony with a promising business center. Thence to Riverside is almost a con-

tinuous orange grove, for we are now in the famous Riverside valley, the greatest orange growing section in the world.

The city of Riverside, political and business center of Riverside county, has no narrowing city walls, but is bounded only by the hills, the municipal limits confining fifty-six square miles, and every mile productive. Last season's orange and lemon crop was about 4000 carloads.

The Coast line is the line to travel northward on. Santa Barbara is the first place to stop. This is what a well known writer says of it:
Facing the beauty-reflecting waters of the Santa Barbara channel, with the islands lending their gracefulness to the horizon, with as fine a beach as ever was lavied by the tide, with an ocean boulevard that follows the surf for miles in an unbroken reach of smooth asphaltum, with beautiful canyon drives and trails that lead you to the mountain tops and unfold the glories of a Promised Land; with a magnificent highway of the mountains, whence valley, city, channel, islands, a picture that only nature could paint, give the eye a greater value; with a background of softly rounded slopes and rugged hills; with valleys rich in the vegetation of the semi-tropics and an ocean that fades away shimmering to the sky; with homes so lovely and estates so attractive as to be in themselves worth of a long pilgrimage; with a historic mission to lend it the glamour of romance; with a climate unexcelled and indeed with sea and mountain and sky all combined by nature in an effort to reach perfection, Santa Barbara is superb, enchanting.

Santa Barbara is a handsome city with electric cars, finely paved streets and boulevards, good schools, including kindergartens and sloyd schools; a public library that public intelligence has made almost uniquely fine in its character; and hotels that have been catering to critical guests until they have nothing to learn in the art of entertaining.

The sun bathing is unexcelled, there being no undertow and the beach, along without a superior. Six miles from the city are fine sulphur springs, to which the stage runs daily through a beautiful country of trees and flowers. Yachting, bathing, driving, riding, cycling, golf and tennis are only a few of many favorite recreations.

The city has tapped a mountain for its water supply. It has all the conveniences of a modern metropolis, and many such unique features as a town clock with Westminster chimes.
Only its comparative inaccessibility has prevented Santa Barbara from becoming a greater city and Mecca for idealists; Brook Farm could hardly have been anything but a success here. An active board of trade is now at work in its behalf, and the completion of the Southern Pacific company's Coast line gives to Santa Barbara the prominence that this city by the sea deserves.
Mission Santa Barbara Virgin y Martyr still serves the work to which it was consecrated when peace had but

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BIRDSYE VIEW OF COLTON.

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RESIDENCE A. H. SMILEY, SMILEY HEIGHTS.

oothill villas are a charming horizon for the nearer view of thrifty towns, broad acres green with sprouting grain, flower embowered homes and thousands of shapely orange trees laden with golden fruit. The line traverses first the fruit and flower garden, the San Gabriel valley, with branches to Pasadena and Douars, then the beautiful valley of Pomona; thence through the broad sweep of San Bernardino valley, with its ramparts of high mountains, and then to the southward the vale of Riverside. Properly, these are not separate valleys, as the term is generally accepted, but a good deal of local pride and some not very large rolling hills that nowhere hide the high mountains to the north, are responsible.

the Baptists founded their first Southern California church. It is in the "moist lands," has three creameries, and abhors the market large quantities of cauliflower and other vegetables. From Bassett are two routes to Pomona, the older via Puente, Lemon and Spadra, through a grain, hay and oil country, and the newer to the northward through a rich horticultural district. The way to the north leads through the gardens of Vineland

Six miles east of Pomona is Ontario, known of old as the Model colony. Its fruit orchards, principally of orange, lemon and olive, for a distance of seven miles to the foothills, presents a forest of green. Through them passes the beautiful boulevard, Euclid avenue, though what that gentleman did to entitle himself to so graceful a tribute has puzzled many a prudent tiler at the Thirteenth Fatal Books. Two hundred feet wide, the ave-

due obediently accommodates sidewalk, a double driveway, several rows of splendid shade trees and an electric railway.

Over seven of the nine miles of the avenue runs this scenic railway, and a five-cent fare will lift you from the 580 feet elevation at the Southern Pacific station to the half-mile elevation at the

MAGNOLIA DRIVE, RIVERSIDE.

with a new boom air, neatness and thrift being evident everywhere. A Dukhard college is maintained. These generous and honorable people are building an ideal colony. The orchards of citrus and deciduous fruits and walnuts are wonderfully productive—partly due, no doubt, to wonderful care.

The road leads through the midst of orange orchards that in the spring lend even to the flying train their fragrance. Pomona is at the crossing of the ways. From the west, the old line and the Covina route converge; to the east one line of the "Inside Track" deours through Chino, rejoining the more direct line at Ontario. Pomona has upwards of twenty-five square miles of orchards and small fruits. These orchards encompass the artistic homes of an intelligent and prosperous people. There are 6000 people here now and the number will be doubled in ten years. The city has fifteen churches, ten schools, and a college that is a credit to the coast. The moral atmosphere is just as splendid as the life-giving air that makes the city a health resort. Of course Pomona has such adjuncts of city civilization as electric light, paved streets, good hotels, a splendid water supply (being constantly augmented), fine business blocks and a public library that would serve as a good excuse for young Pomonians growing up bespectacled like their Boston cousins. The climate, though, insures a clear eye.

The horticultural importance of the city is attested by eight large packing houses, dealers in oranges, olives, apricots, peaches, etc., for which this goddess-favored city is famous. During the season of 1899-1900 the orange crop was worth over a half million dollars, and it was not the only item that figured in the bank accounts. Many fine residences have been and are being built, a new domestic water system has been completed and the city's importance as a railroad center established in the last few years.

Along the foot of the mountains in an elevated yet protected position, it is the chosen home of many New Englanders. It is a city of magnificent views. Toward the west facing it is the lovely San Bernardino valley; at its back are the two highest peaks in Southern California, Mount San Bernardino and San Geronimo; to the north, the fertile foothills and mesas of Highlands and the intermediate country, extending across to the mountains to the north. To the left, the city slopes upward, culminating in a canyon crest, where one may stand and look down as from the upper edge of a giant wall into deep San Geronimo pass, a train perhaps winding through the defile; or turn to the north and view the glory of Redlands, the exquisite

Canyon crest is a park better known as Smiley Heights, and renowned the world over for its beauty. It beggars description. There is little use in trying to tell of two hundred acres of flower garden, with a thousand varieties of trees and shrubs besides. The view, the wonderful drives, the lakes—you don't stop to count the flowers; it's enough to know that in trees they are forty varieties of eucalyptus, twenty acacias, and fifteen of palms, and the tree catalogue hardly opened. A horse and a decade ago called this deserted hill home, would feel badly lost now. As for you, it is enough that you are there.

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Ten miles northwest of Redlands and sixty miles east of Los Angeles, on the broad slope between the mountains of the same name and the Santa Ana river, in the heart of the valley, lies San Bernardino, county seat of the county that by name reached from Colton via the Riverside branch and from Redlands via the motor line. It is now becoming famous as the "City of Mineral Springs." It is a well-built city of broad streets, well paved, and with

MAGNOLIA DRIVE, RIVERSIDE.

wonder at its having three banks. It is almost unnecessary to mention the electric lights, sewer system, excellent schools, ten church organizations, and the other city signs. The mountains to the north of Pomona and Ontario, culminating in Mount San Antonio, familiarly known as Old Baldy, are possessed of many charming summer retreats. Chino, the pioneer of sugar beet culture in California; Cucamonga, a pretty resort and picnic place; Bloomington, a town of growing importance as a fruit center, and other small towns are passed until Colton is reached.

Colton, fifty-eight miles from Los Angeles, is a railroad center of importance. Here the Southern Pacific company's line between Riverside and San Bernardino, recently the subject of great improvements, and for which more are projected, crosses the main line of the "Inside Track." Colton, besides being headquarters for many railroad men, has other adjuncts of prosperity. A cannery gathers hundreds of hands from over the valley in the season. Granite and marble quarries, and perhaps most important of all, cement works of large capacity at Silver Mountain, employ many men. The Colton terrace oranges are at the top in market quotations. A few hotels are projected and an electric railway has been built.

At Loma Linda is one of Southern California's greatest sanitariums. The beautiful main building, with its towers, balconies and porches, is set upon a commanding mound that ends in the mountain wall to its back. Here, guarded against extremes of temperature by one of the best locations climatically, surrounded by an immediate environment of fine orange groves showing never a touch of frost, every attention that the associated work of the best Southern California physicians can offer, the invalid has every reason to hope for relief and eventual recovery.

Almost at the eastern end of the "Inside Track" under the shadow of Mount San Bernardino, lies Redlands, a dozen years ago a barren red hillside; today a city of 5000 people, with 10,000 acres of citrus and 8000 acres of deciduous fruits, and nurseries and land and water, making orchards every minute.

Along the foot of the mountains in an elevated yet protected position, it is the chosen home of many New Englanders. It is a city of magnificent views. Toward the west facing it is the lovely San Bernardino valley; at its back are the two highest peaks in Southern California, Mount San Bernardino and San Geronimo; to the north, the fertile foothills and mesas of Highlands and the intermediate country, extending across to the mountains to the north. To the left, the city slopes upward, culminating in a canyon crest, where one may stand and look down as from the upper edge of a giant wall into deep San Geronimo pass, a train perhaps winding through the defile; or turn to the north and view the glory of Redlands, the exquisite

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business blocks that would be a credit to a metropolis. It is the commercial and political center of the valley, and largely of the mining districts in and beyond the mountains to the north and east.

An entire page of space is devoted to a detailed description of San Bernardino in this section of this issue of the Herald, that will amply repay the read-

er. The business center of Riverside is in keeping with its handsome surroundings. It owns its electric light plant, and has power to sell. The opera house is one of the finest in the state, the hotels are of a high standard, and many of its business blocks of metropolitan appearance. The Y. M. C. A. possesses a handsome home. Riverside schools are wisely managed and progressive, with the artistic homes that are a distinctive feature of California's educational facilities. There are many churches and no saloons. The streets are paved, and the city is intersected with fine boulevards. A magnificent high school building, (Mission style) is now finished. The new government school for the Indians is under way.

Greatest of all avenues is Magnolia avenue, a seven-mile stretch of lovely double roadway, jeweled with the slender eucalyptus, the spreading palm, the drooping pepper and the graceful magnolia, set off with a bewildering profusion of flowers; through fragrant orange groves, white with blossoms, or mayhap golden with fruit. To the right and left are the great orange groves, and half hidden may be seen some ideal home, foliage-encompassed. Not ostentation, but art; not arrogance, but intelligence; not bitter competition, but discerning co-operation; you can see Truth well written along this wonderful way of homes. An electric car line has just been completed down the avenue, starting passengers on their trip from the Southern Pacific station. At night, when the avenue is illumined by electricity, and seemingly the stars twinkle in the tree-tops, drifting down the avenue means indeed a happy, midsummer night's dream.

The sister avenue, Victoria, is hardly less interesting.

The Southern Pacific company's depot in Riverside, within halting distance of the busiest business corner, is not excelled anywhere as a model station and equaled perhaps only by the company's stations at Redlands and Pasadena.

Returning from Riverside the homeward trip is made via the route described, taking the opposite side of the loop from Ontario west. The other side of the car will unveil new wonders to the eye.

