









THE  
REPUBLIC OF MEXICO

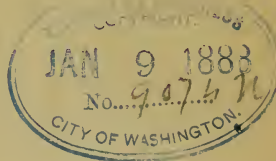
IN

1882

With Revised and Corrected Map

BY

LORENZO CASTRO



New York  
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# INTRODUCTION.

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THE author of this little work has resided in Western Texas, the frontier of Texas, and the interior of Mexico for the last thirty-five years. His father, Henry Castro, for services rendered to the Republic of Texas in early days, received several grants of land in Texas, one of them now comprising the county of Medina, and part of Bexar, Bandora, Uvalde, Frio, Zavala and McMullen ; he colonized his grant with immigrants brought principally from Alsace and Lorraine and the Rhenish provinces. Having brought to Texas, in 27 ships, 5,200 colonists from the year 1842 to 1847, he founded the town of Castroville, the present county seat of Medina County, and the villages of Quihi, Vandenberg and Dhanis.

Before Henry Castro brought his people from Europe to Texas, the country west of San Antonio was a wilderness only inhabited by the Lipan and Comanche Indians. The San Pedro Creek could then be considered the frontier. The difficulties that Henry Castro had to overcome to induce his people, after he had brought them from Europe, to remain, would hardly be believed. After spending a large fortune and several years of arduous labor, his settlements were permanently fixed, and are now in a high state

of prosperity. The State of Texas honored his memory as the pioneer of Western Texas by giving his name to one of the new counties.

The writer, who assisted his father in his efforts to colonize Western Texas, has, since the Confederate war, resided and travelled all over Mexico. He is well acquainted with the country, its language, laws, customs and the manners of its people. He has, since the War of Secession, devoted his entire time to make Mexico better known than it is by the generality of the American people; to develop its untold mining wealth, its agriculture and industry, and promote immigration which will be well supported and encouraged by the best and most respectable citizens of the country.

The writer has consulted the following distinguished authors : Baron Humboldt, Lucas Alaman, Michel Chevalier, Lerdo de Tejada, Jesus Hermosa, Alvarez y Duran, Dr. Eleuterio Gonzales, Carlos Maria Bustamante, the Reports of the Minister of Public Works, and lastly the valuable datas collected by the distinguished statistician Don Adrian Busto.

Americans who desire to emigrate to Mexico can consult this little work with confidence, and if they find the same useful, the undersigned will have accomplished his object.

LORENZO CASTRO.

NEW YORK, April 5, 1882.



# MEXICO.

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## ITS FORM OF GOVERNMENT.

THE Government of Mexico is a Federal Republic, composed actually of twenty-seven States, one Territory and the Federal District.

The independence of Mexico from Spain was proclaimed for the first time on the night of the 15th of September, 1810, in the Town of Dolores, State of Guanajuato, by the curate of the parish, Don Miguel Hidalgo y Costilla, seconded by Captain Ignacio Allande, Mariano Abasolo, Don Juan Aldama and other persons of distinction. The independence was finally effected by Don Augustin Iturbide, commanding the Army of the Three Guarantees, on the 27th day of September, 1821.

The present Constitution of Mexico was promulgated on the 5th of February, A. D. 1857, and is generally known as *the Constitution of 1857*. It was amended September 25th, 1873, establishing the Senate, and prohibiting the reelection of the President of the Republic and the Governors of States to a second term of office, May 5th, 1877.

The Mexican Government is actually divided in three bodies entirely independent from each other, viz.: the Executive, the Legislative and the Judiciary.

## THE EXECUTIVE POWER.

The present incumbent, Constitutional President Citizen General Manuel Gonzales, was elected July, 1880, for the term of four years, from December 1st, 1880, consequently his term of office will expire on the 30th of November, 1884.

In case of death of the President, the Constitution of 1857 provides that the Chief Justice of the Supreme Court becomes the President of the Republic.

The executive power resides in the President of the Republic and a Cabinet composed of the following Secretaries of State, viz. :

One Secretary of Foreign Relations,  
 One Secretary of the Interior,  
 One Secretary of the Treasury,  
 One Secretary of War and Marine,  
 One Secretary of Justice,  
 One Secretary of Public Works.

### THE LEGISLATIVE POWER.

This branch of the Government emanating directly from the will of the people, resides into two high bodies, the Senate and the Chamber of Deputies. The Senate is renewed by halves every two years, and the deputies hold their mandates also for two years.

### THE JUDICIAL POWER.

This important branch of the Government is composed of a tribunal known as the Supreme Court of Justice, composed of a Chief Justice known as the President of the Tribunal, eleven Associate Justices known as Magistrates, and two Attorneys-General, one known as *Fiscal* Attorney-General and *Procurador*, or Procuror or Solicitor General.

The following duties devolves upon the different Secretaries of State.

The Secretary of State and of Foreign Relations has charge of all the foreign relations, the consulates, the delineation and preservation of the limits of the Republic, the naturalization of foreigners, the recording of commercial houses and foreign companies, the legalization of signatures ; he is also the depositor of the great seal of the nation, the keeper of the national archives and has charge of the ceremonial and official publications.

The duties of the Secretary of State and of the Interior consist in supervising all general elections, National Congress, constitutional reforms, territorial divisions and boundaries between the States ; it is his duty to see that the Constitution is enforced, he has charge of the relations between the Executive and the different States, public tranquillity, national guard, amnesties, civil register, right of

citizenship, right of reunion (meetings), liberty of the press, liberty of religion and the police of that department. He has charge of the public security and salubrity, the Post Office, the National festivities, epidemics, vaccination; he has also charge of the political government of the Federal District and its administration, the supervision of public benevolence, hospitals, asylums, prisons, penitentiaries, houses of correction and public printing.

The Secretary of Justice and Public Instruction has charge of the Supreme, Circuit and District Courts, of the controversy that may arise between the Federal tribunals, of cases of piracy, expropriations for public utility, Codes, of the collection of laws and decrees, of the judicial organization in the Federal District and Territories, of the freedom of teaching, professional titles, national colleges, special schools, academies, and scientific, artistic and literary associations, libraries, museums, national antiquities, lawyers and notaries, and pardons.

To the Secretary of Public Works belongs the department of statistics, liberty of industry and labor, agriculture, commerce, mining, exclusive privileges, internal improvements (including the supervision of highways, railroads, bridges, canals, light-houses, telegraphs, colonization, public lands, public monuments, exhibitions of agricultural and industrial products, also textile and mining products, drainage of the valley of Mexico, the supervision of all works of public utility or ornamentation done under the patronage or at the cost of the national treasury, the preservation of the national palaces and all public buildings), and has charge of geographical and astronomical survey and observations, scientific explorations, and weights and measures.

To the Secretary of the Treasury and Public Credit belongs the administration of all federal revenues, tariff of maritime custom-houses, mints, loans and public debt, and the nationalization of church property.

The Secretary of War and Marine has charge of the standing army, the national navy, the national guard (when in the service of the government), the military and naval schools, military hospitals, military legislation, military colonies, judgments of court martials, letters of marque, the inspection of forts, quarters, arsenals, military stores and federal depots, and the wild Indians.

The judicial power is composed of the Supreme Court of Jus-

tice, and the District and Circuit Courts. The first is composed of eleven magistrates and four supernumerary magistrates, and two attorneys general, one styled *Fiscal* and the other *Procurador*. These supreme judges are elected by the people and hold their mandates for the term of six years from the date of their taking the oath of office. During absence, or in case of incapacity or death, the President of the Supreme Court becomes President of the Republic.

The Government of the several States of the Republic is also divided into three distinct branches: the Legislative, Executive and Judicial Powers, taking respectively the names of Legislature, Government of the State, and Supreme Court of Justice of the State.

#### BOUNDARIES AND AREA.

The Republic of Mexico is bounded as follows: On the south by the Republic of Guatemala and the English territory of Balize; on the north by the United States of America. This dividing line between the two nations, as settled by the last treaty of December 30th, 1853, known as the Gadsden purchase, begins at the mouth of the Rio Grande, or Brazo del Norte, and, following its course until it strikes the  $31^{\circ} 47'$  parallel of north latitude; thence west, following the same parallel for 100 English miles; thence south to parallel  $31^{\circ} 21'$ , and following the same parallel until it strikes the  $111^{\circ}$  meridian from Greenwich; thence northwest in a direct line until it strikes the Rio Grande on parallel  $32^{\circ} 29' 45''$ ; thence following the course of said river, until the dividing line between the two Californias is reached; thence following said dividing line until the shores of the bay of San Diego on the Pacific Coast is reached, a marine league below the town of San Diego. The greatest length of the Mexican Republic from northwest to southeast, drawing a straight line from the southern extremity of the State of Chiapas to a league south of the port of San Diego in Upper California, is 750 leagues of 5,000 varas, or  $1,973\frac{3}{4}$  American miles; and its greatest width taken on the 26th degree of north latitude is 224 leagues, or 589 American miles. Its coast extends along the Gulf of Mexico and the Caribbean Sea for 1,613 miles, and for  $4,168\frac{1}{2}$  miles along the Pacific Ocean and the Gulf of California. Its line of frontier with the United States extends for  $1,789\frac{1}{2}$  miles, and the

extent of its southern frontier is of 532 miles. The present area of the Republic amounting to 110,317 square Mexican leagues, or 766,088 square miles.

According to the distinguished Mexican historian, Don Lucas Alaman, the territory of Mexico, when its independence from Spain was established, contained an area of 216,012 square leagues, of 5,000 varas in length, or 4,179 metres. The Mexican square leagues contain 1,747 hectares, or 4,428 American acres. He sets the same down, at the time he published his work upon Mexico, at 106,067 square leagues, the United States having acquired by treaty 109,945 square leagues.

### GEOGRAPHICAL POSITION.

The territory of the Mexican Republic extends from the 13° to the 32° of north latitude and the 14° 20' of east longitude, and the 17° 35' of west longitude from the city of Mexico.

### BAYS.

The principals are those of Campeche, Island of Carmen, Ascencion and Espiritu Santo on the east coast of Yucatan, and those of Acapulco, Manzanillo (on the Pacific) and those of Lower California.

### GULFS.

There are three in the Republic, viz.: the Gulf of California, or the Sea of Cortez, that separates Lower California from the State of Sonora; the Gulf of Tehuantepec on the Pacific, and the Gulf of Mexico on the Atlantic.

### CAPES.

The principal ones are the Cabo Rojo, that of Catoche on the coast of Yucatan, that of San Lucas in Lower California, and that of Corrientes on the coast of the State of Jalisco.

### ISLANDS.

The Republic of Mexico possesses many of more or less magnitude. Among the principals the following can be mentioned:

San Ignacio, Angel de Guardia, Salsipuedes, Tiburon, Tortuga, del Carmen, San José and Cerralvo in the Gulf of California. Those of Venados, of N. W., of del Medio, of the S. E., Santa Catalina, and others in the Pacific Ocean. Those of Cozumel, of Cancun, de Mujeres and Contey in the Carribean Sea, and those of Jollox and del Carmen in the Gulf of Mexico.

### RIVERS.

Unfortunately for Mexico but a few of its rivers are navigable, and that only for a short distance ; below is given the length of the principal streams of the Republic, viz.:

|  |              |
|--|--------------|
| Rio Bravo [Rio Grande] . . . . .         | 600 leagues. |
| Rio Concho, State of Chihuahua . . . . . | 130 "        |
| Rio de Santiago . . . . .                | 208 "        |
| Rio de los Balzas . . . . .              | 161 "        |
| Rio Yaqui . . . . .                      | 130 "        |
| Rio de Grijalva . . . . .                | 132 "        |
| Rio Usumacinta . . . . .                 | 131 "        |
| Rio Mezquetal . . . . .                  | 115 "        |
| Rio Panuco . . . . .                     | 110 "        |
| Rio del Altar . . . . .                  | 108 "        |
| Rio de Nazos . . . . .                   | 103 "        |
| Rio de Flagonalilla . . . . .            | 103 "        |
| Rio de Sinaloa . . . . .                 | 107 "        |
| Rio del Fuerte . . . . .                 | 105 "        |
| Rio Mayo . . . . .                       | 80 "         |
| Rio de Ures . . . . .                    | 80 "         |
| Rio de Alvarado . . . . .                | 62 "         |
| Rio de Culiacan . . . . .                | 60 "         |
| Rio de Gozalcacos . . . . .              | 35 "         |

The Rio de Moctezuma, that takes its rise in the hills that separate the Valley of Mexico from that of Toluca, and which, after uniting its waters with the Panuco, empties into the Gulf of Mexico, might be canalized and, probably will be some day, thereby making an internal water communication and a drain for the Valley of Mexico.

## MOUNTAINS.

Among the principal peaks in the Mexican Republic are the following :

*In the State of Mexico—*

1. The Popocatepetl, 5,400 metres.
2. The Ixtacihualt, 4,775 metres.
3. The Nevado de Toluca, 4,440 metres.
4. The Ajusco, 3,575 metres.

*In the State of Vera-Cruz—*

5. The Peak of Orizaba, 5,298 metres.
6. The Cofre de Perote, 4,089 metres.

*In the State of Colima—*

7. The Volcano of Colima, 3,396 metres.

*In the State of Oaxaca—*

8. The Zempoaltepetl, 3,368 metres.

*In the State of Michoacan—*

9. The Quincé, 3,324 metres.

*In the State of Zacatecas—*

10. The Veta Grande, 2,800 metres.
11. The Bufa de Zacatecas, 2,618 metres.

*In the State of Durango—*

12. Cerro Mercado, 2,500 metres.

*In the State of Chiapas—*

13. The Soconusco, 2,400 metres.

*In the State of Chihuahua—*

14. The Jesus Maria, 2,511 metres.
15. The Tabacotes, 2,359 metres.
16. The Cerro Puelo, 2,124 metres.
17. The Cusihuiriachic, 1,978 metres.
18. The Cerro del Coronel, 1,608 metres.

*In the State of Michoacan—*

19. The Volcano de Zorullo, 1,297 metres.

*In the State of Jalisco—*

20. The Bufa de Bolaños, 1,250 metres.
21. The Mineral de Bolaños, 1,025 metres.

## FORESTS AND VEGETABLE PRODUCTIONS.

Among the trees of the forests are found the following. We give their names in Spanish, or Mexican dialects, with a translation into English, and their technical names in botany when possible.

| SPANISH.  | ENGLISH.        | LATIN.              |
|---|-----------------|---------------------|
| <i>Guachocares,</i>   |                 |                     |
| Quiebrahachas,  | A kind of Fir.  |                     |
| Robles,   | Oak tree,       | Fraxinus            |
| Pinos,  | Pine,           | Pinus.              |
| Olmos,  | Elm,            | Ulmus.              |
| Nogales.  |                 |                     |
| Hayas,  | Beach tree,     | Fagus.              |
| Encinas,  | Live oak,       | Quereus ilex.       |
| Abetos.   |                 |                     |
| Cedros,   | Cedar,          | Cedro de America.   |
| Caobas,   | Mahogany,       | Swietenia mahogani. |
| <i>Guachapillines.</i>  |                 |                     |
| Palmas reales,  | Royal palmetto. |                     |
| Ceibas negras.  |                 |                     |
| Sabinos,  | Sabine.         |                     |
| Palo amarillo,  | Yellow wood.    |                     |
| Aloe.   |                 |                     |
| <i>Topinuranos.</i>   |                 |                     |
| <i>Palo gateado.</i>  |                 |                     |
| <i>Madera de Zopilote.</i>  |                 |                     |
| <i>Palillo.</i>   |                 |                     |
| Ebanos,   | Ebony.          |                     |
| Palo de hierro,   | Iron wood.      |                     |
| <i>Palo brazo</i> (a tree whose shade irritates the masculine sex). |                 |                     |
| Palo rosa,  | Rosewood.       |                     |
| <i>Guamochil</i>  |                 |                     |
| Retama.   |                 |                     |
| Acahuiste,  |                 | Conifera.           |
| Azumiate,   |                 | Maconia.            |
| Balsamo,  |                 | Amyridacea          |
| Cacao (female),   |                 | Anacordiasea.       |
| Cacao (male),   |                 | Anacordiasea        |
| Cherry,   |                 |                     |



| SPANISH.              | ENGLISH.     | LATIN.    |
|-----------------------|--------------|-----------|
| Cimal.                |              |           |
| Cuayolote.            |              |           |
| Espino blanco.        |              |           |
| Esquisuchil.          |              |           |
| Escabo ordinario.     |              |           |
| Alcamban.             |              |           |
| Huisachi              |              |           |
| Laurel.               |              |           |
| Leoncillo.            |              |           |
| Mamey.                |              |           |
| Mecacahuil.           |              |           |
| Naranjo,              | Orange,      | Citrus.   |
| Palo Maria.           |              | Elnica.   |
| Palo blanco,          | Huckleberry. |           |
| Pochote.              |              |           |
| Pixlta.               |              |           |
| Quechulahuacate.      |              |           |
| Sochimahuit (black),  |              | Laurinea. |
| Sochimahuit (yellow), |              | Laurinea. |
| Tesoloahuacate.       |              |           |
| Teolate,              |              | Conifera. |
| Tepehuage blanco,     |              | Mimosa.   |
| Teamole.              |              |           |
| Tlascal,              |              | Conifera. |
| Cacao.                |              |           |
| Copalillo (common).   |              |           |
| Cholahuite.           |              |           |
| Duraznillo.           |              |           |
| Temazcalchihual.      |              |           |
| Tehuiztle.            |              |           |
| Ramon.                |              |           |
| Frijolillo.           |              |           |
| Ispepe.               |              |           |
| Zempoalehual.         |              |           |
| Aceitunillo.          |              |           |
| Ahuacate chico.       |              |           |
| Algodoncillo,         |              | Malvacea. |
| Ahocoahuitl.          |              |           |

| SPANISH.             | ENGLISH.        | LATIN.                     |
|----------------------|-----------------|----------------------------|
| Amargo.              |                 |                            |
| Amargoso.            |                 |                            |
| Ahuacatillo fino.    |                 |                            |
| Arrayan.             |                 |                            |
| Asajarillo (male),   |                 | Sympl. Linonc.             |
| Asajarillo (female), |                 | Sympl. Linonc.             |
| Axocopa.             |                 |                            |
| Almacigo,            | Mastic tree.    |                            |
| <i>Huaconecos.</i>   |                 |                            |
| Brazil,              | Dye-wood,       | Cisalpinei Brasilienses    |
| Acacia.              | A shrub.        |                            |
| Albases.             |                 |                            |
| Campeche,            | Logwood,        | Hematopilis Campechicanus. |
| Fresno,              | Ash,            | Fraximus.                  |
| <i>Tepeguage.</i>    |                 |                            |
| Picea,               | Silver fir,     | Pinus picea.               |
| <i>Taray,</i>        |                 | Tamarisco.                 |
| Aliso,               | Alder tree,     | Betula almus.              |
| Palo colorado,       | Redwood.        |                            |
| <i>Camichin.</i>     |                 |                            |
| <i>Cobano.</i>       |                 |                            |
| Arrayan,             | Myrtle,         | Myrtus corromusus.         |
| Guayacan,            | Lignum-vitæ,    | Guaiacum.                  |
| Azafran,             | Saffron,        | Crocus Santus.             |
| <i>Peomia.</i>       |                 |                            |
| Oregano,             | Wild majoran,   | Origanum vulgar.           |
| Haba,                | A kind of pulu, | Haba comun.                |
| Madera blanca,       | White-wood.     |                            |
| Enebro,              | Common juniper, | Juniperos.                 |
| <i>Ocote.</i>        |                 |                            |
| <i>Nazareno.</i>     |                 |                            |
| Copal,               | Copal.          |                            |
| <i>Amapa.</i>        |                 |                            |
| Hovo.                |                 |                            |

## POPULATION.

Baron Humboldt says that in 1804 the white population of Mexico was in the proportion of sixteen to every hundred inhabit-

ants. The distinguished historian, Lucas Alaman, says that out of the population of Mexico in 1808, which he estimates at six millions souls, one million two hundred thousand were of Spanish blood (in that number he includes sixty thousand European Spaniards domiciled in Mexico), about two million four hundred thousand of Indian blood, and the balance of mixed blood. The proportion of inhabitants of pure white blood is larger in the northern States than in the interior States of the Republic.

