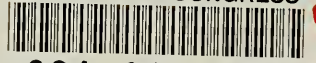


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# San Jose Herald

ILLUSTRATED EDITION

## Resources and Attractions.

WE PRESENT in this edition of the HERALD the most complete and trustworthy summary of the resources and attractions of San Jose and Santa Clara valley that has ever been placed before the public. All other considerations have been subordinated to the idea of giving a truthful review of the conditions of life and business in this county. The articles composing the edition are the fruit of exhaustive personal knowledge, investigation and application. They indulge in no flights of fancy. They are informational, substantial and businesslike.

Our great industrial interests are fully set forth. Our vineyards and wines, our orchards and fruit are described in connection with the conditions of soil and climate, labor etc, under which they are conducted. The prospective settler in this valley will find here a just relation of what he may reasonably expect in his own experience, as shown by the actual experience of those who have preceded him.

The character and varieties of our valley and foot hill lands, their best line of productiveness and the methods of cultivation employed receive particular attention. In this respect this edition aims to be a sort of handbook for those who contemplate settlement here. In this condition other natural resources are treated; our timber, water supply, railroad connections accessibility to market; in short whatever affects the ability of the settler to raise products and dispose of them.

But this practical, business aspect has not been suffered to obscure the equally important conditions bearing upon the agreeableness and convenience of life in this valley. These articles show for instance that the farming population of Santa Clara is superior in point of culture to that of any other rural community in this country. They show that our farmers live in handsome and commodious residences, amid trees, lawns and flowers, that the density of the population brings them into close neighborly relations; that our hundreds of miles of graded, graveled and sprinkled country roads afford them every convenience of transportation for business or pleasure; that in every rural district fine school houses with complete corps of teachers offer all the advantages of common school education; that within a few miles travel the High Schools, Colleges, Universities and Musical Conservatories of San Jose and vicinity afford every opportunity for

higher education and culture; that San Jose is essentially a city of schools and churches where liberal foundations and popular sentiment combine to make it an ideal community in which to bring up a family.

Due attention has also been given to the recreative side of life; to our suburban and mountain resorts, the mineral springs, etc. which abound, the facilities for riding, hunting, fishing, camping and other delights of outdoor life, which make this valley so all-sufficient within itself for the recreation as well as the sustenance of the dwellers therein.

This edition, therefore, serves the double purpose of an admirable advertisement for San Jose and Santa Clara county and a convenient and reliable source of information for all into whose hands it may find its way. With the approaching completion of the Coast overland route, the movement for the division of our large land holdings and the greater attention that the city and county will consequently receive such a publication commends itself as opportune and valuable.

### THE CITY IN BRIEF.

Free mail delivery.

Population 29, 370.

Three daily newspapers.

Seven banking institutions.

Forty church organization.

Eighty-six feet above sea level.

Public parks aggregating 627 acres.

The first town established in California.

Banking capital aggregating over \$3,000,000

Has the largest fruit cannery in the world.

Has the highest electric tower on the coast.

A free public library, containing 12,876 volumes.

One hundred and twenty-six miles of graded streets.

The climate of Italy in the latitude of Washington.

Well supplied with electric suburban street railways.

Within 50 miles of one of the best harbors in the world.

The Garden City of the Garden County of the Garden State.

Founded November 29, 1777. Incorporated March 27, 1850.

One of the largest and most elegantly appointed hotels on the Coast.

Fare to San Francisco by rail, \$1.25; by stage and steamer 75 cents.



Forty-eight miles from San Francisco. Fourteen trains each way each day.

A massive buff stone postoffice building, which was erected at a cost of \$100,000.

Within seven miles of tidewater, where sea-going vessels receive and discharge their cargoes.

Maintains a progressive and enterprising Board of Trade, to promote public improvements and encourage immigration.

Better paved and more beautifully shaded streets, than any other city in the United States, excepting Philadelphia and Washington.

A police patrol wagon, constantly on duty which may be summoned by the Police Department telephones, twenty of which are located at the most available points.

Four steam fire engines, one chemical and an improved hook and ladder truck. Four hose carts and one hose wagon, each carrying 800 feet of hose. Sixty-two fire alarm boxes.

The city of San Jose is one of the best built cities on the coast from an architectural standpoint. It has more and better looking business blocks than any other city of its size in California.

The city of San Jose occupies a very important position, commercially speaking, in the State of California. It is not only one of the largest cities but one of the most important. It has large capital, large mercantile interest and extensive industries. The city itself from an architectural standpoint, is one of the most handsome on the entire coast. Its buildings are all modern and its business conducted on thoroughly modern principles. The streets are wide and finely paved, many of them with asphaltum and kept in most excellent condition. It is well lighted throughout by electricity.

The limit of the corporation includes an area of about five square miles, but a very large population lives without the corporate limit, made possible by the extension of lines of street railways. Its streets are finely paved with asphaltum or macadamized.

The public buildings include a very handsome City Hall built at a cost of \$150,000 a postoffice built at a cost of \$100,000, a Court-House costing \$225,000, a County Jail costing \$90,000 and many fine brick and stone blocks that would do credit to a city three times its size.

The city has a splendid police system, comprising a chief of police, and twentyfive men, a superior fire department with ample equipments and a fine water system.

#### A CITY OF REFINEMENT.

San Jose is noted for its refined, intelligent, progressive and law-respecting community, for its pretty girls and handsome women, for its unequaled religious and educational facilities, for its excellent system of sewerage, for its drives, pleasure-resorts, medicinal springs, for the architectural beauty of its public and private buildings and for its salubrious climate. It is the prettiest city in

California, and the charming scenes that are unfolded to the eyes of the tourists, are indelibly impressed upon the memory and form a lasting advertisement. It is a city of suburbs blending in rural scenery. One block shows clusters of fine residences equal in style and size to metropolitan homes. Another block displays orchards with trees bending under their weight of delicious fruits. The street railroads penetrate such scenes in every direction. There is a corporate limit, but no real limit until the mountains are reached. Those to the east have summits which tower nearly five thousand feet above the level of the sea. Westward the Santa Cruz range shows through the blue haze, a dark green forest on a back ground of blazing gold.

#### STREETS AND BUILDINGS.

San Jose has an excellent drainage. The Coyote and Gaudalupe rivers, bare suggestions of rivers in the summer time, but fierce torrents at times during the rainy seasons, running a mile and a half apart, skirt its eastern and western boundaries. Several years ago the Gaudalupe had been known to overflow its banks in the occasional winter floods, doing damage to adjacent property; but all this has been remedied by an expensive system of river improvements.

The taxable property of the city approximate \$30,000,000. The streets are lighted with electricity, and gas, and electricity furnishes the illumination for stores. The City supports three daily newspapers—The HERALD and News (evening) and Mercury, (morning).

Places of interest and importance can be reached with every facility from San Jose to San Francisco in an hour; Santa Cruz (the Newport of the Pacific Coast) in an hour and a half; Del Monte, Monterey, and Pacific Grove in two hours and a half. With all these places the connection by rail is such that a person may reach them from San Jose after the business hours of the day, and be back before the resumption of business on the following day.

The vast pine and redwood forests of the Santa Cruz mountains afford an almost exhaustless supply of wood for fuel and timber for building purposes. The saw mills give employment to a large number of men and much capital is invested in them.

The health report places San Jose first on the list of California cities for favorable mention.

Several years ago an elegant mansion and grounds on the O'Toole place near Milpitas, six miles north of this city, was purchased for County Almshouse purposes. The institution is now in charge of a Superintendent; the land is well tilled by the inmates and but little expense is attached to the management.

The Postoffice constructed in 1894 by the government is a handsome stone building, replete with every convenience and cost \$100,000. W. G. Hawley is postmaster and Prof. C. H. Allen, assistant.

Reference to the College of Notre Dame and



the Normal School—both located in San Jose, has been made in the article relating to the county in general. The value of these institutions to the city from the attendance of pupils from all parts of the coast, approximates \$500,000 yearly.

San Jose has two theaters well equipped and with a seating capacity of 1600 each, and several halls suitable for lectures, concerts and social entertainments. Its hotels are numerous, commodious and admirably arranged.

Among the notable private institutions is the O'Conner Sanitarium, located near the grounds of the Agricultural Society, a mile west of the city and conducted under the auspices of the Catholic Sisters of Charity. The buildings which are of brick and cost \$100,000, are the gift to a noble cause of Miles P. O'Conner, one of San Jose's wealthiest and most philanthropic citizens.

The system of public school education, as practiced in San Jose is the best on the coast. There are six large schoolhouses, several kindergartens and a night school. The total number of teachers employed is about sixty and their salaries range from \$70 to \$150 per month. The census returns of children approximate 5000 and the average daily attendance is about 3500. There are also private colleges and academies.

All the leading religious denominations are well represented in San Jose. The church buildings are as a rule ornate, well equipped and charmingly situated, while the Congregations are flourishing and their members earnest and active. The city also boasts a Young Men's Christian Association (Protestant) and a Young Men's Institute (two branches, Catholic) besides several benevolent associations.

Secret benevolent societies are represented by the Masons, Odd Fellows, Knights of Pythias, Workmen, Red Men, Legion of Honor, Chosen Friends, Foresters, Druids, Native Sons of the Golden West, Good Templars, Hermann Sons, Grand Army of the Republic, Daughters of Veterans, Champions of the Red Cross, the Grange, the Farmers' Club and Ladies' League. There are also a number of musical and social organizations.

The city is well supplied with manufactures, to which allusion was made in the article relating to the county in general.

All the regular professions and trades are well represented and the prices for the necessities of life are about as cheap as in San Francisco or any of the Eastern States.

San Jose has two Agricultural societies, a Horticultural Association and a Viticultural Society. One of the Agricultural societies, "The Santa Clara Valley," owns a beautiful tract of one-hundred acres on the Alameda one mile from the city. The grounds are provided with two pavilions and stables, stalls, corrals etc; for the care and display of stock and the holding of annual fairs. The mile track is conceded to be the best in the State and has been the scene of some of the most famous

racing events in the history of this country. The grounds are handsomely ornamented with trees and shrubbery. Located on the grounds is a paved cyclers' track with a pavilion. The track is conceded to be the finest in the Union.

#### THE COUNTY IN BRIEF.

Population 70,000.

An abundance of good building stone.

The largest prune orchard in the world.

The greatest educational center in the West.

Larger than the entire state of Rhode Island.

Pre-eminently the prune growing center of the world. Alfalfa here yields from two to six crops per annum.

Increase of population between 1880 and 1890, 43.71 per cent.

Three daily newspapers, twenty weeklies and one semi-weekly.

Every month in the year ripens a crop of some kind in the open air.

Snow has fallen in Santa Clara valley twice in the last twenty years.

There are within the county forty-two and three-quarter miles of street railways.

The most richly endowed educational institution in the world is located at Palo Alto.

For the sprinkling and maintenance of county roads over \$100,000 is expended annually.

The average length of the county is forty-five miles, and the average width twenty-five miles.

The busy bee that works when the sun shines doesn't have much rest in Santa Clara county.

The only home in the United States for the widows and children of soldiers is situated at Evergreen, in this county.

There is not within the United States outside of California a similar area where such an extensive list of products may be raised.

The rainfall of the county varies in different sections, the minimum being seventeen inches, and the maximum thirty-three.

The highest peak in the Santa Cruz range of mountains is Mount Bache, 3780 feet and in the coast range Mount Hamilton 4250 feet.

Santa Clara county produces the finest wine in the Union. This has been demonstrated by a competitive test with French wines.

Two hundred and fifty acres of land set out to a young grove have been known to yield \$52,000 worth of fruit in a single season. These are facts.

The Lick observatory, upon the summit of Mount Hamilton, is directly east of the center of San Jose from which it is distant thirteen miles in an air line.

All the buyers of green fruit are located in San Jose. It is the biggest shipping point and more fruit is shipped away than from any other point in the world.

In Santa Clara county last season there were 56,000,000 pounds of prunes. If these are sold at five cents per pound it will bring in a revenue to the grower of \$2,800,000. This is simply for prunes.



## SAN JOSE HERALD

In the way of transportation facilities, Santa Clara county is well supplied. Between San Jose and San Francisco there are fourteen passenger trains a day. One can go and come at almost any hour of the day.

Mount Diablo is almost directly north of San Jose, the meridian line passing through the Fair grounds, and crossing the railroad a few feet east of the narrow gauge depot at College Park. The Meridian road is upon the meridian line.

Santa Clara county is noted for the size and excellence of its public buildings. Among those which attract particular attention are the Stanford University, the State Asylum for Insane, the State Normal School, Court House,

High School, Hall of Records, and Postoffice.

San Jose has more attractive resorts close at hand than any other city on the coast. There are Congress Springs, Alum Rock, Gilroy Hot Springs, the mountain resorts of the Santa Cruz, Mt. Hamilton and hundreds of lesser places all within from half an hour to an hour's ride of the city.

Santa Clara county is the only county in the state and probably the only county in any state in the Union that sprinkles so many miles of county roads as it does. There are now over 350 miles of roads which are kept in the same condition as those in the city and those driving in any direction find the same smooth, well kept thoroughfares.

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## Notes of Information.

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SANTA CLARA COUNTY possesses the advantage of a location not only extremely favorable as a beautiful and enjoyable place of residence, but also for the cultivation of fruits, flowers, vines and other issues of husbandry. It combines within its borders such a multiplicity of resources, as to make it the wonder of its sister counties and the envy of distant would-be rivals. Its peerless climate, its marvelous fertility of soil, in which the choice and succulent fruits of the tropic thrive equally well with the horticultural productions of the temperate zone; its mineral resources, medicinal springs, timber-clad mountains, unequalled educational facilities and rare scenic attractions, combined with the intelligent and enterprising character of its residents, make it the gem county of California, lacking in no requisite as a place of residence and offering the strongest inducements for the investment of capital.

Santa Clara valley, of which San Jose is the county seat, has an average length of fifty miles from north to south; its breadth is thirty-four miles, while it comprises nearly seven hundred thousand acres or about one thousand and fifty square miles. Its population exceeds 56,000 and the assessed valuation of all property approximates \$60,000,000. It embraces all the various lands suitable for the production of fruits, cereals or vegetables or the raising of stock and timber. Within its boundaries there is little if any waste ground, while its poorest and roughest will compare well with what would be considered good farming land in some of the states along the Atlantic seaboard. Through its heart runs that wonderfully fertile valley, which is the namesake of the county, with San Jose as its central attraction—a gem set in a crown of beauty. The entire range of mountains that divide the valley from the sea is rugged, broken and extremely picturesque. Wild canyons run across them at every possible angle from the valley,

so that hill and dale divide the landscape in charming proportion. The opposite or eastern range is less irregular. There is more grace or harmony in the outlines of the hills and at intervals one catches a glimpse of a winding road leading to the peaks that rise three and four thousand feet above the semitropic orchards and gardens below. Looking down upon the valley from the hills when the harvest is over and the rainy season has opened, would enchant an Easterner by its rare loveliness.

Of the area of the county about 500,000 acres is valley, the ancient lake-bed, or alluvial deposits of existing streams; 3,000,000 acres are in rolling hills and mountain slopes, well adapted to fruit; the residue is valuable principally in pasturage. But the quality of the cultivated soil though in every way superior is varied. In one part of the county it is especially adapted to grapes; in another prunes; in another apricots, etc. It goes without saying that every part is adapted to the production of hay and grain. But the days of wheat raising have practically ended so far as Santa Clara county is concerned. Land has become too valuable. The peculiar fitness of the soil and climate for fruit growing and for the growing of superior wine grapes makes these industries far more profitable than the business of growing grain, even in the palmiest days. Twenty-five years ago there were one hundred thousand fruit trees in the valley. Now there are over 8,000,000 of which 4,000,000 are prune trees. Citrus fruits are successfully grown, but deciduous fruits are the main product.

Santa Clara county leads all other counties in the State in the amount, quality and variety of her fruit.

Not only in the valley, but among the foothills are orchards of wonderful fruitfulness, and vineyards whose prolific branches are yearly laden with purpling clusters, rich with the essence of those sparkling wines, golden



hued, or ruddy stained, which have already added so much to the fame of Santa Clara valley.

Horticulture and viticulture are the two industries to which the county will in the fu-

ture look for its chief prosperity. Every variety of fruit thrives, and it is this remarkable diversity of product that has made Santa Clara county famous the world over.

## County Government.

**I**N REFERRING to the County Government it is necessary to especially mention Supervisors, collectively and individually as they form the central body and direct the machinery of the body politic. As the Board of Supervisors (called in some Eastern States Board of County Commissioners) is the head and center of the administrative and legislative branch of the county government, a discussion of its duties is of interest.

The county is divided into five districts on the basis of population. Hence it follows that some districts are much larger in area than others; some are wholly in the valley, others partly in the mountains; some include the cities of the county, which have separate government of their own and the management of their own roads, schools and taxes; others have to maintain expensive roads through wild and sparsely populated communities. These wide differences have to be adjusted and managed in the most skillful and intelligent manner, so that common justice is done and a uniformity of public interest preserved. The system consequently is far more complicated than the uninformed are aware of.

### THE MEMBERS.

The Board is composed of five members, one from each district, the districts electing their own members. These elections are so regulated that at least two of the members on any elected Board shall already have been in office two years, thus securing a constant quantity of experience. This is a very important feature. A Board composed entirely of new members might easily get into trouble through mistakes. Before the law of 1883 went into effect there were seven districts and seven members in this county, but under the new law all counties must have five districts and five members. Formerly each county had a separate law, and there was no uniformity.

The duties on the Board are intricate. It must supervise the conduct of county and district officers, require them to make reports and prosecute them for neglect of duty; establish and change townships and roads, school and other districts when required; establish voting precincts and appoint officers of election, canvass election returns, etc; lay out and maintain public roads; care for the indigent sick and poor and orphans; care for all the property of the county; examine and credit all accounts of all county officers and require a strict accounting of all public moneys; audit

and allow all claims against the county for all services except the salaries of county officers, which are regulated by the Legislature; levy an annual tax for the expenses of the county, such as for the maintenance and construction of roads and bridges, public schools, the support of the indigent, supplies and material, building and repairs, etc., take care of the bonded indebtedness, in the way of providing current interest and redeeming a stated annual amount of the bonds, which amount is fixed by the Legislature; to incur no floating indebtedness for any year in excess of the revenue provided for that purpose by the tax levy for that year (in this way the county can never run behind in its finances, as the law is strict and punishment for its violation heavy); to establish and govern public pounds throughout the county; to equalize among individuals the assessments made by the Assessor; to defend or prosecute suits to which the county is a party; insure the public buildings; grant franchises for street and other railroads, etc; fill by appointment vacancies that may occur in the county offices except by expiration of terms; establish health regulations and a Fruit Pest Inspector; annually fix rates for printing, advertising and supplies; publish semi-annually a financial statement of the condition of the county and a detailed report of the business transacted, money expended, etc.; to license business, shows, etc.; provide for the destruction of pests, weeds, etc., work the county prisoners on the public roads and a large amount of other detail work.

### THE PUBLIC ROADS.

Santa Clara county undoubtedly has the finest roads in the United States. There are about 2000 miles of these fine roads in the county, and so good are they that a horse may pull over two tons almost anywhere. The roads are wide, fine graded, often lined with trees, and are thrown up in the center, with a ditch on either side. They are hard and smooth as a floor. Every road is a beautiful pleasure drive, and they are not second in excellence and care to the best streets in San Jose. They cost \$80,000 annually. Each district maintains its own roads, the tax being uniform among all the districts. Each Supervisorial district constitutes one district and in some instances as many as four districts, and each Supervisor is responsible for the management of the roads in his district.



## The Wine Industry.

IN WRITING on a subject so complex and so full of detail as the wine industry, the HERALD, for the most part, has followed closely the utterance of those best calculated to impart the greatest amount of accurate information. Many growers, in all parts of the county have been interviewed on all the phases bordering on the subject and taking this information, thus secured, as a basis, the HERALD finds two elements which rise uppermost. One is absolute necessity of unity in action in the manner of marketing the vintage and the other lies in the more advanced methods to be observed in the manufacture.

Of necessity the fruit must be a measure of protection, else the industry will fall into the hands of those who seek either to rule or ruin. By adhering closely to the protective policy laid by the association formed for that purpose the industry will have added strength and make a progress both fast and permanent.

Of the second the question of a higher state of cultivation and the adoption of advanced ideas must take precedence. When the time comes that Santa Clara county can point to a dozen or fifteen producers who make a practice of maturing their wine and who only put it upon the market in a condition for consumption, then will the industry arise to an eminence which will be justified by the climate and soil of this county.

One of the sad features which confront the wine producer today is the absence of just laws in relation to pure wine. The fact that more wine was sold last season in California than was produced by the vineyards only too clearly demonstrates the condition of affairs. It is this doctored article, made from refuse and adulteration which has given California a poor reputation in the East. Fight against it as hard as they may, so long as the law does not make it a felony, this adulteration will doubtless continue. The growers are confronted with problems, not the least of which is this pure wine proposition. If they will make an earnest determined effort they can secure congressional aid in the matter the same as the dairymen did a few years ago.

What a world of thought is suggested when wine is mentioned! It has been the constant companion of civilization. Climate and soil permitting, when man made a home he planted the vine. It was considered the crowning glory of the great triumvirate, corn (meaning all kinds of grain), oil and wine, the greatest solace and comforter. When Noah came out of the ark he set about planting a vineyard. When the spies returned from their journey to Palestine they brought back great bunches of grapes as conclusive proof of the goodly character of the land.

Solomon left his testimony regarding wine.

In enumerating the gifts of the race he placed good wine before oil and bread, "wine that maketh glad the heart of man;" again, in Proverbs: "Give wine to those that be of heavy heart. Let him drink and forget his poverty, and remember his misery no more." Again: "The virtuous and the wise woman considereth a field and buyeth it; with her hands she planteth a vineyard." Solomon appreciated wine. He valued but one thing above it. In his song he raptuously exclaims that "Love is better than wine." He could find no higher subject for comparison. The Israelites considered wine the crowning glory of all they had acquired as the chosen people of God.

### ITS SOCIAL PRIVILEGES.

Wine was held to be a necessity for every social festival. It was present when a child made its advent into the world, when he was admitted to the privileges of manhood, when he married and when he died. Christ's first miracle was to turn water into wine at a marriage festival, where, by some strange oversight, it had been forgotten. And at the last fearful supper when an ignominious death was inevitable, his last and tenderest words were given with wine as a pledge.

Among all the oriental nations, Persian, Assyrian, or Egyptian, wine was held as the greatest of all earthly possessions. Man's highest estate was presented by a kneeling slave proffering wine. The highest courtesy to a friend was to offer wine.

The Greeks and Romans, with their excessive tendency to ascribe all things to a divine origin, invented a god as its especial representative and Bacchus was crowned with more than Cupid's honors, thus almost repeating Solomon's rapturous conclusions. It would seem that wealth, power and cultivation of the higher qualities, if not aided by the use of wine, were always accompanied by it.

It is true that wine was used as a means of debauch. Alexander drank an immense measure of it and killed his dearest friend. A wealthy Roman could conceive no greater luxury than a wine bath, and a Roman emperor no greater extravagance than a sailing excursion on a lake of wine.

When the Roman Empire fell in pieces the several nations resulting therefrom continued the cultivation of the vine. The immigration of hordes of northern vandals into the vine-clad regions of Southern Europe in no wise changed the culture of the vine, but rather accelerated it, for the ragged Teutons gladly exchange their decoctions of barley for the juice of the grapes.

Previous to the centuries of the crusades, wine found its way to the Northern European countries only in small quantities. The



monks of the religious institutions were credited with keeping it to administer to the sick and dying. Some of the royal families and occasionally the nobility could set it before their guests, but to the masses of the people the use of wine was a dream of a far-off unattainable luxury.

The crusade wars taught millions the use of wine, and the general commerce which gradually took the place of international wars brought wine to every city and town of Northern Europe. The Norwegian felt a glow of the genial atmosphere of France or Spain as he drank his bottle of wine with his roast venison or beef; and the weakly invalid, recovering from a prostrating fever felt new life in his veins from the use of a small glass of the life-giving fluid. The wine-producing nations became the centers of wealth and refinement. Poetry, art and science flourished, while in the hyperborean regions civilization made slow and painful progress.

For hundreds of years the writers of France, Spain, Italy and other southern countries referred to masses of the Germans, Russians and Englishmen as hogs, who had no perception of what was refined in art or living.

Grape-growing was confined to the southern countries of Europe. It is true that after years of trial and the generation of new varieties grape-growing followed the Rhine valley northward, invading the domain of King Gambrinus, but that land was not its home. It had a precarious existence, subject to vicissitudes of frost and cold. The wines were not of the generous type of France, Spain and Italy, and Gambrinus still held sway.