Other Delightful Trips
Of course the "Inside Track" is not the only route afforded by the Southern Pacific company for sight-seers. Its lines to Santa Ana, through the most fertile section of Los Angeles and Orange counties; thence to Newport Beach, where excellent fishing and sun bathing are in fashion the year around, or to Long Beach or Santa Monica—

come to the American republic, and its wisemen were struggling with the question of a constitution. The church them all in detail, but when you are ready to go north—for, of course, you will visit San Francisco—the Coast line of the Southern Pacific presents a series of marvelous scenic attractions that cannot be equaled on any line of railroad in the world. Skirting the frowning brow of the mountain range for a great part of the way as far north as

popular resorts, where there is endless amusement for the pleasure-seeker. Space will not permit a description of them all in detail, but when you are ready to go north—for, of course, you will visit San Francisco—the Coast line of the Southern Pacific presents a series of marvelous scenic attractions that cannot be equaled on any line of railroad in the world. Skirting the frowning brow of the mountain range for a great part of the way as far north as

Surf, the passenger now gazes up the precipitous side of a tremendous mountain from one side of the car, and looks upon the foaming surf of the Pacific almost beneath him from the window on the other side. The sub-marine oil wells at Summerland present a picture never to be forgotten, but as a half-way place, Santa Barbara, the Mecca of the Southern Pacific company's ticket offices are at the northwest corner of Spring and Third streets, Los Angeles. Tickets and full information may be had there, or at any office of the company in any of the Southern California towns, covering any of the one-day trips out of Los Angeles or longer journeys over their lines.

Colton. Below Colton the line crosses the Santa Ana river, on a long bridge, and then close to the foothills, along great irrigating canals, passes Highgrove, formerly known as East Riverside. Highgrove is a pretty orange colony with a promising business center. Thence to Riverside is almost a con-

Colton. Below Colton the line crosses the Santa Ana river, on a long bridge, and then close to the foothills, along great irrigating canals, passes Highgrove, formerly known as East Riverside. Highgrove is a pretty orange colony with a promising business center. Thence to Riverside is almost a con-

tinuous orange grove, for we are now in the famous Riverside valley, the greatest orange growing section in the world.

The city of Riverside, political and business center of Riverside county, has no narrowing city walls, but is bounded only by the hills, the municipal limits confining fifty-six square miles, and every mile productive. Last season's orange and lemon crop was about 4000 carloads.

The Coast line is the line to travel northward on. Santa Barbara is the first place to stop. This is what a well known writer says of it:
Facing the beauty-reflecting waters of the Santa Barbara channel, with the islands lending their gracefulness to the horizon, with as fine a beach as ever was lavied by the tide, with an ocean boulevard that follows the surf for miles in an unbroken reach of smooth asphaltum, with beautiful canyon drives and trails that lead you to the mountain tops and unfold the glories of a Promised Land; with a magnificent highway of the mountains, whence valley, city, channel, islands, a picture that only nature could paint, give the eye a greater value; with a background of softly rounded slopes and rugged hills; with valleys rich in the vegetation of the semi-tropics and an ocean that fades away shimmering to the sky; with homes so lovely and estates so attractive as to be in themselves worth of a long pilgrimage; with a historic mission to lend it the glamour of romance; with a climate unexcelled and indeed with sea and mountain and sky all combined by nature in an effort to reach perfection, Santa Barbara is superb, enchanting.

Santa Barbara is a handsome city with electric cars, finely paved streets and boulevards, good

From Foaming Surf to Mountain Peak

Southern California Resorts of Easy Access by Cars of the Pacific Electric Railway Company

One of the delights of Southern California, most appreciated by the tourist from the frozen east, is the possibility of going somewhere and seeing something every day throughout the winter. It is quite possible, to be sure, to get about, even in eastern states, but to journey through an endless garden, amidst the perfume of a thousand orange groves, countless acres of blooming roses and rare flowers, at a season of the year when one has been used to being housed up, digging a heater or a radiator, is a new experience for thousands upon thousands who come to the sunny southland to escape the rigors of the winter.

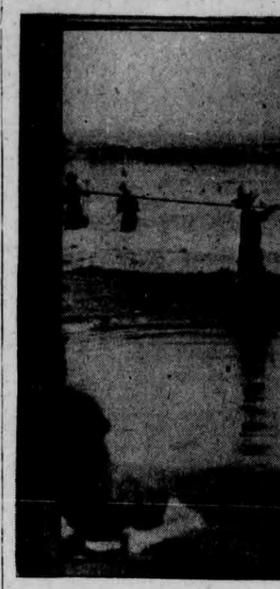
To this great army of travelers and pleasure-seekers, amusement is as necessary as suitable provision and lodging. Once a comfortable hotel has been selected, the tourist wants to know how to "do" Los Angeles and its surrounding points of interest in the most satisfactory manner. This demand has made possible the growth of the electric railway system of Los Angeles to its present state of magnificent perfection. The mammoth and talismanic cars, the wonderfully smooth roadbed, the remarkable speed and the courtesy and attention afforded by these numerous lines, are the talk of all strangers who visit Los Angeles. For no city in the land has superior street railway facilities, and very few have anything to approach them.

It is of the Pacific Electric Railway company's numerous lines, however, that this article has to deal in detail. It is the lines of this progressive company that reach into almost all of the famed resorts and scenic sections tributary to Los Angeles. How to see them all, in ease and comfort and at very moderate outlay, will be told hereinafter.

From the foamy, sweeping, murmuring surf of the grand Pacific, to the summit of the great range of frowning peaks that stand guard over the beautiful valley, one may travel on this company's lines and see a greater diversity of scenery and more marvelously interesting sights than can be afforded, perhaps, upon any other line of railroad in the whole world.

Let us first consider a trip to the mountains. Who amongst the tens of thousands of tourists from the level east has not heard of Mount Lowe? Its famous incline, its beautiful and comfortable chalet, its costly observatory, and from the summit of the lower

cena to the entrance of the far-famed Rubio canyon, whence starts the great incline road to the top of Echo mountain. This is the first step of the Mount Lowe railroad proper, which will be described in its proper place. Leaving Los Angeles, say at 8 o'clock in the morning, a through car to Pasadena, connecting with Altadena and



Mount Lowe will take the tourist over the main line toward Pasadena. A little way outside the limits of Los Angeles the great "Arroyo Seco" is crossed, and a little farther along the wonderful ostrich farm, the largest in the world, is passed. The heads of

numerous pretty parks, crossing pretty drives and passing handsome suburban residences. This is the city of homes—the Mecca of 90 per cent of the tourists: Who come to California for a brief stay. Not that they all stay in Pasadena—by no means—but it is asserted that 90 per cent of all tourists go



there to see the pretty city. Pasadena is a city of 10,000 people, distinctively American in character. It is situated on the high mesa at the base of the Sierra Madre mountains, at an elevation of about 800 feet above the sea and at the westerly end of the San Gabriel valley.

Stretching away to the east and south into this valley and along the foothills are fruit ranches, with comfortable homes and prosperous people. Through this large district beautiful drives lead in every direction through groves of orange, lemon, guava, pomelo and loquat, and orchards of peach, apricot, plum, fig, prune, nectarine and other deciduous fruits. Long avenues of tall trees, frequent reservoirs with spouting water, gardens of flowers and well-kept lawns combine to make the district an inexhaustible source of pleasure, while the changing seasons of the year bring variety of foliage, flower and fruit.

Pasadena is nine miles north of Los Angeles, the entire distance being practically built up with homes. One of the winter attractions that has a national reputation is the Tournament of Roses parade and festivities on New Year's day. This festival has been given every year for twelve consecutive years with increasing fame and interest. The day is given over to the joy of the climate. A floral parade in which no artificial flowers are permitted, stretches out for a mile or more. No man, woman or child, horse or vehicle is allowed in the parade unless decorated with flowers. Every variety of equipage, from a bicycle to a six-in-hand tallyho coach or imposing float is to be seen. Every device of art or whim is indulged in.

Leaving Pasadena at 9 o'clock for the mountains, you pass through miles of lovely orchards—orange, lemon, apricot, olive and every other variety of desirable fruit. The last settlement before reaching the mountains is Altadena. As its name indicates, it looks down upon Pasadena and Los Angeles. The houses are elegant, the grounds beautiful. Passing this charming villa settlement, the railway turns directly toward the mountains, along the steep slope of which you will see the line of that marvel of mountain roads, the

Mt. Lowe Railway

You will begin to enthuse as you are rapidly ascending—splendid vistas of orchard and valley stretching away east and west. At 9:45 o'clock we come to Rubio canyon, a wild and beautiful mountain gorge. Beautiful trees, exquisite ferns and sparkling mountain waterfalls make Rubio canyon a resort for those who love nature.

In the very jaws of the canyon is the pavilion and the station where the Echo Mountain Incline railway begins. At Rubio canyon, where we meet the incline car, we have ascended 2100 feet in our ride from Los Angeles. To stand at the foot of the "incline" and look up to the next part of our trip is a thrilling experience and not soon forgotten. This great product of science and genius seems at first an impossible feat, but as we ascend and seemingly leave the earth and a broader and better view of the valley, the cities and surrounding country is obtained, we marvel at the achievements of science and the glorious scenes about us. We step out of this car upon Echo mountain, 3500 feet above the sea and behold a perfect panorama of land and ocean—1300 feet descent in 3000. At this point is situated the Echo Mountain Chalet, a very comfortable, homelike, commanding view of the incline railway as it descends to the foot of the mountain. Here also is obtained a commanding



MOUNT LOWE INCLINE RAILWAY

mountain to Alpine Tavern, away up in the clouds, the most picturesque line of railroad ever constructed. But in order that we may not anticipate, let us begin at the beginning.

Trip to Pasadena

The line from Los Angeles to Mount Lowe runs via Pasadena and Altadena,



SAN GABRIEL MISSION

view of the San Gabriel, La Canada and the San Fernando valleys; Altadena, Pasadena, Los Angeles, the Pacific ocean, Santa Catalina, San Clemente, Santa Barbara and the San Nicholas islands. From Echo mountain to Alpine Tavern one travels over the grandest mountain scenery in the



SCENES AT LONG BEACH

world. Constantly ascending higher and higher, winding around the edges of beautiful canyons, looking down their steep and precipitous sides, observing still another canyon just before us, and soon coming to a point which a few minutes previous was directly beneath us, revealing many different loops of the winding road. Soon we are upon the great circular bridge which spans a beautiful canyon, making a circle around the spur of the mountain, revealing, once more, Echo mountain and the valleys. So serpentine is the road that all of the beautiful views are obtained, and as we wind around these enchanting scenes one is filled with delight at the artistic hand of nature and the success of scientific men who made this road possible. Los Flores canyon, Cape of Good Hope, Millard canyon, Live Oak Grove, Gut Hill Loop, Circular Bridge, Sunset Point, Granite Gate, Grand Canyon, Alpine Park and Mount Lowe Springs are beautiful and inviting points of interest which are seen in succession after leaving Echo mountain en route to Ye Alpine Tavern. Soon we are among the giant pines which thrive in cooler climates, and which add so materially to the beauty and grandeur of the Sierra Madre mountains. The fascinating and beautiful scenes of sunrise and sunset, as seen in the mountains and canyons are grand beyond description, and must be seen to be thoroughly appreciated. It is an interesting object to watch the sun set in the Pacific ocean, and observe the shades of night settle over the beautiful San Gabriel valley, far below, and as the darkness of the night approaches, instantly there appears in the distance a multitude of sparkling jewels which it is difficult to realize are the electric lights of the cities of Los Angeles, Pasadena and Santa Monica, some twenty miles and more away. Then the great World's Fair searchlight bursts forth, casting its rays upon the distant cities, revealing some special object, then changing its course toward the mountains, making as light as day the great circular bridge and other points of interest along the railway, then down into the bottomless pits of the canyons. Not the least among the many attractions is a visit to the astronomical observatory which is presided over by Professor Edgar L. Larkin.