The distinguished statesman, Don Sebastian Lerdo de Tejada, who succeeded President Juarez to the presidency of Mexico, in a statistical sketch of the Republic, that he published in 1856, set down the population of Mexico at 7,829,564 inhabitants, and its area at 110,317 square leagues.

It is probable that to-day the population is nearer twelve millions than any other figure.

#### CHARACTER OF THE POPULATION.

The Mexican Indian, who forms the largest portion of the population, is of a bronze color, peculiar to most of the natives of the American continent. He is of medium stature, his hands and feet are small; the palm of his hands and soles of his feet are of a lighter color than the balance of his body. He is well proportioned in form, with a narrow forehead, black eyes, black straight hair, with the exterior of his eyes slightly raised toward the temples, beard scarce, and very little hair on the body. The women in general are pretty, their speech is sweet, and their countenance extremely modest.

The Mexican Indian has a dignified appearance: he is of a melancholy disposition—is inclined to silence and solitude; his manners are genteel and passionate; he is inclined to dissimulate, and his physiognomy never show the ardent passions that may animate him within; he is constant in his affections; his fidelity is extraordinary. One of the main reasons why in Mexico the Indian has preserved his race pure, is because he very rarely contracts matrimony or relations with women that are not of his race and class. He is not much addicted to labor, his sobriety is extreme, his wants are but few, and as soon as he has acquired enough to satisfy them he will cease his exertions; with those defects that are inherent to constitution and character, they have many qualities.

They have but little inventive genius, and having little imagination their speech is short ; but this should be attributed to their long ill-treatment by the Spaniards for 300 years, and their want of education.

In regard to his physical force, although far from equaling the negro or the white man, probably on account of the small quantity and the bad quality of the nourishment, his constancy to his labor and his great power of endurance makes up his deficiency of physical force.

At the beginning of this century the negro population of Mexico did not exceed 10,000 souls.

Population, according to latest data in 1881, 10,025,649 inhabitants of all colors ; this includes foreigners residing in the country.

### ANTIQUITIES.

In the State of Chiapas, in the Valley of Quixté, is to be seen two stones in the shape of a tongue, three yards in length and two yards and two-thirds in width. To these two rocks the Indians pay great respect, taking off their hats to them ; they adorn them with flowers, which, after they have dried, they carry off as relics ; they kneel and pray to these rocks, as if they were still practising paganism.

The ruins of Palenque, so much noted for their grandeur and varied sculpture, are also in this State. Ruins of many large Indian cities, which attest a high degree of civilization, are found scattered in this same State.

Many interesting antiquities are found in the State of Oajaca, among the most noted is the ancient palace of Mitla.

In the State of Yucatan are to be found very interesting ruins on account of their vast proportions ; among them those of Uxmal, which are in a better state of preservation than those of Palenque. The structure called "La Casa del Enano" (the dwarf's palace) is amongst the most interesting on account of its fine sculptures

Antiquities of high interest are found in the State of Tlaxcala, among them the portraits of four of their ancient senators made on some leaves of the maguey plant ; the fountain in which the distinguished prince and poet Xicotencalt was baptized, and many others.

In the State of Chihuahua, the ruins of Casa Grande, on the river of the same name, supposed to have been built by the Astecs in their migration to the Valley of Mexico.

In caves situated in the mountains of the Laguna country, that belongs to the State of Coahuila, Indian mummies have been discovered in the late years.

#### ETYMOLOGY OF THE EXPRESSION OR WORD "MEXICO."

It originated from the chief *Ocite*, that degenerated into *Mexite*, whose name the country assumed in consideration of the services he had rendered, and which the Spaniards corrupted into Mexico. The word Mejico, in the Astec language, signifies place or residence of the war god, called *Mexitle* or *Huitzilopochtli*.

#### DIALECTS.

The national language is the Castillan. Amongst the natives, various dialects, the languages of their forefathers, are still spoken; the principal ones in our days are: the Astec or Mejican, the Otomite, the Tarasco, the Zapoteco, the Misteco, the Mazahua, the Poloque, the Zotzil, the Maya language, and many others; the dialects most generally spoken are the Astec, Otomite (in the Sierra Gorda country), and the Mazahua.

#### CLIMATE.

Most of the territory that now forms the Republic of Mexico, which was so greatly reduced by the treaty of Guadaloupe Hidalgo, is almost equally divided by the line of the equator, and limited north and south by the tropics. This vast space was formerly known as the torrid zone, because it was supposed that on account of its extremely warm temperature it was hardly inhabitable for man. It is true that this zone, where the level of the land is but slightly above that of the Ocean, presents the following feature: Near a luxurious vegetation, the heat is so great that the white man cannot perform any arduous labor, and he is necessarily compelled to remain inactive, almost constantly shut up between

thick walls, and have his field labor, particularly that kind that has to be performed in the sun, done by a race better constituted to stand the rays of the burning sun. When near the coast, the vicinity of the sea temperates in a great measure the burning influence of the Aster King, but when the land presents the vast surface of a continent, heat becomes intense, unless favored with an exceptional configuration, as is the case with Mexico, I mean to say with high altitudes. The higher the altitude of a country, the lower is its temperature, so much so that it would seem that he was leaving the equator for the north pole. Under the line of the equator can be found perpetual ice and a mean temperature equal to that of Iceland.

The great mass of the Mexican territory, in lieu of presenting a country of low altitude, as compared with the level of the sea, like the country along the banks of the Niger, in Africa, or the country along the banks of the Amazone River, in South America, constitute a high plateau, that presents on each of its flanks a rapid inclined plane of heavy grade to the shores of the Atlantic and Pacific oceans. It is certainly not one of the least privileges of the Mexican plateau to be situated at elevations which are most favorable to the development of the Caucasian race, both on account of its healthfulness and products. It was also on that account that prior to the conquest of the country by the Spaniards, it was already the seat of a remarkable civilization. The Cordillera, after it strikes the Mexican territory, spreads out so as to occupy the greatest portion of the country situated between the two oceans, hence a region of country suspended above the ocean at a height, in the southern portion of the Republic,—as for instance about the cities of Puebla, Mexico and in the Mixteca—of 4,500 to 5,000 American feet. The city of Puebla is situated at an altitude of 2,196 metres. The City of Mexico, at an altitude of 2,274 metres. North of Mexico, the fine city of Guanajuato, so celebrated for the rich silver mines that are worked in its neighborhood, is situated at an altitude of 2,084 metres, that is a little below the level of the capital. From the surface of this plateau rises several peaks which are covered with perpetual snow, such as the two at the foot of which are built, on the south side, the fine city of Puebla, and on the north, the capital of Mexico. Those two mountains have preserved to this day their Aztec names : one, the *Istaccihuatl* (the white woman), and

the other, the Popocatepetl (smoking mountain), reach respectively the altitude of 4,786 metres and 5,500 metres. A short distance from the City of Mexico, is situated the peak known as the Nevada de Toluca (snow mountain of Toluca) which reaches the altitude of 4,621 metres. Those projections of the plateau are mere dots compared with the immense extent of the same.

The six highest mountains in Mexico are the three above mentioned, the peak of Orizaba, the Coffre de Perote and the volcano of Colima situated almost on a parallel line with the equator. Excepting the narrow strip of country marked by those high peaks, Mexico offers a plateau extending northward, with undulations that do not materially change their altitude for long distances. Immense plains, that at one time were the beds of vast lakes, follow each other, and only separated by low mountains that hardly ever reach in altitude 2,000 feet. In altitude, this plateau equals the height of the Alpine mountains of Europe, which have a very cold climate; the former, on account of its being situated near the equator, is found with a temperate climate. This plateau maintains its great elevation northwardly to a point further than the tropic of Cancer; it really begins about latitude 18 and ends at latitude 40, giving it a development of 22 degrees, or 2,440 kilometres.

The two slopes of this long plateau, as one descends to the banks of either oceans and approaches the sea, presents the highest temperature. The grade being very rapid causes sudden changes in the climate and vegetation. The traveler who ascends or descends this inclined plane passes through the most picturesque and marvellous contrasts. If, for instance, he leaves the plateau for the coast, he first passes through forests of fir trees, like those of Europe; then fields of olive trees, grape vines, wheat or corn, and now and then spaces filled by all the variety of the cactus plant, and fields of magueys (*agave Americana*); then further, forests of orange trees, wild cotton, bananas, coffee trees, sugar cane, fields of indigo, cacao, and finally all the great variety of tropical fruits, with their bright colors, their delicious scent and flavors, which indicates a great natural richness, unequalled in the world, and susceptible of being easily improved.

To distinguish the various climates and products of Mexico, the Spaniards have always divided the country into three different zones, to which they have given characteristic names. These

zones could themselves be subdivided into innumerable others, according to their higher or lower altitudes or exposition to the rays of the sun. The first of these three zones, named "*Tierra Caliente*" (torrid land), begins on the coast and extends to a certain height on the inclined plane by which the plateau is ascended. Vegetable produces are here of great exuberance, caused by the very high temperature and by its numerous running streams. This zone has a very particularly active vegetation on the eastern flank of the plateau (Atlantic side), because the prevailing winds, the trade-winds, reach the low lands impregnated with all the dampness they have gathered on their long course over the surface of the ocean. It is also distinguished from the other two by its cultures, which are altogether tropical. Unfortunately, in the vicinity of its ports on the Atlantic side, its coast is desolated by the yellow fever, known as "vomito."

Half way above the inclined plane leading to the plateau, the second zone, known as *Tierra Templada* (temperate land), is reached. This portion of Mexico has a mean annual temperature of 18 to 20 degrees (Réaumur), the thermometer scarcely varying during the whole year, so that its inhabitants are blessed with a perpetual Spring. This region is one of the most delightful in the world, the best type of which is found about the cities of *Xalapa*, *Orizaba* and *Chilpancingo*. This zone possesses a vegetation nearly as active and as vigorous as that of the coast, but without its burning heaven and the poisonous miasmas of the sea-shore, and none of the innumerable poisonous insects, which constantly torment the inhabitants of the torrid zone, are found in the temperate zone. This zone, where water is found in abundance, as it is also found in the neighborhood of *Xalapa* and some other districts of Mexico, where snow-peaks, like those of *Orizaba* and the *Coffre de Perote*, feed numerous little streams, is a perfect paradise.

Above the temperate zone is found the third, known as the "*Tierra Fria*" (cold land), so named by the Spaniards on account of the analogy of its climate with that of the two Castilles, but most Europeans find the climate of this zone very mild.

The mean temperature of Mexico and the greater portion of the plateau is 17 degrees (Réaumur); it is a little below that of Naples, and the same as the three months of summer in Paris, France. The variations or changes from a season to the other are much less



felt than in the most temperate climate of European countries. During the season called winter, in the city of Mexico, the mean temperature never falls below 13 degrees.

A country favored with such physical constitution, can unite the most varied productions, not only in its divers States, but in the neighborhood of the same city. Four basins are stretched along very unequal altitude and surround the Mexican capital. The first comprises the valley of Toluca, capital of the State of Mexico, at an elevation of 2,600 metres above the Gulf of Mexico ; the second, the valley of Tenochtitlan (Mexico) at 2,274 metres ; the third, the valley of Actopan, at 1,966 metres, and the fourth the valley Tistla, at 981 metres above the Gulf of Mexico. These four basins differ as much by their climate and vegetable productions, as by their different altitudes above the Gulf. The fourth, the least elevated, is proper to the culture of the sugar-cane ; the third, to the cultivation of cotton ; the second, to the cultivation of grain ; and the first, that of Toluca, is distinguished by its maguey plantations. The maguey plant constituted the real vineyards of the Aztecs ; it even to-day furnishes a beverage called *pulque*, much in use among the Mexican population of the interior. When railways will spread out from the city of Mexico as they do from our great American cities, a few hours only will be necessary to unfold to the eye of the traveler the most varied cultivations and climes.

Supposing the railroad from Vera Cruz, via Mexico, to Acapulco completed : the traveller—going from Mexico to Acapulco—from a vegetation like that found in the vicinity of Paris would, in one or two hours' time be amidst the plants natural to Cuba and San Domingo, for it is only 18 leagues, or 47 miles from the city of Mexico to Cuernavaca, where the sugar-cane grows remarkably well. Independently of the phenomena that determine, here and there, the exceptionable most favored expositions to the sun's rays, the extreme variety of the vegetable reign displayed to the eye of the traveller is accrued by the peculiar elasticity that seems to characterize in Mexico the nature or the temperament of the plants, even of those who are supposed to be extremely delicate, like the sugar-cane. For instance, the cultivation of the latter, which begins near the sea-shore, continues, in all its fruitfulness, to a height of 3,000 feet, and even produces well in the valleys that are sheltered from the north, at an altitude of 5,000 feet, and even do

well at a still higher altitude. Sugar-cane plantations are found in the vicinity of the city of Valladolid, or Morella, the capital of the State of Michoacan, at an elevation of 6,000 feet. Very prosperous sugar-cane plantations are also found in the State of San Luis Potosi, in the valley of Rio Verde, at an altitude of 6,000 feet. But the latter valley is deep and narrow, the sides of the mountains, standing as straight as a stone wall, reflects the sun's rays to such a point of heat that makes it unbearable. It is proved by the will of Hernando Cortez, the conqueror of Mexico, that in his day sugar-cane grew in the valley of Mexico. The proper extension to be given to the cultivation of the cane itself would insure a great future to Mexico.

There is, in all probability, no country to be found on the face of the earth whose configuration is so particularly advantageous as Mexico. In Europe, the high land consists in plains situated at an altitude of 2,600 to 2,800 feet above the sea. The plateau of Castille, in Spain, is situated at an altitude of 2,300 feet. In France, the plateau forming the central departments from which rises the Mont-d'Or, the Puy-de-Dôme and the Cantal, has about the same altitude as that of Castille. The plateau of Bavaria has an elevation of 1,650 feet. All of the plateaus above mentioned are far from possessing the advantages of the Mexican plateau, whose base is bathed by the waters of two great oceans; and it is not by descending from the European plateau to the sea-shore that one will meet this admirable succession of all the climates and all the riches of the vegetable reign.

In South America, the vast territory formerly composing the Republic of Columbia, now divided into three Republics, whose coast presents the shape of a large semi-circle, united to the Isthmus of Panama, offers like Mexico the character of a territory situated in the equinoctial regions descending by heavy grades to the sea-shores of the two oceans; but here the elevation of the plains is much greater than it is on the largest portion of the Mexican plateau, the altitudes are too great. The city of Santa-Fé-de-Bogota, the capital of the Republic of Columbia, is situated on a plateau at an elevation of 8,662 feet; Caxamarca, the ancient residence of the Incas, which became celebrated at the time of Fernando Pizarro's conquest of the country on account of the place of keeping of the fabulous treasures of the Inca Atahualpa and the

murder of that unfortunate prince, is situated at an elevation of 9,438 feet. The great plains of Antisana are still more elevated, reaching an altitude of 13,530 feet, an altitude of 1,284 feet above the peak of the island of Teneriffe. Even when an altitude like that of the city of Santa-Fé-de-Bogota is reached, it becomes a disadvantage, as it determines a low temperature that paralyzes the power of vegetation, and prevents the establishment of a well producing agriculture, and in so doing becomes an impediment to the ascending march of public wealth and the progress of civilization.