#### WINE-MAKING IN THE UNITED STATES.

The history of the vine in the United States is a record of continued failure. The wild vine was found growing from the Gulf of Mexico to Canada, and the greatest hopes of success were entertained. All elderly Americans are familiar with the efforts of the Swiss at Vivay, Ohio, to make wine of the Catawba grape. Nicholas Longworth, a millionaire, brought all the necessary capital to its aid. Longfellow was employed to write in smooth numbers the praise of sparkling Catawba, but the French wines kept the market or surrendered only to German lager or distilled liquors.

Enterprise was not wanting. Grapes of foreign origin refusing to grow, thousands of seedlings were tried, and though good table grapes were produced, they were an utter failure for wine. The conclusion was inevitable that though the country was good, unsurpassed for grain and corn, pork and beef, it was not a wine country. The rains, fogs, snows, frosts and other phenomena of the United States weather were not good for wine growing, and beer, whisky and distilled liquors continued to rule.

#### VINES IN CALIFORNIA.

Such was the condition of the wine product in the United States when the discovery of gold sent within ten years half a million gold-hunters to California. Notwithstanding the

fact that for a hundred years the Franciscan Fathers and their dusky converts had raised large herds of cattle and sheep, also immense crops of wheat, the country was pronounced by nearly all the new comers absolutely worthless for agricultural purposes, for the reason that it was so unlike Missouri or Maine. Chili peaches, Chili flour and bacon and boots around the Horn filled the stores and supplied the mines.

One day in 1851 a fruit peddler with delicious pears from the Santa Clara mission came wandering through El Dorado county. His fruit was eagerly snapped at fifty cents a pound. A year or two later some boxes of grapes found their way into the same county, bringing a dollar a pound. Again the 20,000 miners of El Dorado county paused a moment, to ask the question if it was a fact that they had reached the land of oil and wine, but it was not until 1856 that California as a wine producing country began to gain ground. The hill vineyards at Los Angeles were shipping hundreds of tons at immense prices.

#### INTRODUCED INTO THIS COUNTY.

The writer of this article, then mining in Amador county, started to investigate the facts. At San Jose, not far from the Barbour & McMurtry glaze fruit factory, he first saw cultivated grapes growing, and was permitted to lift up the vines and see the clusters of purple fruit. He knew that gold mining would soon cease, but grapes and wine—have they not been given to grow as long as man shall continue?

The vineyard referred to was on a piece of moist bottom land, and moreover was irrigated every day, so little did the owner (and he a Frenchman from a wine land) know about it. What a vision of wealth would have dawned on our minds if we could have known that California in our time would become celebrated for its wines; that the gold which had so moved the world was an insignificant item compared to its capacity for fruit; that the dry red hills, which were so despised, were fitted for the best wine of the world; that grapes, rich and luscious, surpassing in size and flavor all that was known in the Old World, could be raised with less labor than potatoes and corn in any of the older States!

#### AN OPENING OF EYES.

But so it is. We could not then conceive that the warm, rainless summers were necessary to ripen the grape; that even on the dry, rocky hills the grape vine would send its shoots high into the air to gather the sunshine; that the ground being once soaked in the winter months, the vine needed no more moisture to mature its fruit.

These and many more remarkable facts were learned in the course of a few years. All grapes flourish even better than in their native land. The Muscat, ripening only along the Mediterranean sea in a climate with a long summer, was sweet and luscious. Fourteen hundred different varieties have been grown in California. Within ten years from



that time general planting commenced. A million or more of grape vines were down on the assessor's list. The display of grapes at the annual State fairs was astonishing. Such bunches were never seen before. The people rushed into wine-making, feeling certain that good grapes would make good wine. Everybody had a wine cellar. Every one was confident that he could make a Johannisberger or Clicquot.

#### CAUSES OF FAILURE.

It is needless to write the innumerable failures, or rather the one great failure. The causes may be summed up in one short sentence, want of experience. Zeal outran knowledge. Even those who came from Europe knew as little as the Americans. Having tasted Johannisberger, or seen the vineyards of Europe, did not fit one to make the wines—California wines were pronounced an utter failure. When they reached New York they were a mass of swill—worthless even for vinegar.

Some of the causes of failure may be briefly enumerated. The grapes first planted, especially in the hot interior of the State, like all California fruits, contained an enormous amount of sugar, whereas nearly all European grapes lack in this respect. When the wines soured after leaving the cellars, want of strength was the supposed cause. But the addition of sugar made matters worse. Grape-growing came near to being abandoned. Vineyards were dug up or permitted to take care of themselves. In many instances hogs were turned into them to be fattened—fattened on large, sweet grapes, such as the people of the Eastern States never dreamed of! Grapes were sold at five dollars a ton, wine at five cents a gallon.

#### BIRTH OF KNOWLEDGE.

Knowledge came at last. A single instance suffices. The owner of a large wine cellar, large for those days, for his annual product was 30,000 gallons, called in the assistance of a wine expert, one who knew something of the business. Taking a glass of wine, he tasted, smelt and tasted. "This is not wine," said he; "this contains free alcohol, acetic acid, and unfermented grape juice. The first goes to the head and makes one drunk; the vinegar nearly excoriates the throat; the syrupy taste you seek comes from the unfermented juice, and nauseates the stomach; it is filth."

The trouble was in the excess of sugar which could not be fermented out. Whenever the wine was moved or a change of temperature occurred, a new fermentation going through the acetic transformation.

A few enterprising, persistent men, who insisted that good grapes, if properly treated, would make good wine, continued the work. Varieties with less sugar were sought out. There began to be a wide distinction between table and wine grapes. "Large, sweet and luscious" had no charm for the wine-maker. The saccharometer told the story. "The cooler

regions of the Coast Range were sought. Sonoma, Napa and Santa Clara county wines began to attract attention. Under the care of careful and experienced men the wines began to approach the European standard, retaining something of the flavor and aroma of the fruit. This was especially the case in Santa Clara county. Portal, Le Franc, Heney, Selinger, Saratoga Wine Co. and others are making very creditable wines, that are doing much to establish the reputation of California vintages.

#### LEARNING BY EXPERIENCE.

In many instances the grapes, owing to peculiarities of soil and climate, are developing unexpected good qualities. This is the case with the Zinfandel, a grape by no means celebrated in Europe. Being a vigorous grower and a heavy bearer, it was planted extensively along the western side of Santa Clara valley. It was noticed that some years ago some of the wine merchants of San Francisco eagerly sought all the wine made where this grape was cultivated. The fact leaked out that the wine was especially rich in coloring matter—tannic acid and other elements necessary to qualify the paler wines from other parts of the State. In Europe the Maltec, a shy bearer, is planted for this purpose, the Zinfandel in Santa Clara county excels the Maltec of Europe for this purpose.

The wines, too are beginning to show the effect of localities. The Santa Clara valley, in situation and climate bears a great resemblance to the Bordeaux district, whence come the finest claret or light wines of the world. The same red gravelly soil prevails and similiar sea breezes, tempered by an intervening coast range modify the fierce heat otherwise prevailing in the State, with the difference in favor of this valley. Here hail storms never occur during the growing season; there they are always impending. The ripening season here is absolutely free from danger of rain; there it is considered an especially good season if they escape; the year is remembered for its favored vintage. There snow and ice sometimes utterly destroy a vineyard; here the grapes flourish without hindrance, even to the summit of the highest mountains where a light snow occasionally remains for a day or two. The Loma Prieta, (black mountain) the highest summit of the outer coast range, attains a height of about 4,000 feet; yet a vineyard is flourishing within a few hundred feet of the summit.

#### ADAPTABILITY OF THIS COUNTY.

The whole Santa Clara county, with the exception of the tide lands along the bay and the naked rocks of the mountains, is suitable for grape culture. As the rocks are nearly all sorts and friable, the percentage of such rocky lands is very small. A crack in a rock that will hold soil, will nourish a grape vine. It may be many years, however, before the necessity of cultivating ground of that character will arise, but it is a common practice in Europe.

The low rich lands on which vegetables are



raised, produce a large fine table grape though it is too watery for good wine. As a greater elevation, and consequently a dryer soil is reached, the grape increases in value for wine, though the product is less.

Few persons who have not investigated the subject have any idea of the enormous yield possible. A single grape vine has been known to produce from three to five tons annually. It was trained in an arbor and covered an area of eight or ten square rods. It is quite possible by training the vines on arbors to make an acre produce thirty tons. An arbor of ninety vines planted eight feet apart each way produced three and a half tons. Fifteen tons of table grapes to the acre are not unknown, though the average product would not exceed half of that quantity. Five tons of wine grapes to the acre are considered a fair yield though a yield of ten tons to the acre is not uncommon.

#### METHOD OF CULTIVATION.

Grapes are usually planted in rows eight feet apart each way so as to admit of easy cultivation with a team. A cutting a foot long placed in the ground takes root, and the second year they will begin to bear. At four years of age several tons to the acre may be expected. From this time on for fifty years or more, it is constantly increasing in productiveness and in equality of the fruit.

There is nothing difficult in the raising of grapes. After planting, the culture of a vine is much like that of a hill of corn. The ground must be kept loose and free from weeds. During the first years numerous suckers from the roots, have to be removed, but after a "standard" or trunk, is well established, which will be in five or six years, that trouble ceases.

There are various methods of pruning according to the character of the ground, variety of grape and purpose for which it is intended; but the low head, from one to three feet in height is the most common method. This is called the goblet method, because the resulting top is shaped like a goblet. Some varieties of the grape do best however, with what is called the renewal system. A stem is carried up three or four feet higher than the goblet and supported by a stake. After bearing three or four years it is cut away and another sprout or cane is trained up to take its place.

#### THE WORK OF VINES.

An old vineyard twenty years of age is an unsightly object after it is pruned. It resembles a stunted forest, with shaggy, crooked tree trunks two or three feet high and an ungraceful top two or three feet across of stumps of limbs, rather than graceful branches. When the buds start the whole appearance changes, as if by magic. Each bud permitted to grow sends out two or more shoots, which soon lengthen into vines six to twenty feet long, that climb up into the air, then fall to the ground and climb over each other in their effort to obtain sunshine and warmth. By pinching out the terminal buds the vines may

be made to resemble a low weeping willow. A vineyard in full foliage is a beautiful sight. When the fruit is ripened and hangs in great clusters partly hidden under the foliage, as it is too modest to withstand the full gaze of the sun, the husbandman is well rewarded for all his care and labor.

#### COST OF CULTIVATION.

This depends very much on the character of the land. If it is rocky land, such as, in former days, the New England farmer planted to corn and potatoes, where cultivation with a team was impossible, it will cost much more than where he can mount a sulky plow and go over ten acres a day. Generally a field of grapes may be cultivated as easily as a field of corn or potatoes on the same land. The stakes require setting but once, and will last until the low stumps are able to stand alone. If all the work is done with a hoe or mattock ten acres will keep a man busy. If the ground is sandy or friable and moderately level, to permit the use of a team, he may cultivate thirty to fifty acres, including pruning.

When harvesting comes more help is desirable. If the grapes are for exportation they have to be boxed; if for wine they require to be handled in large quantities. One man will gather and put in boxes fifteen hundred or two thousand pounds a day, depending somewhat on size of bunches. It will be readily seen that the harvesting of fifty acres of grapes yielding five to ten tons to the acre is something of a job.

#### CARE OF THE CROP.

The labor of cultivation ceases in May or June, as after the vines commence growing they soon cover the ground. During the months of July, August and September the vineyard, except on moist land where it is liable to mildew, requires no care except watching for depredators. Coons, rabbits, foxes and quail all like grapes, and will wallow over them, destroying more than they eat. The owner must make meat of them whenever they put in an appearance. On moist lands, where table grapes are raised, the vines need dusting with sulphur, to prevent mildew. In this State, where long dry summers generally prevail, mildew is but a small incident.

#### WINE-MAKING.

This is the most intricate and risky business of all, requiring nice judgment as to qualities of wine and grapes, experience in blending to suit the demand and good business habits to know how and when to put the wines in the market. New comers to California who are looking for pleasant homes will do well to leave wine-making to experts, though to one properly qualified for such a position nothing offers more promising results.

#### PROMISING FUTURE.

California as yet has not made enough wine sensibly to affect the market. The whole amount yet planted does not exceed 200,000 acres, nearly all of which are in bearing. The product this season was twenty million gallons. To show how little danger



exists of overstocking the market let us see what the wine crop of Europe is now and what it has been in past years.

The main production in gallons for five years in all the countries of Europe was.

France.....	698,790,875
Italy.....	554,805,875
Spain.....	495,000,000
Austria-Hungary.....	425,000,000
Portugal.....	90,000,000
German Empire.....	82,000,000
Russia.....	78,750,000
Turkey in Europe.....	58,500,000
Greece.....	29,250,000
Switzerland.....	29,250,000
Roumania.....	15,700,000
Servia.....	12,500,000

What figure do California's twenty millions cut as yet? Notwithstanding the vast amount of wine produced in Europe, the demand falls short of the supply, and American alcohol made from corn is imported into those countries by the hundred million gallons to stretch out the wines, or make entirely new compounds to imitate them. The raisins from Spain are also used with water on the residium left after pressing, to make a still further supply for the market. With all these devices the production is constantly decreasing.

DECREASE OF WINE PRODUCTS.

From 1872 to 1876 the average in the Garonne district decreased one-half. There was a positive decrease in forty-eight departments.

Taking twenty of these departments, the result is as follows:

Total in 1875, gallons.....	1,214,450,000
Total in 1884, ".....	561,438,000
Total in 1885, ".....	435,121,000
Total in 1886, ".....	401,908,000

This falling off is partly due to an apparent change in climate incident to the cutting away of timber, partly to the ravages of a mildew, but mostly to ravages of phylloxera.

In 1875 the acreage in vineyards was 5,555,000; in 1886 it was reduced to 4,897,755 acres, a falling off of 657,245 acres. It will be seen from these few figures that the fear of overstocking the world with wine is preposterous. There is far more fear of a flood of grain, butter, cheese, pork and lard than of wine. The wine-producing countries are of limited extent and are constantly deteriorating by reason of exhaustion of land, which has invited a multitude of diseases, while the 160,000 square miles of California, two-thirds of which are available for grape-culture, are fresh and vigorous.

What better investment can a man, especially a young man, make than in a vineyard? A few years of economy and hard work put him in possession of a vineyard, say of twenty acres, that is good for a hundred tons of grapes when his hair is gray and grandchildren throng around him.

Santa Clara county offers unparalleled attractions in good society, cheap soil, vicinity to commercial centers and a climate that makes life a feast of good things.

## Ideal Attractions.

THOUSANDS of persons have hunted quail and rabbits through the chaparral hills around Los Gatos and Saratoga, without a thought of the fortunes that lay waiting the hand of industry and intelligence. If any attention was given to the subject at all, it was to wonder what such land was made for, and perhaps to term it the "rabbit ranch" in derision. Coyotes, quail, rabbits and wildcats found it a security against the guns of the hunters, for the short, stiff brush, as thick on the hills as hair on an Indian's head, was almost impenetrable, save by small animals. The name Los Gatos, now associated with beautiful homes, orange groves and blooming orchards, owing to the influence of good company, seems almost poetical. Some even have attempted to give it another meaning, as if it meant a gate, or door, a gate to Paradise, or some other desirable country, but the term has no such meaning. It means simply "the cats" and was given because of the abundance of wildcats that prowled here in early days.

SLOW PROGRESS.

At first patches of chaparral were dug up to

round out a grain-field. A few ventured on trees and vines, which proving successful, more were induced to make the experiment. Now patch after patch has been cleared, until the summit has been reached. A vineyard is flourishing near the crest of the Loma Prieta, at a height of nearly 4000 feet. However not a hundredth part is yet occupied, so there is plenty of room for more workers.

These remarks were suggested by a visit to the clearing and nursery of a gentleman living about two miles from Los Gatos. Five years ago his only capital was a fair education, good health, good character and a resolution to succeed, if hard work and close calculation would effect it. Perhaps we ought to include also in the capital stock a young wife and two or three little children.

EXCELSIOR.

Leaving the plains and lower foothills, where land had become valuable for vineyards and orchards, he went far up the hillsides, at least a thousand feet above the valley, and commenced operations by securing a quarter section of land, if it could be so called, for the



most was located edgewise, so that one acre, surveyor's measure, would make two by surface dimensions. Selling his first clearing for a sum that enabled him to begin again on a more liberal scale, he moved still higher on the same quarter section, and about three years since commenced his present home, hewing it out of the dense chaparral and scrub oaks with which the hillsides were covered.

#### COURAGE APPRECIATED.

At this point it is perhaps proper to state that people began to appreciate his pluck and industry to the effect of extending him a little credit—a matter of some advantage, for it enabled him to stock his little clearing with such things as would eventually make good returns.

The fact that orange trees were yearly ripening fruit at Los Gatos, Saratoga and other places was not lost upon him. He justly considered that the next would be in citrus fruits. Gathering up a few refuse and rotten oranges, he soon had 4,000 young orange trees ready for budding, which three years after readily sold at a dollar apiece. A barrel of rotten oranges costing little or nothing, produced 15,000 more young trees, now ready for transplanting in nursery form. As the demand for planting orange trees is constantly increasing, these will bring him in the course of the next two years as many thousand more. His place has grown into quite a home, with a comfortable dwelling, barn and outhouses. A living spring gives him a patch of evergreen alfalfa, furnishing hay for his horses and cow.

In addition to his nursery is a vegetable garden with the whole range of vegetables growing throughout the year; also strawberries, blackberries, raspberries, etc. A few choice flowers, such as are frequently cut off by the frosts in the valley below, also have a place.

#### SEMI-TROPICAL FRUITS.

He has not forgotten other semi-tropical fruits and is making some bold experiments. He has four pine-apples a year old, growing in open air. Fearing the recent cold weather he covered three of them, leaving the fourth to the tender mercies of cold atmospheric waves;

but it held its own and made no signs of surrender. Several bananas also are growing.

Several young guava trees are making a brave fight, as is also a cheremoya, or alligator pear. Several date palms are enlarging their heads. These are only experiments; but then, was not the raising of all the fruits an experiment a few years since? We need, even now, scores of men with a dash of daring experiment in them, to find out all this State is capable of growing. We do not suppose that all the fruits of the tropical and temperate zones are going to flourish equally as well as in the most favored clime. We have not reached the limit yet, however.

#### OTHER ATTRACTIONS.

Aside from the growing of fruit trees the place presents numerous attractions. In clearing the land many of the original clusters of trees and shrubbery have been preserved, some as protection to delicate plants, others for their beauty. Clusters of photinea (holly) weighted down with the heavy branches of red berries, which hang on through the winter, contrast finely with the cinnamon-colored trunks of the evergreen madrone.

The laurel or bay wood, from which the famous bay rum of the West Indies is made, is growing there in great abundance, making quite large trees. When possible these have been saved, as the dark evergreen foliage adds much to the general beauty of a home.

#### VIEW OF THE WORLD.

The place being at least one thousand feet above the sea level, a full view is enjoyed of San Jose, Santa Clara and all the towns toward San Francisco as well as Mt. Hamilton and its great observatory. Los Gatos seemed at our very feet, and so near that the busy population looked like ants scrambling through their byways and trails. The sky was filled with scattered clouds that floated lazily through the air and seemed with their shadows to coquette with hundreds of orchards bursting into bloom while the simile was made more striking by the fact that the clouds, true to the womanly nature, would occasionally shed a few tears over the subjects of their attention.

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## Seen at a Glance.

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**T**HE PRINCIPAL advantages that Santa Clara county offers to settlers are as follows:

The center of the county is only fifty miles from San Francisco, which is the center of population and commerce. The northern end of the county is bounded by the bay of San Francisco, the finest harbor on the coast, and at present three railroads (with others in immediate prospect) connect the county with that city. San Francisco is the point from which Pacific coast exports are made to all parts of the world, and is also the distributing

point for all imports and supplies received from the whole world. These advantages of Santa Clara county mean a great saving of time and of freight and passenger charges besides bringing the merchants here in competition with those in San Francisco.

#### GEOGRAPHICAL POSITION.

Santa Clara county therefore is in the center of the State and is also in the center of population. It is near to the state capital, Sacramento. It is in the center of civilization and all the industries.

Being in this center it has all the facilities



of overland and ocean transportation competition, San Jose being the only city in California, besides San Francisco, that enjoys all these facilities. This is an incalculable advantage.

#### A PERFECT CLIMATE.

It has the best climate in the world. Woolen clothing is necessary the year round, and blankets are required at nights. Fires are never required in summer and rarely in the daytime in winter. Sunstroke and hydrophobia are unknown, and there are never any diseases incident to climate, such as dysentery, hay fever and other fevers in summer, and typhoid fever, pneumonia and other pulmonary diseases in winter.

Out of the 365 days of the year there are 300 days of sunshine in Santa Clara county. This is not only conducive to health and pleasure but offers an immense saving of time.

#### WHEN THE RAIN COMES.

It rains here only in the winter months, and only occasionally then. This is the greatest novelty to strangers, and by many considered a drawback. On the contrary it is the greatest blessing imaginable. Whatever dust is created by the dry weather in summer is laid by sprinkling done by the public authorities, and hence the roads are made pleasure drives and are the smoothest and prettiest in the world. The dryness of the summer makes camping out and traveling through the country a luxury and an invaluable health giver, and a large part of the population resorts to it. This is absolute certainty of comfort—none of the Eastern fear of a shower or thunderstorm. Living springs and running water are abundant. This dryness is a boon to farmers and horticulturists. Grain may be left standing three months after it is ripe without any fear that it will be injured by the rain, thus giving the farmer time and opportunity, and unlike grain of the Eastern States it never opens its pods and sheds its kernels, as there is no rain here to bring this about. After it is cut and threshed and sacked it is left on the ground in open field until sold or shipped, and hay is treated in the same manner—there is no danger from rain. This is an immense saving of time, expense and trouble. There is no rain to damage ripening fruit, and this is one reason why the fruit grown in this county is the finest and sweetest in the world—it has continuous sunshine and no rain. Figs left on trees dry themselves and grapes left on vines become raisins. These things are incredible to a stranger, but they are true.

#### SUMMER AND WINTER.

The absence of rain in summer does away with all troublesome insects, such as mosquitos and gnats, those curses of the campers of the East. The croaking of frogs is not heard. The dry summer does not always give a parched aspect to the country. There is abundant moisture in the soil, as it is shown by the luxuriant grain fields, orchards and wild flowers all through the summer, and by surface wells of ordinary depth, and by springs

and streams. The landscape is always beautiful.

The rain falls in the winter, but no snow or sleet. The winters are mild and soft. The ground never freezes. Fresh strawberries and garden peas grow in this county in the open air, and in the greatest abundance are for sale every month in the year, and fine watermelons ripen till late in January. Tender, fresh vegetables of nearly all kinds are furnished the whole year, new crops being constantly planted and constantly ripening.

#### FLOWERS IN BLOOM.

Roses are in bloom in the open air every day in the year. Even much tenderer flowers bloom outdoors freely in December, January and February. Seed will sprout at any time and will flower at maturity, regardless of the season. In the localities a little above the lowest places geraniums grow to be trees, the shrubbery of some measuring from ten to fifteen or more feet in diameter. These are the most eloquent evidences of the geniality of the winter climate, without troubling the reader with thermometrical figures.

#### HOW THE LAND LIES.

Santa Clara contains over 1,000,000 acres, it has every variety of climate within the bounds of semi-tropical climate.

The east and west lines are bounded by ranges of low mountains which converge at the southern end of the county, the northern end being the bay of San Francisco. Between the two mountain ranges lies the magnificent valley of Santa Clara, perfectly level, twenty miles wide at the northern end, and tapering to a point at the southern end, and cut by three streams the Coyote and Los Gatos creeks and the Guadalupe river. This valley is swept by the ocean wind that enters the Golden Gate, being softened and tempered to a genile, refreshing and health-giving breeze by the time it has passed over the warm bay of San Francisco and entered this county.

#### A JEWEL IN A CROWN.

In the center of this beautiful valley, fifty miles from San Francisco, lies San Jose, the county seat and the principal town of the valley. In its limited area of six square miles it contains a population of 20,000, but the numerous villages, settlements and suburbs lying just within its boundaries and really forming part of it, give San Jose a population, directly depending upon it, of about 35,000 souls. This population is growing very rapidly and improvements are going on at a rapid rate. San Jose is the organized center of education in California. It contains the State Normal school, an elaborate system of free public schools, the finest and largest private colleges in the state: Catholic, Protestant and non-sectarian for both sexes. It has fine churches of all denominations, several newspapers, and banks, fine stores and buildings and is lighted with electricity, the central electric tower 200 feet high, being the largest in the world. It has street car lines in all directions, and an electric railway running to



Santa Clara. San Jose is the home of culture and wealth, and contains many handsome residences. It is the favorite home of San Francisco millionaires. From its flowers, its beauty, its cleanness, its wealth and its healthfulness it is known far and wide as the "Garden City."

There are several other towns in the lovely valley.

