

It extends that distance out into the harbor and forms one of the principal shipping places of this part of the world. The steamers do not come to the pier, but lie some distance away, and the goods are taken out to them in lighters. This is a cattle-growing country, and a large amount of livestock is shipped. Cattle are loaded by raising them in slings, by means of derricks from the end of the pier and dropping them into the lighters. When about 100 fat beeves have been thus dropped a lighter is full, and it is taken away to the ship. There is now a railroad track upon the pier, and the cars of the railroad which goes up this valley bring their shipments of sugar, coffee and hides out to the ships over it, paying the American company for the privilege.

All along the coast above here I saw signs of the oil fields of Peru. At one port we stopped and took on thousands of boxes of petroleum for Lima, and at another we saw the refineries on the edge of the sea. There seems to be an almost continuous strip of oil territory running down the Pacific coast from Ecuador for some distance into Peru. The Ecuador oil fields, I learned of in Guayaquil. They have not been touched as yet, and hardly prospected, so that the information concerning them is indefinite and hazy. I was told, however, that flowing wells of crude petroleum are found all along the Ecuadorian coast, from Cape St. Helena southward, and that in many places the flow of oil is such that when the weather is calm it covers the sea for a distance out from the shore with a greasy film. North of Cape St. Helena wells have been sunk by Ecuadorians, and some of the output has been sent to Guayaquil to be used for fuel in the boilers of the steamers on the Guayas river. The parties working the wells, however, were natives, and, as is usual in many such cases, no practical tests were made. From what I was told at Guayaquil, I should think it might pay to investigate this territory. The land on which the oil exists belongs to the government, and any one has the right to denounce it. By "denounce" I mean to take it up for mining purposes. One man, under the law, would have the right to take up twenty claims, each about three-eighths of a mile long by 1,800 feet wide. After this a yearly tax of \$4 in gold on each claim would have to be paid. If the territory should produce largely the properties would be very valuable, on account of the oil lying near the surface and right on the edge of the sea, where it could be almost piped into the steamers.

The oil fields of Peru have been known to exist for the past thirty years, but it is only recently that much development has been attempted. The oil is found at distances varying from 250 to 600 feet below the surface, and both flowing and pumping wells have been exploited. The oil found at Zoaritos, north of Paña, yields about thirty per cent of kerosene, and is said to be good for both lighting and lubricating purposes. It does not furnish as good a light as our American oil, and brings about half as much in the markets here. I am told that a large number of the companies who have tried the Peruvian wells have lost money, and the English consul at Lima estimates that about \$25,000,000 has been spent without return. Still, there are English and Italian companies which claim they are working at a profit, and one Italian named Dr. Piaggio, is now producing about 6,000 barrels a month, while the London and Pacific company has tank steamers and operates the largest refinery on the coast. At present almost all of the oil used in South America is supplied by the Standard Oil company.

The country scenes here are unlike those of any part of the world. I can show you some of them in giving you a

ride with me through this winding valley to the foothills of the Andes. We go on a railroad built by an American a couple of decades or more ago, but now owned by the English syndicate known as the Peruvian Corporation. The cars came from the United States, and the ties are from Oregon. The telegraph poles are discarded rails, to which supports have been bolted to uphold the wires. These iron poles are used on account of the little ants which here eat anything wooden, but do not seem to bother the ties. The conductor of the train is a little Peruvian, in a linen suit, and on board with us we have a traveling postmaster, who sells stamps, takes up the letters from the various small villages and estates as we stop, and hands out mail to the people who come to the train. Notice the little farms which we are passing. The fields are fenced in with thick walls of mud as high as your waist, and irrigating ditches carry sparkling water here and there through them. The water comes from the river, but the irrigation is carelessly done, and a great part of it goes to waste. There is a rice field. This is one of the best paying crops of this part of Peru, and there are large mills at Pacasmayo, where the rice is hulled, polished and prepared for shipment.

