

district yield silver and lead. The district of Actopan, although known to and worked by the Spaniards, was comparatively neglected until recently, but will prove, when further developed, a valuable district, as much rich ore has been found there which carries a larger quantity of gold than that of Pachuca. The most notable mines there are the San Eugenio and the property of the Baron de Humboldt Company, whose drainage adit has now almost reached the main vein; when this is done, the company intends to establish a reduction works at the mine, thus avoiding the heavy cost of carriage. These mines are on the eastern slope of the "Frailes" mountains, six leagues, or twenty-four kilometres, west of Pachuca.

Pachuca is in the rich metal-bearing zone, which extends from northwest to southeast from Sonora to Oaxaca. The state of Hidalgo produces nearly six million dollars of silver per year from its two mineral centres. There is considerable gold in its beautiful mountains, but so far it has not been worked properly. The richness of these mines has been known throughout the world for three hundred years, and all of them seem inexhaustible.

In Pachuca, where the "patio" process of silver reduction was invented by Bartolomé de Medina, his old hacienda is still worked.

The noble metal platinum, the use of which is increasing in the useful and decorative arts, is found in the state, but is not yet worked. It is certain that with foreign capital and methods fortunes could be made from this source alone.

There are large deposits of coal, which are as yet unworked; and ere very long Americans will go down and make money developing the "black diamonds" for local use, as well as for export.

Pachuca has twelve reduction works, El Chico nine, Real del Monte eight, and Zimapan eight. Pachuca exported in 1892 silver in bars to the value of nearly five and a half millions of dollars, besides nearly nine and a half millions in ore.

There are in the state six iron-works; and in the districts of Zacualtipan and Huejutla are deposits of coal, which are to be developed by a powerful English company. In Molango are graphite deposits.

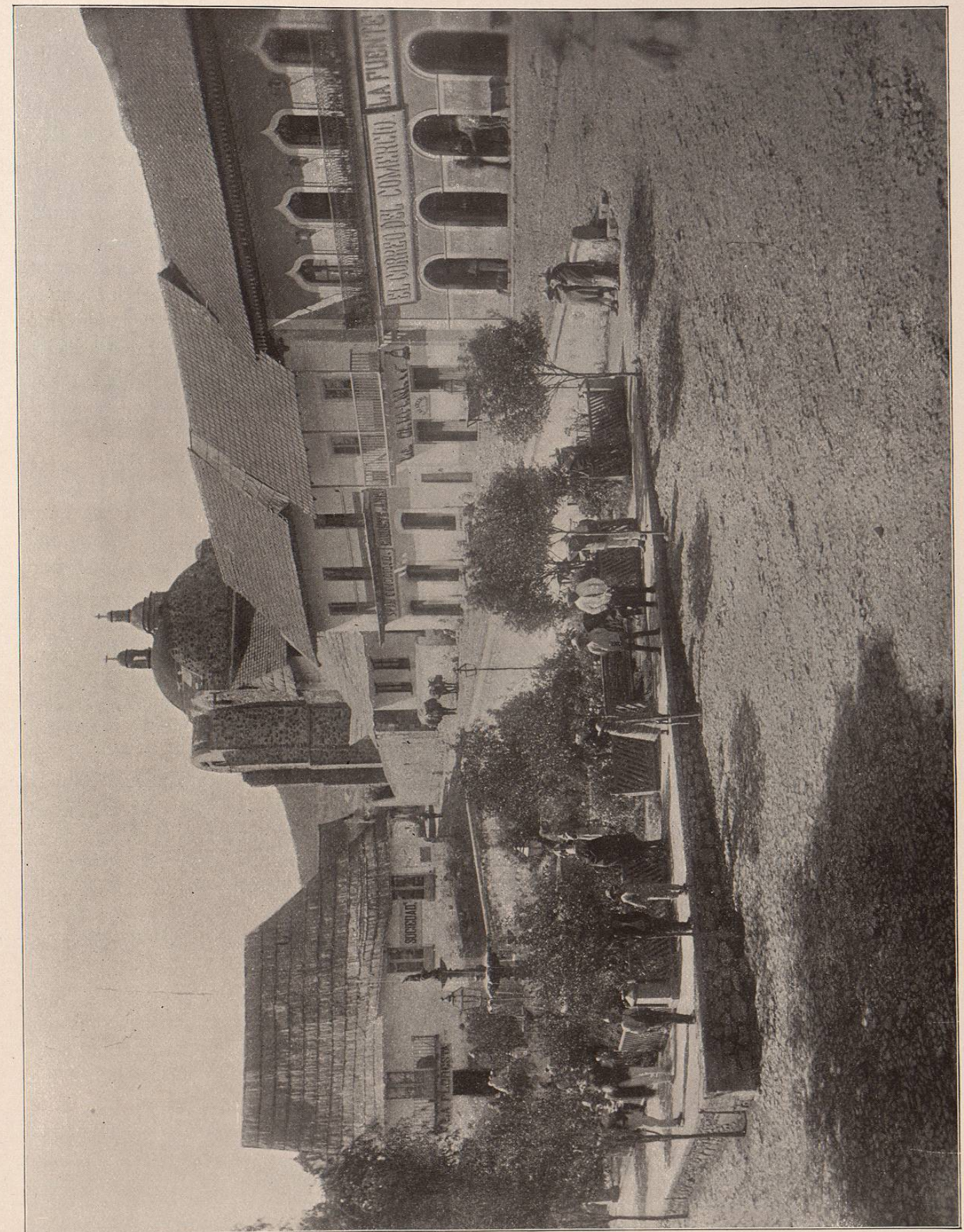
The mines in Pachuca were worked by the Spaniards in 1523, only two years after the conquest. Think of the untold millions that have been withdrawn from the inexhaustible deposits of the precious metal, where busy men of to-day still delve with the same eagerness as of old, but with increased interests and wants.