This observatory contains one of the largest and most powerful telescopes in the world, weighing three and one-half tons, and being twenty-two feet in length and sixteen inches in diameter. One will never regret an hour spent with this searching revealer of the stellar systems, all the points of interest of the particular time being elaborated upon and explained by the astronomer.

Continuing our trip, and after winding around the many loops and wild canyons, we reach Ye Alpine Tavern, 5600 feet above sea level, the view of which is suddenly thrust before one as they round the last curve of this winding mountain railway. Ye Alpine Tavern is the starting point of many beautiful and exceedingly interesting trips. From this point pines may be secured for the ascent to the summit of Mount Lowe, along the trail which affords many charming views to the north, south, east and west, of the canyons and valleys far below. No one, while in Southern California, can afford to miss this grandest of all railway and mountain trips, and it will be one of the most interesting days spent in the memory of one's life.

San Gabriel Valley

It is not only to Pasadena and Mount Lowe that the tourist may travel in the luxurious cars of the Pacific Electric Railway company and see marvels of nature and entrancing panoramas of mountain and plain, city and hamlet. Another line which runs through the famed San Gabriel valley to the old Franciscan mission—the ideal spot where a glimpse of past centuries may be had, in the simplicity and peacefulness of the quaint old institution. The padres are always glad to welcome visitors and history of the missions as narrated by the fathers are most entrancing. The trip to the mission is an easy one,

comfortably made, and one that is well worth the taking.

The Long Beach Line

The new double-track line to Long Beach and the ocean, however, is the latest achievement of the Pacific Electric Railway company. The



SCENES AT LONG BEACH

steam roads have connected the beach with the city for a number of years, but the public demanded a means of transportation more frequent than afforded by steam roads, therefore welcomed the opening of the new electric line to Long Beach, a few months ago, with overwhelming patronage. The line is superbly constructed and equipped. Its cars are built by the Pullman company, and are luxurious, its roadbed is as fine as any in the state, and very fast time is made. The depot for this line is at the corner of Ninth and Spring streets. Long Beach is perhaps the finest all-



GRANITE GATE, MOUNT LOWE RAILWAY

around beach resort in the known world. True, it is not yet thoroughly improved, although quite a pretty and substantial city has already sprung up there. The long, gently curving beach, extending for more than three miles along the base of an abrupt bluff upon which the city and adjacent villages stand, is undoubtedly the most magnificent beach for bathing on the entire Pacific coast, and its waters of an inviting temperature the year around. It is a city of hotels and comfortable homes. During the height of the season it is estimated that

15,000 to 20,000 tourists visit it each day. A recently published pamphlet says of Long Beach:

"The advantages of the town as a residence site became fully recognized in 1897, when Long Beach was reincorporated and her career of advancement began. A position better adapted for a seaside town could not be imagined. The beaches are as fine as a race course. It feels like India rubber, smooth as asphalt, pounded firm and even by the waves. Here may be witnessed in all its glory that unrivaled phenomenon, the Pacific surf. The uniform blowing of the trade winds during the summer months produces a heavy swell which rolls into the bay in a vast but gentle undulation. For seven miles along the city's front four lines of breakers thunder upon the beach. Persons arriving from the interior and beholding the Pacific for the first time are often bewildered by the spectacle. In the foreground are groups of bathers, including the smallest tots; in the background are towers of water rising higher than their heads, leaping upward, till from those sitting on the beach the horizon is obscured, then curling landward they break into

ply above the surf at high tide. Here open air concerts are held all the year round. During the summer they are held every afternoon and evening. Thousands of people sit here on summer evenings, while the murmuring of the surf blends with the strains of the band.

"Below, the diapason of the murmuring deep above, orchestral cadences the measures keep."

"On the west side of the pier is the new bathing establishment containing plunge baths or swimming tanks. Here one may enjoy still-water bathing and acquire the art of swimming much more easily than amid the breakers outside. The building cost nearly one hundred thousand dollars, and is the finest on the Pacific outside San Francisco. Other extensive bluff and beach improvements are proposed. One of these is a mammoth tourist hotel to cost one hundred and fifty thousand dollars.

"During the winter now, the place is crowded like any inland resort. Three new hotels were opened last winter, and all were full. There was scarcely a vacant hour, in town. Hundreds of new houses have since been built to accommodate the increasing crowd of newcomers.

"The Chautauqua program last summer was of unusual interest, and the increasing attendance has rendered necessary the building of a large new auditorium. The summer's list of conventions and assemblies covers the greater part of six months.

"Long Beach is also becoming the favorite place for state and society reunions, church and Sunday school picnics and public excursions of all kinds.

"The growth of the town in the last two years has been phenomenal. Buildings to the value of \$400,000 have been completed within the present year; buildings to half that amount are in course of erection, and many others are proposed. Ten miles of streets have been graded within the year, costing \$30,000, and the smoothness of these streets is the praise of all who love driving. There have also been laid 200,000 square feet of cement sidewalk and 40,000 feet of cement curb.

"The fact that the city is backed with a magnificent farm, fruit and dairy country, is very much in its favor. The presence of large numbers of visitors all the year round makes Long Beach appear a much larger city than it really is, and so furnishes the suburban ranchers with a ready market for all manner of products.

"The city has thirty-five miles of graded streets, about fifteen miles of cement sidewalk; two semi-tropical parks comprising sixteen acres, a mile of bluff reserved for a park, a library block, a city hall, a reading room and public library, a pier eighteen hundred feet long, a concert pavilion measuring 200 feet by 130 feet, an ocean boulevard, and a beach drive ten miles in length. All products of the temperate and semi-tropical zones are grown in season, and many varieties are raised all the year round.

Amusements at Long Beach

Eastern tourists who go to the shores of the Pacific for the first time stand aghast at the wonderful surf. The Atlantic only shows its equal in times of storm, and at such times few ladies ever take the trouble to go and see it.

The tremendous expanse of the Pacific, the steady prevalence of trade winds in a given direction, and the long, unbroken swell of the sea, cause a magnificent surf to break upon this superb beach. Bathing is, therefore, at once the popular sport and amusement, and in the warm months of the summer thousands of men, women and children may be seen in the breakers any day. There is good surf bathing the year around. Tickets and full information covering all of these delightful trips may be had at the office of the company, 230 South Spring. Telephone Main 908.

PROSPEROUS SAN BERNARDINO

Interesting Facts About the Development of a Progressive City

Never visited San Bernardino? Well, then, you should not fail to include the trip "around the kite-shaped track" in your itinerary when you visit California. San Bernardino is the pivot upon which the upper reaches of the San Bernardino range—cr more properly, traverses the foothills from one to four miles above the base line, through the heart of the orange groves, crossing the lower ends of numerous canyons, affording a view of the great San Bernardino valley below, as the train speeds along past handsome homes, peeping at numerous villages that have sprung into existence, just as the groves of oranges, lemons and olives and the vineyards have, by the magic hand of man, with money, energy and determination. Look beyond these, and barren hills or cañon covered plains are seen, with here and there a scrub oak on the higher ground, and brush in the flats, out barrenness on every hand.

Coming from the east, crossing the Colorado desert over the Santa Fe, the change is complete and awe-inspiring. One looking down from the summit of the San Bernardino mountains upon the scores of valleys, green with groves of orange and lemon olive and fig, pomegranate and guava, and the numerous villages and thousands of homes in the San Bernardino basin, and on beyond, even to the mighty Pacific, with ranges of hills and undulating plains, villages and cities intervening.

Night approaches as the transcontinental train reaches Needles from the east, and the train again en route—a happy thought of the Santa Fe passenger department—for during the night the most desolate portion of the trip is made.

Daylight appears as the train completes the last climb to the summit of Cajon pass. Here is presented a picture of a panorama indeed worth a climb, to be sure, to witness. As the train glides down Cajon canyon one gasps for breath as the scene is temporarily obscured by a jutting cliff, but the picture bursts forth anew, intensified by nearer approach, until all at once the orange and lemon groves are reached, with neat homes nestling among the foliage, entered with climbing roses and heliotrope.

The first white settlement in San Bernardino county was made by Spanish priests in 1521—just west of Redlands and within a few miles of San Bernardino. The city of San Bernardino was founded in 1851 by the Mormons, who purchased the old Spanish grant known as Rancho San Bernardino. It was the Mormons who introduced irrigation into Southern California, and some of their original canals are still used. They demonstrated the possibilities of the soil and the capabilities of horticulture in Southern California. But the Mormons did not remain long, as in 1857 Brigham Young, fearing a conflict with United States authorities, called all the faithful to Utah, and the farms and orchards were sold for a mere pittance or left to others. It was but a short time until the best lands were occupied, and now even the hills are blossoming with the richest known only to this region.

The city of San Bernardino has a population of between 10,000 and 11,000, and from the efforts being put forth, the improvements being made and the industries being brought to the city, this will be rapidly increased. Ready property values have been enhanced through this influx of added capital and energy.

San Bernardino's most important industries are the Santa Fe Railway, the company's big car shops and Hanford foundry. The latter, while owned solely by San Bernardino's mayor, Hon. J. J. Hanford, practically an adjunct of the Santa Fe's big plant, for in this foundry every casting used by the Santa Fe, west of Albuquerque, is made—except cylinders for engines, and freight car wheels. These two industries together employ an army of skilled mechanics—most acceptable citizens—a majority of whom are heads of families.

It is the class of citizens that has necessitated the building of more schoolhouses and the employment of more teachers, until today San Bernardino city has ten school buildings and forty-five teachers, exclusive of the high school. There are 1377 enrolled scholars; while in the high school there are nine teachers and two hundred scholars.

While there are still many improvements to be made within the city, San Bernardino is far ahead of most cities even in California. Civic pride is intense, and every citizen is ready to vote and pay more taxes when needed, to improve his home town, yet the tax levies of California towns are far less than in eastern cities of similar population.

The Santa Fe has been expending a large sum of money at this point. These expenditures are for additional facilities, and the shops, when completed and working, which will be within the present year, will be among the most important railroad shops on the coast, and the most extensive of the Santa Fe system, west of Albuquerque.

Railroad Shops Extension
The new shop buildings, including paint shop, car shop, transfer table,

power plant (construction just begun) will cost \$17,000, total, \$275,000. Number of men employed, 650. Total pay rolls, \$56,000 per month.

At these shops all passenger cars from Albuquerque and south of San Francisco are painted and overhauled; all refrigerator cars engaged in fruit traffic in Southern California overhauled, and the greater portion of

Cooley, ex-county supervisor and present president of the board of trade, Mr. Cooley, as supervisor, successfully closed the Southern Pacific when it meant a great deal to oppose that corporation. Mr. Cooley placed the China sugar people on record as making one report to the county assessor. For this service Mr. Cooley was offered a place in the state board of equalization, but declined on account of business interests.

