THE RESOURCES OF THE PACIFIC COAST.

The Pacific Coast States and Territories—namely, California, Oregon, Nevada, Colorado, Utah, New Mexico, Washington, Montana, Idaho, Arizona, and Wyoming—have an aggregate area of 1,218,385 square miles, amounting to about one third the total area of the United States, and equal to that of China proper. While China, however, contains over four hundred million inhabitants, the total population of the above States is but little over a million and a half. Hence they are practically undeveloped, and their magnificent resources lie comparatively idle, inviting the industry and the enterprise of the emigrant from the overcrowded East. On the southern borders of this great region, which extends for 1,500 miles along the shores of the Pacific, are found the olive, the vine, the lemon, the mulberry, the cotton plant, and the sugar cane; further north, wheat and other cereals, with all the fruits of the temperate zone, flourish; and still further northward, the wheat and flax indigenous to cold latitudes are encountered. From an industrial point of view, the area may be divided into two sections, the mineral and the agricultural. The purely pastoral districts are scattered over the whole of it, from the Colorado to the Fraser river, and from the borders of Nebraska to the Pacific. The agricultural districts are mainly found between the base of the Sierra Nevada chain and the ocean. In Nevada, Utah, Colorado, New Mexico, and Arizona, there are great tracts capable of being rendered fertile by irrigation. The mineral section is the largest of all, embracing three fourths of the territory under consideration, and stretching eastward from the western foot hills of Dakota, Nebraska, Kansas, Indian Territory, and Texas. We have before us an annual review of commercial and industrial progress in the Pacific States, prepared by the San Francisco *Journal of Commerce*. From this splendid piece of journalistic work, which covers eight huge newspaper pages, we extract the facts on which this article is based.

Taking first the agricultural products, it appears that there are at least one hundred million acres of land suitable for the culture of

WHEAT.

It is estimated that this territory is capable of producing, when scientifically cultivated, yearly some 2,500,000,000 bushels of wheat, worth, at 50 cents per bushel, $1,250,000,000. The actual value of the wheat yield for 1876 was but $33,000,000. The wheat lands of the coast are extensive enough to supply a million farmers and their families each with a 100 acre farm. Reckoning in workmen and their families, the wheat lands can give employment in their cultivation to a population of 15,000,000; while, taking into account tradesmen, merchants, manufacturers, etc., they can support fully 35,000,000 people, or a population equal to that of France.

COTTON

culture is greatly neglected. The production during the past year was very small, and the cotton sold at the low rate of 14 cents per lb. There are some 8,000,000 acres of good cotton land in the territory under consideration, capable of producing a crop worth $200,000,000 annually. In this connection planters skilled in cotton cultivation are required, as the plant, it is said, grows better in California and Arizona than on the Atlantic coast.

There are few regions in the world better adapted to

THE VINE.

Some 30,000,000 of acres are peculiarly suited to the culture, and these are capable of a yield worth $6,000,000,000 a year. Vine growing offers the strongest inducements for immigration of the skilled laborers from the vineyards of France, Germany, Switzerland, Italy, Portugal, and Spain. The country needs their experience and intelligence; and, in return, it offers them homes and the means of fortune. The total area available for fruit culture is 50,000,000 acres, all capable of being planted with orchards and orange, lemon, and banana groves. At the same time all the fruits of the temperate zone are cultivated with wonderful results; the aggregate possible value of the fruit yield is $2,500,000,000 yearly.

There are favorable localities for the cultivation of the sugar cane and rice in quantities sufficient to supply the population of the region and their immediate neighbors. Coffee can be profitably grown in the southern part of Arizona. Jute, hemp, and ramie may also be cultivated.

Turning now to the pastoral capacities of the territory, it appears that over one third the whole area, or 250,000,000 acres, are suited in a high degree to

WOOL GROWING.

Even the Angora goat has been successfully raised; and it is thought that the alpaca and the Thibet and cashmere goats can also be acclimated. It is estimated that 250,000,000 of sheep can yearly be raised on the coast, producing wool worth at its very lowest $180,000,000 annually.

One of the greatest sources of wealth of the Pacific coast in the future will be its magnificent array of woodlands, which are probably the finest in the world. The quantity of

LUMBER

contained is estimated at 4,000,000,000,000 of feet, worth at the present mill price of lumber $40,000,000,000. There is no species of lumber that may be required for any useful purpose that may not be found somewhere on the coast or islands; while ornamental woods of the finest kinds abound.