This is one of the few districts in the world where that wonderful plant vanilla grows, the beans of which are worth in New York from ten dollars to twelve dollars a pound. In some years as high as three hundred per cent. profit has been made from this crop. This is one of the explanations of the enormous, almost fabulous, riches of some of the Mexican planters.

In this state we find the same maguey as in Mexico,—*la planta de las maravillas*, or the marvel plant, as it was called by Father Acosta,—being here of the very highest quality and largest yield.

In Apam, Pachuca, Tula, and elsewhere we find all the cereals produced; and Apam and Pachuca are the greatest centres for the production of pulque. In the rest of the hotter districts there are cultivated with great success coffee, cotton, sugar, tobacco, vanilla, and india-rubber; and there is an abundant supply of naturally produced medicinal plants and valuable cabinet woods.

I cannot speak of Hidalgo without mentioning its pulque, the yield of which is about a gallon and a half a day for three months for each plant. This industry yields eight million dollars a year to Hidalgo. Nor must I forget mescal, a highly intoxicating liquor, so fiery that



ZÓCALO IN REAL DEL MONTE.

when one takes his first drink the sensation is that of swallowing a torchlight procession. The best brand of this comes from the Tequila hacienda, and from this all mescal is ordinarily called tequila, just as all brandy is often called cognac.

The conditions of the state, especially under the present governor, Rafael Cravioto, lend themselves very favorably to the establishment of new enterprises, only a few of which I may name. One of them is irrigation, there being in every part of the state large tracts under almost every condition of climate which would yield enormous returns by the establishment of systems of irrigation. *Per contra*, there are also extensive tracts where there is too much water, which, while now subject to inundation and not suitable for agriculture, would yield excellent returns if properly drained. There is room for a large extension of textile industries, the raw material for wool and silk manufacture being abundant. In the northern part of the state



OMITLAN.

there is opportunity to develop at great profit the cabinet woods and deposits of marble, pitch, petroleum, and coal.

In the capital there is a scientific and industrial literary institute, in which are prosecuted the studies necessary for the occupations of assaying and topographic, hydrographic, and mining engineering. There is also a practical mining school belonging to the federal government, in which pupils sent from Mexico City acquire practical training under the direction of a professor of metallurgy and one of mining exploitation.

In this state I have added to my already large and varied

collection of aboriginal names such beauties as Tlaxcoapan and Polotitlan, on the Central road, and Zimapan, Zacualtipan, Metztlán, Yahualica, Huejutla, Jacala, Molango, and Ixmiquilpan, to which the railway has not yet penetrated.