J. W. Waters, another man who, like Mr. Cooley, was reared in "the valley," who handles the bulk of the real estate business of this region, is one of the progressive, strenuously active men of San Bernardino. No public benefit is promoted that J. W. Waters is not way up near the top of the list. Mr. Waters is a large property owner himself, and his father was one of the leading cattlemen of Southern California and at one time very wealthy.

J. R. Frith, president of the city board of school trustees, is the leading boot and shoe merchant of San Bernardino. Much of the credit should be given him for perfecting the city school system and securing for the children ample school facilities. To Mr. Frith credit should also go for much of the city's internal improvements.

There are two young men, Towns and Lamb, druggists, whose progressive ideas and interest in the city's affairs have done much to place San Bernardino in the right column. "These men are as honest as their prescriptions" was the comment of a prominent physician, a compliment as earnestly made as it was honestly paid.

The Brazilton Bros., whose horse and mule market and livery and sales stables are known throughout the lower end of the state, trot in the "A" class when San Bernardino's interests are at stake, and Russ MacGillivray, wholesale and retail dealer in harness and carriages, belongs in the same class. It is to this class of men credit for the building up and progress of the city is due.

The San Bernardino Gas and Electric company was organized by Charles R. Lloyd of Berkeley in 1897 with a capital of \$50,000. This was increased to \$100,000 in 1897, and reorganized as the San Bernardino Gas and Electric company in 1903, when it was capitalized for \$200,000. Thus the improvements were made by degrees,

afford recreation from the strenuous life of business. There are numerous warm and hot springs, some impregnated with iron, others with sulphur or a combination of minerals. The most important resort, the easiest of access and the only one, as yet, where every modern convenience obtains, is the Urbita Hot Springs, just outside the city limits, on the line of the electric railway which connects San Bernardino with Redlands and the orange groves and vineyards of the country.

The Urbita Hot Springs were famed among the old Indian tribes. The hot sulphur waters were found efficacious for the cure of rheumatism and for all disorders of the blood and the kidneys. These springs were not exploited to the public to any extent until they were purchased by the San Bernardino Valley Traction company and the Electric Light and Power company of San Bernardino were merged into the San Bernardino Electric company. A new water power was developed at Highgrove, seven miles from San Bernardino, and a 200-horse-power plant installed. In 1898 this company purchased the San Bernardino Gas Light and Power company and its distributing system, thus uniting all the gas and electric plants and properties in the city. In this year the San Bernardino Electric company installed and equipped a large steam plant at its Mill street station, adding a large modern three-phase power generator, which has since been operated in synchronism with the generator at the Highgrove station, supplying current to the same lines.

At this time a new Lowa water gas generator and carburetter were placed in the newly acquired gas plant. The selling price of gas was reduced 50 per cent. The gas mains were largely extended and the output of gas doubled in four months, through the enterprise of the company under the able management of its general manager, beginning with the purchase of two carloads of gas ranges and later by supplying heaters, all of which were placed in homes along the line of the main. Great progress has been made in the electrical distribution. Many miles of good pole lines have been constructed, and a great deal of capital expended in other improvements. The San Bernardino Gas and Electric company is now supplying current to over 4500 incandescent bulbs and nearly 200 arc lights, besides 200 horse-power in motors for domestic uses in the city and environs.

It is the universal opinion that the city of San Bernardino is the best lighted city in Southern California. The service in stores and residences is remarkable from the fact that not a single interruption has occurred for the past eleven months. The company is at present completing a second steam plant at the Mill street station, and occupies the enviable position of having a surplus of power, and not a

deficit of power, coming from the earth at a depth of about six hundred feet, and at a temperature of 110 degrees. One of the attractive features of this plant is the great slide, which affords much amusement to the bathers. In addition to the large number of dressing rooms connected with the plunge there are several private bath-

rooms, neatly equipped with porcelain tubs and reclining cots, where the rheumatic may obtain almost immediate relief by submitting to a hot sulphur tub bath. These waters are extremely beneficial in cases of rheumatism and blood diseases.

The Traction company is putting the finishing touches to the line, which will connect San Bernardino with Redlands; this with its Colton line will give it access to the entire valley.

The San Bernardino Valley Traction company has added to the Urbita Hot Springs attractions by purchasing the old speeding tracks, adding the springs property, and is making considerable changes in these historic grounds, where the caballeros were wont to test the mettle of their horses and show their skill as horsemen. The track is being widened and rolled, and

the center is being fitted for the grid-iron and the diamond. The track will be utilized as a speed ring not only for horses, but for bicycles and road motors. It will add materially to San Bernardino's pleasure resorts.

A Jobbing Center
San Bernardino is quite a jobbing center—"outfitting" would probably be a better word—for it is the ranchers

and the San Gabriel valley. What nature has supplied man has improved upon, for here the Santa Fe railway has brought its greatest western shops and has made it the pivotal point of its famous "Kite-shaped Track," here the Southern Pacific has brought its noted "Annie Track," and from here the electric lines of the San Bernardino Valley Traction company radiate to Redlands and Colton; Urbita hot springs and the orange belt, and throughout the city and suburbs, and as fast as rails and cross ties can be procured the Traction people will extend their lines to all the principal points, gridironing the citrus belt, especially the upper end of the San Bernardino valley. From San Bernardino Senator Clark's Salt Lake and Los Angeles route will throw out its tentacles among the orange groves and vineyards. Thus it is seen that San Bernardino is the railroad center of Southeastern California and with the great warehouses and refrigerator depots must become the chief commercial and shipping point of this position at the state.

San Bernardino is and has been a quiet little city of homes. It is only recently her commercial advantages have been realized by her people, and with the conservativeness of her older residents there would probably never have been an effort made to benefit by this feature or further such interests had not the railroads found it to their advantage to force development and prosperity upon the people. With the railroad came new blood, and with this new energy and aggressiveness, forcing values to rise in reality, the older inhabitants awoke to their opportunities. Today the most progressive, the most enthusiastic, the most aggressive men of San Bernardino are from the ranks of the conservative old times. They are opening their purse strings toward improvements and are selling their lands to home builders and doing in every way to develop the latent energies of soil and climate.

All the streams that have their source in the southeastern portion of the state—and there are many—pour their waters into San Bernardino valley. These waters come from the eternal snows of the mountains that surround the valley on three sides and cross the west ends of the great deserts. These waters are impounded in the canyons and among the foothills and led by canals to the orange and lemon groves and ranches on the bench lands and in the valley proper. To all in irrigating, artesian wells have been sunk in different localities—hundreds of them in the southwestern portion of the valley, furnishing San Bernardino and vicinity. It is from these artesian

wells that Riverside secures water for irrigating her famous orange and lemon groves. The largest and most notable irrigation system known in an artificial source is that of the Bear Valley company. An artificial canal, holding ten millions of gallons, supplies an immense area of lands with water for irrigating. The water is taken across the Santa Ana plains in cement ditches. Most of the canals are cemented, owing to the porous nature of the soils. Another irrigation system is the Arrowhead Reservoir company, which conserves the pure snow waters from the mountains directly north of San Bernardino, and upon which millions of dollars have been expended in perfecting the system. The annual rainfall in the valley is about fourteen inches, while in the mountains almost no snows together furnish forty-five inches.

The climate of San Bernardino county varies, as does its topography—to the extreme. When it is explained that the mountains rise as high as 11,500 feet above sea level, and that a portion of the great Death valley is several hundred feet below sea level, one can imagine the variations of climate from eternal snows to where frost was never known.

The San Bernardino valley will average over 1000 feet above sea level and the best orange and lemon orchards are 1200 to 1300 feet. In some localities, 1600 and even 2000 feet prove excellent for citrus fruits. Vines may be planted at almost any altitude below snow line. Vegetables, like the roses and garden flowers, grow, bloom and seed the year round in the valleys, and the bee-keeper has a harvest every three or four months in but one valley. Indeed this is a paradise and it seems strange that such a country remained undeveloped so long. The secret is out now, however, and home-seekers and investors are flocking to this region in large numbers. It will not be long until every foot of this valley and away up on the foothills and into the canyons will be taken up and planted to orchards and vineyards.

Social Advantages
No one cares to entertain a thought of settling in a new community without carefully investigating the advantages it offers, socially, as well as in a business way. The home life of its people; its educational institutions and its public life are all matters of vast importance to the careful home-seeker. In detailing the advantages possessed by

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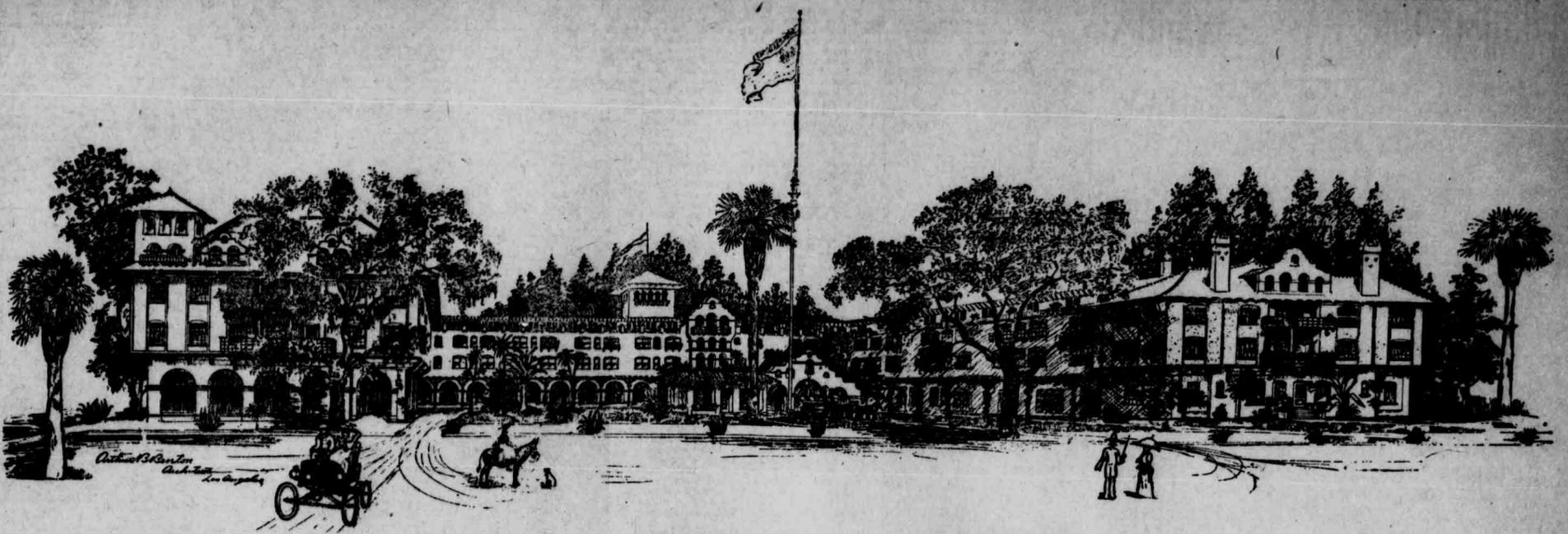
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NEW GLENWOOD INN—FRANK A. MILLER, PROPRIETOR.

NEW GLENWOOD INN COMPLETE

Riverside Has Another Strong Attraction for Tourists

The New Glenwood, Riverside's mammoth hotel, is practically completed. Mr. Frank A. Miller, who planned the big hostelry and has directed its construction from the foundation, is making strenuous efforts to open the doors of this splendid hotel, all in perfect running order, January 8 next—the anniversary of his wedding.