There is Santa Clara, three miles away, connected with San Jose by an electric road and steam railway lines and by the famous drive the Alameda (Spanish for "Beautiful Way,") constructed and lined with trees one hundred and ten years ago by the Spanish Catholic mission fathers. Santa Clara has a population of 3500 and is noted for its famous Catholic college, its beautiful homes, its flowers, its drives and its varied industries.

Next in importance comes Gilroy in the southern end of the county, on the line of the southern overland road, with a population of 2500, growing rapidly, in the heart of the famous grain and fruit region, noted for its cheese and other products.

Next comes Los Gatos, lying at the foot of the Santa Cruz mountains and in the northern end of the gap that opens to Santa Cruz and the ocean, with a population of 2500 and rapidly increasing, and famous for its orange orchards, its health-giving climate, its mills, and fruit-canning factories, its ice works and its magnificent fruits.

Then come Mountain View and Mayfield, two lovely towns in the northern part of the county, on the railroad between San Jose and San Francisco, in the heart of great grain fields, orchards and vineyards.

Then Milpitas, also north of San Jose and on another railroad, situated in a great fruit and grain country. There are several other towns dotted over the valley, such as Morgan Hill, Berryessa and Evergreen, and other towns in the mountains, such as Almaden, Saratoga, Wrights' and Alma. All are growing, all are healthy and thrifty.

Santa Clara county has many industries but only the leading ones can be mentioned. It produces the best wine of the New World. Its woolen mills make the best blankets in the world. It has extensive glove factories. Its numerous fruit canneries put up the finest fruit in the market. Its glace fruit factories, though large, cannot supply the great demand for their products. It has vast lumber and milling industries. Its quicksilver mines are the largest in the world. Its cheese factories furnish the finest cheese to be had. It has a great fruit drying industry. Its petroleum wells, though yielding great quantities of oil, merely give evidence of the inexhaustible stores of oil in the county. Its flouring mills are famous. It has extensive tanneries. It has great brickyards. These are but a few of the leading industries and none are overdrawn.

MANY ATTRACTIONS.

The county has many attractions apart from its beauty, its healthfulness, its famous fruits

and flowers and its soft and balmy climate. It contains the Lick Observatory, which is the best equipped and which has the second largest telescope in the world. It has Alum Rock set apart by the United States government as the public property of the city of San Jose, having famous mineral springs and baths. It has Saratoga with its mineral springs to which thousands resort for health and pleasure. It has the Gilroy Hot Springs, a noted health resort. It has romantic mountains abounding in game and fish and mountain streams, alluring the dweller of the plains.

Everything will grow and thrive in this county. It is the home of the orange, the lemon and the olive. Its peaches, cherries, apples, pears, almonds, figs, apricots and grapes are the finest in the world, and all kinds of fruits are grown to the greatest perfection, with the greatest profit and unflinching certainty.

It is the home of the thrifty poor man for here he can make the best living and have the greatest comfort.

It is the home of the rich man, for here he can enjoy the sweetest and richest bounties of nature.

DISTANCES FROM SAN JOSE.			MILES
TO	RAILROAD		
San Francisco, C. P., S. P. and S. P. C. R. R.			50
Lathrop.....	do	.....	60
Yosemite.....	do	.....	200
Milpitas.....	do	.....	7
Warm Springs.	do	.....	12
Niles.....	do	.....	20
Mission San Jose	do	.....	16
Haywards.....	do	.....	25
Stockton.....	do	.....	70
Sacramento...	do	.....	126
San Mateo ....	S. P. R. R.	.....	30
Redwood City.	do	.....	22
Mayfield.....	do	.....	16
Mountain View	do	.....	11
Lawrence Station	do	.....	7
Madrone.....	do	.....	18
Gilroy.....	do	.....	30
Hollister.....	do	.....	42
Salinas City...	do	.....	63
Watsonville...	do	.....	50
Monterey.....	do	.....	75
San Diego.....	do	.....	500
Los Angeles...	do	.....	406
Soquel.....	do	.....	31
Santa Clara, S. P. and S. P. C. R. R.		.....	3
Santa Cruz....	do	.....	36
Oakland, C. P. and S. P. C. R. R.		.....	43
Wrights Station	do	.....	18
Alma.....	do	.....	12
Los Gatos.....	do	.....	10
Alviso.....	do	.....	8
Alameda.....	do	.....	42
Berryessa.....		.....	4
Evergreen.....		.....	6
Almaden.....		.....	12
Guadalupe.....		.....	10
Saratoga.....		.....	11
Mt. Hamilton (Lick Observatory)		.....	23



## Comparisons Made.

**WHAT A DIFFERENT** picture California presents in comparison with farming in the East. At the time the Eastern farmer is preparing to den up during the winter the California farmer, having just finished his harvest, is preparing for another crop. The coming of winter is welcome as the renewer of the vegetable growth. The rain is welcome, because it starts all the cereals into life. The wheat or barley, scattered or missed in the just finished harvest, starts into growth, and by Christmas may be, according to the season, a foot or more high. Seeding commences with the rains and continues until March or April. Dry sowing also is extensively practiced, the ground being broken soon after harvest with plows of peculiar construction which tear up the ground with little trouble, the seed sown remaining dormant during the winter rains. Though four months or more may be occupied in seeding, the grain will not vary on that account more than two or three weeks in its time of ripening. It grows and stools until about the close of the winter rains and the coming of warm weather, when it suddenly makes a great growth, pushes up the heads and rapidly matures. The Northern farmer has to do all his seeding in a month, or the short season will not permit the ripening of the grain. When his grain is ready for the sickle it must be cut and put into a barn or other shelter at once, as a few days of rain will cause it to sprout and perhaps rot. The California wheat grower may permit his to stand uncut for months, or if cut it may remain in the stack until threshing is convenient, for there are no rains of consequence until winter comes. He does not even need to store it when it is threshed. He has only to protect it from bleaching in the hot sun by throwing a little straw over it. In all the wheat-growing counties millions of bushels of grain are left exposed without harm in this way. If a slight rain puts in an untimely appearance a little straw thrown over the sacks absorbs all the falling moisture.

### A COMPARISON OF RESULTS.

It will be readily seen that grain growing can be done in California with half the expense involved in the Eastern states. A gang of hands, being continuous in their labor, cultivate in this way a vast extent of country. Sixty million bushels of wheat a year, as California sometimes raises, sounds well and reads well, but nevertheless it is a curse to the state, as it involves the labor of less than a quarter as many men as in a country where seed time and harvest are crowded into three or four months instead of a year. A wheat farm of a hundred thousand acres, unbroken by orchard, dwelling, school house or church may be to some a beautiful sight, but it is not what intelligent communities are built upon.

One may see a combined harvester and thrasher drawn by sixteen animals, cutting, thrashing and cleaning twenty acres a day. A man drives the team, a boy sews sacks; another boy rides the machine, oiling it now and then, regulating the wind of the separator, and otherwise superintending the work. The sacks of grain are slid off on a spout, that carries them beyond the route of the next round and are gathered and removed to the store-house at leisure.

Only ground that is hard, firm and level permits this kind of harvesting. On sandy, soft or uneven ground the machine drags or hurries, interfering with good work. Grain is usually stacked and allowed to go through the sweating process, after which it is threshed by another gang. Where wheat raising is made a prominent industry the tendency is toward gigantic operating with few men and much machinery.

### STOCK-RAISERS.

Perhaps stock raising here and in the East shows a greater contrast than any other kind of husbandry. The grass starts with the first rains of winter and ripens with the grain at the close of the season. If left standing it remains uninjured through the long dry summer, nearly equal to hay and grain in the Eastern States. The seeds of many kinds of grasses which are all annuals, remain in a dry state on the surface of the ground, and have great fattening properties. Eastern visitors are astonished at the droves of cattle fattened on apparently sterile hills. Care must be taken, however, not to exhaust the seed or the land fails to produce the annual crop.

The custom of stockraisers is to move the herds from one range to another so as to preserve the perpetuity of forage. If the land is not overstocked, and reasonable care is taken to preserve the grazing, fat cattle may be had at any season of the year without feeding. As a matter of prudence, however, and insurance against a dry or an unusually cold winter, most stock-raisers take advantage of an extra growth of grass to put up a few stacks of cured hay.

Like wheat-growing, this branch of agriculture also tends to large operations with few men, and those of a character not to build up prosperous communities. During Spanish rule eleven leagues of land (40,000 acres) was considered necessary for the support of a family. Under that system of husbandry two or three vessels a year were sufficient for the commerce of the whole coast.

### FRUIT FARMING.

When we compare this industry in California with that of the East the divergence almost passes belief—a divergence in the extent and variety of fruits cultivated; in the



character of the soil and climate suitable for such a range of fruits; and in the remarkable size, flavor and productiveness as well as in the profits of cultivation. The results are not less astonishing to Californians than to the rest of the world. Commenced at first as an experiment, one success has followed another until there remains no doubt of the ultimate position of California as the land where the orange and apple flourish side by side, mingling their blossoms as they fall; where the grape, fig olive and whole range of semi-tropical fruits share the soil with the peach, plum and cherry of the Northern States; where the almond and walnut of the Levant grow side by side with the hickory and butternut; where strawberries bear through Christmas and New Years, where roses and the whole range of flowers, that are reared with difficulty in the short summer of the North, here bloom the year round.

This range of fruit requires a temperature that never falls far below the freezing point. It requires a long, dry and warm summer. How can a people who hibernate six months in the winter comprehend a whole year of growth, a year that has change but no rest? How shall the man that expects rain at least once a month understand a system of agriculture that needs no rain for months, but is seriously damaged by even a passing shower? Yet the task of the writer is to make these things plain.

#### ANNUAL RAINFALL.

First, the successful cultivation of the soil requires a thorough saturation during the winter. This requires an average rainfall of twelve inches. Less than this must be supplemented by irrigation. Where it is only four or five inches per annum it cannot be relied upon and is nearly useless. The rainfall of Santa Clara County has fallen below twelve inches but twice (1863-64 and 1897-98) since the settlement of the valley by the Franciscans and may never occur again.

#### SOIL OF SANTA CLARA COUNTY.

With the soil of New England and New York a dry summer would be dry indeed! The sea-tion named is in the ancient glacial region, almost the center in fact. A vast mass of ice two thousand or four thousand feet thick was slowly forced over the country, compressing everything into a hard pan, a term well known in these states, but never heard here. The hard pan is broken up and converted into soil as far as the frost reaches and not much farther. It is almost impermeable to water; consequently the falling rains drain off, leaving small storage of water to resist the drouth. In this county the glacial action was at a minimum. Traces of it can be found only in the mountains. The friable soil may be anywhere from ten to one hundred feet in depth, all of which is a store house of moisture. In addition to this the stratification is like shingles of a roof reversed, dipping into the ground which enables it to take up a vast amount of moisture, which appears again by slow percolation

through the over-laying strata or as artesian water.

#### VALUE OF CULTIVATION.

Agriculturists long ago learned that a mulch of straw or litter on top of the ground prevented the moisture from escaping. Through the deep cultivation converts the whole surface of the ground into a mulch. The early history of the Plymouth colony relates that after a drouth of six weeks the situation became so alarming that a week of fasting and solemn prayer for rain was ordered. It is further related that while the meeting was in the midst of its devotion an abundant supply of rain commenced falling. A Californian husbandman would have got through the difficulty by a little extra plowing.

It is this knowledge which encourages the farmer to plant trees and vines on dry hills where standing water may be a hundred feet below. Even corn, potatoes, watermelons and vegetables may be raised in this way, where the ground, without cultivation, would dry out to the depth of three or four feet. When the soil is properly pulverized it cannot be exhausted of moisture, except by vegetation. Of course, it is for the farmer's interest to lose no moisture by useless weeds; hence an orchard where choice fruit is expected, is kept scrupulously clean. A horticulturist would as soon build a fire under the trees as to plant anything that would exhaust the moisture.

#### SUMMER RAINS INJURIOUS.

After reading the foregoing our Eastern friends will see why an untimely rain—that is, one after hay and grain are ripe and after the soil of the orchard is reduced to a fine tilth—is unwelcome to all. It damages the grain, destroying its bright, fresh character. It damages the feed or hay left standing for stock, besides damaging that which is cut but not yet in the stack. It destroys the fine tilth of the orchard and vineyard, rendering further cultivation necessary, which, considering the hurry of harvest, is not always convenient and in a vineyard, where the young vines cover the ground, impossible. A rain between the middle of May and the middle of October benefits no one, and injures many. None is feared in August or September, but wandering clouds in October are unwelcome visitors. Much of the grain is in the stack, much in piles in the sack. A rain injures the finer qualities of grapes causing them to crack open. It interferes with the harvest of almonds and walnuts. No one wants a rain in the summer.

#### RANGE OF CROPS.

This article would not be complete without a list of the fruits that are cultivated and form a part of the ordinary crop in Santa Clara county. The limits of a newspaper article will not, of course, admit more than a brief reference.

First we may mention the whole range of fruits grown in the Temperate zone, such as apples, pears, cherries, plums, etc. All these exceed anything grown in the older states, both in size and flavor, excepting the apple,



which loses some of its acidity, which, however, is not considered a detriment by all.

Next all the small fruit, such as blackberries, raspberries, strawberries, currants, gooseberries, etc. Unless on naturally moist grounds these require irrigation in summer, as the roots do not strike deeply into the earth, as do the roots of trees. When properly cultivated these fruits yield enormously, and when near a town have a corresponding profit.

Next we may reckon the fruits of a warmer climate, including the peach, nectarine, apricot, prune, grape and fig. The first great triumph in fruit raising was with the peach, which frequently bears when eighteen months old from the seed, Coloma, in El Dorado county, being the scene of the first victory. Coloma peaches—who does not remember them? However, that kind of fruit is common now. Santa Clara county will ship carloads that average half a pound each, single specimens occasionally reaching twelve ounces.

The apricot is a magnificent fruit, as large as an orange, of a rich, delicious flavor. It is a shy bearer all over the world, but hardly ever fails in Santa Clara county, which seems especially adapted to its cultivation. The demand is always good and crop reasonably sure.

The fig is one of the ancient fruits. All are acquainted with the dried article. The tree is a rapid grower and an enormous bearer. An embryo fig comes out on every leaf stalk. It

bears continually from July to frost. It commences to bear when two or three years old, and increases from year to year. A fig tree twenty-five years old, belonging to the writer of this article, was seventeen inches in diameter, thirty feet in height, and a spread of top of fifty feet and yielded upwards of a hundred pounds of figs a week from July to November. It is most valuable fruit. It requires a rich, moist soil.

The prune is a variety of the plum. It has however, a special flavor of its own. It is an enormous bearer and has a habit of ripening gradually, admitting of a prolonged harvest. It is shaken from the tree and caught on sheets laid on the ground. An active man can gather a ton a day. An acre of prune trees, ten years old, will yield ten tons, and make two tons of dried prunes. It is the least expensive of all fruits to handle, as it requires no preparation for drying. It has no enemies or pests. It requires deep, gravelly land. Prune land in France is worth \$1000 an acre.

As the grape was made the subject of a special article in another part of this paper, it may be dismissed without further notice.

The same may be said of the olive and orange which with the grape are the coming crops of the county, the other fruits mentioned being adapted to a wider range of country and therefore less in value than the products of especially favorable circumstances.

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## Climatic Advantages.

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**M**OST PEOPLE ARE inclined to make the place of their birth the ideal of a perfect country. The Inuit pities the people who live where the snow is not fit to build into houses. The Russian does not see how he could haul his wheat to market without the snow for his sled to run upon. When the people of England first tried to colonize America in the vicinity of the present city of Portland, in Maine, the few who managed to survive the winter returned with the opinion that the country was uninhabitable for civilized persons. Great tribes of war-like Indians, perhaps a good specimen of the genus homo as could be found in the world, fed on the game in which the country abounded; but the English colonists, who were accustomed to the mild winters in the line of the warm Gulf Stream, where snow and ice were rare and frozen ground unknown, could not believe that a country where the ground froze three feet deep and was covered six months in a year with three to six feet of snow, could be inhabited by civilized beings. When the Roman legions penetrated the wilds of Germany and England they reported a similar condition of affairs, and did not dream that the future

seats of empire were to be in those same uninhabitable regions.

### CLIMATE OF THE PLAINS.

When the people of the Eastern part of the United States had adapted themselves to the winter frosts and summer rains they were disposed to make their places the ideal and value every other place by their standard. All west of the Mississippi was considered out of the world, both geographically and commercially. Those who studied geography fifty years ago will remember the territorial map with a single range of mountains through it, and a striking line of words in capitals "GREAT AMERICAN DESERT, INHABITED ONLY BY HERDS OF BUFFALO AND WANDERING TRIBES OF INDIANS" where the populous States of Kansas, Nebraska and Colorado now mark the map.

The geographers did not see the inconsistency of locating immense herds of animals of oxen on a desert. Such numbers too! Hunters told of herds three hundred miles long, but such cautious men as Malte-Brun and Olney thought they trespassed on the domains of incredibility when they acknowledged the possibility of thousands in a herd. General Sherman thought he saw two hundred thousand in



one herd. Standing on an eminence near the Platte river in 1850 the writer of this article saw a whole horizon for a hundred miles around black with buffaloes so far that the sight terminated in just a trembling black line. This was on the "Great American Desert," where rain was unknown several months in the year. Corn-fields hundreds of miles across, and cities of a hundred thousand inhabitants cover the great desert now.

#### CLIMATE OF CALIFORNIA.

When gold was discovered in California the land was supposed to be worthless. A person writing from Sutter's Fort in November, 1848, said: "I have seen Sutter's famous wheat-field; there is not a green blade of grass on it, and the ground is as dry and hard as a pavement, with great cracks in it in every direction." This was conclusive testimony as to the value of the soil for agriculture, and not for years did the miners have a suspicion that the gold of the Sierra Nevadas bore no comparison to the agricultural wealth that was in the soil. Every one spoke of returning home. The long dry summer was a bar to regular agriculture. But the enormous vegetables, crops of hay, fruit, etc., gradually dispelled the illusion and California took rank as one of the most promising places for prosperous homes.

#### NOT ALL ALIKE.

Though all parts of the State have some climatic features in common there are wide differences as to amounts of rainfall, general temperature, range of thermometer, etc. In some parts of the State, as at San Diego, the average annual rainfall does not exceed five inches, while at Shasta it approaches sixty inches. In the upper part of the Sierra Nevadas snow falls to the depth of twenty feet, while in some places it is never seen except on the distant mountains. In some locations the winter is the most genial and pleasant part of the year, the summers being windy and foggy.

In some of the valleys the heat in the summer time will keep the thermometer for days above blood heat. In other places the temperature will not rise above seventy degrees during the season. In some places along the coast the wind blows so fiercely that trees cannot grow except in sheltered places; at others the sea shore is a delightful resort all the year.

#### VARIOUS CAUSES.

The cause of these variations are numerous, mountain ranges, oceanic currents and desert plains all playing a part. Perhaps first in the climatology of the Pacific, as it is in the Atlantic coast, is the influence of the ocean currents. If one will examine a marine atlas he will discover a broad and strong current from the equatorial regions in Asia, flowing through the Pacific ocean and impinging upon the coast of California north of San Francisco, one part flowing southward along the coast, the other towards Alaska, modifying the temperature of the whole coast, north and south.

The oppressive character of the climate of the southeast of the United States is not found until far south of the Mexican line,

while north of San Francisco the low temperature of the eastern coast of America is not touched until Bering straits are passed, the Pacific coast being, in this respect, like the coast of Europe, which is warmed by the great Gulf Stream which modifies the temperature of the whole of Western Europe. The same Gulf Stream, after impinging against the northwest coast of Europe, takes a tour among the frozen islands and continent around the North Pole and comes down the eastern coast, carrying along icebergs and creating a frosty climate for the whole country. London, the seat of opulence and refinement, is in latitude fifty-one. The western shore of the Atlantic in the same latitude is north of the timber line, and consequently all agricultural occupations cease. The cities of Boston, New York, Charleston, etc., are much colder than cities of a corresponding latitude on the coast of Europe.

The wind blowing from Africa across the Mediterranean sea, gathers moisture from its contact with the water and carries life and fertility far towards the center of Europe—in fact meets the great glaciers on their own ground and forces them back up the mountain side. Thus we see that numerous circumstances, other than latitude and elevation, determine the climate of the country.

For a long time the Gulf Stream was supposed to be a continued flow of the rivers pouring into the Gulf of Mexico, hence the name; but more careful observation established the facts that its volume was greater than that of all the rivers in the world, and that it was but a part of the great system of ocean currents that traversed every sea and affecting every shore.

#### INFLUENCE OF EQUATORIAL CURRENT.

We are now prepared to consider the effects of the great equatorial current, called the Kuro Siwo, striking the western coast of North America. The northern branch or deflection, passing up the coast, carried with it a warm moist atmosphere, creating a timber belt several hundred miles wide to Alaska, in latitude sixty, and thence along the Alaska chain of islands, all of which are densely wooded and some of which furnish forage for cattle the year round.

#### RAINFALL IN WASHINGTON TERRITORY.

The great oceanic current laden with moisture causes the foggy climate and the wonderful forests of Puget Sound, and also the wooden country of Oregon and Northern California, the redwoods and firs being a product of abundant rains. The forests around Puget Sound where the atmosphere is most prevalent, are something phenomenal. Persons unaccustomed to them fear to penetrate them more than a few yards lest they get lost. So profound and dense is the shade that only faint gleams of daylight among the huge moss-covered tree trunks, which stand only a few feet from each other, give the wanderer any idea of distance or direction. In that section of the country fogs prevail and sunshine is an exception. At Baker's bay north



of the mouth of the Columbia river, rain falls every day in the year.

#### AN ARID CLIMATE.

As we proceed toward Mexico along the coast, the southern branch of this great current gradually ceases its influence. The rainfall becomes less and less until the influence totally ceases at Lower California in Mexico. Even at San Diego in Southern California the average rainfall is but five inches a year, this being one extreme of rainfall in this State, Shasta near the northern boundary, with its sixty inches of annual rainfall, being the other.

#### INFLUENCE OF MOUNTAINS AND PLAINS.

The Sierra Nevadas and the dry interior Utah basin are important factors in these great continental climate phenomena. If there were now a system of lakes between the Sierra Nevadas, as there once was in geological times, such a system as prevails between Canada and the United States, the whole character of the Rocky mountains, Nevada and California districts would be vastly different. The coal mines of the Rocky mountains and other facts indicate in former ages an immense vegetation. Now the central part is a comparatively rainless tract. The uninterrupted heat of the sun causes a vast column of ascending atmosphere, the vacuum being supplied from the cooler air of the Pacific Coast, thus accelerating the force of the prevailing wind currents from the northwest to the southeast.

#### INFLUENCE OF THE SIERRA NEVADAS.

This lofty range of mountains, rising from six thousand to fourteen thousand feet in height, extends from Mexico to British Columbia, at a distance of two or three hundred miles from the Pacific ocean. The moisture in the air is precipitated by the cooler temperature of the high elevation: hence the snows, often twenty feet deep, and the noblest forests of pines and sequoias in the world. After passing the Sierra Nevadas the atmosphere has but little moisture left and reluctantly gives the dry interior basin of Utah an occasional shower, dropping it in small quantities in the low mountain tops of the interior ranges. Utah seems doomed to comparative sterility.

The Sierra Nevadas, from the vast amount of snow deposited, are the water-houses for the great valleys of the Sacramento and San Joaquin as well the counties of San Bernardino, Los Angeles and San Diego, being the sole reliance for agriculture in the Upper San Joaquin valley and in all the counties south.

#### INFLUENCE OF THE COAST RANGE.

This range is an offshoot of the Sierras in the vicinity of Los Angeles. It divides into several branches like the fingers of the hand, the smallest branches projecting into the sea at various places from Los Angeles to and north of San Francisco, the main range continuing without much interruption to Oregon. It may be more explicit to say ranges for there are many of them, all making a width from fifty to one hundred miles, with many fertile valleys, such as Santa Clara,

Sonoma, Napa, and Suisun, between the different ridges. These, like the Sierra Nevadas, intercept the moisture, and hence the redwood forests, so striking a feature on the coast from Santa Clara to Oregon.

It may be observed here that, in accordance with the gradual decrease in the precipitation of mountains toward the south, the redwood forests cease in the mountains west of Santa Clara county, a matter which will be referred to again. The San Joaquin and Sacramento rivers, uniting their forces have made a tide-water channel through this range, making the bay of San Francisco, with its numerous harbors, the finest and safest entrance from the ocean to an inland sea in the known world. Several hundred miles of navigable stream and bay converge here. Its value as a commercial center cannot be exaggerated. As an element in the consideration of climate it is not less important.

#### THE GOLDEN GATE.

It is a golden gate in more than a commercial sense. The movement of the mild, moist atmosphere towards the arid centers of the continent has before been mentioned. This depression in the Coast Range is one of the great passes—the great one, in fact. The mild, moist atmosphere follows every arm of the bay. Wherever it goes it carries wealth on its wings. It is equally a protector from the frosts of a northern latitude and the aridity of the interior. Ten of the wealthiest counties of the State are along these water lines.