And now, having noted within the limited space at my disposal my impressions of the material part of the noted state of Hidalgo, I can only add a word concerning its distinguished chief magistrate, General Rafael Cravioto, a brave and patriotic soldier and statesman, whose every heart-beat is for his state and his country. Hidalgo and her people are fortunate in their noble governor. One of his chief efforts has been in the promotion of public instruction, compulsory education in this state having been decreed years before it was in the capital of the republic. Another testimony to his zeal in this direction is the establishment of the State Literary and Scientific Institute, where the methods of education are based on lines similar to those adopted in the city of Mexico.

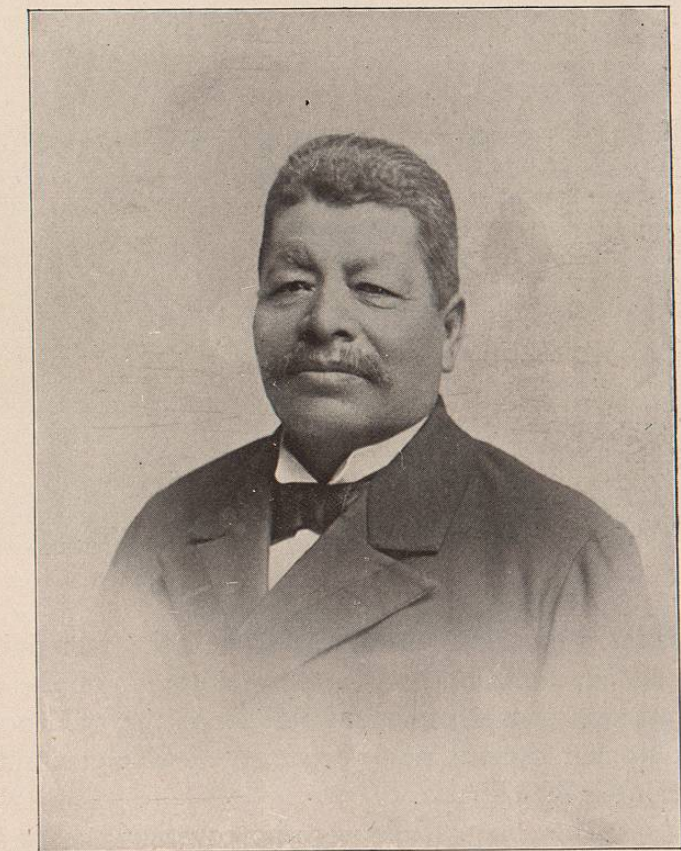
CHAPTER XVII

TLAXCALA

SOUTH of Hidalgo lies the historic state of Tlaxcala, the scene of so much human tragedy during Cortez's conquest. Tlaxcala is one of the oldest places in all Mexico, and was founded by the Chichimecs. For many years before the conquest this gallant little republic had maintained its independence against the Aztecs, of whose great family it was a branch. According to Prescott, "they came on the grand plateau about the same time with the kindred races, at the close of the twelfth century, and planted themselves on the western borders of the lake of Tezcuco. Here they remained many years, engaged in the usual pursuits of a bold and partially civilized people. From some cause or other, perhaps their turbulent temper, they incurred the enmity of surrounding tribes. A coalition was formed against them, and a bloody battle was fought on the plains of Poyauhtlan, in which the Tlascalans were completely victorious. Disgusted, however, with their residence among nations with whom they found so little favor, the conquering people resolved to migrate. They separated into three divisions, the largest of which, taking a southern course by the great volcano of Mexico, wound around the ancient city of Cholula, and finally settled in the district of country overshadowed by the sierra of Tlascala.

"The warm and fruitful valleys locked up in the embraces of this rugged brotherhood of mountains afforded means of subsistence for an agricultural people, while the bold eminences of the sierra presented secure positions for their towns."

Tlaxcala signifies "land of bread," and the name was indicative of the fruitfulness of the soil then as now. Yellow harvests of maize and the bountiful maguey covered the rocky hill-sides, just as they do now, and contributed to the wealth of the little republic. Their geographical position was encompassed with mountains, and their warlike bravery gave them



SEÑOR GOBERNADOR CORONEL PROSPERO CAHUANTZI.