The New Glenwood will be welcomed by Southern California's regular winter residents, and the tourists will have another first-grade hotel, where home comforts, club life or the globe trotter's requirements and fads may be enjoyed. Here there will be found every comfort, every luxury, and with a well managed and elaborately furnished home.

The guest who enjoys the social features of a high-class establishment of this kind will find plenty of interest

in it, and if his ideas have a turn for the athletic, there will be nothing lacking to gratify the most robust, for there will be bowling alleys and a gymnasium, as well as other features provided for the enjoyment of guests. There will be the most unique series of courts and paseos, roof gardens and corridors, cloisters and detached buildings, with great pillars supporting porticoes and promenades—portales and pergolas. There one may linger in the deep shadows among shrubbery and flowering plants, high above the ground floors, or may, by a few steps, luxuriate in a sunbath par excellence.

One might easily "lose" one's self among the nooks and odd, out-of-the-way corners, but there are always the corridors which are the accompaniment of comfort and contentment. One need not remain lost, however. Touch an

electric button, and an attendant will find the lost one instantly, always ready to gratify the slightest wish of the guest. One may lose himself from the crowd, but an attendant, if summoned, will have no difficulty in discovering the retreat, notwithstanding the guest may be any place within the buildings or the hundred and odd nooks covering a city block—from the office or parlor to the remote parts of the great hotel.

The New Glenwood, furnished, will cost something near half a million of dollars, and will be able to accommodate a host of people in its 300 guest rooms, every one en suite, fitted with private baths and heated by steam—indeed, with all the modern conveniences ever thought of by the twentieth century hotel manager.

Riverside is proud of the New Glenwood as indeed is all California, and no American seeing the ingenuity and application displayed in the arrangement of this splendid caravansary can fail to feel a thrill of pride in the American hotel manager in general. To become acquainted with the manager of this particular hostelry—Frank A. Miller—is a pleasure one would not willingly forego.

Some one has said "the modern hotel is the guide post which diverts travelers to or from a locality as surely as commerce." This is strictly true, and

not more strikingly illustrated than right here in California.

The commercial traveler can be counted upon, as can the tourist, as the best advertising medium a town can have. Where there is a comfortable hotel, there you will find the professional traveler has his mail directed.

In discussing the territory he visits, the commercial traveler is always ready with a good word for the town where there is a comfortable hotel—and there he awaits his draft from the house or mail from home. He will contrive to reach that town on Sundays, and from there he will radiate in his work, returning each night until he is through with the region.

The tourist is quite as particular. There are often points of interest he would visit, or visiting, would remain for a time, were there accommodations like the commercial salesman, he has made inquiries of some fellow-traveler and has discovered the lack of comforts, hence forthwith drops it out of his itinerary, or at best makes a flying visit.

No introduction is required by tourist or commercial salesman who is making a territory new to him. One traveler, of either ilk, can unerringly distinguish his kind, and the question "Where do you stop?" or, more politely, "Is there a good hotel?" at a mentioned point, is always unhesitatingly answered, and you may depend upon the information imparted being correct.

Yet after all, a hotel, however imposing or modern in furnishings, will reflect the character and ability of its manager. If the manager is not capable, or is careless of his guests' comforts, that hostelry at once sinks into the commonplace, if not worse. The hotel man par excellence is born such, and while he may become more perfect by practical application to his business and the study of human nature, yet he must be a natural hotel manager. Frank A. Miller is one of these.

The New Glenwood takes the place of Riverside's famous old hostelry, the Glenwood Tavern, now torn down to make room for the new structure. The old adobe, the original hotel used in later years as a lounging place by guests and tourists; the old building on Sixth street and the cottage on Orange street, are left standing. Both have been thoroughly renovated and modernized, and retain their original outside appearances. The adobe structure is left in the center of the great court and will, as always, be known as "The Adobe." Here is where the lounge room—the den—the billiard room and writing rooms are being fitted up, and here the guest may be at perfect ease and bring his friends to enjoy the comforts while visiting. The "Annex" will be fitted up in guest-room suites, and there are several luxurious suites of guest-rooms in the cottage, but in the latter the general reception rooms, ladies' parlors, and banquet halls are being fitted up in

the most elaborate manner possible. Opening on Orange street to the east and half-way down the block, is the great public parlor. Toward the center is, first, the office, and beyond, the large dining room. On the west side the cafe and casino and bowling alleys are situated. Between the office and annex is the patio, or inner court, with garden and fountains, and a driveway which separates the annex from the boiler house, ice plant and electric lighting plant. Sample rooms take up the north front, west of the electric light plant, and the bakery, kitchen, pantry and employes' ordinary occupy the space between the dining room, Y. M. C. A. hall and sample rooms. To the west, facing the grand court and the street as well, are the casino, the barber shop, Turkish baths, news and stationary stands, real estate office, directors' office, curio store, and on the corner a jewelry store. To the east of the court is a series of high-class suites.

The New Glenwood is indeed a new departure in hotel building. A long, low, cloistered building of the Mission type, inclosing a spacious court and surrounded by magnificent old trees and palms. In the court the old adobe or casino adjoins the stately campanile with its sweet chime of old Mission bells.

Facing the court, on the third floor, is the beautiful Paseo de las Palmas a promenade seven hundred feet long, bordered with graceful palms and

brilliant flowering shrubs. The Paseo overlooks the grand court, with its grape-arbored pergola, the Spanish roof-garden of the adobe and the campanile. Beyond is the glorious view of the great snow-capped mountains, that rise in majestic splendor from the wide-spreading orange groves nesting at their base, and which intercept the eye on every side. In the center of the building, on the third floor, facing the Paseo, is the Solarium, or sunparlor, where the tourist seeking sunshine, may bask in old So's semi-tropic smile.

Among other pleasing features of the New Glenwood are the cloistered corridors, the patio, or inner court, and the portales, with its graceful Mission arches, which serves the double purpose of port-cochere and bridge from the hotel to the roof-garden.

Within as without Mission architecture prevails and is emphasized in decoration and quaint monastic furnishings. The colonnaded parlors, rotunda and dining room, the mezzanine floors and social halls are all attractive innovations. The heavy open timbered ceilings throughout the whole house are a prominent feature, and tall, massive chimney pieces with their cheerful hearths add much to the charm of this unique hotel. Every room in this fireproof building is steam-heated; all the chambers are en suite, with bath; are connected with the long-distance telephone and have all known modern improvements.

UPLAND AND ITS ADVANTAGES

A Thriving Little City in the Citrus Fruit Belt

"Frostless and windless" is the way to describe the Upland citrus belt—a combination of nature's favors as rare as important. More, it is one of the scenic beauty spots of the universe, where nature in her lavishness has left an Arcadia, an ideal home spot.

Upland, on the Santa Fe; thus the residents refer to their little city and colony district. Toward the east lies the noted vine-growing district of Cucamonga; to the west is the famed San Gabriel valley, the college town of Claremont, with its beautiful homes,

sleep in the deep gulches near the summits of San Antonio, while a little farther toward the east "Old Baldy," San Geronimo and half-a-dozen more great peaks wear a white mantle the greater part of the year. In the lower altitudes flowers bloom from January to December and plant life becomes perennial.

High up among the pines in the canyons the valley residents have built summer homes, to which they retreat during the heated term. The foothill residents live in a perpetual summer

area of orange and lemon groves within its confines, fully ten to a dozen years old and some orchards antedating even the latter. Of course, orange and lemon growing is the chief industry, owing to the superb climatic conditions spoken of and the superior soils. Residents do not always reserve space for even vegetable garden further than for their table needs. They can purchase vegetables from the valley, cheaper than they could raise them, as a rule.

Every landholder owns his own water. Besides there is a surplus, not only for domestic purposes and irrigating, but water to sell others who may come into the district and plant the uncultivated lands, of which there are large areas within the sphere of influence and water supply of this new community. San Antonio creek, which has its source in the Sierra Madre, directly back of Upland, supplies water to the home and orchard, yet with that far-seeing idea of providing against possible dry seasons the colony has dug a number of never-failing wells, from which to draw as necessary

any and all purposes. In turn this water may, with sufficient fall, furnish power for other purposes and yet be utilized ultimately for irrigating and for domestic supply. Indeed, the possibilities of a small beginning of water well up in the foothills is almost incalculable where water from wells may be pumped and added to the volume and again utilized for power.

Upland is not yet a city, but there is the germ of one established. There are a bank, three fruit packing houses and a fruit drying establishment, and some splendid mercantile houses, carrying stocks of goods equal to cities of 10,000 inhabitants. A lumber yard and planing mill, with a box factory in connection, is one of the necessary and really important business establishments, while a machine shop and general repairing establishment is doing a good business with the orchardists as patrons. Everything in the way of machinery is furnished power by the San Antonio Electric Power and Water Company.

An electric railway, seven miles in length, connects San Antonio Heights

that others strive to be placed under the label or brands of the Mountain View association. It must not be understood that the present bearing orchards of the Mountain View district are all that will be placed under the association's name. There is quite a strip of land of equal worth west and north that will later come in the association, and now that water may reach a portion of the vacant lands next year may see some good-sized groves planted to oranges and lemons.

The frostless and windless belt is here centered and every foot of ground in the district is valuable. Of course, this is in Upland district; Mountain View tract, as all the other family or community holdings in the foothills, here comes within the sphere of Upland's interests.

Last year the Upland-Ontario-Cucamonga-Etiwanda colonies handed from the thirteen packing houses in the district 300 carloads of oranges and lemons, representing a value of over one million dollars; four fruit drying and one large canning concern produced an output of 400 carloads, valued at \$600,000.

transportation facilities stopped further development until some fifteen years ago, when the planting of citrus and deciduous fruit trees became general. There is now a total of about 14,000 acres set out in the district, half of which is in citrus and the rest in deciduous fruits and vines, still awaiting the creative force of labor and capital for the foundation of happy homes. What better opportunity for investment could be offered to one seeking a home in the balmy climate and under the sunny skies of Southern California?

Along with the rapid growth of the fruit industry the field for other enterprises is constantly widening and is equally inviting to the man of moderate means as to the capitalist.

THE CLIMATE OF UPLANDS is one of the main attractions of Southern California and regarding that of this particular locality we may confine ourselves to the broad statement that it leaves nothing to be desired, and the seeker after health, in locating here, could make no better selection.

Closely allied with the climate, in its relation to human as well as plant life, are the physical conditions of the land as regards soil and drainage. In both these respects the visitor to this district cannot fail to at once notice the ideal configuration of the landscape, forming as it does a gentle slope, uninterrupted by any depression which could offer an obstruction to perfect drainage.

In summing up it must be emphasized that this district within seven years, at the beginning of which its citrus fruit shipments amounted to only a few cars, has advanced to a position second to no other in Southern California as regards both the volume of the output and the net results, which has been largely due to the intelligent handling and marketing of the fruit and its superior quality, for which latter it has acquired a wide reputation in the markets of the country.

Anyone intending to locate in California for health or profit, or both, should visit this favored section and carefully examine the conditions existing there before locating elsewhere. Some of the best paying properties in the state can be secured in this district at fair prices.