#### SITUATION OF SANTA CLARA COUNTY.

Among these Santa Clara is prominent. One arm of the bay projects southward into the heart of the county, San Jose, the county seat, being but fifty miles from the Golden Gate. It is far enough away to be exempt from the chilly character of the winds when they enter the Gate, and near enough to share its life-giving moisture. Other gaps in the mountain range, such as the Santa Cruz and Pajaro, also permit the ingress of the moist sea atmosphere, a tract of country twenty to thirty miles wide, modify the temperature until it is suitable for the growth of oranges, almonds, olives, figs, and all the semitropical fruits of southern Europe. Santa Clara county is between two coast ranges the summits being thirty to fifty miles distant from each other.

The eastern summit acts as a barrier to the frosts of the Sierra, which sometimes reach far down and even to the plains, and also a barrier to the fierce heats of the San Joaquin and Sacramento valleys, which were erroneously supposed to be the distinguishing features of all California climate.

The thermometer never rises as high or falls as low as it does there, the mean annual range being less than one-half as much. In the foothills of the Sierra Nevadas it sometimes falls as low as sixteen above zero; here thirty is uncommon and twenty-two has been reached but once or twice. There are no



masses of snow in the vicinity of Santa Clara valley from which frosty air can flow.

EXEMPT FROM DROUTH.

Quite as important for the raising of fine fruits, as well as grain, is the exemption from drouths. But twice in the record of a hundred years has there been a failure, and even then (1863-4) those who sowed early had fair crops, the whole being an average of at least half a crop. Even in the terribly dry year of 1897-98 early sown crops were fair.

It may seem invidious to say that this happy medium between existing moisture and drouth is limited to Santa Clara valley, but it is true nevertheless. The redwood forests terminate with the Pajaro river, the southern boundary of this county. Beyond that winter rains get light as we proceed south, and the liability to drouth increases until absolute sterility is reached on the peninsula of Cali-

fornia, though the decrease is steady, the rainfall being influenced by the mountain ranges that project into the sea. Irrigation of grain crops is unknown and unnecessary in Santa Clara county.

Notwithstanding these extremely favorable conditions as to moisture the sunny days outnumber the rainy five to one. There are three hundred days of absolutely clear weather in a year and rainy days are often more than half sunshine. What better arrangements can be asked? If there is one spot on the earth that has more of the material elements which go to make up a prosperous community the writer has never seen or heard of it—certainty of timely rains, exemption from floods and drouths, exemption from frosts and heat, genial climate and an immense range of productive capacity, embracing all that grows between the Gulf of Mexico and Canada.

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## Climatic Contradictions.

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THE NEWSPAPERS of this state are mainly responsible for the confusion of ideas prevailing in the Eastern States regarding the climate of California. When a San Francisco daily that has a circulation of several thousand copies east of the Rocky mountains puts a ten headed column, with an account of a snowstorm in which trains are delayed three days, engines lost in the snow that was thirty feet deep, snow plows driven by four engines, and such things, in the same edition that gives a glowing account of a citrus fair at San Jose or Sacramento, no wonder that average readers begin to think that this is a country of great stories and that such a caricature as the real estate dealer of Los Angeles got up of a San Josean—standing up to his knees in snow holding an umbrella over a shivering little orange tree—had some particles of truth in it.

The five thousand miners who in 1850-51 mined in the El Dorado canyons, under a temperature of 90 to 100 degrees, in sight of mountains covered twenty feet deep with snow, could correct the impression of a uniform climate.

DIFFERENT CONDITIONS HERE.

The inhabitants of a nearly level country, like the valley of the Mississippi, where a monotonous similarity of climate exists over thousands of miles, do not make allowance for the variety in a state where wide valleys are framed in by mountains ten to fifteen thousand feet high. The White mountains, the so-called Alps of America, are only six thousand feet in height. Snow remains on them but a few weeks later than in the valleys at their base.

The Alleghanies are but little higher than the Coast Range, and the highest mountains east of the Mississippi, in the state of North

Carolina, are but little above 6,000 feet. The Green mountains are not higher than our coast ranges, the Loma Prieta being as high as the Camel's Hump, the loftiest peak of the Vermont mountains. Nowhere east of the Rockies are there any mountains as high as our Sierra Nevadas. Nowhere else does the snow remain through the summer, even in the deepest glens. Nowhere does the snow fall as it does in the Sierra Nevadas. These rise to a height of 12,000 feet, some of the peaks in Southern California reaching to nearly 15,000 feet. They are the great storage reservoirs of water for the rivers that flow thence to the sea. Long after the winter rains cease the melting snow from these mountains causes a rise of all the rivers, called the June rise, when they run banks full, affording ample means for irrigation, wherever it is necessary. The Sacramento and San Joaquin plains are the principal tracts to be benefited by it. The topography of those valleys is such that the escaping waters can be utilized on both sides of the rivers.

A HEAVY FALL OF SNOW.

The fall of snow in these mountains, and even far down the sides, is astonishing. The mining town of Big Meadows, comprising twenty or thirty dwellings, is generally covered with snow in the winter. The inhabitants cut steps up from their doors to have communication with each other. At Downieville, in Sierra county, the snow often falls to a depth of ten feet. A man who packed goods across the mountains in the winter during the Washoe excitement, once fed his riding mule on the fire-burned hollow top of a tree which, when the snow went off was fifty feet from the ground. The person left in charge of the Silver Lake House during the winter, wanting something to busy himself with, went to trim



ming, as he thought, the lower branches of the trees. The following summer his work was from twenty-five to thirty feet above the ground.

#### FREMONT'S EXPERIENCE.

Fremont gives a very graphic description, not only of the snows of the Sierra Nevadas but of the green valleys below. In December, 1845, he divided his party of about one hundred in the vicinity of Walter's lake, directing the larger portion to cross the mountains at Walter's Pass, by way of Kern river. Fremont with fifteen men started north and skirted the eastern foothills of the Sierra Nevadas, to hunt a pass or low place. He eventually struck the Truckee river, and followed it into the mountains, encountered the marvelous depths of snow. His account reads like an exploration of the polar regions. For miles and miles the men tramped a path of unknown depth, sometimes, after making but a mile during the day, returning to the camp of the previous night. For a mule to get off the narrow trail meant an hour's work to get him out of the deep snow on the trail again.

The whole party came near getting lost, but through almost superhuman exertions they passed the summit, and got a view of the Sacramento valley. Carson, who was with Fremont, had never crossed the mountains in that vicinity, although his name was subsequently given to a pass on the great immigrant road, but he had been in California before, and knew the country. As he cast his eye over the green expanse, a hundred miles wide, green even in December, in the vicinity of the deep snows, he shouted, "We are saved! I know that country! That is Mount Diablo! There is New Helvetia (Sutter's fort)! There is the American river!" A few hours' travel got them out of the deep snow, and a few hours more into green grass, for a descent of several thousand feet makes the difference between frost and snow and perpetual verdure.

#### A WRONG POINT OF VIEW.

Those who form their opinion of California at large from the conditions of any one place will go wide of the mark. The passengers of the C. P. R. R. are often blockaded by snow for days in the Sierra Nevadas, when fifty miles away oranges are ripening and blooming in the open air. An hour's ride from

snow banks twenty feet high on either side of the road, carries one through the orange groves of Auburn.

The cause of this anomalous condition is the fact that the thermometer never falls much below the freezing point. A small descent reaches the temperature of rain. Sometimes the ice crop, at the coldest place in the mountains, fails on account of the moderate weather.

The valleys of the Sacramento and San Joaquin have their own climate, as well as the valleys of the Coast Range, the difference being a higher temperature in the summer accompanied with dryer atmosphere, and a corresponding lower temperature in the winter. There is no fall of snow in the Coast Range corresponding to that in the Sierra Nevada. The temperature hardly ever reaches the snow point. The rains also commence earlier, are more copious and continue later, insuring all growths against the danger of drouths.

#### SOME NATURAL GARDENS.

The valleys of Sonoma, Napa and Santa Clara all have these advantages. They are valleys in the Coast range of the mountains which at San Jose is thirty miles across. East of Santa Clara valley the Coast range attains its greatest height. Mount Hamilton the site of the Lick Observatory, reaching a height of over 4000 feet. The other Coast range is from 1500 to 3000 feet in height. Santa Clara valley is thus sheltered from the descending winter frosts of the Sierra Nevada, the arid summer heats of the San Joaquin valley and the raw ocean winds on the coast side. There is abundant moisture to mature every crop, with a temperature that admits of the ripening of oranges in midwinter. The summer temperature is never high enough to generate malaria, the scourge of the valleys where intense summer heats prevail.

It is true that the cool ocean breeze, abounding with fogs, make perpetual grass and a fine dairy country. The warm summers of the interior give grapes and other fruits a greater percentage of sugar, but the absence of these extremes of cold and heat, damp fogs and a desiccating atmosphere, make more attractive homes and promote a higher mental and physical development. Such a place is Santa Clara valley.

## Crops Every Month.

THERE is no better index to the climate of Santa Clara county than the behavior of flowers. Much has been written of the strawberries and the tender vegetables that ripen in this county in the open air and are for sale in the market every month in the year; and although such evidences of a mild climate are convincing they are not so striking as flowers, which are seen on every hand. A few leading

facts connected with flower-growing in this county will convey a volume of information and will reveal a condition of things incredible to a resident of the Eastern States.

#### UNNECESSARY TROUBLE.

Not long ago, two ladies, coming from an Eastern State to San Jose, brought with them a few calla bulbs. The calla, as all know, is the tenderest kind of hot-house plant, and is



made to bloom in the East only with the greatest care by means of artificial heat. It is essentially a winter blooming plant, as it comes from the Cape of Good Hope, where the seasons are reversed from what they are in the United States. In its native country it blooms in the summer—that is, in December, January and February—and, retaining its habit, it blooms in those months in the United States, where it happens to encounter winter in its months of bloom. But in order to bloom in winter in the Eastern States it must be given a high degree of heat, and this can be done only indoors.

#### GREAT ASTONISHMENT.

The ladies, upon arriving at San Jose were astonished to discover that the calla is not treated here as a hot-house plant affair, but is grown in the open air, where it blooms not only in winter but also in summer; and not only that, but callas are growing in every garden, and blooms are much larger and more numerous than they are in the East, and that the plants grow with the luxuriance and rankness of weeds.

This taught them two lessons—first, that the climate approaches that of the tropics; second, that the atmosphere, instead of being hot and dry, is charged with moisture.

#### ROSES IN WINTER.

Eastern people know all about the trouble of protecting roses in winter—how the poor little shrubs must be swathed in straw; or buried deep in the ground, or dug up, potted and taken into the house; and when they come to Santa Clara county and see these tender little shrubs grown into big trees and loaded with blossoms twice as large as any they ever saw before, it is no wonder that they marvel. Such a "tender" rose as Lamarque of a few years' standing will grow in a single year from twenty to forty branches that run from four to fifteen feet in length and each branch loaded with flowers.

#### A RAPID GROWTH.

Unless roses are cut back unsparingly they become trees in a few years. The writer has a Gold of Ophir and a Cloth of Gold, the trunks of which measure each eleven inches in circumference, and they are still growing

rapidly. The main trunks are fifteen feet in height, and they were stopped at that height, it being a roof of a porch. There appears to be no limit to the growing capacity of roses in this county. In the writer's garden is a comparatively young Lamarque, the main stem of which is twenty feet long. When this plant is in bloom it appears to be covered with snow, and the number of blooms probably approaches the thousands.

In the same garden against a northern wall, there are three very delicate plants in bloom—heliotrope, marguerite and ageratum. On the south side of a fence callas are in bloom, and several of the tea roses are bearing both buds and blossoms.

#### BEHAVIOR OF ANNUALS.

One of the marvels in flower growing in Santa Clara county is that with annuals of a limited period of bloom such as phlox, portulacca, stocks larkspur, and the like, the beds may be kept in bloom nearly the whole year by planting seeds at successive times. This is practically impossible in Eastern States, because seeds will not germinate in the dry, hot climate of the Eastern summer. Here they will germinate in the open air nearly every day in the year. This indicates a prevailing temperature throughout the year of about 60 degrees, as it is at that temperature that flower seeds germinate.

#### BLOOMING FRUIT TREES

Apricot trees bloom here early in February. Gladiolus and lily bulbs start at the same time. By the first of February amaryllis is over a foot high. Narcissus blooms in the open air in February, followed immediately by crocuses, hyacinths and tulips. Most tea roses if not cut back, bloom every month in the year. Flowering peas sprout in January and February and are soon in bloom thereafter.

It is difficult for a stranger to believe all these things, unless he has first visited Mexico. No such things as have been enumerated can be accomplished even in Florida or anywhere else in the United States outside of this coast. San Jose is famous for its flowers. It is called the "Garden City" by right and the Santa Clara valley is conceded by Californians to be the garden spot of the state.

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## Citrus Fruits.

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THE CITRUS FAMILY holds a high position among California cultivated fruits, and it is also popular in every country where it is successfully grown. Its popularity is not to be wondered at, as the fruit of some of the species is in general use throughout the civilized world. No other kind of fruit in its natural state is so valuable for commercial purposes as the orange and lemon, which are largely used by all classes of the community. Oranges are enjoyed by those who are suffer-

ing from sickness as well as by the people in robust health, and very frequently they are the only fruit that can be used by the sufferer from disease. Fruit of this family will keep on the tree after it is ripe for a longer period than any other kind, and it will bear carriage better. It is also less liable to injury from storms and changes of weather than most other fruits and owing to the thickness of the rind and the aromatic oil it contains it suffers less from the attacks of birds and insects.



Oranges are more or less in season all the year round, and no other fruit has the same advantages in this respect. Trees of the citrus family also yield large and certain crops, as a rule, in comparison with other fruits. Beside their value as fruit producers the trees, owing to their beautiful foliage and compact growth, are also very attractive as ornamental plants for the pleasure garden.

#### THEIR ORIGIN.

The various useful species of the citrus family are supposed to have originated in China and Central Asia, and to have been taken to Syria by the Arabs. No species seem to have been known to the ancient Hebrews, Egyptians, Greeks or Romans, as they were not mentioned by the writers of these nations. Their introduction into Europe is generally credited to the returning Crusaders from Palestine in the fourteenth century, though it is said that in Spain there are trees over six hundred years old. In all the countries of Southern Europe possessing a genial climate for its cultivation the orange soon after its introduction, became a popular fruit. At the present day in Spain, Portugal, Italy and Greece and the south of France orange-growing is a prominent industry, as it also is in the Azores Islands.

#### THRIFTY GROWERS.

"The orange and several other species of the family thrive remarkably well in Southern California, and the trees attain a size and give returns quite equal to the best European standard. Large quantities of fruit are produced, and growers are not only able to supply the local demands, but also do a large export trade with neighboring States and the East.

Though citrus fruits are mainly cultivated in Southern California there is no reason why they should not be successfully grown in many other parts of the State. When the climate and soil are not absolutely uncongenial there ought to be no great difficulty in cultivating the orange successfully, always providing that its wants are duly attended to. Trees of the citrus family are not as delicate as is generally supposed, and they may be profitably cultivated under various conditions of soil and climate. They will stand a considerable amount of heat and some degree of frost with impunity. When carefully cultivated and growing in a congenial soil and situation the trees will often attain a great size and age. There are in Spain and Italy bearing trees whose ages are said to range from 150 to 200 years, and they are still healthy and vigorous. But, though citrus trees are vigorous and long-lived—when growing under the most favorable circumstances—they are not likely to give much satisfaction to growers unless well and rationally treated.

#### WHAT THEY REQUIRE.

The wants of this family are peculiar and differ to some extent from those of other fruit trees. The chief cause of non-success in or-

ange culture is not so much due to the effects of soil and climate as carelessness or ignorance in the treatment of the trees. Too many people who plant orange and other fruit trees seem to think that after an orchard is fully started and the trees have reached a few years' growth no further assistance or care is required, except to keep down the weeds. This class of cultivators expect to take from the trees heavy crops year after year with little attention, and are surprised when the tree begins to fail in vigor. When not carefully attended to and supplied with proper nourishment trees must necessarily begin to fail when comparatively young. When this occurs the cultivator blames either the climate, soil, season or insects instead of ascribing the failure to the true cause—neglect and starvation. The essential conditions for the successful cultivation of trees of the orange family are: First suitable locality; second, the ground must be properly prepared; third, shelter must be provided; fourth, the trees must be healthy when planted; fifth, the trees must be regularly supplied with congenial food; sixth, the roots should be disturbed as little as possible; seventh, the ground must be kept free from weeds and undergrowth.

#### SOIL AND SITE.

Cultivators should bear in mind that each of these conditions is essential, and it is not sufficient to provide for some of them and neglect others. As regards the first named, the most congenial soil is a strong sandy loam, with a gravelly or loose subsoil. The most favorable site for an orange orchard is a gentle slope with an prospect between north and east, so that the trees will get the benefit of the morning sun. Intending planters, however, are not always in a position to make the best choice of soil or site, and must make the most of circumstances. Trees will do well in any ordinary good soil of fair depth, and on any site which is not too wet or exposed. Low-lying land, where the temperature is often very low in the winter and spring, where fogs are heavy and frequent, and the sides of bleak hills, should be equally avoided as a rule. In preparing for orange trees it is advisable to break up the ground to the depth of from eighteen inches to twenty-four inches when the circumstances will permit. The soil should also be thoroughly broken and well mixed, as a fine tilth is grateful to the roots of the orange family.

#### PREPARING THE GROUND.

Trenching with the spade is by far the most effective way of preparing the ground but the work can be done more quickly and economically by the use of the plow and subsoiler. A good depth of well worked soil gives the trees plenty of nourishment and places them in the best position to withstand the effects of dry weather.

It is not advisable, however, in preparing the ground to turn up much of a bad sub-soil, and where this exists cultivators should sim-



ply stir and break it to the depth of a few inches leaving it in the same position as before.

#### DRAINAGE AND SHELTER.

Perfect drainage is essential to the cultivation of the orange family, as the trees cannot thrive when water is stagnating at their roots. Due provision for effective drainage should always be made when the ground is prepared. In light soils, on sloping ground, when the sub-soil is open, there will often be sufficient drainage naturally. When, however, the soil is heavy and retentive, or on flat ground, the cultivator should always provide for effective drainage. Shelter from bleak winds is necessary to the orange, and no trees suffer more by the exposure, both as regards their health and the quality of their fruit.

In exposed situations the trees have a tend-

ency to produce thick-skinned fruit, deficient in juiciness and flavor, and the product of the choicest varieties is sometimes so altered in character as not to be recognized easily. When there is no shelter naturally, cultivators should always make provision for it by planting belts or lines of quick-growing, dense-foliaged trees which will answer the purpose. Care must, however, be taken that the roots of these breakwinds do not interfere with those of the orange trees. The value of effective shelter is fully appreciated by European cultivators, and invariably provided for. At St. Michael, one of the Azore Islands, where orange growing is the staple industry, the cultivators commonly shelter their trees from the bleak winds which sweep over the Atlantic by means of stone walls from twelve to twenty feet high."

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## Home Building.

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**T**HE DESIRE FOR A home is the strongest instinct in humanity. Whatever man undertakes has a home as the termination and result of his efforts. For this he will span the continent with railroads, tunnel the mountains for silver and gold. He will brave the heats and malaria of the Torrid Zone or the icy, lifeless solitude of the polar regions if there is a nice cozy home in the vista of future events.

It lightens the severest labor to know that it brings a place of rest among and for loved ones. The greed of money getting loses half its turpitude when the proceeds go to create a family residence—in fact it becomes almost a virtue.

The highest and best thoughts center around a home. No expense is too great to make it comfortable. Deep sewers to carry away effete matter are constructed at great cost. Pure water from the mountains is brought scores of miles through aqueducts. The skillful architect is employed to contrive all possible conveniences and comforts. No furniture, painting or statuary is too costly for its decoration. Home is the crowning glory of toil and industry.

#### HEALTH AND WEALTH.

That location is most desirable where all the circumstances that make life pleasant and vigorous are united to those which make the acquisition of wealth easy. Such a place is Santa Clara valley. There may be others as good, but we speak from a knowledge of this county, and do not fear comparison with any land in the world.

#### THE CHOICE OF LOCATION.

Since home is, then, the ultimate aim, the one thing to which all others must pay tribute, is it not well to consider it in all undertakings? Other circumstances being equal, a place for home should be determined by the purity and

salubrity of the atmosphere, the geniality of the climate and the circumstances generally that tend to develop a fine manhood. It should be selected where frosts do not chill the marrow of the bones, or malaria sap the vital powers. Much of what we call good temper is made up of good food and pleasant surroundings, and much of life's ills is due to an inhospitable climate and other unfavorable conditions.

When we think of the millions of homes locked up in frost and snow during winter seasons, and look out over this valley filled with fruit trees, from apple to orange, we sometimes wonder that a general exodus does not take place from their frozen regions: but their living is there, and so they stay, filling their years with the herculean tasks of fighting the cold weather, and teaching their children a love for their native places. It would seem that it is an imperative duty to love one's native land: it is imperative on the parents so to manage that the children may have a native land worthy of their love. We set out to write of household affairs here and there, to show how much labor is required to be comfortable, where the thermometer ranges in the winter from twenty to forty below zero, and how little is wanting where the frost point is rarely searched.

#### FORTY DEGREES BELOW ZERO.

Did you ever think what this means? Can you, who are sitting in the open air in January or February, with the fragrance of heliotrope, orange blossoms and roses greeting your senses, conceive the difference? Let us for a few hours consider ourselves visiting in any one of the towns north of New York city. We alight from the cars, wrapped in woollens and furs until we are as thick as long. In a few minutes the frost from our breath forms ice and snow all around our faces. If we are



of the sex that wear beards our jaws may be so glued together that speech is difficult. If the ears are exposed they are sure to be frozen. With all the care possible our hostess' children may inform us, on our arrival, that our cheeks are frozen, and, as a matter of kindness, will hold a ball of snow to them to take out the frost, or rather, to prevent it from coming out too rapidly in the warm room to which you have been conducted to have your wraps removed.

#### STRONGLY FORTIFIED.

Double windows, double doors, intervening stoves and huge fires are hardly sufficient to prevent a frost even in the sitting rooms, while in the distant bed-rooms frost holds sway. The meat which is cooked for your dinner is sawed off a block as hard as wood. The buttermilk of which the biscuit is made is chopped out of a barrel with an ax, as are the sauces, preserves and other condiments, unless they are kept in a deep cellar with the apples, potatoes and other vegetables. Probably the butter plate has to set near the stove a while to make it fit to spread on the biscuit. You will see the boys piling enough wood in the locker for the night's use to last a California housekeeper a week. Before retiring the little, starved acacia (which here makes a big tree), calla and geraniums, which are cultivated in pots, are removed to the cellar, for fear of a freeze. The stoves are filled with wood and shut up to keep fire until morning.

#### FAMILY WARMING PAN.

And now a strange machine comes to view. At first you think it is a long-handled California shovel, but it has a larger bowl like a milk pan; it also has a tight-fitting cover. It is trimmed with silver and is altogether too ornate for a shovel. It is the family warming pan. The mistress or maid fills this with coals until it is sizzling hot, and then proceeds to run it through the beds until the "chill is taken off," otherwise you might be a lump of sugar or ice, according to your age and sex before morning.

You will perceive that all fresh air is carefully excluded by strips of woolen cloth nailed to the edges of the doors. No windows are allowed to be loose enough to rattle; that would let in the cold air! You cannot have any water in your pitcher; it would be ice in a short time. It will be brought in warm in the morning after the fires are built. If you are a little timid and pull the cover over your head, the breath will form ice and make the soft quilts hard as a board.

#### SNOWBOUND.

The same or more evidence of frost will be seen around the breakfast table, as on the previous evening. If the wind has blown during the night, snow has drifted around the house, perhaps burying the doors and windows, in which case it is shoveled away, though, if it is only a bedroom window, it may be left to help keep out the cold air. Paths must also be shoveled to the road, barns, and outhouses. The cook will probably tell you

that a bucket of water left standing near the kitchen stove "froze up solid."

If you take a sleigh ride you will see the breath of the horses congeal into icicles a foot long on their noses.

#### WITH POOR PEOPLE.

This is the ordinary routine in a well-to-do family, where years of prosperity have built up thorough fortifications against cold weather. If the people are unable to build such frost proof-houses the cases are entirely different. The school teacher who boarded around fifty years ago found variety enough. A small hole in the roof or the siding of a house would let in quite a snowdrift during the night. Great logs on the fire if timber was convenient, partially neutralized the effect of the cold. Usually the thinly-clad children shivered around a fire, which did little to make the room comfortable.