We go through large estates devoted to the raising of sugar. This is Peru's greatest crop. The most of the estates are owned by foreigners, and some in the past have paid very well. The whole of the coast valleys are adapted to sugar raising and the cane grows much more easily here than in our states about the Gulf of Mexico. I visited the Lura Fico estate the other day. This was managed and built up by Mr. B. H. Kauffman. It paid large dividends until the fall in prices of some years ago, when the heart was cut out of the sugar business. Many of the plantations changed hands and Lura Fico is now owned by an English syndicate which has tens of thousands of acres of sugar lands. The factory of Lura Fico made 6,000 tons of sugar last year, and it will make more this. The factory alone cost \$600,000, and the improvements on the estate have footed up more than a million. The most of the machinery was imported from Philadelphia, and the machine shops and foundry are now using steel plates which they import from the United States. This is so notwithstanding the fact that the owners are English. The estate uses steam plows, harrows and cultivators, and I noticed that the plow points were made at Hartford. The cane is hauled from the fields to the factories by steam engines over a portable railroad, and all sorts of modern economical machinery is employed. There are now over sixty sugar factories on the coast region of Peru, and in the neighborhood of \$20,000,000 is invested in the business. The amount produced is about 165,000,000 pounds a year. The labor is the native Peruvian Indian, who receives from fifty to eighty cents in silver a day, or from 25 to 40 cents of our money.

I wonder how an American tenant would look if he were offered a place on one of these Peruvian farms. I refer more especially to those on the smaller estates. I went into one of the houses on a plantation near here today. It is a sample of thousands all through Peru. The hut was made of canes and you could see out through the cracks on all sides. The floor was of dirt and the roof of reeds, being only needed to keep out the sun. There was in the house but one room, about 18 feet square. In one corner a wooden platform about as high as your knees furnishes the sleeping place for the heads of the family; the children slept on the floor. In another corner was the family cook stove, two stones

placed just wide enough apart to allow an earthen cooking pot to rest on them. There were no windows, no chimneys, and, with the exception of a soap box, no furniture. In this house a family of six live, and I doubt not deem themselves happy. Their chickens and goats live with them, and all they want is enough to eat and drink and a chance to get drunk now and then. These people seem to have no ambition whatever. They work hard and are perfectly satisfied. Their employers furnish them, in addition to their wages, one pound of meat and two pounds of rice daily, and they allow them to run up such bills at the store on the estates as keep them always in debt to their masters. Our farmers could not work on such rations as these men have. They take upon rising a glass of pisco, or native whisky, and go to work without breakfast. This is at about 5 o'clock in the morning. This whisky serves them until 11 a.m., when they knock off for lunch, or for what is here called breakfast. This usually consists of a stew of goat meat and rice. At 1 o'clock they go back to work, and at 5 stop for the day. When they get home they have another stew of meat and rice, and perhaps a piece or so of bread. After dinner they sit about and talk, and at 8 or 9 o'clock lie down in the clothes which they have worn all day and go to sleep. They have no education and not one in a hundred of them can read. Their dress costs them almost nothing. That of the men is made up of a pair of cotton trousers, a cotton shirt, a pair of leather sandals and a straw hat. The women wear cotton dresses and straw hats, and, in addition, have black woolen shawls for feast days and Sundays. The men also have what are known as ponchos. These are the overcoats of South America. They are merely blankets with a short slit in the middle large enough to slip the head through. They are worn by the better classes, as well as the poor, and are costly or otherwise, according to the purse of the owner.

The fine farm machinery which I have written of as being used here is, of course, to be found only on the large estates. The native Peruvians do their work in the crudest ways. Oxen with plows of wood tipped with iron serve as the motive power, and the Indian holds the plow with one hand and drives with a goad, as the Palestine farmers did in the days of the Scriptures. FRANK G. CARPENTER.

## FEATURES OF MANILA.

Manila, the capital of the Philippines, is situated in the island of Luzon, at the mouth of the river Pasig, which empties into the bay of Manila. The city was founded in 1571. In 1645 it was almost entirely destroyed by an earthquake, in which upwards of 300 lives were lost. In 1863 a great part of the city was again destroyed from the same cause, and in July, 1880, another terrible upheaval made a wreck of a great portion of it. The inhabitants are naturally in constant fear of these visitations. The houses are built with especial reference to safety under such circumstances, and, although large, possess few pretensions to architectural beauty.

The city proper within the walls is small and contains a scanty population, but the large government buildings and religious institutions are grouped there. The suburbs, of which Binondo ranks first in order of importance, are the centers of trade and industry. The Escolta, the main business street, traverses this suburb, and in it most of the European stores and bazars are to be found. The Rozarino, another broad thoroughfare in Binondo, is occupied