On the Mexican plateau, it can be observed that after reaching the altitude of 8,250 or 8,500 feet, the sun ceases to give during the summer a sufficient quantity of heat to bring to maturity many of the most desirable products to the civilized man. On the plateau of Bogota, or on that of Anahuac (Mexico), the winter is milder than in Europe, or in the so-called temperate climates of the United States, as that portion of the country between Boston or Chicago to New Orleans; on the other hand, the sun rays, during the summer, have not sufficient power to furnish the heat required, at a certain moment, to ripen many of the grains and fruits necessary to the subsistence and the arts of the civilized man.

Between the Mexican plateau and the elevated regions of South America, another feature is found altogether to the advantage of the former. The plains of South America are longitudinal valleys, shut up between the two branches of the Cordillera, while in Mexico it is the largest portion of the mountain chain that forms the plateau. From what has just been said, it is plainly shown that in width,—that is perpendicularly to the equator,—the plains of South America are not of great extent. They are also of limited extent in length; the country is torn across by ravines or crevices whose depth reaches 4,620 feet which opposes to the communications obstacles difficult to overcome. South America, in lieu of a plateau like that of Mexico, presents a checker-board of small plateaus, separated by immense precipices, when they are not separated by the perpendicular walls of mountains. According to Baron de Humboldt, the little plateaus of South America have a mean area of 40 squares leagues or 170,200 acres; they are isolated islands amidst an aerial ocean. The deep cuts that furrow the continent in the elevated regions of South America impedes the transportation of merchandise and prevents all traveling except

on horseback, on foot, or on the back of Indians; to this day, this labor, proper to beast of burden, is for them a profession. In Mexico, on the contrary, and although there are but few roads, except natural roads, wagons can easily roll upon an almost natural level road, that is a road whose easy grade is not felt by the wagoner, from the city of Mexico to the city of Santa Fé, in New Mexico, now a territory of the United States, for a distance by the traveled natural road of 631 Mexican leagues, or 1,640½ miles.

Another great superiority of Mexico over a portion of the other equinoctial regions of South America, is in the small number of its volcanoes and the absence of those violent earthquakes that from time to time destroy and devastate a portion of the country. In the whole of Mexico, one hundred years ago, only four volcanoes were known to be on fire: the peak of Orizaba, who has not had any eruption of any note for 300 years; the Popocatapetl, which constantly ejects smoke in small quantity (it seems that at the time of the conquest he emitted much more); the mountain of Tustla and the volcano of Colima, that never had caused any damage to the surrounding country. In September, 1759, an extraordinary phenomenon without any precedent in natural history took place. A volcano spontaneously arose in the valley of Jorullo, destroying all vestige of civilization for several miles of country, and throwing out ashes in such a quantity as to obscure the sunlight. Some of the ashes fell in the city of Queretaro, a distance of forty leagues. In our days it is smoking. Although Mexico is subject to earthquakes, no shocks have ever been felt in that city like those who destroyed the cities of Guatemala, Lima, Carracas, and, of late, Iquique and many others.

What Mexico lacks is navigable streams, most of its rivers being torrents, dry during a large portion of the year. The Rio Bravo del Norte, which now forms a part of the boundary line between the United States, is only navigable for small boats to Roma. The Guazacoalco is a navigable stream, at the mouth of which a good port could be made, but it is not accessible to the populous portions of Mexico. The Santiago (St. James), or Tolo-tlan, which empties into the Pacific Ocean near the port of San Blas, passes through a rich country, and its navigability could be improved. Fortunately for Mexico, during the raining season, which lasts four months of our summer, the Mexican soil is abundantly

watered every afternoon, and all the natural reservoirs that supply the springs are filled up, as well as all the basins and tanks necessary to the cultivation of the soil where no streams are found. This same phenomenon occurs in calcareous countries. The cause is to be attributed to the constitution of the soil, the earth being so cracked, the rain water, absorbed by the soil, percolates through innumerable fissures and forms small streams that gush out on the flanks of the inclined plain leading to the sea.

Mexico must be considered a dry country, often barren. Some small lakes are scattered about the country. The largest is that of Chapala, containing an area of 75,695 acres. This lake is situated in a thickly settled portion of Mexico, near the city of Guadalajara. The lakes that surround the city of Mexico are only large lagoons, they are the lake of Texuco, Xochimilco Chalco, San Cristobal and Zumpango. They together form an area of 11,100 acres. Nine more lakes are found north of the city of Zacatecas, and five in the neighborhood of Chihuahua. Unfortunately, the water of these lagoons is so impregnated with carbonate of soda, that works have been established for the extraction of this salt, but this manufacturing advantage is counterbalanced by great inconvenience, as these waters cannot be used for irrigating or household purposes.

The same salt, of which we have spoken of in the above paragraph, impregnates a part of the Mexican soil. In some places the salt rises to the surface, attracted by the dryness of the atmosphere. It appears in efflorescence that can be seen with the naked eye, on account of its white color. This salt is found also in the valley of Mexico, on the shores of lakes Texuco, Zumpango and San Cristobal, as well as in a portion of the plains that surround the city of Puebla and many other portions of Mexico. The presence of this salt is certainly a great obstacle to agriculture, and even to all sorts of vegetation, and causes the country to have a lonesome and forlorn look.

It is true that the presence of this salt condemns at present a part of the Mexican territory to a want of vegetation that is unpleasant to the eye, but there is still plenty of excellent lands to exercise the industry of the farmer and to produce rich and varied crops that would be of great profit to the interior laborer and the commerce of exportation.

## PLANTS.

Mr. De Candolle, a distinguished botanist, estimates that there is in America more than 100,000 vegetable plants whose species or varieties have not yet been classified.

Clavigero (book VII, p. 251) says that Europe is indebted to the Mexican doctors for the discovery of tobacco, American balsam, gum copal, the *liquidambar*, sarsaparilla, gum *tacamaque*, and many other plants employed in modern medicine.

Tobacco, called by the Mexican *pyciell*, was used by the Aztecs at the time of the conquest, to snuff and to smoke. American balsam is taken from a tree called *huitziloxitl* (Balsamo-dondron). This tree is common in the torrid zone. The Mexican kings had it transplanted in the celebrated garden of Huaxtepec, from whence it was propagated in the mountains. It is of moderate growth; its leaves resemble those of the almond tree, but are a little larger; its wood is reddish and odorous; its bark of an ash color; its flower white. Gum copal is taken from a tree called *copaliquahuilt* (copalli is an Indian word given to all gum trees).

The liquidamar of the Spaniards is the *xochiocotzotl* of the Mexicans.

Sarsaparilla is the *mecapatli* of the Mexicans.

The *tacamaca* is a gum taken from *tocomacihayac* tree, which also abounds in the *tierra caliente* or torrid zone.

The *hule* of the Spaniards is the elastic resin taken from the *olquahuilt*; it is a large tree also found in the torrid zone. In the State of Michoacan there is a tree of the same species, but which differ from the former by its leaves.

Gum lacque (*goma laca* of the Spaniards) is taken from a tree called by the Mexicans *tsinacancuitlaquahuilt*.

Besides these, many other medicinal plants and herbs, too numerous to be mentioned in this brief sketch are to be found in Mexico. There is certainly a wide field for botanists and chemists to look after and work these valuable gums and medicinal plants, and export them to other countries.

Before concluding we will add the following plants among the most useful:

|   |                         |
|---|-------------------------|
| <i>Tominogua</i> , a sure cure for fever. | <i>Canaguat</i> (root). |
| <i>Parroqui</i> (herb).                   | <i>Chupi</i> (herb).    |

|                                |                             |
|--------------------------------|-----------------------------|
| Barba de chebato (buck beard), | <i>Guaguat</i> (a plant).   |
| <i>Ubalamas</i> (a fruit).     | <i>Guaco</i> (Jalapa root). |

## FLOWERS.

It would take a volume to enumerate all the beautiful flowers of Mexico ; besides all those known to Americans are some of extreme beauty, of vivid colors and most delicious perfumes. Among them I will only mention a few, giving their names in the Spanish of the country, viz. :

Flor del Corazon. (It grows on a large-size tree.)

Flor de la Mano.

Flor de Tigre.

The Coatzontecoxochitl.

Flor de Cabeza de Ribora.

Flor de Zempoaxochitl (flower of a beautiful gold color).

The Azucena. (Eng. *White Lilly*.) (Lat. *Lilum Candidum*.)

La Camelia.

El Tulipan. (Eng. *Tulip*.)

El Clavel. (Eng. *Pork*.) (Lat. *Dianthus Caryophyllus*.)

The Flor del Cuero.

El Floripondio.

The dahlia, one of the finest flowers in the world, on account of its great varieties and beautiful colors (although it has no perfume), is aborigineous, but has been improved in Europe with great success, and the most varied sizes and colors produced.

Roses of all varieties and of the very finest colors and most delicious perfumes.

## AGRICULTURE.

The cultivation of corn is and has been, without any doubt, of the greatest importance to Mexico, as this grain constitutes the principal nourishment of the poorer classes ; it forms really the basis of Mexican agriculture.

Some people believe that there are several classes of corn, when really there is but a variety of the grain. There is a quality of corn called in the country *Maiz pinto*, whose grain is blue ; *Maiz cianuro*, on account of the whiteness of its grain, is employed to

make certain pastes. *Maiz de riego*, is a corn raised by irrigation ; when the crop is good, it generally yields 500 to 1 ; it is very abundant and is generally planted in most of the plantations. *Maiz tremis* is what in the United States is called early corn, and will mature in three months ; is sown or planted in dry lands, but must be planted early. Although corn does well in every State of the Mexican Republic, a warm climate is better adapted to its cultivation.

Wheat is cultivated with more or less success in most of the Mexican States. The Mexican wheat is very nutritive. In 1856, it was estimated that about 11,000,000 of bushels were raised in the Republic, but the natives in general prefer corn to wheat. But M. de Humboldt, whose name has to be cited often when speaking of Mexico, said that corn has the great disadvantage of containing less nutrition than wheat cultivated on the same space of ground.

Barley is put to divers use, and it was reported that, in 1856, about 8,000,000 bushels were raised in the Republic.

The *Maguey* or *Agave americana* is one of the peculiar plants of Mexico, it hardly needs any cultivation. It is generally planted from sprouts in gravelly or dry soil ; a plantation of 20 to 25,000 magueys will produce a handsome income. What is called a *fanega de sembradura*, about ten of our acres, will admit 1,300 plants ; after five or eight years, it will produce the *aguamiel* or *sap*, out of which is fermented the *pulque*, the principal beverage of the Mexican population in the interior of Mexico ; each plant, for the period of from four to six months, will yield on an average nine quarts of the juice per day ; each plant will give a return to its owner, in general, from 20 to 30 dollars. It is estimated that the cost of planting each plant is  $3\frac{1}{8}$  cents, or, in the term of the country, a *cuartilla*. We will speak more extensively of this plant hereafter.

The culture of sugar-cane constitute also one of the principal branches of Mexican agriculture, which could be greatly propagated, for no country in the world is better adapted to its production. In some of the Mexican States it will yield twenty per cent. more than in the State of Louisiana. It does well in all of the Mexican States, but yield large crops in the States of Morelos, Vera Cruz, Tamaulipas and southern Nuevo Leon.

Cotton is also raised in Mexico, but not in sufficient quantity



for the wants of its inhabitants, although some States are particularly well adapted to its growth.

The coffee-tree was first brought to Mexico from the island of Cuba about the beginning of this century, and was first cultivated with success in the neighborhood of Cordova, in the State of Vera Cruz; afterwards it was propagated in other Mexican States. The coffee produced in Cordova and Orizaba is equal, if not superior to that raised in Cuba; and that raised in the State of Colima is said to be superior even to Moca. It is, in after years, destined to be one of the main exports of Mexico. Its culture is fast improving; for a few years ago only about \$100,000 worth of coffee was exported, while in the fiscal year, ending June, 1878, \$1,275,058.11 was exported from Mexican ports to foreign countries.

Tobacco is also produced in several of the Mexican States, and will be eventually one of its principal exports. The best tobacco is produced in the State of Tabasco. It is certainly equal to the Havana tobacco. Tobacco is also grown in Orizaba, Cordova, and the District of Tepic, in the State of Jalisco, on the Pacific.

*Anil*, or aniseed, is cultivated in the State of Chiapas, and on the western coast of Mexico—Sinaloa, Sonora, and other States.

The *cochinilla*, or cochineal, a very useful insect on account of the beautiful red color it produces, is proper to Mexico, and is raised on a certain variety of the nopal (*cacti*) that are cultivated in the Republic. The cochineal is a very small insect; it is bred more largely in the State of Oajaca than any other Mexican State, and does remarkably well in that State. Generally three crops are gathered yearly; as already said, it produces a red substance of extraordinary beauty; on this account cochineal, after gold and silver, was considered one of the principal exports of Mexico. In 1856, 602,832 pounds of cochineal, valued at \$1,214,388 were exported from the Republic.

In 1856 it was estimated that the agricultural products of the Republic amounted to \$200,000,000.

## ZOOLOGY.

We will only mention the animals that existed in the country at the time of the conquest, such as mountain cats, wolves, squirrels, rabbits, wild hogs called *javalin*, various species of monkeys.

The coyote, called by the Mexicans *el coyotl*, an animal resembling the dog in form and size and the wolf in ferocity. The camomiotte, a specie of marten. The coyopalin, an animal the size of a rat, but with a very large tail. A large variety of snakes; among the most venomous are the rattlesnakes, the coral. The *céntoatl* is a snake about five feet long and eight inches in diameter, it is easily distinguished from all others as its skin shines in the darkness. The *saltillo* (darting snake) is a large reptile, with an ash-color stripe running along his spine and a brown stripe under his belly; he is venomous and darts upon its prey from trees.

Among the reptiles worthy of notice is the *alcatelepon*, a sort of lizzard fifteen inches in length, with a rugged gray skin covered with pimples; it has an extremely ferocious look, and its bites are very painful. The iguana, a kind of lizzard native of America (*Lacerta iguana*, bot.), sometimes three feet in length. Among the spiders are the tarantula, the ham and casapulga, whose bites are exceedingly dangerous; the scolopundo, known as centipede, is an insect of the order *Aptera*, which is sometimes found eighteen inches in length. The rinagrillo, a dangerous insect; and many scorpions whose bites are said to cause death.

There is in Mexico six species of bees, one of which has no sting and is peculiar to the States of Yucatan and Chiapas. The honey they produce is said to be more delicious than that of all others.

A great variety of butterflies of the most beautiful colors. Among the worms, the *teocuilin* or shining worm, which is said to possess the qualities of the cantharides. The *temahuani* is covered with yellow thorns, which are very venomous. A great variety of ants. Among them, the kind called *arrieras* (carrying ants) does a great deal of harm in the fields. There is a small black ant and a large red one whose stings are very painful. There are two kinds of ticks (*Acarus ricinus*); one, known as the *pinonillo*, is of a black color, very small and very numerous; also an insect called *cochimilla*, which resemble the bed-bug in size and appearance; both of the latter are dangerous.

There are in Mexico, besides the domestic fowls, over two hundred species of birds, among them several varieties of the eagles, hawks, sparrow-hawks, the royal eagle, the raven and all kind of buzzards.

# TABLE I

Showing the Names of the different States composing the Republic of Mexico, their area in Mexican leagues, their population, the names of the capitals of the different States, and their population in 1881.

| When created States, | Names of the different States of the Republic of Mexico. | Area of the States in Mexican leagues, | Population of the States. | Names of the Capitals of States. | Population of the Capitals of States. |
|----------------------|--|--|---------------------------|----------------------------------|---------------------------------------|
| 1                    | Aguas Calientes.....                                     | 327                                    | 139,300                   | Aguas Calientes.....             | 35,000                                |
| 2                    | Campeche.....  | 3,801                                  | 120,815                   | Campeche.....                    | 26,000                                |
| 3                    | Coahuila de Zaragoza.....                                | 9,500                                  | 125,400                   | Saltillo.....                    | 17,000                                |
| 4                    | Chiapas.....   | 2,474                                  | 205,000                   | San Cristobal las Casas.         | 10,205                                |
| 5                    | Chihuahua.....   | 14,300                                 | 220,000                   | Chihuahua.....                   | 16,000                                |
| 6                    | Colima.....  | 552                                    | 65,827                    | Colima.....                      | 31,774                                |
| 7                    | Durango.....   | 6,391                                  | 200,000                   | Durango.....                     | 28,000                                |
| 8                    | Guanajuato.....  | 1,862                                  | 889,575                   | Guanajuato.....                  | 63,000                                |
| 9                    | Guerrero.....  | 3,564                                  | 325,000                   | Chilpancingo.....                | 3,000                                 |
| 10                   | Hidalgo.....   | 1,521                                  | 404,207                   | Pachuca.....                     | 15,000                                |
| 11                   | Jalisco.....   | 7,225                                  | 934,850                   | Guadalajara.....                 | 93,875                                |
| 12                   | Mexico.....  | 1,416                                  | 607,435                   | Toluca.....                      | 11,376                                |
| 13                   | Michoacan.....   | 3,497                                  | 618,240                   | Morelia.....                     | 25,000                                |
| 14                   | Morelos.....   | 262                                    | 150,300                   | Cuernavaca.....                  | 12,000                                |
| 15                   | Nuevo Leon.....  | 4,036                                  | 201,732                   | Monterey.....                    | 40,000                                |
| 16                   | Oaxaca.....  | 4,953                                  | 733,556                   | Oaxaca.....                      | 26,708                                |
| 17                   | Puebla.....  | 1,733                                  | 784,466                   | Puebla.....                      | 76,817                                |
| 18                   | Queretaro.....   | 506                                    | 154,000                   | Queretaro.....                   | 48,000                                |
| 19                   | San Luis Potosi.....                                     | 4,262                                  | 650,000                   | San Luis Potosi.....             | 45,000                                |
| 20                   | Sinaloa.....   | 5,950                                  | 200,000                   | Culiacan.....                    | 7,000                                 |
| 21                   | Sonora.....  | 11,655                                 | 141,000                   | Ures.....                        | 8,000                                 |
| 22                   | Tamasco.....   | 1,376                                  | 104,759                   | San Juan Bautista.....           | 8,000                                 |
| 23                   | Tamaulipas.....  | 4,428                                  | 120,000                   | Matamoros.....                   | 25,000                                |
| 24                   | Tlaxcala.....  | 253                                    | 138,988                   | Tlaxcala.....                    | 36,463                                |
| 25                   | Vera Cruz Llave.....                                     | 3,501                                  | 552,918                   | Orizava.....                     | 20,000                                |
| 26                   | Yucatan.....   | 4,818                                  | 422,365                   | Merida.....                      | 56,000                                |
| 27                   | Zacatecas.....   | 6,270                                  | 470,000                   | Zacatecas.....                   | 62,000                                |
| —                    | Baja California (Territory).                             | 8,727                                  | 30,000                    | Lapaz.....                       | 4,000                                 |
| —                    | Federal District of Mexico.                              | 50                                     | 315,916                   | Mexico.....                      | 225,000                               |
|                      |  | 119,710                                | 10,025,649                |                                  |                                       |

## POLITICAL DIVISION.

The Republic of Mexico is divided into 27 States, one Territory and one Federal District. The States, for their interior government, are divided into 48 departments, 170 districts, 48 cantons, 110 counties, 1,411 municipalities, 146 cities, 378 towns, 4,886 villages, 872 hamlets, 5,869 haciendas, 14,705 ranches and 6 missions.