Cadillac Mining Co.
Adjoining the Crown King is also to be found the property of the Cadillac Mining company, another large and valuable mining tract, owned and controlled by Michigan people. The principal work has been done on the Merced, the development of which is being rapidly pushed. Very rich ore, composed of gold, silver, copper and lead, is being taken daily from this mine, and a large mill will soon be erected, plenty of ore being in sight to warrant the expenditure of a large amount of money for improvements.

The Cadillac group comprises seven claims, the Golden, Merced, Ida, Frontier, Damascus, Laurita and Tartar. Considerable development work has been done on each of these claims, all showing rich bodies of ore. There is no doubt that this whole basin in the Bradshaw mountains is destined to become a very important mining center, as there has been no development work done in any direction which has not shown rich mining deposits, and as soon as the "Murphy" railroad is completed there will be ample shipping facilities.

intervening, and Pomona, the home of the orange, and Chino, the great sugar beet region just below in the valley. To the south is Ontario, blessed with a climate and soil second only to Upland, and practically within the same citrus belt, but lower. To the north is the San Gabriel range of the Sierra Madre mountains as a background, San Antonio peak, lifting its hoary head high above the valley, keeps a watchful eye upon Upland's destiny. This massive peak holds back the winds and frosts, and from the reflection of the sun's rays against its southern slopes the atmosphere is tempered to the requirements of the lemon and orange and reaches the ideal of the most fastidious dreamer, while from the deep gulches and canyons flow the purest of waters, produced from the everlasting snows of the higher elevations. What a contrast! Here, clothing these foothills with a deep green verdure, are orange groves bearing golden fruit; beautiful homes with yards of green sward, interspersed with flowering shrubs and flowers, lading the air with their perfume. A dozen miles away—two miles toward Mars and ten miles toward Alaska—the eternal snows

home.

Upland enjoys the benefit of being on the trunk line of a great transcontinental railway—the Santa Fe, and within an hour's ride of a metropolitan city—Los Angeles. Here every social feature of older settled communities obtains. In the district there are four graded grammar schools and a high school, with colleges within a few miles, west and south.

Practically all religious denominations are represented and the social status of the town is characteristically Californian, equal to any country in the world. The basis for a splendid library has been the work of the literary men and women of Upland, and it is likely some substantial gifts will place it among the features of the little city.

Upland is located in a strictly foothill region. The hills of this portion of the state possess a climate and soil peculiarly adapted to orange and lemon culture, and the greatest assurance of water supply from the mountain snows.

Upland, as a distinctive community, is comparatively new to the world, although there are several thousand

requires.

A peculiar feature of the system of supply wells is that a portion of them are semi-artesian in character. "Semi-artesian" may sound far-fetched, but a word will suffice to explain the appellation. It was discovered that water could be secured at a depth of from 300 to 120 feet, but by going to a depth of 500 feet, the second stratum, the water would rise within from forty to sixty feet of the surface, and as pumping facilities were limited at that time, a place where a sharp activity occurred leading to the water, supplying crenel lands and a tunnel was driven into the hill far enough to secure a depth of seventy-five below the surface, and from this tunnel wells were sunk. The theory that water would flow from the wells into the tunnel proved correct, and these are the "semi-artesian wells." Later the waters of San Antonio creek were harnessed, and an electric plant was installed. This plant furnishes power to pumps from the other wells, which may be increased at will; to the orchards, the homes and to the villages, for domestic utilities, for lighting streets and houses and furnishing power for

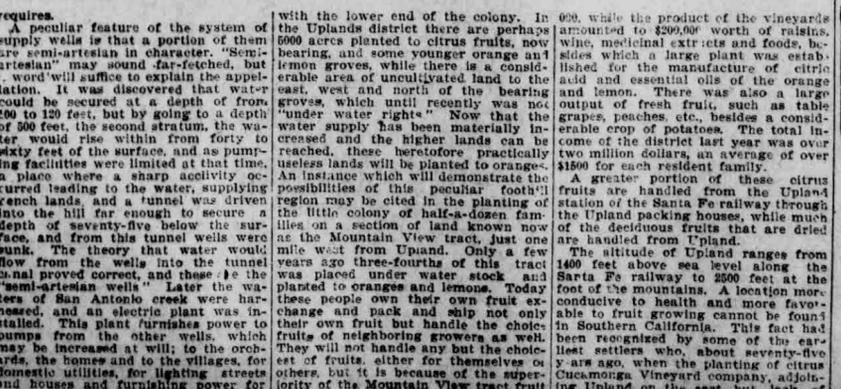
with the lower end of the colony. In the Uplands district there are perhaps 6000 acres planted to citrus fruits, now bearing, and some younger orange and lemon groves, while there is a considerable area of uncultivated land to the east, west and north of the bearing groves, which until recently was not "under water rights." Now that the water supply has been materially increased and the higher lands can be reached, these heretofore practically useless lands will be planted to oranges. An instance which will demonstrate the possibilities of this peculiar foothill region may be cited in the planting of the little colony of half-a-dozen families on a section of land known now as the Mountain View tract, just one mile west from Upland. Only a few years ago three-fourths of this tract was placed under water stock and planted to oranges and lemons. Today these people own their own fruit exchange and pack and ship not only their own fruit but handle the choice fruits of neighboring growers as well. They will not handle any but the choicest of fruits, either for themselves or others, but it is because of the superiority of the Mountain View tract fruit

output of 400 carloads, valued at \$600,000, while the product of the vineyards amounted to \$200,000 worth of raisins, wine, medicinal extracts and foods, besides which a large plant was established for the manufacture of citric acid and essential oils of the orange and lemon. There was also a large output of fresh fruit, such as table grapes, peaches, etc., besides a considerable crop of potatoes. The total income of the district last year was over two million dollars, an average of over \$1600 for each resident family.

A greater portion of these citrus fruits are handled from the Upland station of the Santa Fe railway through the Upland packing houses, while much of the deciduous fruits that are dried are handled from Upland.

The altitude of Upland ranges from 1400 feet above sea level along the Santa Fe railway to 2800 feet at the foot of the mountains. A location more conducive to health and more favorable to fruit growing cannot be found in Southern California. This fact has been recognized by some of the earliest settlers who, about seventy-five years ago, when the planting of citrus Cucamonga Vineyard company, adjoining Upland on the east, but lack of

BIRDSEYE VIEW OF UPLAND, CAL.



Do You Eat?

San Bernardino is a good town and the trade of its merchants is large. All commercial traveling men stop at

The Stewart Hotel

Centrally located, conducted on the highest and most generous scale, it contains every modern convenience.

E. DUNHAM, Proprietor

HIGHLAND AND ITS ENVIRONS

A Progressive Little City in the Heart of the Fruit Belt

There is an unusual movement toward the golden west by health and pleasure-seekers of all classes, and especially by home-seekers, who have enough of this world's goods to live in ease and comfort. There is no portion of California—the Mecca of these people—of which information is more eagerly sought than of the San Bernardino valley, particularly its upper portion, which has such a superb climate, such wonderful and varied scenery, such natural advantages for the small capitalist seeking an ideal home and the opportunity for sustaining with little effort the comforts of home life in an acceptable social atmosphere.

The upper loop of the Santa Fe railway's famous kite-shaped track is the "top layer" of Southern California's great citrus fruit belt. Highland is the center of this rich and fertile section. About 2000 people are settled here, and a more contented, prosperous people could not be imagined. They have not yet reached the climax in comforts, for they have not had time, since discovering this Elysian garden spot, to develop all its natural resources, much less add the finishing touches of man, who alone may improve upon nature by artifice. Improvements are being applied, however, and wonders are being wrought.

Highland is located on the southern slope of the bench lands at the foot of the San Bernardino mountains, at an elevation of from 1250 to 1800 feet above sea level. Looking from any point, not obstructed by orange trees, one may enjoy a natural cyclorama, unequalled

clinging to their feet beyond Highland—even more orange groves. Some of these higher peaks are perpetually crowned with snow and the gorges and canyons near their summits are seldom free from the great snow banks that fill them in the winter months.

Just beyond those peaks, San Geronimo rises almost perpendicularly to the height of 10,000 feet above sea level, while a little further still there is a great depression, 367 feet or more below sea level.

It is generally conceded that Highland grows the choicest citrus fruits of any locality in Southern California. For the past six years Wells, Fargo & Co. have purchased all the oranges, grape fruit and lemons the officials have used for complimentary holiday gifts from the Highland Fruit Growers' association, through A. G. Stearns, manager of that organization. These facts speak volumes for Highland fruits.

There are probably 5000 acres of citrus fruits in bearing in Highland district, of this probably 4000 acres are in oranges, principally Washington navel, while about 800 acres are planted to lemons and 200 acres to seedless grape fruit. Highland fruits have a record few localities in any country can equal. Fully five-eighths of the entire orange crop is graded as "extra," and quite a proportion of this as "extra," the highest grade, while there are or-

ange, it is no wonder that fruit and other vegetable life attains such perfection wherever water can be furnished for irrigation. Water is plentiful, and while expensive to secure in the begin-



A FOREST GIANT

nix, prove cheap in the end, for the source is now well defined and the supply is inexhaustible. Natural springs in City creek canyon furnish the water for irrigating, are owned by

business in this district shipped, during the season of 1901-02, a total of 614 carloads of citrus fruit, which were forwarded from Highland, 245 from East Highland, 44 from Highland and 22 from Del Rosa. The Highland Fruit Growers' association of course handles the bulk of the fruit, but it is largely through the personal popularity, persistent effort and public-spiritedness of the association's manager, A. G. Stearns, that this has been achieved. Mr. Stearns has done much toward bringing Highland fruit to its present high standing in the markets. Oranges ripen from two to four weeks earlier in this district than elsewhere in Southern California as a rule, and there are no frosts nor fogs, there are no losses, and the fruit comes clean and bright from the trees.

Highland is a prosperous little city in every way. There is a \$10,000 schoolhouse in each end of the district, each employing four teachers. There is now under course of construction a home for the 500 or 600 volumes of books the library committee of the district has gathered together. There are several splendid business houses, one of which, the large brick block shown in the illustration, was sold to Colonel C. H. Doherty recently by the new postmaster, A. A. True, for \$10,000 cash.

Of course there are the usual real estate dealers; Paul E. Umfrid, who is acting secretary for the Domestic Water company and notary public, as well as general agent for the Highland people in business matters coming before the county officials. Captain L. A. Desmond, recently elected justice of the peace, is also interested in real estate and insurance and has a general law practice. Dr. Charles C. Brown, who attends to the sick, and while his services are not so often required in this beautiful locality, yet he is very popular and much sought after man, for he is interested in all public affairs and owns a fine orange grove.

An industry of vast importance, and a necessity, indeed, in a fruit growing region, is the nursery of Captain H. H. Lyville. This nursery always has on hand 30,000 orange trees ready to set out and a sufficient number of lemon and grape fruit trees to supply the demand. Citrus fruit trees are seeded, and after the first year's growth, are transplanted; after two years' growth, under high cultivation, the little trees are budded; then, after two years' budded growth, are ready for the orchard. Captain Lyville is one of the earliest citrus fruit tree growers of Southern California and is thoroughly proficient in his business. He is very popular in the community and enjoys a large patronage.

Still another important industry, one of the most important, indeed, is the Brookings lumber yard and box factory, the largest plant of its kind in Southern California. Not only does this factory supply the local fruit growers with boxes and crates for shipping fruit, but a large proportion of the business of the yard is in Southern California and is handled by this concern.