Molasses and frozen bread; with perhaps a decoction of parched peas for coffee, made the breakfast. Colds, cough and pneumonia were common. Cough medicines were compounded and used in every family. Blue-veined and thin-faced the children at twenty were all candidates for consumption. Is it strange that terrific nervous and pulmonary difficulties prevail where so little life in the open air was possible? The descendants of these who were "scarcely saved" through these cold winters, whether in the Mississippi valley or in California, carry with them the inherited penalties for the sins of the fathers, for it certainly is a sin to rear children in an inhospitable climate when a much better one is available.

#### NERVOUS DISEASES.

In the northern tier of States, where the range of the thermometer is from forty-four below zero to eighty or ninety above, making a range of a hundred and twenty degrees, a variety of nervous, pulmonary, and blood diseases have been developed, that threaten the extermination of the children of pioneers.

The strange phenomenon called "Involuntary jumping," as well as neuralgia, tetanus and rheumatism, is created or intensified by the climate.

#### HOUSEHOLD MATTERS.

The domestic affairs are all more or less tied up by such a temperature. The raising of chickens, which is the source of much of a woman's pin money in the country, is attended with many difficulties. Eggs laid during the winter, which, however, owing to the depressive effect of cold weather on the hens, are unusual, are generally found frozen and cracked open. The raising of chickens, except in the short summer, is almost impossible.

Unless chickens can range through barns over mows of hay or grain they will have to be fed wholly from the table or other sources, as there is no food in a snowdrift. It is true that chickens like all other creatures, and plants also, have extraordinary vigor when the summer or growing season sets in, and partially atone for the long period of torpidity.



Those who are wealthy may build houses in which chickens can be kept comfortable, and up to the reproductive point all winter. It is related of a Mr. Leland, a famous hotel keeper of New York, that he built a stone house for his chickens, with large open fires to keep the room warm, and thus kept his table supplied with fresh eggs through the winter.

#### VEGETABLES SCARCE.

The range of garden vegetables is much limited, both in varieties and times of growth. Peas, lettuce, turnips, beets and parsnips are planted as soon as the ground will sprout them; beans, corn, cucumbers, squashes and melons when the ground gets warm, say June 1st. Even then they are in danger of frost. June 12, 1843, the whole state of New Hampshire was white with frost, that killed all tender plants. The tops of the White mountains were covered with snow. It was not considered a very unusual circumstance. By careful management green corn, beans, peas, cucumbers, summer squashes and melons may be had for six weeks. Tomatoes started in a box by the kitchen fire, and transplanted when a month old, sometimes ripen, then again they do not. When ripe they are inferior in flavor to those ripened in a genial clime.

Fruits also are limited. Previous to the building of railways no woman could set peaches before her guests, and even now they are a costly importation. Blackberries, strawberries, raspberries and huckleberries last but two weeks. Formerly the prudent housewife dried a supply of these for pies and puddings. Since the introduction of the canning process more summer is infused into the long winter.

#### RANGE OF FLOWERS.

Perhaps no more striking appearance in domestic affairs is seen than in the flowers, which the women of a household always try to cultivate. In that region the variety is limited to those that stand hard freezing, unless the roots are put into a cellar, like potatoes, and kept through until spring. Formerly roses, marigolds, chrysanthemums, pinks, etc., with the addition of those that were annually produced from the seed, satisfied the housekeeper. Recently, however, a larger number of rooted plants have been introduced, that bloom for a short time in the summer, but for nine months in the year the household is utterly destitute of smiling blossoms, save those that are cultivated as house plants with much labor and care. Perpetual roses, pinks, geraniums and hundreds of other flowers to be found in the winter season everywhere in California are inconceivable to the winter there.

#### HOUSEKEEPING IN CALIFORNIA.

So far we have written more for the California reader, though Eastern people will recognize the truth of the description. It will now be a pleasure to take the reader out of the polar regions to a land of perpetual delights, where a home is a place of enjoyment rather than a fort where an eternal struggle is the price of existence.

Here no such houses are required to protect the household against cold as are required in the Eastern States. There is an entire absence of double doors, double windows and entries to cut off the outside air. Instead there are large verandas covered with climbers of every description, honeysuckles, passion flowers, wisterias, canary vines, trumpet creepers, jessamines, geraniums and dozens of others if wanted chase each other up the columns of the porch and over the house, winter and summer, until the excess of growth compels removal. Pinks and roses bloom the year round. The mistress of the house may decorate her parlors every day of the year with flowers grown in the open air. There are three hundred whole days of sunshine, and few of the rainy days are half rainy.

#### A FEAST OF FRUIT.

She may put fruit newly gathered before her visitors any time. Beginning with the year are oranges, limes, lemons and persimmons. The latter is different from that native to the United States. It resembles a tomato in appearance, has a rich, musky flavor, and is likely to become extensively cultivated. Oranges will last until the loquat and cherry put in an appearance. The cherry is in bearing several months and is accompanied and followed by varieties of the apple and pear. The peach and apricot commence in June and July, the former lasting until November. Figs also commence in July and continue until December.

Grapes begin to ripen in June and continue until New Years on the vines, and by proper care may be preserved several months longer. Plums, of which there is an enormous variety, last several months, Coe's late red holding on the tree until nearly Christmas, or until oranges and persimmons are again ripe.

Of the smaller fruits, strawberries may be picked any day in the year, though most plentiful in May, June and July. Blackberries and raspberries have a prolonged season of growth and bearing. Currants and gooseberries have a long season also. No garden or yard need be without fruit during the year.

#### PERENNIAL VEGETABLES.

There is the same continuity in vegetables. Cabbage, turnips, beets, parsnips, etc. are planted at any time. Peas are also perennial. Potatoes are always being dug for the market somewhere, though more plentiful in summer and autumn than in winter. The same may be said of green peas. Eastern immigrants frequently make a point of raising green peas and new potatoes for New Year's. Tomatoes bear into the winter, the vines frequently living through the season. New vines are best however, bearing the largest tomatoes. New potatoes are not thought much of, as there is a perpetual succession of ripe potatoes in the market.

#### MONSTER VEGETABLES.

There is one feature of vegetation which is a perpetual surprise. Everything in the way of fruit, flowers and vegetables takes on an im-



mense size. The writer has seen four pound pears, eight-pound tomatoes, four-pound onions, five-pound potatoes, peaches three-fourths of a pound, and other fruit proportionally large. What housekeeper wants a squash weighing two hundred fifty and pounds? Who wants to eat a five-pound bunch of grapes? They are not every day affairs, but are occasionally seen. As a matter of fact, attested by hundreds of witnesses, some visitors were measuring the huge proportions of a squash when they were still more astonished to see a medium sized, blooming seventeen-year-old girl burst out of the squash like a chicken out of its shell, and stand before them.

#### EGGS AND CHICKENS.

We must not forget the poultry yard, the source of so much table pleasure, as well as profit. With a little extra care chickens may be kept laying the year around. They will need no drugged patent food to remind them of family matters. In the country where they have the range of the fields they find ample food, such as insects and the seeds of grasses, which are always ripening. When confined to yards, they must of course, be provided with food, but even then there is a large margin of profit on the coast. To be candid, it must be acknowledged that in a country where there is no cold weather to destroy vermin the poultry house requires extra care to keep it in good condition.

#### COST OF A HOME.

In whatever way we look at the matters pertaining to the maintenance of a home we find cares and labors lessened and pleasures multiplied in a climate like that of Santa Clara. That eternal grind, or monotonous but persistent resistance to forces hostile to life, is unknown. There is always vitality, a measure of unexpended energy, for an advanced movement, for progress in health and wealth or for moral and intellectual growth.

#### NO NERVOUS STRAIN.

There are no sudden changes of temperature to strain the nerves to a higher or breaking tension. The climate is conducive to rest, not through debility, but by permitting the healthy action of all the organism. The whole train of nervous diseases, such as neuralgia, asthma, rheumatism, induced by unequal circulation of the blood, are greatly modified, or even lost sight of altogether, though the inherited tendencies from the Northern climate are remembered many generations. The tendency to colds is much lessened here, though unfortunately it is not altogether dependent on the climate or it would cease entirely.

#### ABOUNDING LIFE.

Nowhere can be seen such healthy children, running over with life. The pale, thin, interesting girl must be looked for elsewhere. They are rather of the "corn-fed, home-bred" type of a century ago. An Eastern man, on getting off the street cars with a bevy of them, will be astonished to see them sweep along the street four miles an hour. It is not a cult; it is the healthy action of life.

#### NO CHILLS AND FEVER.

That dread emissary of death, malaria, that sweeps into untimely graves so many of the jewels of a household and sits like an incubus upon all, has no residence in Santa Clara. The temperature never reaches a degree that develops the germ, the healthy sea breezes make short work of it. Whenever diphtheria or other zymotic diseases appear they may be traced to local and avoidable causes. No climate will insure against filthy surroundings.

Such is home here and there. Is it not worth an effort to make the exchange? Is it not the duty of all who are calling into the world beings to enjoy or suffer, to choose those lines of life which entail the least of misery and the most of pleasure?

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## Products Compared.

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PEOPLE WHO are accustomed to see wheat, corn and hay raised on a small margin of profit, and that little attained by "close calculation and hard work" hardly comprehend the difference in the real value of the land that is limited to the production of the most common cereals and that which will produce anything from the hardy wheat of Minnesota to the orange, lemon and fig of a southern clime. Millions of farmers in the Mississippi valley have cultivated corn, satisfied with selling the crop at ten dollars an acre. Perhaps they could reach that result only by feeding it to hogs or cattle and driving them three or four hundred miles to market. When the margin above the cost of the labor expended was sought it was often found to be nil. The same may be said of wheat raising. Too often

a long life of hard labor left no results but a worn-out constitution and worn-out land. It is true that land may have gone up in value from government price to \$50 an acre, but there was a positive loss.

The increase in the value of the estate was not in the farming; but in the increased settlement and the introduction of more remunerative industries around him. In this way some qualities of land through Illinois and adjoining states have approximated \$100 an acre; in some places, however, it is still sold as low as \$20. The land is fertile, level, accessible from railways or river navigation, but it is saddled with that Old Man of the Sea, the inhospitable climate, which not only limits the productive qualities of the land to a few cereals, but also demands the greater



share of the product as a tribute to the long hard winter. The millions of bushels of corn and wheat, the millions of cattle, hogs and horses, all represent an aggregate of wealth that is very satisfactory. It does not indicate a famine by any means, but a nation in prosperous circumstances. It is simply a surplus of breadstuffs.

#### BREAD IS CHEAP.

All the world can raise bread. Few nations can raise the articles which seem adapted to California. Only a small part of the United States can produce oranges. A few are raised below New Orleans, but not enough to supply a home demand. Only parts of Florida are reliable, and even the best places have a greater fluctuation in temperature than Santa Clara county, where orange growing, on account of the great success of other fruits, is hardly begun. The following from the Florida Dispatch shows how the thermometer goes down occasionally.

#### COLD SNAPS IN FLORIDA.

"Again we breathed freer when the weather man at the Signal Station pulled down the black centered flag on Wednesday last. The preceding night the mercury got down only to 25 degrees it is true, while on January 3d it registered 24 degrees and on January 4th 22 degrees, but these cold snaps are rather too frequent for the comfort of those whose oranges are ungathered and painfully suggest the "big freeze" of '96.

"The lowest point indicated by the mercury at the office of the signal service observer during the last fourteen years has been as follows:

Dec. 28, '72, 27; Jan. 19, '73, 24; Jan. 9, '94, 35; Dec. 18, '75, 28; Dec. 3, '76, 24; Dec. 2, '77, 29; Dec. 28, '78, 27; Jan. 7, '79, 25; Dec. 30, '80, 19; Nov. 25, '81, 32; Dec. 17, '82, 28; Jan. 12, '83, 29; Jan. 6, '84, 21; Jan. 18, '85, 31½; Jan. 12, '86, 15.4.

"During this cold-snap on the 2d, 3d and 4th of that month the mercury registered 22 degrees at Jacksonville, while it indicated 41 degrees at Sanford, 17 degrees at Ocala, 23 degrees at Gainsville, 32 degrees at Leesburg, 29 degrees at De Land, 90 degrees at Orlando, 35 degrees at Merritt's Island, Indian river, showing pretty accurately the relative intensity of cold waves in the several sections of the State."

Is an orange belt worth more than land in only a grain-producing climate?

#### FRENCH PRUNES.

Take another article. The French prune is grown in parts of Europe, mostly along the Mediterranean. It is the most profitable of all the plum family, for the reason that it is the sweetest, most productive and the easiest handled. An acre of prune trees five years old, will produce ten tons a year, making two tons of dried prunes, worth from six to ten cents a pound. They hang on the tree until ripe, are shaken on to cloths, and dried with little preparation. An active man will gather a ton a day. The tree has no peals, and is vigorous and healthy. A hundred dollars an

acre is a very moderate estimate. Is not an acre of prunes worth as much as ten acres of grain? Who could sell a prune orchard for less than a thousand dollars an acre?

#### ABOUT APRICOTS.

The apricot is a fine fruit, which is hardly seen out of California. The fruit readily sells for canning and drying at from \$12 to \$30 per ton. The cultivation is about the same as for apples. It is rather a shy bearer in places subject to late frosts and high winds but is almost a certain crop in Santa Clara county. The trees are set out twenty feet apart, or about one hundred and ten to the acre. A tree begins to bear at two years but is in its prime at six to ten years of age, producing two hundred to four hundred pounds to the tree, instances being known of twice as much. It will be seen that five or six hundred dollars to the acre is not an extravagant expectation. It may be observed here that the agent of one of the Santa Clara canneries was told in London that that city alone would take all the apricots that California could raise. Allowing one-half for expenses (and no one need approach that), one hundred and fifty dollars is left as net per acre.

#### PROFITABLE PEACHES.

Peaches show an enormous production. A graft one year and a half old has been known to become two inches thick and bear eighty pounds of fine peaches. Two hundred to four hundred pounds to a tree are common. An acre of peach trees will keep a man and team busy. Is it not worth quite a number of acres of corn?

#### PEARS, CHERRIES AND ALMONDS.

An acre of Bartlett pears selling at fifty dollars a ton for canning purposes, has been known to yield its owner a thousand dollars a year.

Cherries are also enormously productive, but are sold mostly for local consumption as, excepting the most delicate varieties, they are grown almost wherever corn will grow. They usually bring, at wholesale, five or six cents a pound. Cherries nearly an inch in diameter are not uncommon.

Almonds are too shy bearers. Few places even in California mature the almond. An orchard of 55,000 trees in Santa Barbara county on the Hollister place, became worthless. It is uniformly productive in Santa Clara county.

#### TABLE GRAPES.

For steady profit from one year to another with little trouble or anxiety, the grape excels all, though it does not show exceptionally brilliant results as some other fruits. All varieties flourish in Santa Clara county, from summit to summit of the mountains. The Santa Cruz mountains show the largest and finest table grapes in October, November and December, while the lower valleys get into market with fine grapes three or four months earlier. The price of table grapes varies from forty to eighty dollars a ton, according to the supply and demand season, and shipping facili-



ties to the East. Occasionally a man with a few acres of table grapes will gather in half as many thousand dollars; then again, the market is off. The fashion is precarious; sometimes the large sweet Muscat is in demand, then it is the Flaming Tokay, the Verdal, the Black Morocco or Black Malvoisie.

#### WINE GRAPES.

There is a steady demand for the wine grapes at from fourteen to twenty dollars or even more a ton, according to variety. The making of wine is in the experimental stage as yet, resting on the fact that good grapes must make good wine, if properly handled. The wines of Santa Clara valley are now approximating those of Bordeaux, in France, a result that was predicted long ago by those who had seen the close resemblance in the soil and climate of the two places. The acreage is being rapidly increased, perhaps beyond the cellar and storage capacity, but a bright future is certain.

Three-fourths of Santa Clara, or more than half a million of acres, is especially adapted to the grape, which seems as much at home here as wheat in Minnesota or corn in Kansas. It can be raised up to the time of harvesting with as little expense per acre as corn. The usual yield, field culture, is five to ten tons an acre. Trained on trellises, the yield

may be twice or thrice as much, though the expense is much increased. A bearing vineyard in this county is subject to fewer vicissitudes than corn, wheat, barley, potatoes or any of the staple crops in any part of the United States.

It will be seen that any of the above named fruits yield a net profit to the acre of more than \$60 a year or the interest on \$1000. Indeed it has come to be considered that less than \$100 to the acre is no crop at all.

#### POOR FARMING DOES NOT PAY.

It must not be thought, however, that all that sow, reap big crops, or all that plant trees make fortunes. There is more go-lucky, haphazard farming in California, perhaps, than any other State in the Union. Apples and peaches are planted on dry ridges and grow only marbles, or, planted in good ground, are pruned to death, in accordance with some impracticable theory. Grapes are often set where water stands within a few feet of the surface, and perish from mildew in five years, when they would have rejoiced in a vigorous and useful life on a dry ridge. Farming without judgment is as disastrous as in other places, while to him who brings industry and intelligence to bear on his work the reward is beyond expectation.

## Oversupply Not Possible.

**O**CCASIONALLY a man whose ability is limited to considering township or school district lines thinks California has already overstocked the market with wines and fruits, and triumphantly asks, "What are you going to do with them?" To such a man a million gallons of wine, or vineyard extending ten to twenty miles along a road are an immense overstock. Such a man must have ideas in common with a Digger Indian, to whom twenty is almost an incomprehensible number. Millions or hundreds are to him all the same. In vain you tell him that France has her six million acres in grapes, and all that are yet planted in California will not amount to one-tenth of what has been lost in France by the phylloxera. California's eighteen million gallons of wine seem to him enough to float the navy.

#### A SHORT PROSPECTIVE.

If you tell him all the wine of California is not a hundredth part of what is raised in France alone he is in still greater darkness, for like the Indian he is very much limited in his conception of numbers. To such a man a Kansas cornfield would seem enough to feed the world, whereas the corn of all the States of the Union does not move the world much. A thousand railways and steamboats carry it away and a hundred million mouths help to devour it, directly or indirectly. The great

piles of corn, apparently inexhaustible, melt away and are gone before another crop is harvested. So of wheat, notwithstanding the area of wheat ground in the United States amounts to six million square miles (not yet all cultivated by any means), the wheat supply barely keeps pace with the demand, and almost every year sees a famine in some part of the world, this year in India, another time in China. If, then, with the immense area devoted to grain, or capable of its production, bread should occasionally fall short in supply, how much less danger of overstocking the market in the special fruits of California, which can be grown only in a very limited territory.

#### LIMITED PRODUCTIONS.

Let us consider the agricultural capacities of North America for we may rest assured that however national lines and prejudices may be established, commercial interest will abrogate them as far as trade is concerned. First, the whole of British North America, from Quebec to Victoria, and from a width of five hundred to one thousand miles will raise only wheat and grasses. A railway now passes through the whole length of it. Numerous lateral branches are also being constructed or planned with the object of opening it for more extended settlement. The overcrowded population of Europe is pushing there and a few



more years will see the country fully occupied. The country will grow relatively much faster than California. To the swarms of Europe it will be a paradise. The principal fact that concerns us in California is that not an orange, lemon, olive, grape, peach, apricot, prune, almond or walnut can be raised there, nor, excepting California, within a thousand miles of any of that vast territory, compared with which California is but a square in the corner of the chessboard.

#### LIMITED FRUIT AREA.

How much of the United States is adapted to California fruits? On the line of Portland, Boston, Albany, Buffalo and Rochester peaches are an impossibility, while as far south as New York, Chicago and St. Louis the winters often kill the trees. The peach is not reckoned among their valuable productions. Two-thirds of the population in the United States is north of the peach line, while none of it, even its most favored spots along the Chesapeake and Delaware bays is equal to California. Farther west the cold atmospheric waves from central North America destroy the bulk of the fruit as often as every other year. On this belt, if anywhere, California meets a rival in the grape. What are the facts regarding its capacity for the wine and table grape? It is in the region of summer storms and showers which are destructive to grapes. The fine varieties, such as European wines are made of, will not grow at all. Resource is had to the development of the native grapes. It is true that a decided improvement has been effected. Some of the new varieties are good substitutes for grapes, but in comparison with the grapes of California are poor indeed.

#### CONCERNING OTHER FRUITS.

The apricot, olive, almond, and walnut which are so common in Santa Clara county are never seen; never thought of, except as an imported article. As far as temperature is concerned, the grape might flourish in all the Southern States, but the damp atmosphere, with frequent rains, produces a fatal mildew unknown in California. The Gulf States will always remain the land of the cotton and cane—staple and valuable crops, but far below our fruit crops in value, to the acre. Texas has dry summers, suitable to many fruits, but here, again, the cold atmospheric waves, in the shape of a northern blizzard, frequently cover the opening blossoms of peaches and other delicate fruits with ice or snow, destroying the promise of a crop. So small is the prospect for success in fruit raising that few undertake it except as a curious experiment. It is never thought of as an investment, with the prospects of an increased return.

Florida and parts of Louisiana are the only places which enter into rivalry with California, and that only in the citrus fruits. If the area of oranges was twice or even ten times as large the culture would still be profitable.

#### NO BLIZZARDS

California is not in the line of the cold waves to any extent. First, they are cut off by the

lofty Sierra Nevadas, which enter the ocean near British Columbia and stand like sentinels guarding the whole coast, deflecting the cold atmospheric waves towards the Rocky mountains. Furthermore the atmosphere is modified by the great equatorial ocean stream, called the Kuro Siwa, which projects warm breath over the whole coast, maintaining a growing temperature, while all beyond are suffering the agonies of a blizzard.

#### NO COMPETITION.

There can be no serious rivalry with any other part of the continent. The coming millions will have their own industries, but wine, olives, oranges and kindred articles will not be among their productions. When the 77,000,000 people now dependent on the importation of these fruits become 150,000,000 which they will in less time than has elapsed since the discovery of gold called attention to California, the relations will be the same. Our State will be sunny and vine-clad, the land of oranges, olives and wine, while all beyond is under the constant siege of hyperborean forces.

#### AMPLE TRANSPORTATION

Railroads, entering the State in every direction, insure a cheap transportation to all points. Never again will choice grapes be fed to the hogs, or peaches suffered to rot on the ground for want of a market. The millions who will work the rich mines from Lake Superior to the Pacific will want them. The whole busy population of the Mississippi valley, the great grainfield of the world, will look to California for their choice fruits.

#### COMPETITION WITH EUROPE.

California will have an ample margin for profit at present prices. Considering the value of European lands, the increased rates of labor, consequent upon immigration, a greater circulation of money, and the well known favorable climatic conditions, California producers will always be able to maintain at least present prices.

The populous countries of England, Germany, Russia, Sweden and Norway now draw their supplies of wine and semi-tropical fruits from Southern Europe. Even now California is threatening to meet them in their own markets. Shipments of wine have been made with profit to England and Germany. The production of wines in Europe falls short of the demand, and has to be stretched out with deodorized potato and corn alcohol. California "must" (unfermented wine) shows a proportion of sugar as high as twenty or thirty per cent., needing no fortification with brandy or free alcohol. Think of five hundred pounds of grape sugar to the ton, most all of which can be fermented and distilled into alcohol or brandy.

Pure wine can be made in California cheaper than any mixture of coloring matter, sugar, acids and alcohol using even potato whisky, for the grape containing all the elements can be raised in California with less labor than potatoes and corn in any part of the world.

California wines are meeting with a tre-



mendous opposition because they threaten the destruction of such vast capital invested in the manufacture of beer, whisky or bogus wines. Standing on their own merits for quality, purity and cheapness, the march to victory will be certain and irresistible.

What relation will Santa Clara valley hold to the rest of the State? First, vast herds of cattle fed on its perennial grass; next, it was covered with waving wheat fields, the yield astonishing the world. These give place to blooming orchards and rich vintages. Now it

is discovered that the husbandman may add to his list nearly all the production of a tropical climate and include in his industries oranges, lemons, limes, figs, olives and numerous other fruits. He may from his farmhouse, watch the vessels going out of the Golden Gate bear his productions to the whole world. Who wonders that the denizens of Santa Clara valley think theirs the finest country in the world? They have good reasons for their opinions, for nowhere else has Nature been so lavish in her choice gifts.

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## Seeds and Grasses.

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ONE of the most notable peculiarities of California vegetation is the tendency to produce seeds. Nearly all of the native grasses and seeds are annuals the roots inevitably dying during the long dry summer and autumn. Nature seems to have made extraordinary provisions for their production by expending its power on the maturing seed. The same tendency to produce seeds is noticed in blooming shrubs. The manzanita (little apple) produce an enormous amount of fruit, the greater part of which is seed. Nature has also made a provision for the perpetuation of the shrubs by providing them with a large, globe-shaped root, which acts as a reservoir for moisture, and thus the evergreen shrub is enabled to survive the dry season.

All the deciduous trees manifest the same tendency to mature seed. The oak trees frequently break down with weight of acorns. Some well informed agriculturists have seriously considered the policy of raising selected varieties of oaks for the crop of acorns for cattle and hogs. The hazel nut (filbert of England) also bears abundantly, indicating the probability of its successful culture, though no efforts to introduce the improved variety has been made, that the writer is aware of. The success of the almond, walnut and other nut trees is probably in part due to this peculiarity of climate.