## REVENUES.

Average revenue of the Mexican Republic, \$20,477,788.

The revenue of the different States, is in the following order: 1st, Guanajuato, \$811,430; 2d, Puebla, \$636,560; 3d, Oaxaca, \$569,489; 4th, Jalisco, \$540,680; 5th, Mexico, \$462,103; 6th, Vera Cruz Llave, \$391,688; 7th, Michoacan de Ocampo, \$390,230; 8th, Zacatecas, \$360,960; 9th, San Luis Potosi, \$329,238; 10th, Hidalgo, \$311,500; 11th, Yucatan, \$232,000; 12th, Sinaloa, \$184,976; 13th, Morelos, \$180,000; 14th, Queretaro, \$165,450; 15th, Durango, \$159,717; 16th, Sonora, \$136,565; 17th, Chiapas, \$120,202; 18th, Chihuahua, \$117,673; 19th, Tamaulipas, \$114,300; 20th, Guerrero, \$108,530; 21st, Aguas Calientes, \$95,186; 22d, Coahuila, \$92,483; 23d, Tlaxcala, \$85,890; 24th, Nuevo Leon, \$76,000; 25th, Colima, \$75,418; 26th, Campeche, \$66,893; 27h, Tabasco, \$62,400.

## STATE OF AGUAS CALIENTES.

This State is bounded on the west by the State of Zacatecas, on the north by that of San Luis Potosi, on the east and south by that of Jalisco; its area contains 1,771,479 acres, or 377 square miles.

This State contains one city, one town, three villages, three mining towns (*minerales*), 57 haciendas or estates, and 288 ranches or farms.

Population in 1856, 85,859 inhabitants.

Population in 1881, 140,000 inhabitants.

Capital, the city of Aguas Calientes (Hot Springs), derives its name from a spring of thermal water that rises in its vicinity. The city possesses 13 churches, 1 hospital, 1 penitentiary for women. The principal public buildings are the City Hall, the market and the jail; it has also fine public walks.

The population of the city is set down at 35,000 inhabitants.

*Products.*—Corn, beans, wheat, pepper, lentils, tobacco, potatoes; all fruits and vegetables of warm and cold climates; pulque, also a liquor made out of the cactus figues, called *coloche*, wines, alcohol, cheese, etc.

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## STATE OF CAMPECHE.

### BOUNDARIES, AREA, POPULATION.

This State is bounded on the north by the Gulf of Yucatan, on the east by the State of Yucatan, on the south by the State of Tabasco and the Republic of Guatemala, and on the west by the State of Tabasco.

Its area contains 3,841 square leagues. Its present population is 66,724 inhabitants.

*Mountains.*—In this State the Cordillera is reduced to the size of high hills.

*Rivers.*—The principals are those of Champoton and Jaraliza.

*Lakes.*—Lake Terminos is worthy of notice.

*Ports.*—The principal are those of Campeche, an old Spanish town, and that of El Carmen has a considerable foreign commerce.

*Natural Productions.*—Many dye-woods, tobacco of superior quality, sugar-cane, hennequien, and valuable palmettoes.

*Political Divisions.*—This State is divided in five districts, viz.: Campeche, Los Chenos, Hecelchacan, El Carmen, Champoton.

*Principal Cities and Towns.*—The city of Campeche, an old fortified Spanish town, has a population of 15,000 inhabitants; is situated in a fertile valley surrounded by the Gulf; it has a fine theatre, several institutions. For many years it was the only port of Yucatan, and was sacked repeatedly by filibusters. The land is

gradually invading the bay, so much so, that only boats of light drafts can navigate into the port.

Value of real estate \$700,000. Campeche was created a State in the year 1856. •

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## STATE OF COAHUILA.

This portion of Mexico was inhabited by the following barbarous tribes of Indians, viz. : the Guachichiles, Tobosos, Cotzales, Pihuiques, Irritilas, Laguneros and others. Under the Spanish Government it was known as the Province of "New Estramadura." Its boundary line then extended to the Medina River, Texas.

The independence of Mexico being achieved, it was united with Texas and formed a part of the State of Coahuila and Texas. In 1837 it was erected into a department, and in 1847 into a State with its present territory, Texas having been lost to Mexico by military occupation. In 1857 it was united to Nueva Leon by Governor Vidauri, but the law of the 18th of November, 1868, restored definitely that territory to its sovereignty.

It contains an area of 9,500 square leagues or 42,066,000 acres ; population, 125,400 inhabitants. The State contains the following cities and towns, viz. :

*First.*—District of the Centre, 46,583 inhabitants ; municipality of Saltillo, 27,500 inhabitants. The city of Saltillo, founded in 1586 with the title of town (*villa*), and created a city on the 5th of November, 1827, with the name of Leona Vicario, in honor of a heroine of the Mexican revolution, which name did not prevail, has a beautiful church, ornamented with fine sculptures, also six other churches, one hospital, an amphitheatre dedicated to bull-fighting, a public garden, a college, a government palace on the principal square, known as the Plaza de Zaragoza, and an alameda with beautiful shade trees.

The etymology of the word Saltillo is a corruption of a " Chichimec " word which signifies " high lands with much water," and was given to it for its being situated on the declivity of a hill that gives birth to abundant springs of water. Population, 18,000. The

towns of Arteaga, Patos, San Pedro, Ramos Arispe, are in the same district.

*Second.*—District of Parras: 18,330 inhabitants. The City of Parras de la Fuente, had the name of Fuente added to it in honor of the Mexican ambassador of that name to France who heroically protested against the French intervention. The place was founded by the Jesuit father, Juan Augustin Espinosa, and Captain Antonio Martin Zapata, with families of the Tlaxcaltec nation brought from Saltillo in 1598. It was created a city in January, 1868. It has a good City Hall, six churches and eight thousand inhabitants. The town of San Pedro is in the same district.

*Third.*—District of Nazas: 18,842 inhabitants. Town of Nazas formerly known as the Alamo de Parras.

Villages of Saucillo, Santa Margarita Soledad.

Town of Laguna de Matamoros, created September 8th, 1864.

*Fourth.*—District of Monclova: 31,749 inhabitants. The City of Monclova founded by Captain Antonio Balcarcel Sotomayor y Rivadeneyra on the 23d of November, A. D. 1784, under the name of "Our Lady of Guadalupe of New Estramadura." Founded again by Don Jose Escandon in 1748. It was the capital of the State of Coahuila and Texas for some years. It has two churches and a population of 3,500 inhabitants.

Villages of Mota, Estancia, San Francisco Aguayo, San Miguel Aguayo. The town of San Buenaventura, was founded by Fernando del Bosque, first alcalde of New Estramadura, on the 14th of May, 1678. Population, 3,500 souls.

Village of Coronel Fuentes, Juarez, and the town of Abasolo, founded 14th of May, 1675, and named San Vicente del Alto.

Town of Rodriguez, formerly hacienda of San Vicente el Bajo.

Town of Cuatro Cienegas, 4,000 inhabitants.

Town of Sacramento, formerly a fort or presidio, founded in 1736.

Town of Musquiz, formerly town of Santa Rosa, founded in 1698. In 1789 the headquarters of the captain-general commanding the eastern internal provinces of New Spain, were established in this town.

Town of San Juan de Sabinas, founded as a mission on the 22d day of June, 1699, by Father Juan Martin Trevinio, with the name of San Juan Bautista y valle de Santo Domingo, and finally created into a town in 1869.

Candela, 3,867 inhabitants, has valuable copper mines in its neighborhood. It was founded in 1689.

Town of Valladares, founded under the name of Santiago de Valladares in 1790.

Town of Progreso, founded in 1860.

*Fifth.*—District of Rio Grande—City of Zaragoza, founded on the 1st of February, 1753, by Pedro de Rabago y Teran, under the name of San Fernando de Austria. It was then called Valley of Santa Rosa, then San Fernando de Rosa, and last, in 1868, it was created a city with the name of Zaragoza—population, 2,000 inhabitants. Towns of Allende, Nava, Piedras Negras, 2,738 inhabitants. Towns of Guerrero, formerly Presidio de San Juan Bautista de Rio Grande, founded in the seventeenth century, and removed to its actual position in 1704.

Towns of Rosales, Fuente, Morelos.

Town of Gigedo, founded in 1725 with the title of Santo Nombre de Jesus de Peyotes, by Fray Francisco Penasco; repeopled in 1737, under the name of San Pedro Gigedo. It is also known under the name of the town of Luga.

Town of Tomines: 864 inhabitants.

This State contains 4 cities, 27 towns, 8 villages, 12 hamlets, 88 haciendas and 320 ranches.

Besides the Spanish language the Indians speak the Lippan and the Apache dialect called the llanero.

*Productions.*—Gold, silver, copper, lead, salt, nitre, onix alabaster, cotton, sarsaparilla, wines made out of the grapes, that have received a gold medal at the Philadelphia Centennial; mezcal de la popa, a liquor made out of the maguey plant, of the very best quality; all small grains, good timber, all fruits of temperate climes, and wool and cotton manufactures.

The following factories are at present in good working order, viz.: "La Hibernia," "La Esmeralda," "La Aurora," "La Libertad," "El Labrador," and "Palomas," all in the Central District in the vicinity of Saltillo. In the District of Parras "La Estrella," and in the District of Monclova "La Abundancia," all worked by water-power. There is in this State fifty flour and corn-mills and several saw-mills.

*Public instruction.*—In 1876, this State expended \$26,322 for 115 public schools, attended by 4,359 scholars of both sexes.



The present Governor of this State, Don Evaristo Madero, one of its wealthiest real estate owners and manufacturers, is a man of large views and of great spirit of enterprise. His liberality is equal to his success. He accepted the position contrary to his wishes, and abandoned his salary for the benefit of the poor of the State.

#### MINING IN COAHUILA.

Formerly in the divers mineral districts of this State, over sixty mines were worked, but after the declaration of independence from Spain only four in the District of Viezca were worked; they were the mines of Sierra de Ramirez, Sierra de Timulco, Cañon de Ribera, and Sierra de Hornos. Actually various mines are worked in the valley of Santa Rosa.

Besides silver, iron is found in this State near Monclova; and in Reis and Guadalupe, copper and lead are found in abundance. Magnetic iron abounds in Viezca and in the vicinity of Monclova, the former capital of the province. Nitre is found in San Blas, in the jurisdiction of San Buenaventura. Sulphur and copperas is found in the hills of Gigedo or Peyotes.

The principal causes of the abandonment of the mines in this State were the same ones which affected all northern Mexico: the insecurity occasioned by Indian incursions, and the want of capital.

The mining district of Sierra Mojada is mostly situated in this State.

The mines of Matehuapile, situated in the mountain and near the present farm of the same name, on the lands of the estate of Salado,—are rich silver mines which produced an immense *bonanza* from 1720 to 1735, prior to the discovery of the mines of the Cerro de Catorce mountain, of which this chain is a sort of foot hill. Its owner purchased them from the crown with the title of Count of Matehuapile, and afterwards that of Marquis de las Guadianas. Near the present ranche of Matehuapile existed a town that had as much as five thousand people engaged in mining, who were all massacred by the Indians in the year 1735. At a short distance from these mines is an elevation of almost pure iron.

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## THE STATE OF CHIAPAS.

## SITUATION, BOUNDARIES AND AREA.

This State is situated between the  $15^{\circ} 45'$  and the  $17^{\circ} 55'$  north latitude, and the  $3^{\circ} 54' 50''$  and the  $6^{\circ} 45' 50''$  east longitude from the City of Mexico. It is bounded on the north and the east by the State of Yucatan, on the south by the Pacific Ocean and the Republic of Guatemala, on the west by the States of Tabasco and Oaxaca. It has an area of 2,598 square leagues.

*Topographical aspect and climate.*—The Sierra Madre mountain, in three chains almost parallel, cross this State from east to west, which, on the south, present considerable depression. Its general climate is good.

Chiapas was created a State on the 12th November, 1824.

*Rivers.*—Among those worthy of note, are to be found the Chiapas, that takes its rise in the mountains of Cuchumatanes, in Guatemala; the Odumacima; the Julija, which is navigable for a short distance; the Chapa; the Blanquillo, that passes near Chapultenango and empties in the Gulf.

*Lakes.*—The lake of Tepancuapan, situated in the southern district of the State, is about 17 miles long and three miles wide. Also, the small lake of Islotes.

*Natural productions.*—The mango, the caomito, the bixa ocellana, Brazil-wood, Campeche wood, zopote mamey (*achras zopota*), pasiflora granadilla or passion-flower, the zenzula tobacco, vanilla, pepper, ginger, coffee, tea, India-rubber tree, wild vine, and the orejuela. Also a great variety of medicinal herbs: the viper herb or *escorzonera lucimada*, julep root, the copalchy, and many others.

This State is divided into 7 districts, 15 counties, and possesses 4 cities, 7 towns, and 96 villages.

*Capital of the State.*—San Cristobal contained in 1856, a population of 7,649 inhabitants. It has a few good public buildings, and is situated 287 leagues east-southeast from the City of Mexico. Population of the State, 193,406.

## THE STATE OF CHIHUAHUA.

## SITUATION, BOUNDARIES AND AREA.

The State of Chihuahua is situated between the  $25^{\circ} 50'$  and  $31^{\circ} 47'$  north latitude, and the  $4^{\circ} 10'$  and  $9^{\circ} 6'$  west longitude from the City of Mexico. It is bounded on the north by the United States, on the east by Coahuila, on the south by Durango, and on the west by Sonora and Sinaloa. Its greatest length from north to south is 159 leagues, and its greatest width 132 leagues; it contains 12,557 square leagues.

Chihuahua was created a State in 1824.

*Topographical aspect and climate.*—This State is broken and mountainous, principally in its western portion, where several chains of mountains run parallel to the main chain or Sierra Madre, and form that district called *Tarahumara*. These chains of mountains are divided by deep ravines, where streams take their rise, among them the Yaqui, Mayo and Fuerte rivers, which empty into the Gulf of California. In this mountainous region, plenty of good land is found for agricultural purposes, and rich forests.

In the northern part of the State are found the sand hills known as the Medanos de Zomalayucan; they occupy sixty miles of country. The climate varies according to the altitude; in the vast plains, it is considered cold by the Mexicans, but would be considered pleasant by northern people; it is generally agreeable and very healthy.

*Lagoons.*—In this State are to be found the following: that of Guzman, Santa Maria, Patos, Castillo and Encinillas, all of little importance.

*Mountains.*—The Sierra Madre mountain, which runs over the western portion of the State, where it is known as the Tarahumara; the Sierra de en Medio, the Sierra de Carcay, the Sierra de la Escondida, the Sierra del Nido, and the Sierra de la Campana (or bell mountain).

*Rivers.*—The Bravo or Rio Grande; the Concho rises in the Sierra Madre, and, after a course of 130 leagues, empty into the Rio Grande at the old fort and town of Presidio del Norte. The Santa Maria, that has a course of 60 leagues; also those of El Car-

men, Chihuahua, the Florido, the Casas Grande, which, after a course of over 60 leagues, empties in the Lagoon of Guzman.

*Vegetable productions.*—Among the forest trees are found the following, viz.: pine, cypress, oak, beech-tree, silver fir-tree, acacia, alder-tree, logwood, ash, Brazil-wood, lignum-vitæ, and many others.

All the fruits of temperate climes can be produced in this State. Grapes do remarkably well, between the mountains and the Rio Grande.

Among the medicinal plants are the following: sarsaparilla, saffron, aniseed, wild marjoram, and others.

*Agriculture.*—The following cereals are cultivated in the State of Chihuahua: corn, wheat, rye, pepper, peas, beans, lentils. Cotton grows very well in the southern part of this State. The fibre is short, but it is very white. In 1856 the cotton crop amounted to 312,000 lbs. All kinds of stock thrive well, and are raised with little or no expense.

Among the wild animals are the Mexican tigers, wolves, panthers, deers, bears, wild-hogs, coyotes, and the celebrated Chihuahua dog, and others. Among the birds the pheasant and the eagle.

The State of Chihuahua has always been considered one of the richest in minerals of the Republic. [*See our catalogue of mines.*]

*Industry.*—The principals are mining and agriculture. There are a few cotton factories, and the inhabitants manufacture Mexican blankets and hats, but not in sufficient quantities to supply the home consumption.