The company gives employment to about 200 men, 125 of whom are at the logging and saw mill camps in the mountains, ten miles distant, and about seventy-five are engaged in the lumber yard and box factory at Highland. The company was organized and began business three years ago. Its operations have been a considerable factor in the recent activity and development of Highland. There is an impression that Southern California has no trees commercially valuable for lumber, but on the northern slope of the ridges of mountains enclosing San Bernardino valley, are extensive areas of pine for sale, trees nine feet in diameter not being unusual. The saw mill is located on the crest of the ridge at an elevation of 6500 feet; a log pond has been made by damming one of the canyons. Three miles of narrow gauge railway extend from the saw mill to the logging camp, the locomotive being of the Shay geared type. The logging is done by four steam donkey engines, each operating about 1000 feet of steel cable, a method which admits of handling the heaviest logs in the most difficult places, in canyons or on mountain side. The greater portion of the company's product is worked up in fruit boxes and vegetable crates, yet with a planing mill auxiliary the company is doing a large business in furnishing lumber for building purposes. The lumber is regarded as superior for finish. The yearly output of the mill is about 10,000,000 feet. There is plenty of timber in the San Bernardino hills, and for a dozen or more years, even at this rate of cutting, and there is much more timber in that vicinity.

Highland is unfortunate in that several of the company's fine ready saws, fully a million feet of this white pine going to Los Angeles yearly. Of course no lumber concern can compete with this local mill in prices, and it is difficult to secure the grade of lumber turned out by the Highland company. Some wealthy non-residents own some of the best orange orchards. These lands might be improved by home-builders. Some of the very best orange groves are thus held, three in the heart of the Highland district, by one man who places a superintendent and a few laborers upon the places and comes to look at his holdings once or twice each year. These places are now for sale, however, held at a good round price, but divided up into small tracts, a dozen or more families could find a splendid opportunity to live like princes and lay by a good sum annually. There are other places for sale also and some land under water stock not yet planted to orchards that can be purchased, while a considerable area in the outlying parts of the district, now in sagebrush, will soon come under the high line water possibilities.

While Highland is handicapped with some non-residents she is blessed with at least one, Captain L. C. Waite, the father of Highland in a sense, who while interested in the banking business at Riverside, keeps in touch with Highland as first in every public enterprise and maintains a fine country home there.

Brookings' Lumber Company
Every resident of Highland is an orange grower to a greater or less extent. Even the butcher, the baker, the grocer and blacksmith have orange groves at least surrounding their homes, and that means a neat income, for every tree will bring from \$10 to \$20 per year to the owner. That is why there are no vacant lots in Highland.

The lot question has been a subject of some discussion. New arrivals in the district, whose land is some distance out from schools, would often build town houses if lots were available. The matter has resolved itself into someone cutting up an orange orchard, and this will be done by the postmaster, who will lay out "True's addition to Highland," and place it on the market December 1. This is not done as a speculation so much as a desire to keep up that public spirit and helpfulness every man and woman in Highland has always in mind.

The tradesmen and artisans are not the only orange growers among the town folk at Highland. Some of the best orange groves in the district are owned by professional men and fruit packers. Dr. Brown, who came here for his health and regaining it remained, has one of the best orchards of its area in the state, and while he keeps up his practice the income from oranges is greater than from his profession. Dr. Brown is known among professional men as a student and investigator. Through his thoroughness and industry a bank is the next important busi-

ness interest for Highland. While the matter has been discussed in a general way for some time, no definite action has yet been taken; however, it is proposed to establish a bank—to do business under state charter—by local capital. This action will be taken very soon unless others from the outside

land, to the upper end of the valley, also, which will be another point in its favor, for the Salt Lake railroad will make an aggressive fight for the business of this region, not only in freights, but passenger traffic as well. True's addition to Highland has been surveyed and it will be placed upon

plies Highland will be extended to the new addition, and every convenience enjoyed by the residents of the older part of the city will be given the newer. As a matter of fact, there will be no way of distinguishing the older from the newer portion of the city unless it be by the newer buildings



CORNER OF PALM AND PACIFIC AVENUES, HIGHLAND

In any country on earth, and very nearly approaching the dreams of the most fanciful. Below lies the great San Bernardino valley. Across the valley, nestling among orange groves, the streets are bordered with stately palms and drooping pepper trees, half hiding the lawns and shrubbery around the handsome homes, is Redlands. To the west, where tall church spires and cupolas of public buildings peep out amongst the rich green of the semi-tropic foliage, just beyond a great valley of orange groves, is the city of San Bernardino. Colton and Rialto lie a little

angles, and lots of them, of a grade beyond commercial classification. These are purchased by the special buyers mentioned, as are many of the lemons, and much of the grape fruit. There will be need of trying for further purchasers by next year, however, for many of the younger orchards are coming into bearing, while the yield of the older groves is naturally increasing. There is a tendency to cut back the lemon trees here, owing to the instability of the market, and because of the superiority of the oranges grown here and the growing favor of grape

fruit, and are independent of the land interests. The company is incorporated, has no bonded indebtedness, and the water stock can be used as collateral security at any time. The company has over forty miles of stone and cement canals, and lateral ditches innumerable.

The Domestic Water company was formed in September, 1898, to receive water from wells for domestic purposes. It was discovered that the vast portion of San Bernardino valley could be tapped. Wells were sunk and a large reservoir was made, and two sets of pumps were put in the second set for security, to serve as auxiliary. These pumps can fill the 200,000-gallon reservoir three times each twenty-four hours when necessary. Additional wells and pumps could furnish any quantity of water, for the supply is absolutely inexhaustible, and, what is more to the point, absolutely pure, as determined by Professor Hilgard of the California State university, who has made systematic and thorough analyses. The wells now in use were sunk 104 feet to a bed of clean gravel, overlaid by a stratum of impervious clay, which renders it so pure that, as Professor Hilgard remarked, "There was nothing for bacteria to feed upon."

The Highland Domestic Water company is purely a local institution. The officers and directors, who were the originators, incorporators and capitalists, are L. C. Waite, president; A. G. Stearns, vice president; Dr. Charles C. Brown, secretary; W. F. Grow, superintendent, and Mrs. Caroline Grow, the latter the wife of Superintendent W. F. Grow, one of the most enterprising and active promoters of this district. Mrs. Grow is a lady not only of financial and social standing, but a leader in every public spirited movement proposed.

Highland postoffice has recently been placed in the category as "presidential," of the third class, and President Roosevelt has appointed Dr. A. A. True, the choice of the Highland people, to preside over the new office. As a further indication of Highland's



HAULING LOGS, BROOKINGS' LUMBER CAMP

further along, and Ontario just shows itself over the western horizon, illuminated with pinks and yellows, and now that a cloud shadows the scene for the moment, purple and almost chrome greens play among the bushes and low meads that break the level between the valley and the Pacific.

fruit, the old lemon stocks will be budded with these fruits. Tangerines, loquats, pomegranates, olives, vines, all yield heavily, and of high grade fruit, but these trees are being sacrificed for the navel orange.

The soil, which produces such superior fruit, is like the climate which makes the fruit possible—simply perfect. The soil deposits on these mesas, as shown, where the rain floods have



BROOKINGS LUMBER COMPANY'S MILL

hanging vistas are magnificent and indescribable. Looking in the other direction, there, towering above, are the rugged peaks of Old Baldy, Grayback, San Geronimo, San Antonio and San Jacinto, and

when their way to the valley, are fully integrated granite, with the accumulation of centuries of decomposed vegetable matter, permeated with the natural mineral salts coming from the forma-

commercial importance, these facts might be mentioned: The two largest general stores—Fraser & Barnes and Thomas N. Evans—each did a business of about \$30,000 the past year. The four fruit packing companies doing



NAVEL ORANGE ORCHARD, SHOWING IRRIGATING FURROWS

come in of their own accord and start a bank.

It will not be long until Highland will be connected with the gridiron of traction tracks traversing the San Bernardino valley. There has been one sight of way sold and another will be within a few days, to the San Bernardino Valley Traction company. This, with the Santa Fe's "kite-shaped track" service which Highland has enjoyed since its existence, will suffice

the market within the present month. Mr. True has cut up a portion of his big orange orchard to supply the demand for town lots, and while some orange trees will be destroyed in grading streets and putting in curbing and walks, still there will be many orange trees left bearing, of the best varieties and like all citrus trees in this locality, absolutely free from pests of every description. The True addition will have graded streets and

and walks in the addition. Highland is all right.

Plenty of Water

In addition to the Domestic Water company's plant, which supplies water from wells to the homes of the residents, there are two district irrigation companies supplying water to the orange and lemon growers. The North Fork Water and Irrigation company draws its water supply from the north fork of the Santa Ana river, dividing the water with the Bear Valley company, while City creek, just above Highland, furnishes a supply sufficient for all needs, together with wells from which water may be pumped. Water is never amiss where irrigation is necessary, but Highland will always have sufficient, even though every foot of the yet unoccupied land is planted to trees and gardens.

Harlem Hot Springs

There are several important resorts in the canyons and on the mountain slopes above Highland. Among these is the noted Fredalba, owned by the Smileys of Redlands. Fredalba is eleven miles northeast of Highland at a considerable elevation, and besides the large hotel there are a number of cottages for the accommodation of tourists and summer outing parties. The Harlem Hot Springs, one mile southwest of Highland, is another resort that must become important for its curative properties. A well-financed company has control of these springs and they will be highly improved in every way. A hotel will be erected and bathhouses and all accessories added. Already there is a large pavilion and beautiful picnic grounds.

Outrageous

Giant—The glass-eater has lost his job in this museum. "What for?" Bearded Lady—What for? Giant—Why they caught him eating anthracite.—Detroit Free Press.



HIGHLAND WATER COMPANY'S RESERVOIR

to give the little city and the district

hourly communication with its neighbors, and the two great railway systems of the southwest. The Salt Lake railway will undoubtedly extend its line from San Bernardino via High-

sidewalks laid as fast as the work can be done. Every lot will be connected with the domestic water company's service and, of course, will be under the irrigating ditch system as now. The electric light system which sup-



THREE-YEAR-OLD BUDDED GRAPE FRUIT

METROPOLIS OF THE DESERT

The Thriving and Important Little City of Needles

Of all the little cities and towns that dot the line of the Santa Fe system across the continent, there is none that comes as more of a welcome surprise to the eye of the transcontinental traveler than the wonderful metropolis of the desert, with its odd sounding name—Needles. Its history is an interesting one and its development and rapid progress, particularly during the last half a dozen years, are interesting, even in the narration of wonderful things that usually make up the history of a western town.

Nestling on the green banks of the Colorado, hundreds of miles from anywhere, a verdant spot of refreshing green amidst an almost limitless expanse of desert, Needles is at once a welcome resting place, as well as the subject of more than a little conjecture and curiosity upon the part of the tourist. How happened it to come there? What did any one want to start a town there? How did it thrive? What would be its probable future? That there is a very great deal more of importance attaching to the thriving little town than one would naturally imagine and that it is destined to become of vast commercial importance, it will be the purpose of this article to show.