### ABSENCE OF FROST AND SNOW.

One of the reasons of this tendency is said to be found in the absence of frosts, rain-storms and high winds at the time the fertilization takes place. The favorable influences of the atmospheric conditions benefit nearly every cultivated plant and tree. Apricots, such shy bearers in all other parts of the United States, here seldom fail. The same may be said of peaches, plums, pears and the whole range of fruits. Thinning out is a universal necessity. The magnificent heads of wheat and barley owe their size to the same cause. The ripened grasses, being so full of seed, have the value of grain and hay in other countries.

### ASTONISHING YIELD.

The amount of seed some of the grasses ma-

ture would seem almost incredible to Eastern men. The writer has seen the seed pods of the bur clover lying an inch deep over large tracts of land. Cattle lick them up and get fat when there is not a blade of grass in sight. The seeds are the valuable parts of all dry grasses.

If a plant grows but an inch or two high it will mature its seed. The plumpest of wheat, though but a few grains in a head, will often be found on straw not more than a foot in height. The famous gramma, or buffalo grass, growing under nearly the same climatic conditions has extraordinary fattening qualities.

The tendency to produce seed is seen in many garden vegetables. A small beet left in the ground will throw out numerous spikes six or eight feet long covered with seed, which if let alone, will plant acres with worthless beets. Cabbage, turnips, cauliflower and the whole kale family soon degenerate into seed-bearing plants. The common mustard sown for greens in the Eastern States, and growing only two or three feet high, will here make a shrub so large and strong that men may climb on its branches. Thirty or forty bushels of mustard seed is sometime gathered from an acre of "volunteer mustard."

The raising of garden seed for the Eastern market has become quite a business in this State. Several hundred acres devoted to this industry near San Jose are making fortunes for the owners, the product being superior to the home article.

### PROFITABLE INDUSTRIES.

Nearly all of the industries which have grown to such gigantic proportions, astonishing Californians as well as Eastern friends, were clearly foreshadowed in the native growths. The wild oats growing in such abundance, indicated the success of the cereals. The wild blackberries, strawberries, gooseberries, currants, mulberries, etc., assured the success of the improved varieties, but circumstances were so different that those who set up the Eastern climate as a standard were skeptical regarding the California climate. "Apples need snow and frozen ground to give them flavor. Peaches must have frost



or the trees will not bloom." Everything was wrong here according to that standard. "Taint like home," was the ordinary expression and also the final proof of worthlessness.

#### CALIFORNIA APPRECIATED.

There are some men whose conception of a standard climate is above that of the little spot where they were born. Some years since the veteran florist of New York, Peter Henderson, after reading an account of the blooming shrubs and plants of California and their habits of producing seeds, expressed the opinion that it would yet raise flower seeds for the world. Among other things he learned that the geranium grew wild here; that the cultivated varieties ripened their seeds, while in the East they could be made to do so only under glass or under exceptional circumstances. He wrote to several persons in California urging them to make flower seeds a specialty. He mentioned the fact that seed from cross-fertilized varieties of fine geraniums was worth six dollars an ounce.

It is well known that the larger the grade of the flower the greater the difficulty in raising perfect seed. The rose, aster, pansy and in fact nearly all the favorite flowers, are subject to this contingency. The higher bred the less chance of getting seed.

#### A SUCCESS.

Some years ago Mrs. Theodosia Shepherd of Ventura, chanced to come into a correspondence with Mr. Henderson, through exchanging California flower seeds for Eastern varieties. Transplanted East, the plants rapidly deteriorated and finally failed altogether. He urged her to enter upon the cultivation of flower seeds for the Eastern market, offering such assistance as was in his power. Her health being delicate, she did not feel able to manage such an establishment, but commenced on a small scale doing much of the work her-

self especially that of fertilizing plants for new varieties. She was delighted with her success and astonished with the improvement of her health. More ground was obtained, more plants cultivated and new varieties originated. Her plantation now occupies nearly four acres. Though much of her work is experimental, not making any returns, she is in receipt of about \$4,000 a year, net profit. Mrs. Shepherd's novelties in flowers are known in almost every home in the East. Some of her new varieties of pansies and astors have brought her hundreds of dollars while she has a steady income from the production of seeds from numerous other flowers.

There is abundant room in Santa Clara county for a hundred delicate but cultured ladies to do likewise. There is no limit to the market. The demand for flower seeds exists in every home in every civilized country. The rich must have flowers for they are the crowning glory of nature's work; the poor must have them for they are the cheapest luxuries attainable.

#### FLOWERS FOR PERFUME.

There is another feature in the cultivation of flowers to be considered. Nowhere in the world are flowers so fragrant as in California, nowhere are they so abundant. Do not those facts point to their raising for the manufacture of perfumery? The vast bloom that ever gladdens our hills can be made a source of revenue as well as pleasure. The delicate fragrance of the chaparral just now in bloom may make a fortune for him who first impounds it. So of numerous others. We may rest assured that we have the most bountiful outpour of nature's good things the world ever saw; also that these opportunities for making money out of them will not remain forever, but be appropriated by some of the thousands who are on their way, or about to come to this country.

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## Suburban Homes.

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VALUABLE as the Santa Clara lands are for fruit, there is almost a certainty of their being converted into residence property during the coming century. Wealthy and cultivated men seek the rest and quiet of country life. There is a greater communion with nature, and a larger development of soul among trees and flowers, than among piles of stone, brick and mortar, or among the shanties that always indicate the quarters of the criminal population of the city.

Walled cities are no longer necessary for the safety of people, and the population overflows into the country. Even as far back as Roman times the wealthy sought homes in the country. We read of Cicero's departure to his country seat. Nearly all the wealthy Romans had country homes. Paris, London, Berlin,

Vienna and all large European cities have elegant suburban districts.

Since the introduction of railways and steamboats, almost annihilating time and distance, the suburban districts have pushed far into the country. A hundred miles up the Hudson is practically a part of New York. A large part of the millions of dollars accumulated in New York City, is spent in beautifying the wooded hills and rocky points along the river.

Boston, Philadelphia, Baltimore, New Orleans, Chicago and the larger cities, have elegant suburban districts. Land in the vicinity of a city, if suitable for residence, has a prospective value for this purpose far beyond that of its agricultural capabilities.

San Francisco is likely to remain the me-



tropolis of this coast, whatever the growth of population may be. All railways center there; all the navigable rivers and bays terminate in San Francisco bay. Half the population of the coast is on these commercial lines, and more than half the population of the state is within an hour's ride. The cities of San Rafael, Oakland, Alameda, Berkeley and San Mateo, are largely made up of persons doing business in San Francisco. The overflow of persons seeking country homes while doing business in the city, is greater year by year. Faster trains are continually demanded, and the time is not far away when the San Jose resident will be landed in the heart of San Francisco in one hour. There are no obstructions to a rapid transit; no ferries, sharp curves or high grades.

Consider for a moment that New York was more than 200 years old before it was as large as San Francisco is to-day, and that many of the founders of the latter city are still doing business there. Who shall place a limit to the growth of the city which has the only safe and capacious harbor on the whole line of our possessions? The eastern coast of the United States is dotted with harbors amply sufficient for commerce, like Portland, Boston, Newport, Annapolis. Not until the coast of Florida is reached, is there a practical want of seaports. On the Pacific coast there is but San Francisco. That port must be the great gateway of all the commerce of the coast, and the country around it will have a share of its prosperity in addition to its own resources of wealth.

What are the relative situations of the two places—San Francisco and San Jose? A look on the map shows a large arm of the bay projected to the south into the heart of Santa Clara county. There is a strip of land on either side four to six miles wide, rising gradually from the water's edge until a height of two hundred feet is attained. Farther, the sloping plain terminates in rolling hills, and these again in the Coast Range of mountains, rising to a height of one thousand to two thousand feet, Mount Hamilton, the sight of the Lick Observatory, attaining a height of four thousand feet. The whole country around the bay farther south, forms a kind of amphitheatre, the end opening towards San Francisco.

Standing on an elevation, say at the San Jose cemetery, or an elevation at the sides, the view is most beautiful. To the right may be seen the towns of San Leandro, Irvington, Niles, San Leandro, Haywards and Centerville, with the thousands of orchards and vineyards lying between. On the left are the towns of Los Gatos, Saratoga, Mountain View, Mayfield, the Stanford University grounds, and the country seats of Milbrae, Belmont, etc. Following the line of the bay the steeples of the churches arise above the trees of Alameda and Oakland, while on the bay may be seen the steamers busily plying from one side to the other. In a clear day the individual houses on the heights of San Francisco may be seen

with a glass. Beyond all, the view is terminated by the dark Tamalpais and the mountains in Marin county. San Jose and Santa Clara, embosomed in orchards and vineyards, lie reposing in the center of the foreground. No view combining orchards, vineyards, towns, villages, ocean and cities, can be found in the world equal to it.

Broussa in Syria is said to be beautiful, orange groves, olive orchards, vineyards, mosques, temples and palaces being mingled in bewildering mazes; but the surrounding mountains are rainless, bare and desolate. Here vineyards, orchards and other verdure climb to the very summit of the adjoining mountains. Seasonable rains assure every crop. The far famed Alhambra of which the Moorish poets sang, was in a rainless country, or with so little rain, that artificial irrigation was necessary. In summer the arid winds from the Sahara desert sweep across the plains, scorching everything as with fire. This valley is subject to neither summer heats nor winter blasts. From summit to summit, grain fields, orchards and vineyards cover the land.

Santa Clara valley was recognized as the queen of all the agricultural valleys in the very beginning of the Spanish settlements. The bay of San Francisco was first seen from the adjoining mountains, the calm, peaceful, grassy valley lying between. When the summit of the Santa Cruz mountains was reached, the glorious landscape, bounded by the placid waters of the great bay, burst on their view. It was like the sight of the promised land to Moses. Though weary and faint from travel and hunger, they forgot all and shouted hal-lalujah.

It is likely the Fathers appreciated the value of the harbor and the adjoining valley which should give the harbor its commercial importance, for both were settled simultaneously and nourished as if depending on a common interest. When the Americans took possession of the country, Santa Clara was regarded as the best of the conquered territory. It was made the temporary capital, and but for the accident of the overland routes terminating in the mines, which left the people in a temporary majority there, it would have remained the permanent seat of the State government.

Though deprived of the honor of being the seat of the legislative assemblies, it is likely to become the center of learning and refinement, as San Francisco is the commercial center. Attracted by the unsurpassed beauty of the situation, the incomparable climate, which permits of perfect mental and physical development, easy accessibility from all parts of the State, and the high character of the rural population, making it a desirable residence for youth, one college after another has been located here, until Santa Clara has become as celebrated for its institutions of learning as for its natural beauties and resources.

First, the two most powerful denominations the Catholics and Methodists located their colleges here, building up large institutions.



Then came the State Normal School. Now the Stanford University, the richest endowed institution of learning in the world, has been located within the boundary. The finest equipped observatory, with the largest refracting lens in the world, when finished and ready for work. It is probable that other millions will be donated for educational purposes, until Santa Clara valley will rival any of the Old or New World cities as a place of learning, for where has nature provided more inducements for such work?

It is quite certain that thousands in far-off lands, who have no business connections in San Francisco, will seek this valley for the advantages enumerated, and that in the next

quarter of a century, Santa Clara valley will be a solid rural town from the cemetery to Palo Alto and the old mission. Lines of cars, propelled by electricity or steam power, will penetrate every side valley, and climb every height. The mountain sides will be traversed by carriage roads that will lead from one country seat to another country seat, that will rival all that are seen on the Hudson river, for the richest gold and silver mines and the best vineyards of the world will pour their wealth into its lap. Those who now object to hundreds of dollars an acre, will then in vain offer as many thousands for a place to make a home. Santa Clara county will then have a population of a million souls.

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## California Native Timber.

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MUCH of the value of a country as a place for homes, depends upon the quality and quantity of the native timbers. It is true that the timber may be in such excessive quantity as seriously to retard the development of a country. The settlers of the Atlantic coast had a fearful contest with the solid belt of timber, six to eight hundred miles wide, which met them like chevaux de frise, at every point. There were no open glades ready for the plow, no parks with stately trees so far apart that grass grew as high as a man's head, as in California. When the immigration reached the open prairies, a few miles across, inviting the plowman to immediate work, the settler's joy was unbounded.

### A SCARCITY OF TIMBER.

But as they went further west, the open glades became larger; the timber thinned out until the groves became a day's ride apart and finally ceased altogether. It was too much of a good thing. Even in Kansas the settlers, who were in advance of railroads, had to dig holes in the hillsides for dwellings; hence the significant and ominous name for a home—"dugout." There was no timber for fuel. Cornstalks and even corn itself, were used to warm the houses. The writer well recollects cooking a scanty breakfast with cornstalks for fuel while crossing the wilds of Iowa on the way to California in 1850.

During the past winter the thermometer went fifty degrees below zero in Dakota and Montana and no timber within hundreds of miles. The building of homes in such a country, however fertile the soil, must be attended with serious difficulties, especially in a land of blizzards. No wonder people freeze to death in their beds.

### CALIFORNIA WELL SUPPLIED.

All of California north of the thirty-sixth parallel is well timbered, or within easy reach of lumber. The Sierra Nevadas from the base to the summit furnish the finest pine timber

to be found in the world. The sugar pine is without a peer. It rises in a straight, tapering shaft, symmetrical as a column of the Parthenon, a hundred feet, without a knot or limb. A large variety of other pines, firs and spruce of immense size afford an inexhaustible supply of lumber for all domestic uses.

At the base of the Sierras the pine gradually gives way to a great variety of oaks including the evergreen live oak. These do not grow in a dense wood as in the Eastern States, but in the shape of a well-cared-for park. The greater portion of it is so open that carriages may be driven anywhere. The oak timber is brittle, inelastic and of little economic value, except for wood. Scattered over the alluvial plains, it adds much to the general beauty of the country.

### THE REDWOODS.

The coast range of mountains has its valuable timbers, as well as the Sierra Nevadas, though the varieties are entirely different. The pine is represented by but one or two useless varieties, giving place to the Sequoia Semper-virens, a close relative of the Sequoia Gigantea or Big Tree family, found only in a few groves along the Sierras and said to be the largest trees in the world, some of them measuring thirty feet and upwards in diameter and three or four hundred feet in height. Though not so large as the Sequoia Gigantea the coast Sequoia is an enormous tree. The first Americans thought they were monsters.

Compared to the trees of the older state they were. One man built a house and fenced in forty acres of land with a five-rail fence, all from one tree. Two hundred thousand shingles from a single tree were not unusual. Some of the trees were fourteen feet in diameter round to the center, and a hundred feet to the first limbs. The lower part of the trunk for ten or fifteen feet usually settles upon itself, forming a curly grain now much prized for finishing lumber, but



formerly considered worthless. A high scaffold was built to cut the tree off above this swell.

#### COULD NOT BE HANDLED.

When the trees were felled they had to be blasted to pieces before they could be sawed. No saws were long enough; in fact, the log could not be moved with any means at the command of the mill-men. Then, of what use was a twelve foot wide plank except as a sample production of California?

The redwood, as the settlers first called this tree, from the reddish tint of the wood, is of free grain. It is not unusual to split siding for a house, 12 feet long and a foot wide. It readily splits into posts, rails, pickets, stakes for grapes or any other purpose. It is inferior in strength to the pine, fir or any of the soft woods, but has numerous other qualities which make it valuable. It is a common saying that it never rots. A post forming the cross at the Santa Clara Mission set in the ground seventy years ago was perfectly sound when it was taken out, though the wind and weather had worn it nearly off above the ground. Fences built of it in 1850 are as sound as on the day they were erected. Houses will last generations as far as decay is concerned. Being destitute of resinous matter, like that which prevails in the pine family, the redwood is not as inflammable. A house burns slowly, affording time for fire companies to get engines to work. The buildings in San Francisco are to a great extent constructed of redwood, to which fact San Francisco owes much of its exemption from devastating fires.

#### OTHER TIMBER

The Coast Range abounds with numerous other valuable varieties of timber, such as the fir, spruce, cypress, madrone, etc. Excepting the last they are all soft wood, relatives of trees of the same name in the East. They make good flooring and dimension timbers, being stiff and strong but are not used to any extent for finishing lumber.

The madrone is a slow-growing evergreen, with irregular trunk and spreading top. The

wood has about the texture of the sugar maple, is of a dark, rich color, and takes a fine finish. It is coming into use for furniture and fine finishing. The laurel or pepper tree is also a hard, elegant wood with about the same uses.

The reader will observe a scarcity of timber suitable for wagons and machinery. The want of it is seriously felt. The Puget sound firs are strong for car building, also for some agricultural machinery, but nowhere is there anything equal to the oak or hickory of the United States. At present all are imported. Even the oak staves for wine casks are brought over the Rocky mountains.

#### THE EUCALYPTI.

Our only hope is in growing imported varieties. The locust flourishes well, as do varieties of the walnut and hickory, but our main reliance for hard-wood timber is on the eucalypti, a family of about fifty varieties, some of which are equal to any of the Eastern hardwood. The Eucalyptus Globrius (blue gum), promises to be eminently useful. It is a rapid grower, adding two inches to its diameter and several feet in height each season.

Some of the trees planted as ornamental trees twenty-five years ago are now four feet in diameter, with three good saw log cuts on the trunks. The wood is hard, tough, fine-grained and said to be the strongest timber of its weight known, but as its grain interlaces, preventing its being split into rails or shingles, it is rather unpopular. They are not suitable for ornamental trees. Being such vigorous growers they are of necessity gross feeders, absorbing all plant food within fifty or sixty feet, but are excellent forest trees. The tall, plume like trees, a hundred feet or more high, have become quite a feature in the landscape of San Jose. Nothing can be more stately than a eucalyptus grove fifteen or twenty years old. Every farmer with twenty acres of land should give one acre to a grove of these trees. It will insure him wood for the next one hundred years.

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## Asphalt Deposits.

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THE ASPHALT deposits of Lake Trinidad at the mouth of the Orinoco river, and of Neuchâtel, in Switzerland, have been famous for many years and have supplied the principal street paving material for the principal cities of Europe for some years past, and is seen also on the streets of Washington and other American cities. These were the only notable sources of supply for this excellent paving material until it was discovered in a modified form in California.

From the peculiar nature of the California material it was at first feared that it could not

prove successful. The Trinidad asphalt is approximately a pure bitumen, and before it is used must be mixed in a heated form with pulverized granite or limestone in some other form. That in this state comes ready mixed with sand. This natural compound was formed in the following way: Large bodies of sand centuries ago were flooded with petroleum from the great petroleum deposits that fill the Coast Range and gradually more volatile parts of the petroleum evaporated, leaving a sticky and tough bituminous residue as the binding property of the sand. All that is necessary to



prepare it for spreading is to heat it. In its natural state it is black and almost as hard as bituminous coal, but when heated it is soft and black and about the constituency of damp ashes. It is spread an inch or more thick and smoothed down with hot irons. If placed on a proper foundation it will last for many years. Its elasticity is the principal ad-

vantage and it makes a hard, smooth pavement as level as a billiard table.

Unlimited deposits of this valuable material exist in this county in the vicinity of Soap Lake near Gilroy. There are miles of sidewalks in San Jose paved with it, besides many blocks of streets. It is an excellent pavement, giving easy draft, is noiseless and easily cleaned.

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## Beautiful Pleasure Resorts.

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**A**MONG THE pleasing and attractive resorts for a pleasure outing, and Santa Clara county has a number, is Alum Rock Park, seven miles east of San Jose. It is reached by the Alum Rock railroad, trains of the line running at frequent intervals, and on Sunday, especially the service is equal to the demands of thousands who desire to take a breathing spell and partake of sulphur and soda baths.

One of the first things which the stranger inquires about is the derivation of the name Alum Rock. From a bold rocky bluff which juts out into the canyon a short way below the park grounds, a substance is found which is declared to be alum in its natural state, hence its name. The park is located well up the canyon, down which flows the Penitencia, a creek. Surrounding on all sides tower tall mountains covered with live oak, sycamore and maple, while the shade thrown out by their ample branches make the midsummer day most delightfully pleasant. The park stretches for a mile up and down the left bank of the stream, many places having been cleared away for camping parties, while in others bits of gardening with a sprinkling of flowers, and grassy plats have been added. A neat and attractive depot has been erected by the railroad company in a convenient spot, a short way below the drinking fountain and bath house, and passengers have but a step to walk to find any point they may desire.

The park property is owned by the city of San Jose. It is controlled by a board of park commissioners who exercise over it a watchful care and so fast as revenue is derived are making what improvements are most needed.

As a matter of fact the railroad company since it fell into the hands of Mr. Hugh Center, has done more toward bringing the resort into popularity and inducing people to visit it than was ever done before. So much has this been done that the people are taking a well merited pride in the park and are going there by the hundreds. The baths are now owned and operated by the city, are superior in appointment to the ordinary bath houses, inasmuch as the waters which include sulphur, soda and iron are conveyed direct from the springs to the tubs. The latter are arranged in such a manner in a commodious house that any degree of heat and cold can be enjoyed with the

added zest of a plunge if so desired. Either sex can find ample accommodation. Because of the healthfulness of the sulphur, many go out several times a week to revel in its efficacy.

The trip from San Jose of a morning is a pleasure which those who have not taken it cannot well appreciate. Imagine a trip of half an hour's duration in which the scenes of a city, the landscape of beautiful orchards, vineyards and grain fields blend with the picturesqueness of mountain canyons and rocky declivities. The ride, although but half an hour in duration, and started upon the street car line leading out Santa Clara street, has more variation in scenery than any similar road of like distance in the country. Alum Rock Park road is reached in East San Jose. This line follows out Santa Clara street for a couple of miles and it then bends around toward the mountains, at one place crossing a grain field and the next running under the shade of one of Santa Clara's thrifty orchards. In and out it goes until finally the mouth of the canyon down which Penitencia creek flows, is reached and then it is first on one side and then on the other, now through a tunnel, now over a trestle and upward and onward winding snakelike up under the shade of great gigantic oaks; the roar of the trucks and the blast of the whistle awakening the echoes sounds strangely in contrast to the murmur of the waters as they leap from rock to rock in their rush downward to the open valley. Finally with a blast longer and more fierce than its predecessors, the train arrives. Alum Rock Park: And such a park. It is like a picture out of fairy land. On a little bank a short way from the landing and facing the bath house—the central point by the way—a bit of landscape gardening is seen in which the name of the park is clearly outlined with brilliant hued flowers.

An attractive fountain from which three varieties of waters are taken is built near the bath house. A little way beyond and facing the latter is a fine open air plunge 75 feet in length, while at convenient places beneath the wide spreading oaks are seats for patrons of the park. Below the depot are ample grounds for picnic parties with tables and seats and other conveniences.

The one great need of the park at present is a large hotel where people can go and



remain for a day, a week or a month. If it could be possible to induce a man like Mr. Center to take hold of a hotel enterprise, it would be solving the problem in a most satisfactory manner. A hotel is badly needed but the hotel must of necessity be of such a character that the city can take a pride in and harmonize with all the other surroundings. Mr.

Center, judging from the character of the improvements he has already made, is undoubtedly the one to undertake a proposition of this kind, if he can be induced to do so. When once that hotel is open for the public and a little more improvements on the park are made, Alum Rock will undoubtedly be the most attractive park in this section of the State.

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## Climatic Contrasts Made.

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**T**HOSE WHO were born in this county, where practically there is no winter, where autumn and spring shake hands across the gap of winter months, have as little idea of the character of farming in that region of snow and frozen ground for six months of the year as the people of that country have of our farming operations. The writer, having spent many years in both climates, hopes to write candidly and intelligently on the different methods necessary in each section, exaggerating or concealing nothing.

All countries produce men capable of the highest achievements and the most self-sacrificing and heroic acts. Minnesota and Maine, as well as others between and south, are sister states to California. We rejoice in their prosperity. We are proud of their triumphs over the resisting forces of nature. We write of the immense differences of climate, resources and attractions that all residents of the East or West may become better informed about our common country.

### A COLD COUNTRY.

The exceptionally cold winters of the Northern States, colder than anywhere else in the world in the same latitude, attracted the attention of all explorers, and by many were considered a bar to settlement. England, much farther north than any portion of the United States, had comparatively mild winters. Nothing like a Maine or Minnesota winter could be found below the coast of Norway or Sweden, where summer days and winter nights were twenty-four hours in length. Of the one hundred and four persons who landed from the Mayflower in December, thirty-one died of hardships during the winter from inclemency of the weather. Other colonists fared even worse. The result, however, established the habitability of the country, even with its fearful winters, for two hundred and fifty years afterward the inhospitable land was the home of a civilization greater and better than the world had theretofore seen, such as our forefathers never dreamed of. A rocky sterile soil and cold inhospitable climate may be productive of a tough race of men; only such survive; but probably if the Puritans, God-fearing as they were, had known of the inducements for settlers on the Pacific Coast, duty would have led them in that direction.