*Population.*—This State has been for years back desolated by the various tribes of Apaches known as Chrichahuis, Tontos, Mimbrenos, Giliños, Farones, Goyames, Mescalesos, Llañeros, Lipanes and Navajoes, and the Comanches who roamed about the Bolsom of Mapimi and the Laguna de Jaco, where rich gold placers are said to exist. The Tarahumaras occupy the western portion of the State. They are nearly civilized, and number presently over 30,000 souls. In 1856, the population of Chihuahua was set down at 147,000 inhabitants.

*Cities and towns.*—The City of Chihuahua, capital of the State and District of the same name, is situated at the foot of the Sierra Madre mountains, in a large plain, in latitude 28° 35' 10" north, and longitude 6° 17' 0" west, from the City

of Mexico, with the streets running at right angles. It has seven churches, a city hall, one hospital, and a jail. Among the edifices of note are the parish church, the Sanctuary of Guadalupe, the church of San Felipe, the old college of the Jesuits,—behind which the leaders of the revolution of 1810, Don Miguel Hidalgo, curate of Dolores, and Capt. Allende, were decapitated—the Congressional palace, the tribunal of justice, the mint, and the *alhóndiga* or granary. An aqueduct, 6,553 varas long, is built to the centre of the plaza, where it discharges its water through a well-sculptured fountain. In the square of San Felipe a modest monument was erected to the memory of the unfortunate leaders of the revolution. The present population of the city is 16,000.

Parral, or Hidalgo, in the centre of a large and rich mining district.

Guadalupe y Calvo.

Jimenes, or Guajuquilla, contains a population of about eight thousand people, and is a neat, clean, little town. It is situated near the Rio Florido.

Allende.

Concepcion.

Paso del Norte is situated on the western bank of the Rio Grande, in the northeast corner of the State. It is compactly built for the space of a half mile near the plaza, and from there it extends from five to ten miles along the rich bottom lands of the river—each house is surrounded by orchards, vineyards and cultivated fields. The valley, or bottom land, is from one to two miles in width. It is supposed to have been settled about the year 1585. In 1600 missionaries were living in the valley, then occupied by the Piso Indians, who had a village named Sinecu in the neighborhood of the present town of El Paso. The height of the valley, at El Paso, according to Dr. Wentzelus, is 3,800 feet above the level of the gulf.

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## THE STATE OF COLIMA.

## BOUNDARIES, AREA, POPULATION.

This State is bounded on the north and northeast by the State of Jalisco, on the east by the State of Michoacan, and on the south and west by the Pacific Ocean.

Its area contains 552 squares leagues.

*Mountains.*—Steep mountains of no great height separate this State from that of Jalisco. Among the principal mountains is the volcano of Colima; deep ravines and steep mountains surround this State.

*Population:* 65,827 inhabitants.

*Rivers and Lakes.*—The principal rivers are those of Colima, la Armeria, Coahuayana, Maracasco and Huerta. The lakes of Cuyutlan, or of Alligators, and that of Alcazagua are worthy of note.

*Seaports.*—The principal seaport of this State is that of Manzanillo; it does a large foreign commerce.

*Natural productions.*—This State produces delicious fruits. Among its production is a quality of coffee, which is said by competent persons to be superior to the mocha. Stock raising is carried on to some extent and is very profitable. The sea-coast abounds in fish. The principal industry of this State consist in refining salt, cocoanut oil, aniseed, nitre, sugar, *aguardiente de caña*, rum, and mescal.

*Political divisions.*—This State is divided into seven municipalities, viz.: Colima, Villa Alvarez, Cornala, Coquinatlan, Tecoman, Ixtlahuacan, Manzanillo.

The City of Colima, situated on the river of the same name, has a population of 32,000 inhabitants. At the time of the conquest the inhabitants of this portion of Mexico were tributaries of the Mexican Emperor, and paid their tribute in *tilmas* (a mexican cloak made of feathers, etc.), cacao, and pearls. After the conquest, about sixty Spaniards settled there and intermarried with the natives, a few Manillians also mixed with them, who to-day form the principal part of the population, although many French, English and Germans have settled at Colima.

Colima was created a State in February 1857.

## THE STATE OF DURANGO.

## SITUATION, LIMIT AND AREA.

The State of Durango is situated between the  $22^{\circ} 53' 20''$  and the  $26^{\circ} 27' 50''$  north latitude, and the  $3^{\circ} 45'$  and  $7^{\circ} 47'$  west longitude from the City of Mexico.

This State is bounded by the State of Chihuahua on the north, the State of Coahuila on the east, Zacatecas on the southeast, Jalisco on the south, and Sinaloa on the west.

Its superfcy contains an area of 6,745 square leagues. Durango was created a State in 1824.

*Topographical aspect and climate.*—The country is divided by high mountains—part of the Sierra Madre range that separate this State from that of Sinaloa.

As in all the Mexican States the climate varies according to the altitude, but on an average the climate can be considered as temperate.

*Rivers.*—Those worthy of note are the Rio de Nazas, that has a course of 108 leagues, after which it empties in the Lake of Caiman. Along the banks of this river are some of the best haciendas or grain estates in all Mexico; also the Rio de las Palomas and Rio del Tunal.

*Mountains.*—Those of most importance are formed by the prolongation of the Sierra Madre mountain range.

*Natural productions.*—Corn, wheat, beans, pepper, which are the main articles of home consumption, are cultivated with success. Cotton, peas, sugar-cane and barley are also grown with success.

*Stock.*—Horses, horned cattle and sheep do remarkably well.

*Mining.*—This State is rich in mining and agriculture; but, owing to the incursions of the Apaches and other Indians, as well as on account of civil strifes, those elements have not been worked with profit of late years. Rich mines of copper, tin, lead and other metals are known to exist. [*See the catalogue.*] In the district of Durango is known to exist one of the richest iron mine in the whole American continent. It is known as the Cerro del Mercado, and was named after a distinguished Spanish captain, who conquered that country for the king of Spain.

In the mint of this State, in the year 1855, \$682,812 were coined in gold and silver.

*Population.*—The population of the State in 1856 was set down at 156,159 inhabitants; population in 1881, 200,000.

*Industry.*—Few cotton and wool factories, five or six in number, form all the industry of the State.

*Principal cities and towns.*—Durango, capital of the State. The District and municipality of the same name is situated between latitude  $24^{\circ} 2'$  north, and  $4^{\circ} 52'$  west longitude, from the City of Mexico. The city has a population of 28,000 souls. It has eleven churches, one mint, one hospital, a theatre, and an arena for bull fights.

Among the other principal towns should be noted the following:

Santiago Papasquiaro, Santa Maria del Oro, Nombre de Dios, Cuencami, Mezquital, Tomazula, Cerro Gordo, San Dima, San Juan del Rio, and Naza.

When railroads will unite this State with the United States, it will prove to be one of the most important of the Republic.

## THE STATE OF GUANAJUATO.

### SITUATION, BOUNDARIES AND AREA.

The State of Guanajuato is situated between the  $20^{\circ}$  and  $21^{\circ} 44''$  north latitude, and between the  $0^{\circ} 30'$  and  $2^{\circ} 47'$  west longitude from the City of Mexico.

This State is bounded on the north by the State of San Luis Potosi, on the east by Queretaro, on the south by Michoacan, and on the west by the State of Jalisco.

Its greatest length from north to south is 46 leagues, and its greatest width from east to west is 53 leagues—containing a total area of 1,755 square leagues.

*Rivers.*—The principal rivers are the following:

The Rio de Santiago, or de Lerma, that enters this State from the southeast, and passing through the cities of Acambaro, Salvatierra, Salamanca and the Hacienda of Pantoja. After a course of 35 leagues in this State, it empties into Lake Chapala.

The Rio de la Laja that takes its rise in the mountain, and



after irrigating the lands near the city of San Miguel de Allende, and flowing by that city and those of Chamacuero, Celaya, and before uniting its waters with the Rio de Lerma, has a course of over 30 leagues.

The Rio Turbio rises in the mountain near the Hacienda de Altos de Harra.

*Mountains.*—Among the highest mountains in the sierra, or mountain chain, of Guanajuato are the following :

The Cerro, or peak, of the los Nanitos is situated two leagues north from the capital. Its highest point being 3,359 varas above the level of the sea.

The mountain of El Gigante, which is situated northwest of Guanajuato. Its elevation is 2,800 varas above the level of the sea.

West of the city of Guanajuato, and near the city of Silao, is the Cerro del Cubilete.

The population of this State was set down at 874,073 inhabitants in 1856. Its population, in 1881, at 889,575 souls.

*Dialects.*—The majority of the population speak the Spanish language. The Indians speak mostly the *Otomí*, with the exception of those of the town of Amedo in the Sierra de Xichu, who speak the *Pame*, and those who live near the boundary line of Michoacan, who speak the *Tarasco* language.

*Cities and towns.*—Those of most importance in the State are Guanajuato, the capital of the State and of the district of the same name. It is situated 94 leagues northwest from the City of Mexico, in a cañon in the 21° of latitude north, and 1° 49' west longitude, from the City of Mexico. Its population was set down, in 1856, at 63,398 inhabitants.

Celaya.

Salvatierra.

San Miguel de Allende is a beautiful city, situated on the declivity of a high hill, at the foot of which runs the Rio de la Laja, which is crossed by a good stone bridge, although it is fordable nearly all the year. The population of the city is not less than 25,000.

Leon, situated west of Guanajuato, is a manufacturing city. The best saddles and leather in the Republic are manufactured at this place. In 1865, its population ascended to 166,000 people; and, although it is noted in geography as a town of ten or twenty

thousand inhabitants, it was then, and is now in population, the second city of the Republic.

Salamanca, a city of some importance.

Among the large towns, the following are worth mentioning, viz. : Dolores Hidalgo. The streets in this town are well paved. There are several fine churches and plazas. This place has become celebrated in Mexican history on account of its parish priest, Padre Hidalgo, having declared Mexican independence on the 16th of September, 1810.

Silao.

Acambaro.

San Luis de la Paz.

The principal villages of this State are the following (some of these villages are really good-size towns) : Romita, Valle de Santiago, Pueblo Nuevo, San Juan de la Vega, Rincon de Tamaye, San Andrés el Alto, Guaje, Tarrandacuo, San Bartolo, Neutta and others.

In 1856, there existed in the State 398 haciendas and 816 ranches (or farms).

The total assessed valued of real estate in this State, in 1856, amounted to \$27,117,728.

*Mining.*—The mines of the State are celebrated, not only for their antiquities, but for their extraordinary richness [*see the Catalogue*]. The principal mining districts in the State are those of Guanajuato, La Luz, Monte de San Nicolas, Santa Rosa y Santa Ana, San José Iturbide, San Luis de la Paz, Xichu and Arteaga, belonging formerly to the territory of Sierra Gorda. The rich mines of Valenciana, Mellado, Villalpando, Rayas y la Luz, and San José de los Muchachos produce gold, silver, copper, lead, iron, tin, magistral, cinnabar and many other substances.

The amount of gold and silver coined at the mint of Guanajuato, from the year 1827 to the latter part of the year 1855, amounted to \$124,896,504.

*Industry.*—In the city of Salamanca there are several factories of unbleached cotton ; in Salvatierra, factories of cotton thread ; in Celaya, several factories of woolen cassimeres of very good quality.

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## THE STATE OF GUERRERO.

## SITUATION, BOUNDARIES AND AREA.

The State of Guerrero is bounded on the north by that of Mexico ; east, by the States of Puebla and Oaxaca ; and on the south by the Pacific Ocean. Its area contains 3,500 square leagues.

Guerrero was admitted as a State in 1849.

*Topographical aspect and climate.*—This is one of the States of the Republic that displays to the traveller's eye the greatest variety of vegetation. The numerous mountains and hills, forests and ravines, that divide the country at short distances, occasionally show, in a savage way, the untold wealth of this extraordinary portion of Mexico, where immense richness will only be developed when the railway from the City of Mexico shall be constructed to Acapulco, on the Pacific.

The climate of the State, with few exceptions, is extremely warm, and very unhealthy along the Pacific coast.

*Rivers.*—The most noted is that of Las Balsas.

*Lakes.*—Those of Coyuca and Tecpa.

*Natural productions.*—All tropical fruits are produced in this State ; also a great variety of timber ; corn, peas, beans are raised in large quantities, and constitute the principal nourishment of the inhabitants.

*Mining.*—This State is considered one of the richest of Mexico in mineral wealth. Lately, some gold placers have been discovered, which are said to be richer than those of Upper California.

*Population.*—It was set down, in 1856, at 270,000 people, and, in 1881, at 325,000.

Tixtla, or Ciudad Guerrero, is situated in latitude  $17^{\circ} 34'$  north, and  $0^{\circ} 11'$  west longitude, from the City of Mexico. It is situated in one of the gorges formed by the cordillera, at an elevation of 1,740 varas above the sea. Its population is about 8,000 souls.

The capital of this State, Chilpancingo, has a small population of about 3,000 inhabitants. It is celebrated in Mexican history for being the town where the first Mexican Congress met, after the first cry for liberty had caused the Mexican people to rebel against the iron rule of Spain.

## THE STATE OF HIDALGO.

Hidalgo was created a State in 1869.

It is bounded on the north by the State of San Luis Potosi ; on the northeast by the State of Vera Cruz ; on the east by the State of Puebla ; on the south, by the State of Tlaxcala ; on the southwest by the State of Mexico ; and on the west by the State of Queretaro.

*Area.*—Its area covers 1,521 square leagues.

*Population.*—Its population consists of 404,207 inhabitants.

*Productions.*—This State produces all kinds of cereals, and all fruits grown in tropical and temperate climates. It possesses rich mines of silver, copper, lead, stone-coal and sulphur. The maguey plant is produced in abundance.

The value of real estate was \$10,507,828, in 1880.

*Principal cities and towns.*—Pachuca, capital of the State, has a population of 15,000 souls. The seat of the Real del Monte Mining Company, the largest mining company in Mexico, is located in this city. There are in its vicinity many rich smelting works.

Tulancingo is situated in one of the richest portions of Mexico. The Gould and Degress International and Interoceanic Railway, from Laredo to the City of Mexico, will pass through this city.

## STATE OF JALISCO.

## SITUATION, BOUNDARIES AND AREA.

The great State of Jalisco is situated between  $18^{\circ} 51'$  and  $23^{\circ} 12'$  of north latitude, and  $2^{\circ} 20'$  and  $6^{\circ} 57'$  west longitude, from the City of Mexico. It is bounded on the north by the States of Sinaloa and Durango ; on the east, by the States of Zacatecas, Guanajuato and Michoacan ; on the south, by Michoacan and Colima ; and on the west, for a distance of 142 leagues, by the Pacific Ocean. Its superficial area is 8,324 square leagues.

Jalisco was created a State in 1824.

*Topographical aspect and climate.*—The Sierra Madre chain of mountains runs almost through the centre of the State, from north

to south. On both sides of the mountains are beautiful, extensive and rich valleys fertilized by several streams. One of the principal valleys is that of the Rio de Santiago. A great variety of trees, its rich vegetation and beautiful scenery give this portion of Mexico a most beautiful landscape. Its climate varies according to its altitudes. It may be considered cold in the districts of Lagos, La Barca and Cololtan; temperate in those of Guadalajara and Etzatlán; warm in those of Aultan and Tepic; and variable in the district of Sayula.

*Seaports.*—The port of San Blas is situated 116 leagues from the capital of the State, on the Pacific coast. The old town of San Blas, about three-quarters of a mile distant from the new site, is situated on the summit of an isolated rock, from one hundred and fifty to two hundred feet high. This rock, which rises abruptly from a low, swampy and partly wooded plain, is inaccessible on three sides. The northern side has been cut away, and a winding path, of easy ascent, leads to the top. This road is closely lined with a dense forest of cocoa, banana, plantain and other tropical trees, together with a thick undergrowth of flowering plants and vines, which are closely bound together, and prevent all ingress. The bold, rocky mass presents a most picturesque appearance. Portions of it exhibit a bare perpendicular front, while others are covered with a most luxuriant vegetation. The summit, which is about five hundred yards square, was formerly occupied by the town; but, owing to the unhealthiness of the location, it has been deserted and suffered to fall into decay.

The business of the town has long been transacted at the *Playa*, or shore, where the present landing is. The Custom-House was for many years at Tepic, a city twenty-five miles inland. It was established there on account of the unhealthiness of San Blas.

Among the other ports of some importance are those of To-malton, Ohamelta, Tenacatita and Natividad.

*Rivers.*—The Rio Grande, which is also known as the Rio de Santiago (James River) or Lerma, the Rio Verde, in the district of Lagos, and those of Lagos, Ameca, Ayuquila, San Pedro, the Tepic, the Acaponela, the Jerez, and the Rio de Cañas.

*Lakes.*—The lake of Chapala, that contains an area of 75,695 acres, and those of Sayula, la Magdalena, and that of Mescaltitan, in the district of Tepic.

*Mountains.*—The principal chains are those of Tapalpa and Tigre, in the district of Sayula; the Sierra Madre, that runs through the districts of Sayula, Etzatlan and Cololtan; the Nevado, and the Volcano of Colima on the south.

*Vegetable productions.*—Among the timber most worthy of note are the following, viz.: cedar, mahogany, pine, ash, Brazil-wood, log-wood, copal, mezquite, sabin, white-wood, and many others too numerous to mention here.

Among the fruits, which in this State are of excellent quality and great variety, are to be noted the bananas, oranges, lemons, plums, nuts, figs, pine-apples, the sweet zote, the American mammee-tree, the chirimoya, the most delicious fruit on the American continent.

A great portion of the State produces coffee, sugar-cane, cotton, vanilla and tobacco.

Agriculture, like in all Mexican States, is in the most primitive condition; corn, wheat, beans, peas, barley, and pepper are cultivated with great success and form the main subsistence of the inhabitants of the State.