Lastly we have the mineral resources. The principal

GOLD DEPOSITS

are and have been found in the valleys of the rivers flowing from the high mountain ranges; hence California, Colorado, Idaho, and Montana, and the sides of the valleys in them, adjacent to the great ranges, have become the chief ources of gold. The western side of the Sacramento and San Joaquin valleys have yielded little, if any, of the precious metal. Most of the known superficial deposits have been worked out; but there are still vast beds, that are treated by the hydraulic process, that will last for a score of years. Besides these, there are the ancient river beds, one of which, the Blue Lead, has been traced for hundreds of miles. The present production of gold is about $53,000,000 on the Pacific Slope, of which California produces some $23,000,000. The production of

SILVER

is principally confined to the States of Nevada and Colorado and the territories of Utah and New Mexico. The deposits are practically inexhaustible, and their extent has never been determined. The yield of the metal for 1876 was about $50,000,000.

The quicksilver mines of California and Arizona have produced in 1876 between 60,000 and 70,000 flasks. They are capable of yielding 120,000 flasks yearly, worth at the lowest $3,600,000. Lead is found united with silver and in immense quantities. The amount supplied to the United States from the Pacific coast is about 8,000 tons yearly. Copper is mined in small quantities now; but is present in large amounts, and eventually will become an article of export.

COAL

is found in great abundance. That on the Pacific slope is nearly all lignite. The great Rocky Mountain coal field covers some 300,000 square miles; and there are other immense deposits in or near the coast ranges. Iron exists in large amounts in Oregon, the deposits having been traced for a distance of 25 miles; the mines are yet to be developed. The California and Nevada borax deposits are the most extensive in the world; and although they are of comparatively recent discovery, they have already greatly affected the price of the product. In Nevada, there are a mountain of rock salt and illimitable soda deposits. There is also a fine deposit of tin, and extensive beds of antimony and manganese in Nevada and Utah. The petroleum wells of southern California are capable of yielding 20,000 barrels of oil per day, or nearly as much as the present Pennsylvanian product. Sulphur is also found in Nevada in large amounts, and is shipped to San Francisco.

The Scarlet Fever Epidemic.

Scarlet fever is reported as being epidemic at present over a large portion of the country, especially in the Western States. In Chicago, the prevalence of the disease has excited considerable alarm, and several meetings of the medical faculty of the city have been held for the discussion of the best modes for its prevention and cure. In Boston, also, the disease is being closely watched by the health authorities of the city, and they have issued very admirable instructions for its avoidance and treatment, which will be found quoted below.

Scarlet fever is highly contagious, and at the same time exceedingly fatal; so that there should be no halfway measures taken to prevent its spread. Wherever the disease has manifested itself, the utmost vigilance is imperative to prevent clothing or other infected articles communicating the malady to other persons. There is even danger of disseminating the poison by funerals, the *Medical Record* tells us; and the same authority counsels the greatest care on the part of physicians lest they themselves, coming from the bedsides of patients, carry the disease to non-infected houses. The protection of school children will also require great care; and our contemporary strongly recommends that a thorough system of medical inspection be organized in our now crowded public schools.

As a recent meeting in Chicago, the physicians discussed at considerable length the value of belladonna as a specific for the malady. The daily use of this drug as a prophylactic against scarlatina is "emphatically recommended;" "but," continues the resolution passed, "only in doses so attenuated as not to produce visible effects upon the organism, and always under the advice of the family physician." The other resolutions agreed upon are "that isolation is the next only means that we know of to prevent the spread of the disease, but we deprecate arbitrary interference with the rights of families;" and "that we have every reason to believe that such a course would reduce the frequency, the severity, and the mortality of this disease, but will not wholly eradicate it, nor do we know of any means that will."