Well, what is the climate of those Northern States? One writer has aptly described it as "three months cold weather, and nine months winter." The writer's experience is confined to the states of New Hampshire, Vermont and New York. Farther south the weather was different in degree only. After a short growing season of ninety days, which is all that is exempt from frost, say October 1st, the ground begins to freeze at night. Daily the Frost King lays closer siege until everything is locked up in his embrace. All the ponds, lakes and rivers are frozen over and are safe for heavy teaming and freighting over their surfaces. Sometimes the Frost King is mighty enough to lock up the harbors, Boston's having been frozen over several times in the present century, so that vessels could not get out except by sawing channels through the ice at great expense. Even the New York harbor has had to surrender occasionally.

### THE FROZEN GROUND.

The ground is frozen as hard as a rock. It would be about as easy to plow a granite ledge as a last year's cornfield. Snowstorms prevail, and the ground is covered from three to six feet with snow to remain for three or four months, unless a January thaw intervenes, in which case the snow is replaced by frequent storms. After each fall of snow the whole neighborhood must turn out to break a road, that the stage may pass, or the children go to school. All the oxen of the neighborhood are hitched together and attached to a sled with a plow lashed to each side to throw the snow farther away and make the road wider. If the storm has been severe or accompanied with a drifting wind, a party of men with shovels must precede the procession of cattle, to shovel a way through the drifts, which may be ten or even twenty feet deep.

Most snowstorms are followed by high winds which whirl the snow into great drifts, or sweep it miles along level ground, and drop it in some sheltered place, where it will often resist the sun's influence until the following June. Sometimes the snow is piled up on the sheltered side of a house until the windows are hidden from view.

### FROST-PROOF CELLARS.

Apples and all vegetables, such as potatoes, turnips, beets, onions, etc., have to be put in



cellar away from the frost. If the cellar is under the house, which is usually the case, the house must be banked around with earth, tan bark or fine chips, to assist in keeping out the cold, which lays close siege to everything in the house and cellar. Great fires have to be kept up during the winter, requiring an immense outlay for wood. Previous to the introduction of stoves to economize the heat, forty to sixty cords of solid wood were thought necessary to carry a family through the year.

#### ANCIENT FIREPLACES.

It may be observed at this point that the experience of two hundred and fifty years has induced a better style of dwelling than prevailed among our early colonists. In revolutionary times often a whole end of a house was a fireplace, being built up of brick or stone work, the chimney, such as it was, starting from the timbers that supported the chamber floors. Doors were left near the fireplace on each side of the house, so that large logs could be drawn in with a horse. (Query: Did "drawing-room" come from that source?) As the whole Atlantic Coast, eight hundred miles from the ocean, was a solid belt of timber, wood was of no value. These big fireplaces are a matter of tradition, but something of that style of building was common a half century since.

#### CARE OF CATTLE.

To return to the present method of farming, all cattle, horses, cows, oxen, sheep or hogs have to be housed at night. Oxen and cows are tied in rows with bows, or in a stanchion with their heads between two upright pieces, to keep them from goring each other. They must be fed several times during the day and night. In the three states mentioned, every prudent farmer puts into his barn, for winter use, three tons of hay, or its equivalent in other feed, for each horse or ox; two tons for each cow, and a ton for each three sheep. If the season is open, that is, if the cold weather delays its appearance a few days or if spring is a few days earlier or the winter is milder than usual, some hay will be left over.

If water is not brought into the barnyard by underground pipes laid below the frost line, the cattle must be watered from wells or at some spring or creek, frequently several hundred yards away from the farm. Paths must be shoveled through the snow, and the ice cut away from the spring or creek that the cattle may get to the water. The industry of a man who farms in such a cold country is taxed to a fearful extent to carry him and his stock through the winter. It amounts to at least half his earnings, or rather half of his vital power.

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## The Principal Industries.

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**A**MONG THE MANY articles published in other pages praising and describing the Santa Clara valley, the following from a San Francisco paper a few years ago deserves prominence:

Today San Jose is bathed in a flood of warm, mellow sunshine. Last night the climate asserted itself, and pushed the clouds through the cracks of the Coast Range, and resumed its regular business of being more amiable than any other climate in the world. The Eastern visitors all came out for a sun-bath, and the citrus fair was thronged, the day attendance being the largest yet. A number of San Franciscans and Oaklanders came down to look at the orange show, among the former, United States Marshal Franks. Old Californian that he is, he was very much surprised at the beauty and variety of the display. He gave the "boom" his blessing and returned to the metropolis with a San Jose rose in his buttonhole.

#### A GREAT INDUSTRY.

Prunes are becoming one of the staple food products of the county, much care having been bestowed on culture and securing the very best varieties. S. F. Leib's orchard furnishes an example of what can be done in prune culture alone. In one season he gathered one hundred and fifty tons of fruit prepared for mar-

ket. His prunes are so esteemed that he has his entire crop sold before his trees blossom, and could make satisfactory bargains for more if he had more bearing trees. He receives a net return, over and above all expenses of cultivation, picking and packing, of \$150 or more an acre. The same land in wheat would not yield a net profit of more than \$10 to \$12 an acre. A hundred thousand acres, as well adapted to prune culture as Mr. Leib's orchard, lie around San Jose.

#### DEMAND FOR FRUIT.

Good fruit finds a ready sale in the orchards here. This is a decided advantage as owners of small orchards can, if they so desire, spare themselves the trouble of picking and packing. This advantage is equally shared by the small vineyardists, who find a ready market for their grapes at the extensive wineries. The prices are according to the variety and quality of the grapes, but the advantage is always on the side of the grower of good fruit. The better the grapes the readier the sale and the larger the price.

Apricots are a fancy crop in Santa Clara valley and yield big returns. They are a favorite canning fruit, and large quantities are put up annually. Peaches and pears are not much behind, either in the quantity canned or the profits realized from cultivation.



There is such a wide variance in the prices of land, that intelligent quotation is almost impossible. They run from \$50 to \$1000 an acre, location and degree of improvement being prime considerations. Good vineyard lands equally well adapted to citrus culture, in the foothills from ten to fourteen miles distant from San Jose, range from \$75 to \$200 an acre; valley lands lying from eight to twelve miles distant, range from \$100 to \$300 an acre. These figures only apply to the first class land lying along improved highways and within easy distance of a postoffice or railway station.

#### MEETING NEW CONDITIONS.

The reader whose farming experience has been in a cold country will see that though he may raise the ordinary Eastern products his interests will lead him to cultivate the crops of a more favored climate, involving new methods of farming. His experience there will avail him little here. At first he will consider everything slipshod. The absence of extensive barns and dwellings to resist frost, enormous woodpiles and the other accessories of farming in a cold country will impress him unfavorably. He will eventually find, however, that they are unnecessary. He will see more profitable uses for his energy and industry than to fortify against cold weather. The efforts necessary to make a living in a cold country will make him forehanded here. One thing that impresses him is the splendid roads

everywhere, generally designated as avenues. They are sprinkled and kept in beautiful condition, with costly residences and well kept lawns. They are provided with hot and cold baths and there are few without a telephone, connecting them with San Jose and all parts of the county. At little cost he can call up Los Angeles or San Francisco and other places.

#### FORTUNES IN STOCK.

Many fortunes were made by the Americans on the San Joaquin and Sacramento plains, as well as in smaller valleys, in early years by branding stock and letting it run at large. Generally part would survive dry summers and cold rains without further care. The stock was "rounded" at a rodeo once a year and the calves branded with the mark of the cow which each followed. The "no fence law" which makes it obligatory for each owner to take care of his stock, and the general settlement of the country and making farms, banished that kind of stock raising to the frontiers. This is especially true of Santa Clara county, where wheat growing first, and subsequently fruit growing, drove out the long-horned Spanish steer and his half-savage owner. But few of these large grants remained intact, and these are fast disappearing under the demand for fruit land. A thousand families now live in comfort and refinement where one Spanish rancho reared his ignorant sons and daughters.

## Selection of Lands.

WHILE FARMING is much alike in all countries, yet the different soils and climatic and other conditions modify the general character so that what in one place would insure success, in another would bring disaster. No man in Vermont would plant potatoes in December or corn in February, yet such things are common in California. All the conditions are strange to newcomers and the object of this article is to give those who propose to make their homes here some idea of the necessary labors and expense. Those who have means may buy an improved piece of land, with trees and vines yielding a revenue. But many men of those who have money desire to begin de novo, and those who are impecunious are almost compelled to do so.

#### QUALITY OF LANDS.

The cheapest and best land for some fruits is that which was formerly covered with a growth of small trees and shrubs called chaparral. The soil is not alluvial in the ordinary sense, that term being used to indicate the moist land near the banks of a river and deposited by overflows. It is not fertile like the prairies of the Mississippi valley, for it will raise only moderate crops of grain and hay. The land has to be cleared of the brush and

trees, root and all. Here it may be necessary to explain that nowhere in California, except along water courses or in the fir and redwood lands of the coast regions, are there any tracts of solid dark forests such as covered the whole Atlantic coast. Large, magnificent oaks, four to eight feet in diameter, with large, shady tops may be found everywhere, but they may be fifty to one hundred feet apart, so scattered that the grass that formerly grew among them, formed something like a park to the rest of the estate. They were far apart with roots below the reach of the plow, and interfered so little with the cultivation of grain that most farmers permitted them to stand unmolested.

#### METHOD OF CLEARING LANDS.

When orchards and vineyards were planted they had to come out, stumps and all. As there would not be more than five or ten trees to the acre the expense of clearing was comparative small. On the chaparral lands it is different. The small shrubs have roots large enough for trees; in fact the root, which is hard and gnarly, is much the largest part of the growth. The roots of all these chaparral growth are hard, fine grained, beautifully colored, take a fine polish and make excellent ornamental work, such as picture frames, toi-



let cases and all work requiring inlaying. There is not much sale for them at present, but probably will be; now they are used mostly for fuel. They sell readily at four or five dollars a cord, fully paying for the cost of grubbing them out. The cost of fruit land may be reckoned by the quantity of roots it has on it, generally four to ten cords to the acre.

#### CULTURE NECESSARY.

A few years of close cultivation are required to keep the wild shrubbery from growing up again, which would be as bad as ever in two or three years. This kind of soil is always mellow and after the brush is removed can be easily plowed to the necessary depth with a pair of horses.

Much of the same quality of land, both on mountain and plains, is destitute of either the chaparral or timber, and may be plowed without any preparation.

#### DEEP PLOWING UNNECESSARY.

An erroneous notion has extensively prevailed that deep plowing was necessary for grapes or fruit trees, and six or eight horse teams might be seen dragging a plow cutting a furrow twelve or fourteen inches deep. The idea of this unnecessary operation was borrowed from Europe, or the Northern States, where glacial action has plastered the earth into a "hard pan" many feet in depth which was broken up only by alternate freezing and thawing. In California there is no "hard pan," and extraordinary deep plowing is unnecessary. There is one exception, however. In many of the old wheat-fields, cultivated for the last thirty years, there is a hard floor on which the plow has run many times. This must be broken up with a strong team, otherwise it would hold water and make the preservation of the deep moisture difficult. The preparation of soil for fruit trees does not differ essentially from that of any hoed crop, costing neither more nor less. It is done on large tracts, even in California, with gang plows, as low as one dollar and a quarter an acre. A small tract, say ten to twenty acres, might cost two or two and a half dollars an acre.

#### HOW TO PLANT.

Laying out a vineyard or orchard requires a careful man. Some over-nice people employ a surveyor, with chain and theodolite, which is all nonsense. Any man of good common sense can make a chain in half an hour out of baling wire that is correct enough for all purposes. The method is as follows: Drive two nails such distance apart on a board as you design to plant your trees or vines, say eight and a quarter feet for vines, which is the usual distance. Bend the wire into a hook around the nails and cut it off. Each length will make a link in a chain. To facilitate measurement put a piece of red flannel in each joint of the chain. Twenty links (ten rods) in length will be a convenient chain to handle. A man at each end will carry it alongsidewise, after the corners of the tract are established, without

difficulty and set a stake at each piece of flannel.

#### FOR GREATER ACCURACY.

If you have any trouble in getting the trees or vines in line you may be more accurate by using a narrow strip of board five or six feet long with a hole in each end and a notch in the middle. When you are about to dig the hole adjust the notch to the stake where the tree is to set; wooden pins in the ground where the holes in the end of the board rest will enable you to put the board back in the same place after the hole is dug, the tree to be planted being placed in the notch being vacated by the stake. A careful man will work expeditiously and set the trees within an inch of a straight line, which is correct enough for all practical purposes.

#### NO DEEP HOLES NEEDED.

The hole for a fruit tree need be dug no larger than is necessary to contain the roots. Here, again, some theoretical horticulturist will insist on digging immense holes, four or five feet deep, and as many feet across, which is a waste of labor for the reason stated, that nearly all the ground is loose enough for the growth of roots.

If cuttings are to be planted the ground should be opened with a spade. Some use a dibble or crow bar, making a hole and thrusting the cutting into it; but unless the earth be closely pressed against the whole length of the buried part, by thrusting down the bar close to the cutting, and pressing the earth against it, the cutting will not likely take root.

#### STAKING THE VINES.

The second year the vines ought to be staked though this is not imperative, but they make more uniform heads when staked up. Good redwood sticks may be purchased for ten dollars a thousand making the cost per acre about six dollars. They will last until the grape vines can support themselves, which will be six or eight years of age.

The first cost of planting trees and vines is about the same, adding the extra cost of trees and also the subsequent cultivation to the time of bearing. Larger teams with a gang of plows may be used among trees than among vines. It is common to see a four-horse team with a gang of cultivators loosening a breadth of six feet of soil. Two plowings each way during the season are considered ample for all purposes. Improved plows and cultivators, that go quite close to the tree, are used, so that little remains to be done with a hoe or mattock. Generally an orchard or a vineyard may be cultivated with the same labor that a cornfield requires in the Eastern States. Many a man in Illinois has raised with his own labor, fifty acres of corn. The same industry will count here as there.

#### PRUNING VINES.

Grape vines whether raised on trellises or stakes or on the ground require much pruning, nearly all the growth of each year has to be cut away, the growth furnishing means for



elaborating the fruit sap. For the first few years the cost is slight. A man will go over several acres in a day. When five years old each plant will throw out dozens of long canes which will cover the ground, requiring at least a day's work on each acre of vines. This expense increases year by year, but so does the yield. When a grape vine is young it throws out numerous suckers, which have to be pulled off, being in this respect much like a hill of corn. After three or four years that trouble ceases and the vine goes seriously to work, economizing all its forces.

When well treated the grape vine shows the heartiest desire to serve its owner. It climbs and runs, sets and ripens fruit without stint. It is the ideal of plant vigor.

TREE PRUNING.

A great deal of waste prevails in dressing trees—waste in the vitality of the tree and waste in time. A custom of severe pruning

prevails, induced, perhaps, by professional butchers who manage, by severe pruning that induces a growth of water sprout, to make a subsequent pruning a necessity. An orchard pruned in this way soon shows indications of old age and ceases to be of any use, when it should be in a vigorous youth. Nine-tenths of the ordinary pruning is worse than useless. If a man does not know how to prune with discretion, let him go home and hang up his saw and pruning hook.

THINNING OUT FRUIT.

Everyone may venture to thin out the fruit when more is set on the tree than it can mature. That will save the tree. The best orchards now growing of the plant of thirty years ago are those which were not pruned. If a professional pruner comes to you representing that the trees need cutting all to pieces, set the dog on him; at any rate get him off the place.

## Ladies' Benevolent Society.

THE pioneer charitable association of this city, the Ladies' Benevolent society, was organized April 16th, 1867, and the Home of Benevolence was founded some ten years later as a logical result, and to meet the needs of the society.

The Ladies' Benevolent society was the outgrowth of a general feeling of the need of organized charitable work, and a move toward its accomplishment among the best men and women of the community.

Notable among its founders and projectors were Mrs. J. C. Cobb, Mr. and Mrs. Freeman Gates, Mrs. Geo. Evans, Hon. J. J. Owen and many others.

At the first meeting, for organization, and in recognition of the superiority of woman in work requiring so peculiarly the mother instinct, it was resolved by the gentlemen interested, that the management of the work be given entirely into the hands of the ladies, the sterner sex occupying the position of helpers and "auxiliaries."

At the second meeting a constitution was adopted, fixing the name "The Ladies' Benevolent Society of San Jose," declaring its object to be "to render assistance to sick and dependent persons residing in the city of San Jose," and declaring it the duty of members, among other things, "to search out the condition of the poor, the sick and the needy, as they may have opportunity, and to report the circumstances to any member of the Board or Visiting Committee."

The officers consisted of a president, vice president, secretary, treasurer and a board of managers of four, a visiting committee of fourteen being appointed every three months. The annual dues for members were two dol-

lars a year for ladies, and five dollars a year for gentlemen.

The first official board consisted of Mrs. J. C. Cobb, president; Mrs. A. Pomeroy, vice president; Mrs. N. Hayes (now Mrs. Chas. Martin) secretary; Mrs. C. R. Spaw, treasurer and Mesdames W. N. Slocum, George Evans, F. E. Adams and E. J. Wilcox, managers.

The members of the first visiting committee were: Mrs. R. B. Hall, Mrs. E. Albon, Mrs. China Smith, Mrs. Joseph Ingham, Mrs. Collins, Mrs. D. L. Shead, Mrs. A. Rhodes, Mrs. D. T. Adams, Mrs. Wesley Tonner, Mrs. J. R. Whitney, Mrs. T. Ellard Beans, Mrs. Josiah Belden, Mrs. B. L. McCabe and Mrs. J. C. Smith. An auxiliary committee of gentlemen was composed of Messrs. J. A. Quimby, J. J. Owen, D. S. Payne, E. J. Wilcox, Richard Savage and A. B. Hamilton.

In 1877 by a revision of the constitution the dues were placed uniformly at two dollars a year, and other changes were made.

In February 1872 the Ladies' Benevolent society was legally incorporated. In 1874 Mr. Stephen Morey bequeathed to it some property, including six acres of land at the junction of Martha and Eleventh streets.

In June 1876 the Home of Benevolence was established in a temporary home, which after some transitions, is now located in its own buildings on its own lands. It was incorporated in 1879.

The constitution and by-laws of the Ladies' Benevolent society were finally revised in April 1890 to meet the requirements of the branches of its work as well as its vastly increased duties and responsibilities, its object being then defined, "to render assistance to



sick and dependent persons, and afford a home for orphans, half-orphans and abandoned children, and such others as in the judgment of the directors shall be deemed worthy of aid." The affairs and property of the society are now managed by twenty-five directors, ten of whom are trustees of the Home of Benevolence. The work is done by various committees, including district visiting, etc. The members of the Ladies Benevolent society are members of the corporation, Home of Benevolence.

The present officers and directors of the Ladies Benevolent society are: Mrs. Geo. B. McKee, president; Mrs. D. M. Barker, first vice-president; Mrs. S. J. Churchill, second vice-president; Mrs. Paul P. Austin, recording secretary; directors, Mrs. Mary F. McCulloch, financial secretary; Mrs. E. H. Guppy, corresponding secretary; Mrs. Fannie D. S. Williams, treasurer; Mrs. S. A. Cory, Mrs. J. L. Asay, Mrs. I. Willey, Mrs. M. L. Wyllie, Mrs. E. R. Stone, Mrs. E. Smout, Mrs. M. F. Williams, Mrs. B. Cochrane, Mrs. M. T. McCall, Mrs. W. Morse, Mrs. E. C. Flagg, Mrs. F. W. Moore, Mrs. J. A. Ledyard, Mrs. W. H. Fruhling, Mrs. H. Branham, Mrs. E. D. T. Van Hagen, Mrs. A. T. Herrmann and Mrs. Noble T. Biddle.

The officers of the Home of Benevolence are the same as above, with Mrs. S. A. Cory, Mrs. E. R. Stone and Mrs. E. D. T. Van Hagan as additional trustees. The physicians in charge are Drs. Howard B. Gates, Amelia L. Gates and J. D. Grissim.

The present Home buildings were first occupied July 15, 1880. Since then various additions and extensions have been made as required, and more are now needed.

There are now one hundred and twenty-two children in the Home, forty-six girls, fifty-six boys and twenty babies under one year.

The sources of revenue of the Home, beside dues of members and private donations, consist of: A small per capita sum from the state for orphans and half orphans, to which the Home is entitled under a legislative act of 1880, affecting such institutions, and the yearly revenue from the \$25,000 appropriation of the late James Lick for similar purpose, known as the "Contingent James Lick Trust Fund." For a time the County Board of Supervisors dispensed aid to the needy through the association, but this help has been withdrawn, the Board now looking after this distribution, itself.

In the midst of its lovely tract of six acres surrounded by its own orchard, gardens, lawns and flower beds the Home of Benevolence is indeed an ideal institution of the sort. Under

the excellent management of the matron, Mrs. Margaret J. Hubbert and her skillful assistants, the home is kept in a model manner. Neatness, cleanness and sweet wholesomeness, are the characteristics of the place, while cheerfulness and kindly wisdom in dealing with the children, on the part of the assistants, tend to reduce to a minimum the loneliness of their orphanhood.

The best of food is supplied, and added to this are milk from their own cows, and fruit and vegetables from their own gardens.

Of the great host of noble women and men who have given their efforts in this most praiseworthy charity since its inception, it would be impossible to speak even briefly in the present limits. Among the early officers and members were such well known ladies as Mrs. L. Archer, Mrs. James Hart, Mrs. Charles Allen, Miss Sarah Severance, Mrs. Crydenwise, Mrs. J. J. Owen, Miss Anna Cobb, Mrs. Stephen Thorne, Mrs. Jackson Lewis, Mrs. W. S. King, Miss Graves, Mrs. T. W. Spring, Mrs. S. O. Houghton, Mrs. Ann Yates, Rev. and Mrs. Chas. G. Ames, Mrs. S. J. Churchill, Mrs. Flickinger, Mr. and Mrs. E. P. Reed—but it is impossible to complete the list, and individual mention seems almost as an invidious comparison.

Some of the earliest members will be recognized as prominent in the work today—as for example that strong worker along all good lines, Mrs. S. J. Churchill, Mrs. S. A. Cory, Mrs. T. E. Beans, Mrs. L. Archer and several others, while the mantle of Mr. and Mrs. Freeman Gates has descended worthily in this instance upon their son, one of the physicians in charge.

The work of Mrs. Bertha R. Cochrane, the "Committee of One," to whose judgment and experience cases of admission and dismissal have been confided, can hardly be passed by without reference, it has been so faithful, so unselfish and so efficient.

The present membership is one hundred and seventy-five and includes some of the best men and women in the community.

It would be equally impossible to give any adequate idea of the work done by the society during its thirty-two years of existence; of the poor families helped, of the orphans sheltered and homed, of the many given an impulse to added personal effort that led to success—they are known in their entirety only to Him who commanded of old to "Gather up the fragments, that nothing may be lost." It is one of the most valuable institutions in San Jose, and her citizens will, undoubtedly, in the future as in the past, be earnest in its support.



## Art Building Association.

THE VARIOUS WOMEN'S CLUBS and culture clubs of San Jose have in hand the work of obtaining funds for the erection of an Art Building, the workers being known officially as the Art Building Association.

The particular purpose of this proposed building is to house a valuable collection of paintings and art gems, given to the city, with this provision, by Mrs. M. P. O'Connor, a cultured and public spirited lady, who with her husband, Hon. M. P. O'Connor, gathered the collection while traveling in Europe.

In January, 1898, by an invitation from the Art History Club—to the ladies of which the gift was first suggested by Mrs. O'Connor, during an inspection of the collection—representatives from the several culture clubs of San Jose and Santa Clara, the State Normal and city public schools, met at Notre Dame Institute, where they were received by Mrs. O'Connor, with the object of considering the proposed Art building.

At this meeting a committee of fifty was appointed from the several representative bodies "to devise ways and means to obtain funds for the erection of a suitable building, in accordance with Mrs. O'Connor's desires, to receive the beautiful gifts of pictures and art treasures to be presented by her to the city." The clubs represented and their committee members were: Art History, Mrs. L. Archer, Mrs. Nicholas Bowden, Mrs. H. Ward Wright, Mrs. James Henry Pierce and Mrs. George Muirson; Woman's Club, Mrs. E. O. Smith, Mrs. Mitchell Phillips, Mrs. W. C. Kennedy, Mrs. Francisca Sunol Angus, Mrs. Stephen A. Jones, Mrs. William B. Hobson, Mrs. Noble T. Biddle, Mrs. W. B. Hill, Mrs. A. K. Spero, Mrs. Louis Callisch and Mrs. H. K. Stahl; Eschscholtzia Club, Mrs. F. Bradley Smith, Mrs. F. C. Young and Mrs. W. B. Hobson; Manzanita Club, Mrs. H. C. Benson, Mrs. Ed. Williams, Mrs. Stanley Willey and Mrs. Stone; Navalikhita Club, Mrs. H. M. Tenney; The Monday Club, Mrs. Chas. Allen, Mrs. Mary McCall, Mrs. E. C. Singletary and Mrs. R. S. Holway; No Name Club, Mrs. T. Ellard Beans, Mrs. Geo. Bowman and Mrs. J. Q. A. Ballou; Book Club, (Santa Clara) Miss Wheeler; State Normal school, Prof. H. H. Howe and Miss Gertrude Payne; Public schools, Mrs. C. H. Clement; University of the Pacific, Prof. M. S. Cross.