*Mines.*—The principal mining districts of this State are those of Bolaños and Copalá; they produce gold, silver, copper and iron.

In the year 1855, the mint at Guadalajara coined \$10,368 in gold and \$644,050 in silver.

*Zoology.*—All kinds of stock do well in the State. In the lake of Chapala are found a great variety of aquatic birds and fishes. Among the birds most all the varieties of wild-geese and ducks; among the fish, a variety of the "*Bagre*," a delicious fish, and the white-fish. In the small bay of Valle de Banderas, on the Pacific coast, are rich pearl fisheries.

*Territorial Divisions.*—The State is divided into eight districts, whose names are given below: Guadalajara, Lagos, La Barca, Sayula, Etzatlan, Autlan, Tepic and Cololtan.

*Population.*—Was set down in 1856 at 804,058 inhabitants. In 1881 at 934,850 souls.

*Principal Cities and Towns.*—The city of Guadalajara, capital of the State and of the district of the same name, is situated in latitude 20° 41' north and 4° 15' west longitude from the City of Mexico, and 150 leagues distant from that capital. Its streets are wide and at right angles. It has fourteen squares; the

principal square is the Plaza de Armas (Military Square), on the east side of which is situated the Government Palace. The portico of Cortazar (a distinguished leader of the revolution of 1810), on the south; the Portico of Bolivar on the west, and the Sagrario (Sagrario is a church where holy relicts are kept) on the north.

Among the principal edifices are the Government Palace, the Hospital, the Bishop's Palace, the City Hall, the Mint, the Custom-House and the Theatre. Among the private buildings are many that would be an ornament to any city. Guadalajara was always considered the third city of the Republic in wealth and population.

This city possesses a university, a college, an academy of painting, drawing, architecture and sculpture, also a seminary, besides many establishments of primary education.

The Alameda is a fine public walk, well ornamented with trees and fountains. The climate of the city is very dry. The population of the city, in 1856, was set down at 68,000 inhabitants.

*Industry.*—There are in the city several factories of unbleached cotton and of woolen goods. It was at one time the most noted city for the manufacture of silk, thread, and cotton rebozos (a sort of Mexican scarf, used by Mexican ladies in which to wrap themselves, a very graceful piece of attire that distinguishes the Mexican ladies from those of other nations).

The City of Lagos, containing 10,000 inhabitants, is an important manufacturing place.

The City of San Juan de los Lagos—its population was set down, in 1856, at 6,000 people. This is a noted place on account of the yearly fair that used to take place in that city. At one time it was the emporium of commerce of all the country situated northwest of the capital. Merchants from all parts of the world resorted to that great fair. It has lost much of its importance of late years.

La Barca.

Tepatitlan.

Sayula,

Zapotlan.

Ameca—has large sugar refineries and tanneries.

Autlan.

Mascota.

Compostela.

Almacatlan.

Colotlan.

All the above are large towns, with populations varying from five to fifteen thousand. Also Tepic, a large, fine city, well laid out, about twenty-five miles from the port of San Blas, in a beautiful country; it is also a manufacturing place of importance. Among its produce it is celebrated for its good quality of cigars.

In this State there are many little towns where Mexican pottery is manufactured.

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## THE STATE OF MEXICO.

This State is bounded as follows: On the north, by the new State of Hidalgo; on the east, by the States of Tlaxcala, Puebla and Morelos; on the south, by the States of Morelos and Guerrero; and on the west, by the State of Michoacan.

This State is divided into the following districts, viz.: Toluca, Lerma, Tenango, Ixtlahuaca, Jilotepec, Zumpango, Otumba, Texcoco, Chalco, Sultepec, Tejupilco, Tenancingo, Tlalnepantla, Cuautitlan, and Villa del Valle.

The city of Toluca, capital of the State, has a population of 14,376 inhabitants. The district of the same name, in which it is situated, is the highest inhabited land of Mexico, being situated at an elevation of 3,110 varas, or 8,638 feet above the level of the Gulf of Mexico. Toluca itself is 498 varas higher than the City of Mexico. The climate is cold.

The district of Tlalnepantla is composed of rich plains, well cultivated, in which is situated the city of the same name, and is renowned for its mild climate and pretty landscape. It is a Summer resort for the inhabitants of the City of Mexico, being almost one of its suburbs.

The district of Texcoco comprises the lowest portion of the great valley of Mexico, where all its waters unite and form the two great lakes of Texcoco and Chalco. The other portion of this district is composed of beautiful hills, whose climate is delightful. The district of Zultepec comprises rich mineral hills, and also enjoys a temperate climate.



The population of this State was set down at 607,435 inhabitants in 1881.

## STATE OF MICHOACAN.

### SITUATION, BOUNDARIES AND AREA.

The State of Michoacan is situated between  $17^{\circ} 50' 5''$  and  $20^{\circ} 26' 30''$  north latitude, and  $1^{\circ} 9' 20''$  and  $4^{\circ} 3' 30''$  west longitude from the City of Mexico. The western portion is crossed by the Cordillera. It is bounded on the north by the State of Guanajuato. The Rio de Lerma, known here as the Rio Grande, and a portion of Lake Chapala, forming a natural boundary; on the east, by the States of Queretaro and Mexico; on the south, by the States of Mexico and Guerrero, and on the west, for more than thirty leagues, by the Pacific Ocean, the States of Colima and Jalisco. Its superficies contains an area of 6,556 square leagues.

Michoacan was admitted as a State in 1826.

*Topographical aspect and climate.*—This State is very fertile. Its surface is composed of vast inclined plains, of easy grade toward the Pacific shore, which are divided by branches of the Cordillera. The Sierra Madre (Mother or Main Chain) enters this State in the district of Coalcoman. The climate in general is temperate but damp.

*Rivers.*—The principal are the Rio Grande or de Lerma, the Rio Duero, the Pantla, the Rio de las Balsas or Puebla and the Melonar.

*Lakes.*—The principal one is that of Patzcuaro. In this lake are five small islands; their names are: Xanicho, Pacanda, Xaracuaro, Yuguan and Tecuen. These small islands present to the traveller an enchanted landscape of beauty beyond description, particularly those of Xanicho and Pacanda, which are covered with beautiful flowers and rich vegetation. All those appear to move like the floating gardens of the Valley of Mexico. This lake is only five leagues long from northeast to southwest, and about twelve in circumference. And the lake of Cuitzco, north of Morelia.

*Mountains.*—The most important are the Jorullo (volcano),

the Taneitaro, Periban, the Tzirate, and the peaks of Pantamban, San Nicolas and San Andres.

*Natural productions.*—Here we will only enumerate a few of the most valuable productions of this rich State, where everything is still to be developed. Among the timber are found the mahogany, oak, ebony, iron-wood, cedar, rosewood, evergreen oaks, and many still unknown in the United States. Corn, wheat, barley, oats and beans are cultivated with success; also, the cocoa, sugar-cane, coffee, cotton, vanilla and aniseed are produced and could be made the chief produce of this State for exports.

*Zoology.*—Among the wild animals the deer, hare, rabbit, the coyote and many others are found. Also a great variety of birds. Among the fishes are the *Bagre* and white-fish.

*Mining.*—Among the richest in all Mexico in old times was the mining district of Tlalpujahuá, also those of Angangueo, Espiritu Santo, Guayabo, Inguaran, Curucupaceo, Ozumaltan y Barra, Chapatuato, San Antonio, Cuacomán, and many others. The produce of these mines consist of silver mixed with gold, copper mixed with gold, iron, cinnabar, antimony, stone-coal, and emery.

The State is divided into four districts, known as the districts of Morelia, Patzcuaro, Maravatio, and Zamora.

*Population.*—This State, in 1856, had a population of 491,679 inhabitants, entirely *métis* (mixed breed) and Indians; in 1881, 618,240 souls.

*Dialects.*—The principal spoken are the Tarasco and the Otomi.

*Real estate.*—In 1856, there was in the State 6,989 country estates or small farms, and 2,386 houses, situated in cities. The assessed value of the same amounted to the sum of \$14,181,662. This aggregate value did not include the clergy, or church property, which then amounted to the sum of \$800,000.

*Industry.*—The principal industry of this State consists in mining, agriculture, also some silk and cotton manufactures of good quality, which can be developed when railway communications are opened.

The State possesses three cities: Morelia, Patzcuaro and Zamora; two towns: Tacambaro and Zitacuaro; 276 villages, and many haciendas and ranches.

## THE STATE OF MORELOS.

This State was created, in 1869, out of the States of Mexico and Puebla. It is bounded as follows: On the north, by the State of Mexico; on the east, by the State of Puebla; on the south, by the State of Guerrero; and on the west, by the State of Mexico.

It contains an area of 262 square leagues.

Its population, according to latest statistics, consists of 159,300 souls.

Its principal productions are coffee, sugar, fruits, corn, rice, alcohol, wheat, etc., etc.

*History.*—This State is situated in the ancient country of the Tlahuicos, part of the estate of the Marquis del Valle Hernando Cortez, the conqueror of Mexico, and was, prior to the 17th of April, 1869, a district of the State of Mexico. It was named in honor of ex-priest, General Don José Maria Morelos y Pabon, one of the principal chiefs of the revolution for independence of Mexico.

*Principal cities and towns.*—Cuernavaca, capital of the State, was founded by the *Tlahuicos*, a tribe of the nation *Nahuatlacos*, about the fourteenth century. It was incorporated, in 1432, by *Itzcoatl* to the crown of Mexico; was conquered by the Spaniards in April, 1521; declared a city October 14th, 1834. It contains the palace of Hernando Cortez, the parochial church, built in 1713, the beautiful church of Guadalupe, and of *Los Tepetates*, San Pedro and San Pablo, the immense gardens of Borda in ruins, market, hospital, a garden on its principal square, two Protestant churches, a literary institute, the Stage and San Pedro hotels. The Indian name of this city was *Quanhuahuac* (which means, adjoining the beautiful hills). It contains a population of 12,000 souls. The unfortunate emperor, Maximilian, made it his favorite place of resort.

Cuantla de Morelos, principal city of the district of Morelos, called the "Heroical Cuautla," was also founded by the *Tlahuicos*, with the name of *Quanhltli* (delightful hills); was conquered by the Spaniards in 1521, who called it Cuautla de Amilpas; it was created a city in April, 1829. It possesses a fine city hall, a public garden, a parochial church, built in 1605, and the churches of San Diego, Señor del Pueblo, or lord of the city and the calvary. It has a population of 3,000 souls. Yantepec of Zaragoza, the princi-

pal city of the district of Yantepec, was founded by the Tlahuicos and conquered by Montezuma the first, in 1440, and by the Spaniards in 1521. Its Indian name was mountain where the flower of *yahutli* grows; said flower has a scent like the *anil*. It was created a city in 1869, and has a population of 4,500 souls.

In the same district is the City of Tetecala de la Reforma, created a city December, 1873. Its Indian name Tetecala means a stone-house. It has a good City Hall, hospital and a main square. Population, 2,500 inhabitants.

City of Jojutla de Juarez, created a city in May, 1873. Has a City Hall, parochial church, hospital and 4,175 inhabitants.

This State contains 5 cities, 13 towns, 106 villages, 7 hamlets, 48 haciendas and 54 ranches.

The value of real estate is set down at \$4,193,315.32.

## THE STATE OF NUEVO LEON.

### SITUATION, BOUNDARY AND AREA.

This State is situated between the  $23^{\circ} 5'$  and  $27^{\circ} 10'$  latitude north, and  $0^{\circ} 30'$  east longitude, and  $1^{\circ} 26' 40''$  west longitude from the City of Mexico. It is bounded on the north and west by the State of Coahuila; on the north and east by the State of Tamaulipas; on the south-west by the State of San Luis Potosi. Its greatest length from north to south is 284 American miles, and its greatest width from east to west is 105 miles; its area contains 6,695 square miles. Population in 1856, according to Jesus Hermosa, 144,869 inhabitants; population, according to a semi-official paper published in 1875, 178,872; in 1881, 201,732 souls.

*Mountains.*—Besides the Sierra Madre and many other spurs of mountains, the most noted are the Cerro de la Silla, or Saddle Mountain, about six miles south-east from the City of Monterey, the Mitra, the Picacho, Santa Clara, La Iguana and Gomez Mountains.

*Rivers.*—Among the principal streams are the Salado, El Can-

dela, El Sabina. The San Juan, which rises in the Sierra Madre mountains, and has a course of about 130 miles before uniting its waters with that of the Rio Grande; the Pilon, Monterey and Linares rivers, etc.

*Census.*—In 1856 this State contained 4 cities, 29 towns, 118 haciendas, 481 ranches and 182 small ranches.

*Natural Productions.*—Agricultural productions are numerous and of a great variety; among the timber is found the ebony, Brazil-wood, beech tree, oak, ash, coyotilla, huisache, cedar, palmetto, frijolillio, huiachillo, elm, mesquite, willow, pecan, hackberry, cypress, pine, javay. The Irish potato grows wild in the mountains.

*Fruits, Vegetables and Grain.*—Among the fruit trees are found the peach, pomegranate, apple, pear, lemon, orange, mulberry, aguacate or *laureus persea*, the chirimoya, which is considered the most delicious fruit in America (known in botany as the *anana humboldtiana*), figs, bananas, pears, grapes, etc.

This State produces all kinds of vegetables and corn, sugarcane, oats, wheat and beans, and a great variety of flowers.

*Stock Raising.*—Good grazing, adapted to all kinds of stock, is found in this State. In 1856 the State assessed 48,988 head of horses, 11,278 head of mules, 117,210 head of cattle, 529,159 head of sheep, and 15,568 head of hogs.

*Wild Animals, Game Birds, Aquatic Birds.*—Among the wild animals and birds are found the following, viz.: mountain cats, bears, tigers (that is the jaguar), wolves, wild-hogs, hares, squirrels, armadillos, panthers, coyotes. Among the birds: mocking-birds, linnets, larks, cardinals, doves, colibris, pigeons, partridges and turkeys. Among the aquatic birds: duck, cranes, geese, herons, etc.

*Fish.*—Among the fish are found eel, trout, bass, crawfish, perch and sea breams. Pearl oysters are found in the Salado river, also otter and beaver.

*Thermal Waters.*—There are those of El Topo, Potrero Prieto, Huestas and Huajuco.

*Mines.*—Most of the mines in this State have been but very little developed, the surface metal only having been worked. According to experts, they contain silver, iron, copper and lead, sulphur, nitrate of potash, alabaster, white and colored marble, and muriate of soda. In the mineral district of Villa Aldamas, known

before the Mexican Independence as Boca de Leones, the Minas Viegas, Ladera, Catitta, etc., Vallecillo, Cadereita Jimenez. The mining districts of Sabina Santiago de las Sabinas, Santa Teresa and others. Most of the above mines are rich galena, containing silver varying from five to forty dollars per cargo of three hundred Mexican pounds.

*Schools.*—In this State there were, in 1875, 278 primary schools, carried on at a yearly expense of \$70,400.00.

*Principal Cities and Towns.*—Monterey, capital of the State, is situated in latitude 25° 40' 6" north, and 0° 49' west longitude from the City of Mexico; 602 miles from the capital, and 1,626 American feet above the level of the Gulf of Mexico. (For a better description, see itinerary from San Antonio, Texas, to the City of Mexico.) Although it is situated in a warm climate, it is very healthy, and is certainly destined to be one of the greatest cities on this side of the Sierra Madre mountains; its present population is over 40,000 souls.

The towns of Cadereita Jimenez, Linares, Montemorelos, Salinas, Ceralvo, and many others are beautiful places whose surrounding country is well adapted to agriculture.

*STATISTICS.—Agricultural productions of the State of Nuevo Leon, and value of the same for the year 1878:*

|                               |           |             |
|-------------------------------|-----------|-------------|
| Oats, 2,154 bushels.          | . . . . . | \$14,160 00 |
| Sugar-cane,                   | . . . . . | 165,300 00  |
| Sweet potatoes,               | . . . . . | 5,680 00    |
| Wax, 11,150 pounds,           | . . . . . | 8,840 00    |
| Onions,                       | . . . . . | 20,850 00   |
| Chile pepper, 104,050 pounds. | . . . . . | 4,136 00    |
| Beans, 11,850 bushels,        | . . . . . | 19,700 00   |
| Peas, 270 "                   | . . . . . | 280 00      |
| Corn, 751,200 "               | . . . . . | 250,000 00  |
| Maguey, 1,098,000 plants,     | . . . . . | 144,250 00  |
| Potatoes, 177,000 cwt..       | . . . . . | 2,950 00    |
| Pelloncillo, 1,368,250 "      | . . . . . | 437,840 00  |
| Ixtle, 3,811,875 "            | . . . . . | 86,475 00   |
| Wheat, 120,000 "              | . . . . . | 9,600 00    |

*Amount carried forward,* . \$1,170,061 00

|                                    |                 |             |    |
|------------------------------------|-----------------|-------------|----|
| <i>Amount brought forward,</i>     | .               | \$1,170,061 | 00 |
| Tobacco,                           | 45,750 . " . .  | 4,490       | 00 |
| Sugar,                             | 300,000 " . .   | 36,000      | 00 |
| Mezcal,                            | 264,500 " . .   | 41,840      | 00 |
| Fodder,                            | 7,303,750 " . . | 73,085      | 00 |
| Bagging,                           | 37,500 " . .    | 3,000       | 00 |
| Tomatoes, measure,                 | . . . .         | 590         | 00 |
| Peas, 900 cwt.,                    | . . . .         | 72          | 00 |
| Total amount of products,          | .               | \$1,329,138 | 00 |
| Total value of stock of all kinds, | .               | \$868,021   | 00 |

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## THE STATE OF OAXACA.

### SITUATION, BOUNDARIES AND AREA.

Oaxaca, in olden times called *Antequera*, is one of the principal States of the Republic of Mexico.