The following is the Boston Board of Health's circular: "Scarlet fever is like smallpox in its power to spread readily from person to person. It is highly contagious. The disease shows its first signs in about one week after exposure, as a general rule, and persons who escape the illness during a fortnight after exposure may feel themselves safe from attack. Scarlet fever, scarlatina, canker, rash, and rash fever are names of one and the same dangerous disease. When a case of scarlet fever occurs in any family, the sick person should be placed in a room apart from the other inmates of the house, and should be nursed as far as possible by one person only. The sick chamber should be well warmed, exposed to sunlight, and well aired. Its furniture should be such as will permit of cleansing without injury, and all extra articles, such as window drapery and woollen carpets, should be removed from the room during the sickness. The family should not mingle with other people. Visitors to an infected house should be warned of the presence of a dangerous disease therein, and children, especially, should not be admitted. On recovery, the sick person should not mingle with the well until the roughness of the skin, due to the disease, shall have disappeared. A month is considered an average period during which isolation is needed. The clothing, before being worn or used by the patient or the nurse, should be cleansed by boiling for at least one hour, or, if that cannot be done, by free and prolonged exposure to out-door air and sunlight. The walls of the room should be dry-rubbed, and the cloths used for the purpose should be burned without previous shaking. The ceiling should be scraped and whitened; the floor should be washed with soap and water, and carbolic acid may be added to the water—one pint to three or four gallons. The infected clothing should be cleansed by itself, and not sent to the laundry. In case of death from scarlet fever, the funeral services should be strictly private, and the corpse should not be exposed to view. Because children are especially liable to take and spread scarlet fever, and because schools afford a free opportunity for this, the Board of Health has excluded from school every child from any family in which a case of the disease has occurred, and has decreed that the absence shall continue four weeks from the beginning of the attack, except in cases subject to the discretion of the Board, and that the scholar, to be re-admitted to his schoolroom, must have the certificate of a physician that the required time has passed."

As regards this last provision, in localities where authorities do not promulgate similar instructions, parents will do well to take the precautions noted; and after the disease has shown itself in the family, the attendance of any of the household at school, until the period stated has elapsed, should be prevented.

Chloroform and Dentistry.

We have repeatedly noted accidents produced by the use of chloroform in minor dental operations. A very sad case recently occurred in Rahway, N. J., in which, by the improper administration of the anæsthetic, a robust, healthy boy lost his life. The New York *Medical Record*, commenting on the casualty, offers the following valuable suggestions:

In regard to the use of chloroform in dentistry there is but one opinion, namely, that it is always dangerous. As a general rule, it should never be administered at all for purposes of tooth extraction. In the present state of professional opinion upon the subject, the dentist who chooses to administer it, even in a special case, assumes a responsibility of which he should not be ignorant. So great is the prejudice against this anæsthetic among leading dentists that many will not allow it to be administered in their offices, even when the direct professional responsibility is assumed by an experienced physician.

Although the fact cannot be very well explained, chloroform has taken more victims from the dentist's chair than from any other place. Indeed, it has gained its reputation as a dangerous article more in connection with simple tooth drawing than with any other operation, however grave or formidable. A very good reason for the liability to accidents is the erect position of the body of the patient while in the operating chair. Taking this into account, authorities are unanimous in advising that chloroform should never be given except the patient is recumbent.

No surgeon cares to assume the responsibility of giving chloroform unless he knows that the stomach of the patient is empty, that the circulatory apparatus is in good condition, and the lungs free from disease. A previous inquiry into these conditions is as much a part of the administration of any anæsthetic as in the placing of the napkin to the nose. It appears in the Rahway case that all these preliminaries were neglected. The patient came into the office immediately after having eaten a hearty meal, and, without any questions being asked, was at once placed in the operating chair. There was no loosening of waistband or shirt collar, no examination of the chest—in fact, nothing was done except to order the little fellow to take long and deep inspirations, while the napkin was held closely against the nose. The result could easily have been foreseen. The overwhelming effects of rapid anæsthesia and the crowding impediment of a full stomach, in the most unfavorable of all positions of the body, did not invite death in vain.

The examination of the bodies of patients dying from the effects of chloroform have not thus far given us any satisfactory pathological explanation. The lesions have varied with each individual case, and have given rise to as many different theories. The careful and thorough examination of the body of the victim of the Rahway tragedy still leaves the question an open one. It may be, however, that both asphyxia and asthenia operated together in producing the effects observed; but the precedence which should be given to either involves the discussion of some questions, for which, in the present state of pathology regarding deaths from chloroform, we are not yet prepared.

Death of the White Whale.

The white whale at the New York Aquarium recently died. He was captured with much difficulty off the coast of Labrador, and has seemingly enjoyed good health during his five months' sojourn in the aquarium tank. Lately, however, the experiment of giving him fresh instead of salt water was tried, and the change disagreed with him, producing his death.