In making this magnificent gift to San Jose Mrs. O'Connor requested but two conditions: That the proposed building should be located in the grounds of the State Normal school; and should be fire proof. She stated that the collection was to be considered but the nucleus of an art gallery, and that her chief object in giving it was to found an art school. She also requested that in the proposed building rooms

should be provided for a meeting place for the various women's clubs she being particularly interested in the culture club work of women.

At this first meeting over which Mrs. E. O. Smith was elected to preside, while Mrs. R. S. Holway acted as secretary—all local organizations for culture were invited to co-operate. A standing executive committee of fifteen was also appointed whose duty should be, 1st to secure a site; 2nd to secure plans etc. 3rd to select from the citizens of San Jose and surroundings a committee of one hundred to assist in securing the needed money, \$20,000 being the sum desired,

The executive committee, after some slight changes and additions consists of Mrs. Mitchell Phillips, Acting President; Mrs. E. O. Smith, President; Mrs. Nicholas Bowden, Vice President; Mrs. R. S. Holway, Secretary; San Jose Safe Deposit Bank, Treasurer; Mrs. J. H. Pierce, Mrs. W. B. Hobson, Mrs. Edw. Williams, Mrs. C. H. Clement, Mrs. Carrie Stevens Walter, Miss Mary Beans, Mrs. Mitchell Phillips, Col. Philo Hersey, Col. A. K. Whitton, Prof. R. S. Holway and Prof. F. P. Russell—Mrs. W. L. Woodrow acting on the committee.

To Mrs. C. H. Clement was delegated the task of securing the site in the Normal School grounds, and subsequent events proved that no better person could have been selected for this duty. The annual joint meeting of the several Normal school boards of trustees was to be held in Los Angeles early in April, 1898, and Mrs. Clement applied herself so faithfully and convincingly to the work of laying the matter before the members interested in the matter, and others, including Governor Jas. H. Budd, that when the meeting of trustees took place every one was enthusiastic in favor of the Art Building.

At Mrs. Clement's suggestion, and with Mrs. O'Connor's cordial approval, the trustees were asked to give a site for the Art Building; to receive the building and contents in trust for the city of San Jose, to take care of the building in the same way that other Normal school buildings are cared for, to all of which the trustees most heartily agreed. The board also sent to Mrs. O'Connor resolutions of thanks for her gift.

It can be said, with the cordial endorsement of all the other workers, that to this bright, energetic, capable lady, Mrs. Clement, belongs the credit of securing the site.

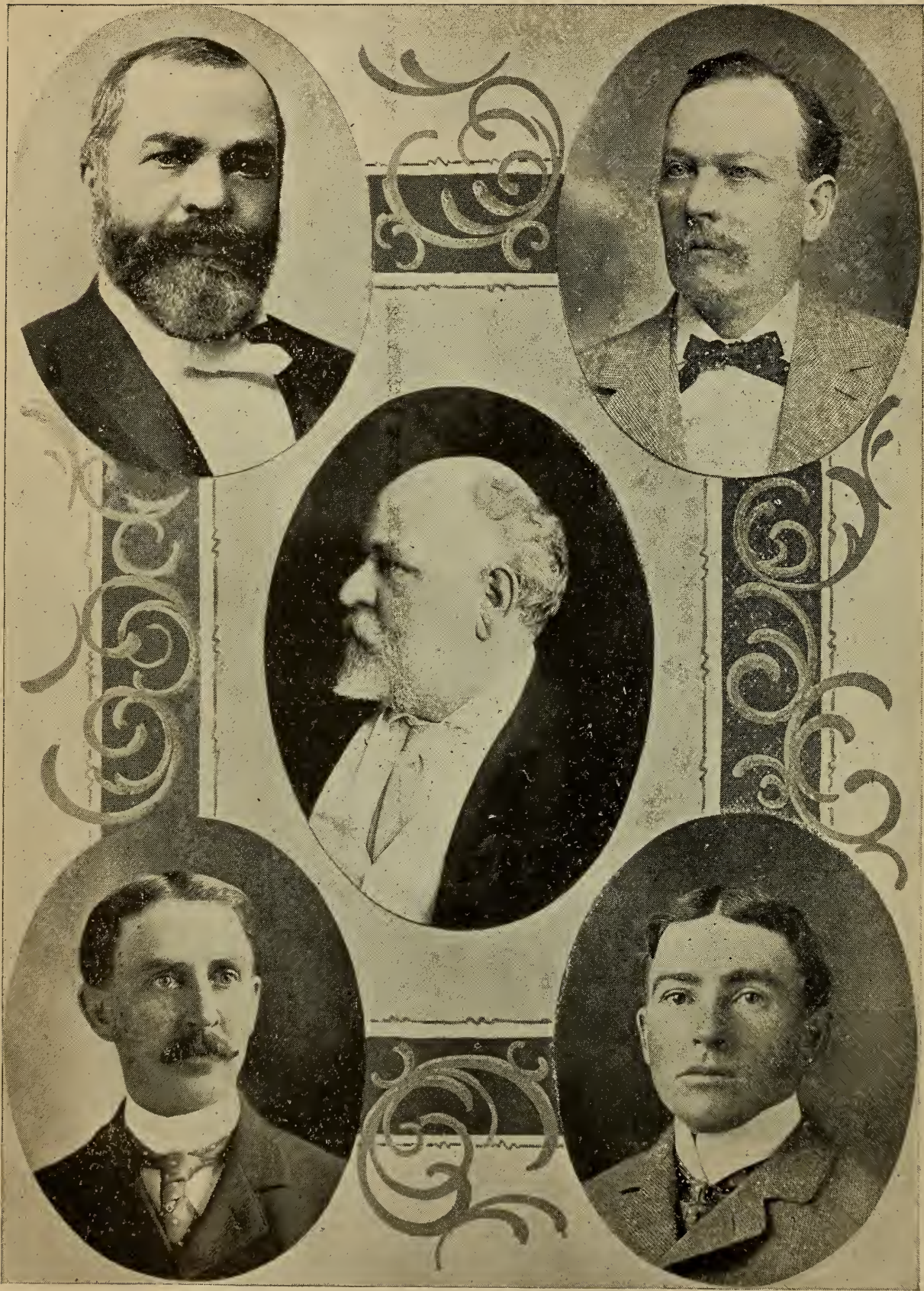
The several plans for securing the needed sum were progressing successfully when the war with Spain was declared and every other effort of the ladies was merged into the needed work for the Red Cross Society. Until peace returned the work for the Building fund was held in abeyance. It has now been taken





HON. P. M. O'CONNOR.





BOARD OF PARK COMMISSIONERS.

B. D. MURPHY

A. C. DARBY

L. G. NESMITH

A. H. MARTIN

J. B. CARROLL



up again and is being earnestly pushed by the ladies interested.

Two notable events in its interest have yielded gratifying results; The "Dewey Day" celebration held May 1st, 1899, at Agricultural park—the net returns being over a thousand dollars; and a grand concert of local talent given at the new Victory theatre June 13th, 1899.

The ladies have now in cash and pledges between six and seven thousand dollars. The work is being pressed steadily and they are sanguine of soon being able to begin the erection of the building.

With the art building and art school, San Jose's claim as a center of culture will be a

just one, as this alone has been lacking.

To the tireless efforts of the president of the executive committee, Mrs. Mitchell Phillips, and to the faithful painstaking secretary, Mrs. R. S. Holway too much praise cannot be given. Their hands are held up by a host of bright, enthusiastic women who have resolved to see the completion of this ornament to San Jose, therefore the success of the enterprise is assured.

Its erection will be but a fitting response on the part of the people of San Jose to the generosity and public spirit of the respected donors, Judge and Mrs. O'Connor, who have already given away in benevolence here over half a million dollars.

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## Alum Rock Reservation.

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**T**HIS MAGNIFICENT park of some five hundred acres belonging to the city of San Jose, lies about seven miles away in the eastern foothills. Being shut away from the valley almost entirely by a low range of hills, it possesses an atmosphere much drier and lighter than the valley, and is quite free from fogs or cold winds. The climate is delightfully balmy and healthful, which together with several valuable mineral springs render it a favorite place of resort both for health and pleasure.

The beautiful Penetencia creek flows through a wild and picturesque canon the entire length of the park. Countless varieties of natural woods, shrubs and, in their season, wild flowers make the hills and declivities beautiful the year around.

Much of the park has, wisely, been left almost in a state of nature, but immediately surrounding the baths near the entrance to the park many improvements in the form of buildings etc. have been made.

The park is under the direction of a special commission formed June 22nd, 1891, by an ordinance of the Mayor and Common Council of San José. The first commission was composed of the well known gentlemen: Hon. B. D. Murphy (chairman), Dr. C. W. Breyfogle, A. B. Hunter, L. G. Nesmith and H. B. Alvord (secretary). During the next seven years Messrs. A. T. Herrmann, Valentine Koch, H. J. Edwards, A. C. Darby and D. J. Porter served upon the board taking the place in turn of A. B. Hunter (elected councilman), Dr. C. W. Breyfogle (deceased), H. B. Alvord (resigned), A. T. Herrmann and V. Koch, elected mayor.

On the first Monday in July, 1898, by provision of the new city charter, the old board ceased to exist, and a new board took office, consisting of B. D. Murphy, L. G. Nesmith, A. C. Darby, A. H. Marten and J. R. Carroll—

Mr. Murphy being elected chairman and Mr. Nesmith secretary.

When the first commissioners took charge of the reservation in 1891, they found it dilapidated in appearance and unsavory in reputation. The building that had been used for a hotel had recently burned, leaving only the debris to mark the site, and there remained a primitive bath house for men only, and an excuse for a barn in the shape of a broken down shed.

The work of the commission since then speaks for itself, and those who have had charge of the work justly take a commendable pride in the results which have been obtained in the face of the necessity for the exercise of the strictest economy, owing to the limited funds at their command.

Among the improvements that have been made by the commission since taking charge, may be mentioned the surveying and mapping of the reservation, which demonstrated that the upper or north fall came within the park; the development of the mineral springs and their enclosure with masonry; the piping of the waters of the mineral springs to a pretty kiosk erected for the purpose. The men's bath house has been enlarged and renovated, and tile floors and baths substituted for wooden floors and tin bath tubs, and a large tiled plunge constructed in the same; the women's bath house has been erected with floors, bath tubs and plunge all handsomely tiled; and an addition to men's bath house in shape of steam baths erected. Beside these, a commodious restaurant building and a new modern stable have been erected; a fresh water swimming pool 75 feet long, 40 feet wide and  $2\frac{1}{2}$  to 10 feet deep constructed; the picnic grounds have been cleared and improved and supplied with a dance platform; an aviary has been built and stocked with birds, and a deer park enclosed and stocked with deer. Convenient



foot bridges connect the main road with the picnic grounds, and lead from the stable to the bath houses. A new system of piping from all the mineral springs has lately been introduced, and a new system of fresh water supply created by building a concrete dam about half a mile above the bath houses by which water is brought down in a four inch main to new tanks of 40,000 gallon capacity.

Elaborate work on the creek has been completed to protect the buildings and other improvements from danger of overflow; the roads in the reservation have been macadamized and trees planted along them and paths have been laid out to the falls and on the southern hillside, and on the line of the creek. Lawns and flower beds ornament the grounds around the buildings, and a flag staff flings out "old glory" upon all appropriate occasions.

These springs at our very door offer facilities for medicated baths, not surpassed in value by those in Colorado or the Hot Springs of Arkansas, which they resemble in many respects. They are as yet only partially developed, but sooner or later their value will be appreciated and Alum Rock will become famous as a resort for persons afflicted with nervous troubles, rheumatism and similar ailments.

Since the above was in type, Hon. B. D. Murphy has resigned his position as president, and that honor has been conferred upon the able and efficient secretary, L. G. Nesmith, Mr. A. C. Darby being elected secretary instead.

Four springs, Soda, Blue Sulphur, White Sulphur and Salt have been analyzed by Prof. M. E. Jaffa of Berkeley with the following results:

	Soda Spring	Blue Sulphur	White Sulphur	Salt
Silica .....	1.21	1.19	1.30	3.52
Potassium Sulphate .....	.83	3.27	3.08	5.88
Potassium Bicarbonate .....	10.57	.....	.....	.....
Sodium Chloride .....	126.94	73.68	38.89	146.67
Sodium Bicarbonate .....	267.12	159.45	115.44	25.11
Sodium Sulphate .....	.....	13.68	13.77	116.51
Lithia (with spectroscope) .....	S. T.	S. T.	V. S. T.	Trace
Magnesium Chloride .....	.50	.....	.....	.....
Magnesium Sulphate .....	.....	.39	.31	24.30
Magnesium Carbonate .....	7.45	5.00	7.81	15.45
Calcium Carbonate .....	20.82	19.52	12.98	19.91
Calcium Sulphate .....	.18	.20	1.03	56.39
Calcium Phosphate .....	3.04	1.17	.97	.32
Iron and Aluminium, Carbonate and Phosphate .....	.35	.49	.29	.58
Boracic Acid (with spectroscope) .....	W.M. T.	.....	W.M. T.	.....
Total Grains per Gallons .....	439.01	278.04	195.87	414.64
Free Carbonic Acid Gas, cubic inches per gallon .....	215.62	174.03	98.50	22.35
Free Hydrogen Sulphide Gas, cubic inches per gallon .....	.....	5.60	10.51	.....

Note—Abbreviations: S. T., slight test; V. S. T., very slight test; W. M. T., well marked test. (Signed) M. E. JAFFA.

## The Board of Supervisors.

THE HEAD of our county government is the Board of Supervisors, and in the board is centered the legislative and administrative power of the county government.

Santa Clara county is divided into five districts, on the basis of population. The varied and different needs of the several districts (often unlike and dissimilar in their topographical features) have to be adjusted and managed in the most skillful and intelligent manner, so that a uniformity of public interest is preserved. Each district has one mem-

ber, elected by the people. These elections are so arranged that at least two members shall already have been in office two years, securing thereby, in the board's membership, a measure of experience.

It is interesting to note some of the duties that devolve upon the board of supervisors. To supervise the conduct of county and district officers, require them to make reports and prosecute them for neglect of duty; establish and change townships and roads, school districts and other districts when required; establish





BOARD OF SUPERVISORS.

FRED M. STERN  
GEO. E. REA

PAUL P. AUSTIN

JOHN ROLL  
THE LATE S. F. AYER





BOARD OF POLICE AND FIRE COMMISSIONERS.

WILLIAM OSTERMAN

JAMES A. KIDWARD

ANDREW MACKENZIE

ERNEST LION

H. J. MARTIN

W. H. CARMICHAEL

HENRY FORD

L. FINNEGAN



voting precincts and appoint election officers; canvas election returns; maintain public roads; care for the indigent sick, poor and orphans; care for all property of the county; examine and credit all accounts of all county officers and require a strict accounting of all public money; audit certain claims against the county; levy an annual tax for certain county expenses; fill vacancies in county offices that may occur except by expiration of terms; and other duties in similar lines.

#### THE LATE S. F. AYER.

An active and prominent member of the board of Supervisors since 1876, was the late Samuel F. Ayer, from the Fifth District, whose recent death was esteemed a public loss.

Mr. Ayer was chairman of the board for several terms. His first official act was to cast the deciding vote for the construction of the road to Mt. Hamilton upon the building of which by the county James Lick made contingent the location of the observatory at Mt. Hamilton. Mr. Ayer's long membership and his unflagging interest in public matters gave him a wide knowledge of the country roads and deep insight into its affairs, which made him a very valuable official.

#### PAUL P. AUSTIN.

The representative from the Second district and chairman of the board of supervisors, Mr. Austin, is a prominent business man of San Jose, who brings to his official duties a wide

experience in public affairs and private enterprises. He has served acceptably as mayor of San Jose, manager of the Security Savings Bank, and in other positions requiring first class executive ability and strict probity.

#### JOHN ROLL.

The supervisor from the Fourth district resides in Santa Clara. Mr. Roll is a clean, energetic man, active in his interest in public affairs and his private enterprises. He has done much to further the interests of his home section, and as a public officer his record is without a flaw.

#### GEO. E. REA.

The member from the First District, Mr. Geo. E. Rea, is a native of his home section, Gilroy. Although the youngest member of the board he is one of the most active, and represents the interests of his very important district in a most satisfactory manner.

#### FRED. M. STERN.

The Third District is represented by Mr. Stern, who in 1887-8, was a member of the common council of this city. He is a practical business man, was reared in Santa Clara county, where his father has been for a generation one of the leading business men of the community. He understands the needs of his district, and is earnest and energetic in the public interest.

## Board of Police and Fire Commissioners.

SAN JOSE has just cause to be proud of her police and fire departments. Because of the efficiency of the police department, our city enjoys an immunity from disorder and crime that is almost exceptional in cities of its size.

Chief of Police Jas. A. Kidward is recognized as a thorough disciplinarian, his force of nineteen officers being in splendid working order, and the affairs of his office conducted in a systematic and up-to-date manner. He is now filling his third term, having been twice re-elected to this important position. He has instituted, as an important adjunct to his force, 22 police telephones having direct communication with the police office. In this way the office is kept constantly in touch with the men on their beats. There are also two patrol wagons well equipped. An interesting addition to his office is a complete rogues' photograph gallery of 4000 pictures.

The fire department is so thoroughly up to a high standard that destructive fires are practically impossible.

This fact is so well recognized by the various insurance companies, that they have placed the rates on San Jose property exceptionally low. Chief Ford of the fire department is an energetic and capable officer whose fine executive ability puts him at once in control of the most trying situation in his work.

At a recent test, the entire fire department responded to a call from Box 26, at the City hall, all the companies reaching the place in less than three minutes, the first company arriving on the scene in the remarkably short time of one minute and twenty seconds.

By a provision of the new city charter the police and fire departments passed into the control of a board of commissioners on the 3d of May, 1898. The board is composed of the following well known gentlemen: William Osterman, president; Andrew Mackenzie, Ernest Lion, W. H. Carmichael and Dr. L. Finnegan; H. J. Martin secretary.

Since taking office this commission has worked earnestly to make these two very important factors in our city's welfare and good



government as nearly perfect as possible. The fire department now has three engine companies, one hook and ladder company, one chemical engine company, one relief hose and two hose cart companies, with twenty regular and thirty-six extra men in the department.

There are 262 hydrants in the limits, and about 8000 feet of hose. There are 64 fire

alarm boxes, and about 25 miles of wire in the fire alarm system, the cost of which was \$4500. As it stands today the system is worth \$15000, and is one of the best equipped and most efficient fire alarm systems in the United States, and its annual expenses for supplies etc. is one-eighth of what it was under the old system.

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## Notre Dame Institute.

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AMONG the many valuable gifts to their homecommunity by Mr. and Mrs. M. P. O'Connor was their magnificent home on corner of Second and Reed streets, which they have devoted to an orphans' home and given into the hands of the sisters of Notre Dame, under the name of the "Notre Dame Institute."

Here under the care of these noble and devoted women, orphans are sheltered, schooled and cared for, regardless of any other consideration than their orphaned and needy condition. From time to time the generous donors have built additions and added to the original structure as the growing needs of the Institute required. A large hall accommodates at present a portion of the magnificent collection of paintings designed to fill the contemplated

Art Building as a gift to the city of San Jose. The Ladies' Altar society meets at Notre Dame Institute. Its work of making altar furnishings and the regular exhibitions of the Society's work are made here.

In this noble gift to humanity these great hearted and unselfish donors have unconsciously and unintentionally erected for themselves a monument richer than that of sculptured marble, the gratitude and love of the poor and sorrowing.

The benevolence of Mr. and Mrs. O'Connor is exceeded only by their modesty, and hence it is not possible for the public to know even a measure of their generous deeds, of which the Art Collection and Notre Dame Institute are examples.

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## Associated Charities of San Jose.

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THE ASSOCIATED CHARITIES of San Jose was organized January 29, 1894, its purpose being to centralize and facilitate the charitable work of the city. The lines on which its efforts are based are: First—To secure the proper relief for all deserving cases of destitution; second, to aid the municipal authorities in administering out-of-door relief among the poor; third, to protect the community from imposters and fraudulent begging and to diminish pauperism; fourth, to restrain indiscriminate and duplicate almsgiving and any waste of charitable resources on the part of the Association and individuals; fifth, to prevent children from growing up as paupers; sixth, to encourage thrift, self-dependence and industry and better and more sanitary ways of living among the poor, through friendly intercourse advice and sympathy.

The association has done much good work since its organization and deserves the cordial support of every citizen of San Jose. Its headquarters are at 252 N. First street, where

also is the wood yard established to give employment to men out of work. The Society's officers for 1899 are:

Rev. H. Melville Tenney, president; Mr. S. B. Hunkins, first vice-president; Mrs. E. O. Smith, second vice-president; Mr. James Bean, treasurer; Mr. Alfred C. Bean, secretary; Miss Cora M. Bethel, superintendent.

Board of Directors: Mrs. T. Ellard Beans, Mr. J. H. Campbell, Mrs. Ben Cory, Mrs. F. M. Gray, Mrs. Jackson Hatch, Mr. James Bean, Mrs. W. B. Hobson, Mrs. H. Branham, Miss C. Taber, Mrs. W. L. Woodrow, Mrs. W. P. Dougherty, Mrs. M. Ogier, Mrs. W. B. Hill, Mr. S. B. Hunkins, Mr. Alfred C. Bean, Mrs. Stephen Jones, Mrs. H. Levy, Mr. James Rhodes, Mrs. E. O. Smith, Rev. H. M. Tenney, Mrs. B. Cochrane.

Honorary Directors: Mrs. B. D. Murphy, Mrs. G. M. Bowman, Mrs. L. Callisch, Rev. Father R. E. Kenna, Mr. Nicholas Bowden, Mrs. Anna Taber, Mrs. Edward McLaughlin, Mrs. Robert Syer, Rev. J. B. Wakefield, Mrs. Ed. Williams.



## The Sheltering Arms and Pratt Home.

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SOMETIME in the early '80's the Sheltering Arms Society was organized for the work of child saving. Its membership included many of the ladies of San Jose prominent in works of benevolence. Soon after its inception, the need of an institution of shelter for its work became apparent, and the ladies resolved to found a home both for child shelter and for old ladies who wished to avail themselves of its hospitality.

About this time Mrs. Margaret Pratt, a lady of means, made a gift to the society of nine thousand dollars for the benefit of the proposed home which was, when completed, named for the generous donor, "The Pratt Home." In 1889 "The Sheltering Arms and Pratt Home" was incorporated.

The home was first established on North Second street in a small rented building. The first president and matron at this place was Mrs. Cheney, a woman eminently qualified for this unselfish duty. In time the present site was purchased on South First, and a handsome and commodious structure erected, which now houses the Society's wards and the several old ladies who have availed themselves of its advantages.

The ladies of the Sheltering Arms Society have done a noble work since the society's organization although in a modest and unobtrusive manner they have gathered in many children that were otherwise destined for a life of immorality—the offspring of drunken par-

ents, crime, or abject poverty. Of necessity this has been done in a manner often amounting to secrecy for the sake of those rescued.

The ladies who are so earnestly devoting themselves to this noble benevolence, with no compensation save the approval of their own consciences, certainly deserve the most cordial support of the community, when they come before the public in the furtherance of their work.

The Society's objects as outlined in its latest adopted constitution are to rescue from ruin unfortunate, neglected or ill-treated children, to procure letters of guardianship for them, and to place them under such influences as will best tend to their reformation, to send them to schools, teach them habits of industry, and provide for them homes in good families; and also the establishment, erection and maintenance of an "Old Ladies' Home." The present board of managers are: President, Mrs. R. Syer; First Vice President, Mrs. E. O. Smith; Second Vice President, Mrs. B. D. Murphy; Recording Secretary, Mrs. F. A. Taylor; Treasurer, Mrs. L. J. Watkins; Board of Directors, Mrs. Geo. McCracken, Mrs. F. A. Taylor, Mrs. W. L. Woodrow, Mrs. R. Syer, Mrs. D. W. Burchard, Mrs. J. H. Henry, Mrs. L. J. Watkins, Mrs. T. Rinaldo, Mrs. H. Pierce, Mrs. S. A. Cheney, Mrs. E. O. Smith, Mrs. W. B. Hobson, Mrs. J. H. Ogier, Mrs. B. D. Murphy, Mrs. F. P. Russell.











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