It is bounded on the north, by the State of Vera Cruz ; on the east by the State of Chiapas ; on the south by the Pacific Ocean ; on the west, by the State of Puebla. It contains an area of 4,426 square leagues.

Oaxaca was created a State in 1824.

*Topographical aspect and climate.*—Many chains of mountains run over this State in various directions, and although the country is much broken, its climate in general is mild ; like the balance of the Mexican territory, it varies according to its altitudes.

*Rivers.*—They are few and of no importance.

*Natural productions.*—Rich in all productions. This State has large forests of valuable timber, all tropical fruits, many valuable gum trees, coffee, cacao, wheat, corn and many other products of the temperate zone are cultivated with profit by the inhabitants.

*Zoölogy.*—All kinds of stock are raised in this State with little or no expense. Game and fish are abundant, and there are rich pearl fisheries on its Pacific coast.

*Mining.*—This State possesses many mines rich in silver, gold, quartz, jaspers, marble and other valuable minerals; but in former days the principal revenue of the State was derived from cochineal and aniseed.

This State, in 1856, had a population of 489,969 inhabitants, and of 733,556 in 1881.

*Principal cities and towns.*—The City of Oaxaca was founded in a beautiful valley by Juan Nuñez del Mercado in the year 1628. Its streets are laid off at right angles. On the main square is situated the Government palace, the cathedral, worthy of note on account of its elegant style of architecture and the porticos of our Lord and of the Star (*La Estrella*). Its population, in 1856, was set down at 28,000 souls.

*Principal towns.*—Teotitlan, Huahuapan, Ejutla, Jamiltepec, Teposcola and Villa Alta.

Among the distinguished men born in this State was President Juarez, who was a pure Zapotec Indian, educated at the Jesuit college of Oaxaca, and whose memory will live in the minds of all lovers of liberty as one of the great figures of this continent.

## THE STATE OF PUEBLA.

### BOUNDARIES AND AREA.

This State is bounded on the north by the States of Vera Cruz and Hidalgo; on the east by the State of Vera Cruz; on the south by the States of Guerrero and Oaxaca; and on the west by the States of Morelos, Mexico, Tlaxcala and Hidalgo.

Area, 1,725 square leagues.

Puebla was created a State in 1824.

Population, 697,788 inhabitants in 1857.

Population in 1881, 784,466 souls.



*Mountains.*—A wide chain of high mountains, cut at intervals by fertile valleys or plateaus, like those of San Martin, Puebla, Alixco and Chalchicomula, gives this State a peculiar topographical aspect without monotony. The mountains of Huauchinango, Zacapoaxtla, Zacatlan and Tezintlan are among the principals. On the eastern boundary of the State are found the Cofre de Perote and the peak of Orizaba; and on the west, the Popocatepetl and Ixtlaciuatl; and on the north, the mountains of Zacatlan and Huauchinango.

*Rivers.*—The principal rivers of this State are the Atoyac, that rises in the mountains of Tlaxco, which in its course is also known as the Rio de las Balsas, and those of Vinasco, Pantepec, Cazeses and Zempoala.

*Climate and natural productions.*—Climate generally temperate and healthy; the soil, very fertile, produces all kinds of graminea, corn, wheat, barley, oats, cotton and sugar.

*Mining.*—In this State are seven mineral districts that produce gold and copper, argentiferous lead and iron; stone-coal is supposed to exist in this State. The names of those districts are Tetela del Oro, San José, San Miguel, Ixcamastetlan, Tlalchachalco Huecapan, Tlachiaque, Izucar. The ores of these mines are worked by both the smelting and amalgamating processes.

*Principal cities and towns.*—Puebla de Zaragoza (formerly of the Angels), capital of the State and seat of the Bishopric, is situated in a fine valley, at an altitude of over 7,000 feet, in latitude  $19^{\circ} 2' 45''$  north, and longitude  $2^{\circ} 4' 45''$  east, from the City of Mexico. It was founded on the 28th of September, 1531.

Puebla, on account of its industries, is in importance generally considered as the third city of the Republic. Surrounded by the Atoyac, the San Francisco and Alzezecca rivers. It has an abundance of good water. It possesses 26 squares. Its cathedral is one of the finest in Mexico; its sculptures and ornaments are extremely gaudy. Puebla has a fine museum—interesting for the numerous antiquities it contains. In 1856, the city contained 71 churches and chapels. Its population amounts to 76,817 souls. A railroad connects this city with that of Mexico and the port of Vera Cruz. It has factories of unbleached cotton, thread, crockery, glass and soap. Among the principal towns of this State are those of Alixco, Cholula, Izucar, Tehuacan, San Marten and San Andres.

Cholula is celebrated on account of its pyramid of the same name, which resembles very much the Egyptian pyramids.

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## THE STATE OF QUERETARO.

### BOUNDARIES, AREA AND CLIMATE.

This State is bounded on the north by the State of Guanajuato and San Luis Potosi; on the east and south by the State of Mexico, and on the west by the States of Michoacan and Guanajuato. It contains an area of 506 square leagues.

Queretaro was created a State in 1824.

The climate in general is temperate and very healthy.

*Rivers.*—There are none of much importance, although the State is well watered, we will only mention the Rio de la Silla and Santa Lucia.

*Natural productions.*—Wheat, corn, beans, cotton and all kinds of vegetables and fruits proper to European and American climates do remarkably well in this State. There is in the mountain forests a great variety of first class timber.

*Industry.*—Queretaro has had quite a name in Mexico for its manufactures of wollen cloth, casimires, carpets, blankets, and unbleached cotton. It possesses one of the largest factories on this continent; it is a cotton factory and a mill that we have described in our itinerary from San Antonio, Texas, to the City of Mexico; this factory is known as the "Herculus." The artisans of the city have the reputation of being the best stone-sculptors in the Republic.

*Population.*—The population of this State was set down at 147,119 souls in 1856, and in 1881 at 154,000 souls.

The City of Queretaro which we have described in our itinerary from San Antonio to the City of Mexico, is the capital of the State. San Juan del Rio, a large manufacturing city of some importance; Cadereita and other small towns.

The Mexican Central Railway, which is to connect with the United States Railway system at El Paso, is now running four daily passenger trains from the capital to the City of Queretaro.

## THE STATE OF SAN LUIS POTOSI.

This State is situated between the  $21^{\circ} 40'$  and  $24^{\circ} 35'$  north latitude, and  $0^{\circ} 36'$  east and  $3^{\circ} 15'$  west longitude from the City of Mexico. It is bounded on the northeast by the States of Nuevo Leon and Tamaulipas; on the south by Guanajuato, Queretaro and Mexico; on the west and northwest by Zacatecas. It has an area of 10,792 square miles. It was created a State in 1844.

Various chains of mountains cross this State, forming many fine valleys, among which that of San Luis is noted for its large area; that of Valley del Mais and Rio Verde are among the richest. The ravines and mountain chains in this State are spurs of the Cordillera chain, which covers the eastern portion of the Mexican Republic and forms the natural boundary line between the States of San Luis and Tamaulipas.

This State enjoys all climates, that is the warm, temperate and cold; but the greatest portion of its territory is favored with temperate and warm climates.

But few rivers are found in this State, the most noted are the Santa Maria, the Montezuma or Zimapan, the Rio Verde and the Tampaon.

The most remarkable chains of mountains are the Sierra de San Luis and the Sierra Gorda; that on the south forms the boundary lines between this State and those of Guanajuato, Queretaro and Mexico.

*Natural productions.*—In the temperate climes of this State, cedar, balsam, ebony, rosewood, mahogany, juni, cypress, oaks, millon and other woods are indigenous.

There are many fruit trees, among which the following can be noted, viz.: lemon, peach, pears, oranges, apricots, zapote, small-white and black zapote (*achras mammosa*), mulberries, chirimoya (*anana Humboldtiana*) and others.

Among the grains that can be cultivated with success in this State is corn, wheat and oats, and all kinds of vegetables.

Coffee, cotton, tobacco and sugar-cane of good quality can be produced with profit.

Horn cattle, goats, sheep and horses do well in this State, and are raised in large quantities, as well as poultry.

Among the wild animals of the mountains and forests are found the jaguar or Mexican tiger, the puma or Mexican lion, panthers, wolves, deer, fox, monkeys and antelopes.

Among the birds are found the following species, viz.: eagles, eaglets, larks, linnets, wild turkeys, golden pheasants, mocking-birds, sparrow-hawks and vultures.

The mountains of this State are very rich in minerals; but, like other portions of Mexico, they are not worked properly for want of capital and enterprise on the part of their owners, who do nothing or little with them, and will not allow any one else to extract the mineral. The principal mines are those of Catorce, Guadalcazar, Charcas, Ramos, Ojo Caliente, San Pedro and Santa Maria del Penon Blanco. The above mentioned mines produce gold and silver, copper, lead, mercury and sulphur, the minerals being mostly of the kind called in the country red and bine silver.

Santa Maria del Penon Blanco has also very rich salt deposits.

And also the following mines : Blancas, Los Pozos, Matchuala, Ramos, Rio Verde and San Luis Potosi.

There is a mint at San Luis Potosi, and during the Maximilian rule one was also established at the City of Catorce, which was suppressed in the year 1865. The mint at San Luis Potosi coined \$1,849,794.95 in silver in 1855.

*Political divisions of this State.*—This State is divided in four prefecturas, known as those of San Luis, Rio Verde, El Venado and Tancanhuz, and eleven districts. Population, 650,000 inhabitants.

*Public instruction.*—In 1875 there was in this State 252 schools, attended by 9,676 boys and 3,343 girls—in all, 13,019 children—carried on at a cost of \$91,400.

The price of public lands, as fixed by law for the year 1875, was \$1,755.61 per sitio, or 4,605 of our acres.

The City of San Luis Potosi, capital of the State and district of the same name, is situated on the east side of the great plateau of Anahuac, in a valley extending from north to south about 45 miles, in latitude 22° 8' north, and longitude 1° 40' west, of the City of Mexico. Its streets are narrow, and run at right angles. Among the principal buildings are the City Hall, the Granary, the Market, the Theatre. This city contains churches which for their sculptures can rival any in Mexico, particularly those of "El Carmen," the

Cathedral, San Francisco, San Augustin, La Merced, the College of Loretto and San Nicolas, the Hospital of San Juan de Dios, the Chapel of El Rosario and Los Remedios, and the Sanctuary of Guadalupe, situated at the end of the Alamada public walk, well adorned with shade trees and sidewalks.

Its population is 45,000 souls. It has not prospered lately, although it has always held a certain rank among the Mexican manufacturing cities. It is of easy access, north and south, and any railroad constructed from Texas to the City of Mexico must necessarily pass through it. It is, in future, destined to be a railroad centre, and will be the great commercial centre of Northern Mexico and the frontier of Texas. Its climate is healthy; it is temperate, being never very cold nor very warm.

Its principal commerce consists in Mexican groceries, seeds, bagging, leather and shoes.

After the Royal Decree, dividing New Spain—as Mexico was then called—into Intendencies, the City of San Luis Potosi was made the capital of the Intendency of the same name, of which Texas formed one of the provinces. It was also the headquarters of the Tenth Military Brigade, at the time of the revolution of Hidalgo against the Spanish rule, on the 16th of September, 1810; and it was to the energy of its then distinguished Spanish commander, Gen. Calleja, that the revolution was suppressed and the independence of Mexico set back eleven years.

*Other cities and towns.*—The present State of Texas formed part of the 10th military brigade.

Matehuala, situated within a few miles of the *Cerro de los Frailes* and the Catorce mountains, is fast improving. It has a population of 25,000 souls.

Cedral, situated six miles north of Matehuala, is also a mining town. It has a population of 15,000 souls.

Catorce—the *real* de Catorce—is only distant four leagues from Cedral, in the mountain of Catorce, one of the richest mining districts of Mexico. It has a population of 20,000 souls.

Charcas, also a mining town, beautifully located; population, 4,000 inhabitants.

El Venado, a city of 10,000 inhabitants; Ciudad del Maïs, Rio Verde, Valle of San Francisco, Moctezuma, and many other important and thriving towns.

One of the largest haciendas (estates) in the Republic of Mexico belongs to the jurisdiction of this State; it is known as the Hacienda of Salado, situated on the main highway between the City of San Luis Potosi and Saltillo. Its lands belong to the four States of Zacatecas, Coahuila, Nuevo Leon and San Luis, and contain an area of over 200 leagues in one block, or 885,600 acres. It is one of the best properties situated on the table lands of Mexico, being well adapted to all kinds of stock raising, and to the cultivation of all small grains and corn, the grape and all the fruits of the temperate climates. This hacienda is well watered by springs, wells and tanks, and water is found at a depth that varies from five to fifty feet. Its mountains, which are really the foothills of the Sierra de *Catorce*, contain over two thousand metallic veins; some of its mines produced immense bonanzas last century; they are principally silver, lead, copper, cinnabar, and some gold, also a rich iron deposit. The building materials, such as marble, rock suitable for hydraulic lime, fire-brick, and earth for the best kind of brick and crockery, are found in abundance for all purposes. Brushwood and small timber fit for fuel abound in the mountains. Its natural productions—if properly worked, would alone pay a large income—they consist principally of the plants known as the maguey, the lechuguillas, the zotole, the zolmandoque, the palmetto, the cactus, all of which abound over the hills and valleys of this immense estate, and all of which produce a valuable fiber, and whose roots or fruits can be distilled profitably into alcohol. The line of the Palmer-Sullivan Railway will traverse the lands of this estate from south to north on its section between the City of San Luis Potosi and Saltillo, passing through the ranches of El Gallo, Salado, San Miguel and San Salvador, all properties belonging to said hacienda. As poorly as it is worked to-day, it brings to its owner ten per cent. on a capital of one million dollars. The name of this vast estate is *San Rafael del Salado y Agua Dulce*, more commonly known as El Salado. It is the property of General Don Juan Bustamante, ex-Governor of the State of San Luis Potosi.

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## THE STATE OF SINALOA.

## SITUATION, BOUNDARIES AND AREA.

The State of Sinaloa, or country of the *Ostimuro*, is situated between the  $22^{\circ} 30'$  and  $28^{\circ}$  of north latitude. It is bounded on the north by the Yaqui and Sonora rivers; on the east by the State of Durango and Chihuahua; on the south by the Rio de los Cañas and the State of Jalisco; and on the west by the Gulf of California. It contains an area of 3,825 square leagues.

Sinaloa was created a State in 1834.

*Topographical aspect and climate.*—South of the City of Culiacan, capital of the State, there are barren hills; some portions of the State are level, with some high hills scattered about the plains. The climate of Culiacan is rather warm, but very healthy.

*Rivers.*—The principal rivers are the Culiacan, which takes its rise in the Sierra Madre mountains of the State of Durango, and in this State unite its waters with the Humaya River, that empties into the Gulf of California at the port of Altata.

*Natural productions.*—Among the most important are the following: Coffee, sugar-cane, tobacco, corn, rice and beans are raised with great profit. There are many fine trees in the forest such as the Brazil-wood, etc., and all fruits raised in tropical and temperate climates abound.

*Mining.*—Rich mines are worked in this State. They contain gold, silver, copper and lead. From the year 1846 to the year 1853 the mint coined \$4,620,422 in gold, and \$1,963,636 in silver, making a total of \$6,584,058.

*Population.*—The population of the State was set down at 250,000 inhabitants in 1856.

*Principal cities and towns.*—Culiacan, capital of the State and district of the same name, was founded in 1532, by Nuño de Guzman. It is situated in latitude north  $24^{\circ} 48'$ , and  $8^{\circ} 15' 32''$  west longitude, from the City of Mexico. The city is built on the left bank of the river of the same name. Its streets are straight, and cut each other at right angles. It has a fine square, on one side of which is situated the cathedral, and on the other are fine porticos

and magnificent (for the country) private buildings. The population of this city was set down at 9,647 in 1856.

Mazatlan, a seaport of some importance, which has a great future, and will be probably the greatest port of Mexico on the Pacific. Its population in 1856 was registered at 31,000 inhabitants.

## THE STATE OF SONORA.

### SITUATION, BOUNDARY AND AREA.

The State of Sonora is situated between  $26^{\circ} 40'$  and  $33^{\circ} 50'$  north latitude, and  $8^{\circ} 50'$  and  $14^{\circ} 55'$  longitude from the City of Mexico. Its boundaries are, on the south, the State of Sinaloa—the Rio del Fuerte being the dividing line—and the Gulf of California; on the east, by the State of Chihuahua; on the north, by the United States of America; on the west by the Gulf of California. Its superficies contains an area of 11,953 square leagues. Sonora formed a part of the State of Occidente from 1822 to 1830.

*Topographical aspect and climate.*—A large portion of this State is composed of vast plains separated by low mountains or hills. The climate, particularly along the coast of the Gulf of California, is warm.

*Rivers.*—The principal rivers are the Rio del Fuerte, the Yaqui, the Mayo, and the Colorado of California.

*Natural productions.*—The northern portion of the State is well adapted to agriculture; corn, wheat, beans, peas, lentils, sugar-cane and tobacco produce good crops. Among the fruits cultivated are dates, peaches, figs, pears, grenades, lemons, and many others.

Among the timber are found the logwood, the ebony, the elm, brown and Brazil-wood.

This State is rich in medicinal plants. Some used by the natives, like the tomenagua and the root of canaguat, are a sure cure for fever.

*Zoology.*—This State is well adapted to stock raising. The vast amount of wild lands, forests, and its large water courses are



full of game and fish. The Yaqui and Mayo Indians subsist mostly by hunting and fishing. Among the wild animals are the bear, tiger, wolf, the coyote, buffalo, otter, hare, rabbit and others.

In the Gulf of California, the following fishes abound: the doree, the horse-mackerel, herring, the tunny-fish, whales, and many others for whose name no equivalent is found in the English language.

In the rivers, carps, eels, bagres, and a variety of the trout called robalo, are found in abundance.