A Profitable Enterprise

There are perhaps not less than 12,000 carloads of oranges and lemons shipped eastward through Needles every year. These trains are "iced" at San Bernardino, but about one-third of all the cars need require reicing by the time the Colorado river is reached. The haul across the desert to the river is expensive to the railroad companies, but a boon to the manufacturers of ice, for the fruit must be refrigerated or it will not last to reach the Missouri river. Monaghan and Murphy erected in 1904 the largest artificial ice manufacturing plant to be found between Los Angeles and Albuquerque. The dire need of ice for fruit cars was the

prime factor in the establishment of the plant and of course a contract upon advantageous terms was secured from the transportation company without delay. The plant cost about \$160,000 and has a capacity of thirty tons per day. The power to operate the huge condensers is supplied by a tandem compound St. Louis Corliss engine of 150 horse power, supplied by two boilers of 110 horse power, arranged in series. Crude oil is used for fuel. The wells supplying water for the plant are of the Cook system. Distilled water is, of course, used exclusively in the manufacture of ice. The question of labor was a serious one at the outset, but

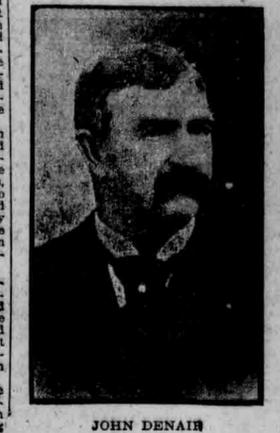
remain such. There are employed in all departments close upon 200 men, a few years ago there was nothing more to be desired, as every comfort and convenience for the children has been provided. The grades are in the hands of thoroughly competent teachers and the curriculum is the same as in corresponding grades in other city schools in San Bernardino county.

The railroad interests of Needles are, of course, its mainstay. It has been a railroad town since the Southern Pacific and Atlantic and Pacific lines came together at the crossing of the Colorado, and doubtless always will

tion, the richness of which is as yet only hinted at. It is the center of supply for the same great region and its commerce is assuming immense proportions. For the capitalist investor or man interested in mining property Needles is the point of beginning for from it everything in this southwestern mineral belt radiates.

The Cottage Hotel

James Carroll is the pioneer hotel man and one of the first settlers of Needles. The Cottage hotel, was opened



JOHN DENAIR

NEW GOVERNMENT WORK

Surveyors Are Making Contour Maps to Show Irrigation Possibilities

The problem of reclaiming the arid lands, on both sides of the Colorado river, from fifty miles above Needles to Yuma, is now being thoroughly investigated by the reclamation division of the United States geological survey. The parties have outfitted, and are still going so rapidly as engineers arrive to take charge at both Needles, Cal., and Yuma, Ariz.

In the vicinity of Needles and Yuma two topographic parties are in the field making a small scale map of two miles to one inch with fifty-foot contours extending about fifteen miles back from the river. In the Needles party are E. T. Perkins, reclamation engineer, United States geological survey, and his assistants, E. C. Barnard and T. S. Chapman. The triangulation for control of the topographic work is being extended down and up the river from a United States coast and geodetic base at Needles. The valley of the Colorado river is to be mapped on a scale of two inches to one mile with ten-foot contours up to an elevation of 100 feet above the river level.

The elevation will be controlled by accurate level lines extending along both banks of the river from Needles. There are at present in the field at Needles two topographic parties mapping on the scale of two miles to one inch, four river parties mapping the valley on two inches to one mile, three level parties, triangulation station building and triangulation observing parties. And it is proposed to increase this force as soon as the experienced topographers to place in charge are available.

At Bull's Head, on the Colorado river, about thirty miles above Needles, E. T.

Wholesale Indian Curio Dealer

DR. D. W. REESE, Manager

I have established a Wholesale Indian Curio Purchasing Agency at Needles, Cal. Having had business relations with the different Indian tribes of the Southwest for the past ten years, I am in a position to buy the curio productions of the tribes at figures never before known, and being right on the ground am able to give to the retailer the benefits of my experience. I am prepared to furnish dealers with all articles manufactured by the Indians in quantities to suit. These articles consist of Indian Bead Belts, Chains, Capes, Watch Fobs, Chacirane, Neck Band Necklaces, etc., Bows and Arrows, at all prices; Navajo Blankets, Baskets and Pottery.

Special Designs in Bead Work to Order. A sample order will be appreciated. Respectfully,
D. W. REESE.

NEEDLES POINT PHARMACY

Our Motto—"We Lead; Others Follow."

Appearance Is Everything

GOOD CLOTHES MAKE THE MAN

Why Look Ragged and Run Down? WE MAKE GOOD CLOTHES AT RIGHT PRICES. . . . Full Line of Suitings and Trimmings. Repairing Neatly Done at Short Notice.

H. F. FETSCH, Tailor,
Briggs Block, Needles, Cal.

When the western end of the Atlantic and Pacific road was approaching the eastern shore of the Colorado river, in the early months of 1883, the writer, as a newspaper correspondent and artist, first saw the broad stretching plains of sand and gravel that marked the Colorado bottom. There was no Needles then—except that the sharp eroded bluffs from which the town is believed to have been named were there—a human habitation of any kind except the railroad camp. And it was a typical frontier camp, too. The pioneers of Needles were then earning a salary as employes for the Southern Pacific company, running freight trains, but became imbued with the idea that there was a future in the desert country, particularly in the merchandising line. Dan Murphy and Frank Monaghan were younger than they are now by a score of years, and, notwithstanding the fact that money was a scarce article with them, they formed a partnership, purchased a stock of such merchandise as miners and railroad employes would buy, pitched their tent on the California side of the river not far from the end of the original pile bridge and went into business. They have a lot more money and a vastly wider range of experience now than they had then.

The young men prospered in business. Prospectors and miners were threading the numerous ranges of hills thereabout and needed provisions, tools and supplies. Monaghan and Murphy supplied the demand. The freighting up and down the river developed more or less business, and the young firm began to broaden out as the years went by. A store was built near the site of the railroad depot and other buildings as soon as the company had selected its site and the young firm still further increased its stock of goods. When the great steel cantilever bridge was completed seven or eight years ago, and the railroad company enlarged its plant at Needles it became more and more

and the pay roll each month amounts to almost \$30,000. Extensive repair shops take care of engines and rolling stock used on these divisions and afford employment to a small army of expert machinists. The transportation department is under the direct charge of Superintendent John Denair, who is one of the solid, responsible and progressive business men of Needles as well.



MONAGHAN & MURPHY'S ICE MANUFACTURING PLANT



MONAGHAN & MURPHY'S WAREHOUSE, NO. 5

apparent that the town was destined to be something more than a water tank station on the line of a transcontinental road. Small tent and building camps had sprung into life all around it within a radius of a hundred miles, and the trade of these camps naturally came to Needles as the nearest railroad and shipping point. Monaghan and Murphy built another addition to their store and again materially enlarged. The great railroad repair shops drew hundreds of men with their families. Houses of such size, style and convenience as fitted them for the use of high class employes of the railroad company were in demand. Monaghan and Murphy were by this time the capitalists of Needles, and they built the houses needed for the growth of the town. Eighty or more comfortable cottages were erected and the population of Needles soon increased to more than 500 souls. The thrift and enterprise displayed by its people induced other merchants to engage in business there. They were welcomed rather than discouraged, and within another year or so the business street of Needles had lengthened to several blocks, substantial brick stores were built and im-

perintendent Lewis, who is a power among the Mojave Indians, impressed a gang of them, taught them the business, and now they are employed exclusively, except in the departments requiring especially skilled labor. "Smoke Stack," the tallest Indian in the Mojave tribe, who was exhibited throughout the eastern cities many years ago, was impressed, but didn't stay. He looked at the clear water in the pans, walked over the floor of the freezing room, looked at the big condenser and then saw the great 200-pound cakes of ice come out. He put on his coat, started toward the door and said to the superintendent: "Dan Murphy heap big man; make ice in Needles; God no make ice in Needles." His superstition was so strong that he never entered the ice house again. "Shorty," another Indian character, who used to haunt the depot at train time, was also so afraid of the witchery of the ice plant that he would never go into any part of the building. Besides being prominent in railroad circles, is always first among the financial affairs of the town and is greatly interested in matters pertaining to the desert section of country with which he has been conversant for the past twenty years. He built the Needles hotel about a year ago, a picture of which appears on this page. He is also largely interested in mining and is the president of the Desert Prospecting, Exploration and Development company, which was organized upon plans of his own.

One of Mr. Denair's most worthy public enterprises was the building of a hotel. For years Needles did not have a good hotel, and as it grew in commercial importance the need became an imperative one. The new Needles hotel, owned by Mr. Denair and managed by R. Taggart, is a thoroughly well equipped institution. The rooms are large and airy, well furnished with the best of Brussels carpets, quartered oak furniture, iron and brass beds, and is the only hotel in the desert affording gas in every room. The parlors are elegantly furnished and the cuisine of the house is unsurpassed. Commercial men need have no fear of not having the best the land affords, as well as comfortable rooms at the Needles hotel.

The commercial future of Needles is assured. Hundreds of thousands of dollars every month are paid out there in the interest of the hands of men by mines and mining camps. It is the financial center for a vast mineral re-

WIDEBY VIEW OF NEEDLES, CAL.

by him about fifteen years ago at the corner of Second and D streets, its present location, about one block from the Santa Fe depot. It enjoys the distinction of being the oldest hotel in the city.

It has always been a popular stopping place for the traveling public and recently it was found necessary to build an annex to accommodate the rapidly increasing business. The hotel is run on the American plan, has large, clean and well ventilated rooms and is located in one of the finest parts of the city. The dining room is of good size and well lighted, and everything that a hungry man would crave for is supplied in season. Particular attention is paid to the commercial trade. One of the best recommendations that could be given the hotel is that guests who have once stopped with mine host Carroll have invariably returned for a second and third time.

Mr. Carroll has been honored with several public offices by the citizens of Needles, among the more prominent of which might be mentioned that of justice of the peace, which he held with credit to himself and the community for six years.

He at present holds the office of notary public. He has always been greatly interested in educational work and was largely instrumental in the erection of the new public school building. He has recently received an appointment as school trustee.

Besides his hotel interests he also carries on a general insurance business and an undertaking establishment.

Needles Hotel

R. TAGGART, Proprietor

Entirely New, Modern Hotel Building, Containing Every Modern Improvement.



Gas in Every Room . . .

Headquarters for Commercial Men

Elegantly Furnished Rooms

. . . Table Unsurpassed

S. F. HOLCOMB, Needles, Cal.

The Popular Place to Trade

A Complete Line of

DRY GOODS, QUEENWARE, GROCERIES, BOOTS AND SHOES, AND GENERAL MERCHANDISE

We Make a Specialty of Outfitting Prospectors and Miners.

NEWMARK & FOLKS,

The Up-to-Date

Dry Goods and Clothing

Store of Needles.

Needles City Market

GEORGE NAY, proprietor

Fresh and Salted Meats, Eggs, Butter, Pickled Meats, Etc., Fish and Poultry, Select Eastern Oysters

We Make a Specialty of Outfitting Prospectors and Miners

B. W. TASKER

Needles Lumber Yard

Arizona and Native Lumber

Lath, Mouldings, Shingles, Estimates cheerfully furnished Sash, Doors, Blinds, Paints, on all contracts. Boats built Glass, Etc.

BUILDERS' HARDWARE CARPENTER AND BUILDER

NEEDLES, CAL.

TUCK & BONER

J. W. Tuck
M. L. Boner

Proprietors **Needles City Market**

All kinds of Fresh and Salt Meats. Choice Cuts always ready. Fresh Fish and Game in Season. Dressed Poultry

NEEDLES, CALIFORNIA