This State is considered the richest in Mexico, and wonderful tales are told about its hidden wealth; until lately, mining was almost abandoned on account of Indian depredations; fortunately, but few Apaches are left to do harm, and the construction of the Southern Pacific Railway, with the investment of American capital and industry, will soon again develop its mining wealth. [*See Catalogue of Mines.*] The following minerals abound, particularly in the eastern portion of the State, viz.: gold, silver, copper, lead, sulphur, carbonate of soda, tin, antimony, alum, salt, potash, marble, and gypsum; pearls are found on the coast of the Gulf of California.

This State is divided into nine partidos or districts, known as Hermosillo, Salvacion, Ures, San Ignacio, Altar, Moctezuma, Oposura, Sahuaripa, Arispe and Alamos.

In 1856, this State assessed four cities, two towns, seventy-seven villages, fifty-two mining places, two Indian towns, and two hundred and fifty haciendas and ranches.

*Population.*—In 1856, it was put down at 124,000 inhabitants. 110,000 are either pure or descendants of Indians, and the balance white. The present population, official, is 141,000. Among the various nations of Indians who inhabit this State are the Opatas, who live in the centre of the State; the Pimas, the Papagos and Yumas, who live in the northern portion of the State; the Yaquis and Mayos, who live in that portion of the State watered by the rivers of the same name, are corpulent; their women are generally pretty, kind and of a jovial nature. They preserve to this day their traditions and customs; they are also very industrious, and are good carpenters, blacksmiths and good sailors, and form the best laboring class of the State.

The Opatas are half-civilized and very friendly to the whites.

They are a true, sober, and warlike race. They are mostly addicted to agriculture. Inveterate enemies of the Apaches, whom they used to fight with success, they are notwithstanding good and law-abiding citizens.

The various tribes of Apaches that have constantly warred upon the people of Sonora and desolated the northern States of Mexico, were the Tontos, Chiricahuis, Gileños, Mogollones and Mescaleros. The Spaniards were never able to subdue or induce them to become Christians.

*Principal cities and towns.*—The City of Ures, the capital of the State, is situated on the east bank of the Sonora River; was originally a missionary establishment, and among the earliest in the State. The town presents a lonely aspect. There are no edifices worth mentioning—the Legislative Hall being a large adobe house, distinguished by a flagstaff from the other buildings. The Jesuits, before their expulsion from Mexico, had commenced building a large church, which was never completed. It has a population of 8,000.

Alamos is of some importance on account of the mines situated in its neighborhood. It possesses a few churches and a Government mint.

Hermosillo is the modern name for the old Presidio of Pitic. It is thirty leagues distant from the nearest point on the shore of the Gulf of California, and thirty-six leagues from the port of Guayamas, which lies nearly south. It is probably the finest city in the State. In 1856 it had a population of 15,000 people. The climate is dry and exceedingly hot, but nevertheless healthy.

Guayamas stands on the eastern shore of the Gulf of California, in latitude  $28^{\circ}$  north, and  $110^{\circ} 40'$  west longitude, from Greenwich. It is completely shut in from the sea, as well as from the winds. Mountains protect it on the main land, while islands with elevated hills surround it by sea. Next to Acapulco, it is the best port on the Mexican coast. The entrance from south to north is formed by the Island of Pajaros on the east, and by the islands of San Vicente and Pitayas and the mainland on the west. There is another entrance, called Boca Chica, from the southeast, having the Island of Pajaros on the south, and the shore of Cochori on the north, which terminate at the Morro Ingles, or English Hammock. From the principal mouth to the mole is about four miles, and the bay is of about the same extent. The bottom is so muddy that

ships which are to remain some time, find it necessary to raise their anchors every week or so to prevent their becoming too deeply imbedded to be extricated. The soundings commence with seven fathoms and diminish gradually to two at the mole.

The bay abounds in fish of great variety and delicacy; also with shrimps, crabs, lobsters and oysters.

The town stands close on the margin of the bay, occupying a narrow strip about a mile in length, and not exceeding a quarter of a mile in width, when the mountains rise and hem it closely in. It is entered from the north by a single avenue, which forms the main street; and this is intersected by short lateral ones leading to the bay. The houses are built of stone, brick and adobe. The water-supply comes from wells situated in the suburbs; it is somewhat brackish, but is considered wholesome.

Although Guayamas has one of the finest ports in the world, and is the key to the interior of Sonora, it has never enjoyed much trade until of late years. When it will be connected by railway with the Southern Pacific, it will become the greatest port of the Gulf of California.

La Magdalena, a well-built town, Arispe, Presidio del Altar, in a rich grain valley, and Satmaripa, all capitals of the districts of the same names, are among the important cities of this State.

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## THE STATE OF TABASCO.

### BOUNDARIES AND AREA.

The State of Tabasco is bounded on the north by the Gulf of Mexico, on the east by the State of Campeche, on the south by the State of Chiapas, on the west by the State of Vera Cruz. Its area contains 1,876 square leagues.

The name Tabasco is derived from the Cacique that governed the country at the time that it was discovered by the Spaniards. It was conquered and reduced to Spanish vasselage by the Spanish captain, Vallecilla.

The climate is warm and generally unhealthy.

Water communications along the coast by the bars of Puerto Real, Puerto Escondido, Punto de Zicalango; bars of San Pedro and San Pablo, and bar of Tabasco are of easy access for small crafts.

The population of the State, in 1856, was set down at 63,580 inhabitants.

The capital of the State, the City of San Juan Bautista de Tabasco, contains a population of 8,000 souls. The present population of the State is 104,759 inhabitants.

## THE STATE OF TAMAULIPAS.

### BOUNDARIES AND AREA.

The State of Tamaulipas lies between latitudes  $22^{\circ} 14' 4''$  and  $27' 30''$  north of the City of Mexico. It is bounded on the north by the United States, or rather by the Rio Grande river, which is the boundary line; on the northwest by the State of Nuevo Leon; on the west and southwest by the State of San Luis Potosi; on the south by the State of Vera Cruz, and on the east by the Gulf of Mexico. Previous to the treaty of Guadaloupe Hidalgo, in 1848, a large portion of the present State of Texas, in the United States, belonged to Tamaulipas, the Nueces river being then the boundary line.

*Climate.*—In the greater portion of the State the climate is warm and moist. In that part of Tamaulipas, situated west of the Sierra Madre mountains, it is cooler and dryer. Exclusive of a small strip of country bordering on the Gulf of Mexico, subject to yellow fever, the climate is salubrious.

*Rivers, lakes and mountains.*—The principal rivers and streams in Tamaulipas are the Rio Grande del Norte, Panuco, Concha, Rio de la Purificacion, San Fernando, Goyalejo, and a number of others of minor importance. Of these rivers, the Rio Grande del Norte, the largest and most important, is navigable for a distance of about 250 miles from its mouth, while the Panuco, the

next largest, is navigable for the distance of eighteen miles for steamers. The only lake worthy of mention is the Laguna Madre, which connects with the Gulf of Mexico. Tamaulipas is traversed by the continuation of the Sierra Madre range, which crosses the State from the southeast to the northwest, from the Hacienda del Chaburo, on the division line between this State and that of San Luis to the town of Villagran, near the division line of Nuevo Leon, forming an almost impenetrable barrier. From this range of mountains, spurs extend in different directions, forming many beautiful valleys, among the principals of which are those of Santa Barbara and the Chamal Valley. The products are corn, cotton, rice, sugar-cane, beans, peas, sweet potatoes, Irish potatoes (the latter being indigenous to the soil), all of which can be raised with but little trouble, and when properly cultivated yield prodigious crops. The maguey (*Agave americana*) is grown in large quantities. The principal fruits are peaches, bananas, mangos, the goayaba (from which the celebrated guava jelly is made), citron, the aguacate (a fruit resembling a pear, of which a delicious salad is made, the technical name being *Paurus persea*), the chirmoya (*Anana humboldtiana*), the most delicious fruit in America. Timber is for the most part confined to the mountain regions. Besides abundance of timber fit for building purposes and fine cabinet-work, there is the ebony tree and the anacahuite. The latter is, however, more like a bush than a tree, and its use is purely medicinal; the bark and root being remarkable for their curative properties in cases of diseased lungs and throat.

*Stock raising.*—The eastern portion of this State, as well as that bordering on Texas, is admirably adapted for stock raising. Horses, horned cattle, sheep and goats are raised in large numbers. The mules raised in this State are the finest in Mexico.

*Game.*—Game is abundant, and includes deer, turkey, hares, rabbits and quail. The feathered creation is well represented, the trees being filled with parrots and many other kinds of birds. Among the wild animals, wolves, leopard and mountain cats may be enumerated. The rivers abound with fish.

*Mineral products.*—Tamaulipas is very rich in minerals, which are found exclusively in the mountainous regions. The supply of gold, silver, copper and other minerals is almost inexhaustible. Marble and jasper have also been discovered. In the year

1856 the mines of Trinidad, Providencia, Los Pastores and Colorado were worked with great profit. The copper mine of San Carlos is also very rich, the copper ore containing a large percentage of gold. One great advantage this mine possesses, is the facility with which the metal could be exported, as the seaport of La Carbonera, on the gulf, is only 120 miles distant. There are 25 abandoned mines in this State which could be worked, under more favorable local surroundings, with great profit.

*Territorial divisions.*—This State is divided into three districts (*prefecturas*), in which are thirty-four municipalities. The former are called the Southern, Centre and Northern. The municipalities are Santander, Tamaulipas, Villanos, Aldama, San Antonio, Tancasnequi, Magiscatzin, Xicotencatl, Morelos, Santa Bárbara, Ciudad Victoria, Tula, Jaumave, Palmillas, Bustamente, Miquihuana, Llerra, Guemez, Casas (Croix), Padilla, La Marina, Abasolia, Jimenez, Hidalgo, Villagran, San Carlos, Matamoros, Reynosa, Mier, Guerrero, New Laredo, San Fernando, Crucillas, Burgos and San Nicolas.

*Principal cities and towns.*—Matamoros, one of the principal ports of entry of the Republic of Mexico, is situated on the west bank of the Rio Grande, opposite the town of Brownsville, in Texas, and about 30 miles from the mouth of the river. Matamoros contains about 18,000 inhabitants. During the days of the Confederacy this city had an immense trade in cotton from Texas, but at present its commerce is for the most part with the northern States of Mexico. Ciudad Victoria, the capital of the State, is a town of some 8,000 inhabitants, beautifully situated at the foot of a high mountain. It is well watered by a large clear stream, and lies in the midst of gardens, and fields of sugar-cane. A graveyard surrounded by a high wall, provided with port-holes, and bearing the marks of shot and shell, occupies a commanding position near the town. The only object of interest about the place is the old church, built by the Spaniards, but which has never been finished entirely. This city has been desolated for the last forty years by the civil wars that have been almost constantly waged in that part of Mexico. It is a desolate, dreary place, almost destitute of commercial life and enterprise. There is no wagon-road through the Sierra; what trade and travel there is has to be carried on through the mountains over the almost impassable mule-path. The road, or rather

trail, that leads to the port of Soto la Marina, runs for the entire distance, 150 miles, through dense forests. This portion of the State of Tamaulipas is subject to heavy rain storms, called, in the language of the country, *temporals*. These storms last for several days, and the rainfall is so great that the whole country is placed under water, the damage done at times being very great.

Croix, named in honor of the Marquis of Croix, is an old Spanish town, of which but few traces of its former importance are still visible. On the ruins of the villas and stately residences of its former inhabitants a growth of thatched hovels has sprung up. The town of Croix is now called Casas, it being the native town of Col. Casas, who was shot at Monclova for having headed the revolutionists who took San Antonio and captured the Spanish garrison, in 1812. The name of the town was changed to Casas after the Spanish were driven out, similar changes were the case with nearly all towns in Mexico.

Soto la Marina was, in the time of the Spaniards, a flourishing little town, but it has dwindled down to an insignificant village. Small as it is, it presents quite a gay appearance, consisting of about one hundred houses, and a very pretty little church. The Corona River runs through the town, which is about 35 miles distant from the Gulf of Mexico. Soto la Marina lies midway between Matamoros and Tampico, on the Gulf, and has a far better bar than either of these seaports. Its harbor affords to shipping complete immunity from the violence of the northers, by which this part of Mexico is visited. This port will some day become a place of great importance. That it is not so already is due to the great difficulty in crossing the mountains between it and San Luis Potosi, but as soon as the railroad takes the place of mule-transportation in the traffic and travel of Mexico, Soto la Marina will be one of the most important of Mexican seaports. In 1864 the trade of this port was carried on by a few American merchants, the principal item of export being hides. Soto la Marina enjoys a kind of mournful celebrity from the circumstances of it being the place where the brave but unfortunate Gen. Mina and the lamented Emperor Iturbide landed, the former in 1817, and the latter in 1824. Both were shot, shortly after their landing, by their political enemies. The town was founded, September 3d, 1750.

Padilla is also an old Spanish town, of which but little remain-

to be seen, except ruins. It was on the public plaza of Padilla that the unfortunate Iturbide, the first emperor of Mexico, was shot, in 1824, in compliance with a decree of the Mexican Congress, which the rebel General Gutierrez de Lara, who was the Governor of the State, took great pleasure in enforcing. Gutierrez de Lara is the same individual who ordered the butchery of fourteen Spanish officers, prisoners of war, among them two governors, Herrera and Salcedo, at San Antonio, Texas, in the month of April, 1813. The population at Padilla is estimated at 1,500 souls, and it has no commerce to speak of.

Tampico, on the Gulf of Mexico, is second only to Vera Cruz in importance. It is situated at the mouth of the Panuco river, which is navigable as high up as Altamira, a distance of eighteen miles from the mouth of the river. Tampico has quite a large trade with Europe. The population is about 12,000. It is visited by yellow fever annually.

*Area and population.*—The area of Tamaulipas is 11,102 square miles. According to the census taken in 1871, and published in the Perez Almanac of 1875, the population of Tamaulipas is set down at 108,788, which is rather under than over estimated. According to latest statistics, it is of 120,000.

*Schools.*—In 1865 there were within the limits of the State sixty primary schools, attended by 3,600 pupils, and carried on at an annual cost of \$10,000.

*Public lands.*—Public lands can be purchased from the General Government at \$363.34 per sitio, or league, containing 4,428 American acres. Even better terms can be made with private individuals.

According to the statistics compiled by Garcia y Cuba, the State of Tamaulipas contained, in 1856, 6 cities, 128 towns, 18 congregas (Indian settlements), 118 haciendas, nearly all of which are in ruins, and 984 ranches.

*Historical.*—About the year 1720, the Indians made war on the inhabitants of the Kingdom of Leon, at present the State of Nuevo Leon. This portion of New Spain (Mexico) was so completely overrun by hostile Indians from Tamaulipas that it became apparent that the only way to save Nuevo Leon was to colonize Tamaulipas, and by this means divert the minds of the Indians into other channels. In the year 1738, several Spanish gentlemen made application to the viceroy, and also to the court of Spain, to colo-



nize this territory, but little attention was paid to their desires until about the year 1747, when Don José Escandon, having been appointed Governor of the new colony, and also Vice-Regent of the Mexican Gulf coast, entered this territory from the south with a body of troops and a large number of colonists, subduing some Indian tribes and driving others before him. He founded missions and towns in all parts of the country, but as the Indians, as a general thing, objected to being brought under the dominion of the Spaniards, an immense number of them retired to the rolling plains of Texas, so that very soon after the colonization of Tamaulipas, the State of Nuevo Leon became free from Indian invasion from the east. From that time on, the Indians carried on a frontier war, which is kept up to the present day. Until after the declaration of Mexican Independence, this colony was known as New Santander, when its name was changed to that of Tamaulipas, the name of a mountain.

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## THE STATE OF TLAXCALA.

### SITUATION, BOUNDARIES AND AREA.

This State is situated between  $19^{\circ} 1'$  and  $19^{\circ} 41'$  of north latitude, and the  $0^{\circ} 37'$  east longitude from the City of Mexico, and is bounded on the northeast, east and south by the State of Puebla; on the west by the State of Mexico; and on the northeast by the State of Hidalgo.

Its territory contains an area of 221 square leagues.

*Topographical aspect.*—Part of this small State presents fine valleys like that of Huamantla, and in others is rugged, being cut up by mountains and ravines. Among the curious features of this State, is the Sierra de la Malitzin, a high mountain that occupies an important place in the Tlaxcaltecan mythology, on account of its top being so shaped, by nature, as to represent a corpse lying in its grave and partly covered up with its shroud. At times the clouds, loaded with electricity, gather on the top of that mountain,

and burst with a tremendous crash ; for that reason the Tlaxcaltecs gave it the name of their favorite god. The sides of the mountain are cut up by deep ravines and rocky bluffs, covered with a luxurious vegetation. Part of this State is well irrigated by the waters of the rivers of Zahuapan and Atollac.

*Lakes.*—The small lakes of Acuitlapilco ; the Rosario and Tonecuila, are the only ones worth mentioning.

*Natural productions.*—Grain is produced in abundance ; such as corn, wheat, barley, oats, peas, lentils and chili-pepper. Fruits of all climates are also produced in abundance.

*Climate.*—Is agreeable and healthy.

*Mining.*—In the mountains of San Ambrosio and San Mateo : silver, copper, stone-coal, and lead have been found.

*Political divisions.*—This State is divided into three districts, those of Tlaxcala, Huamantla and Tlaxco, which are subdivided into twenty-two municipalities.

*Population.*—In 1856, it was put down at 80,171 people.

The City of Tlaxcala, the capital of the State, has a population of 5,000 inhabitants, and at the time of the conquest was the capital of the Republic of the same name, and occupied, by its industry and wealth, a distinguished place in ancient Mexico, as a rival of the Mexican Empire. Some interesting antiquities are found in its neighborhood.

*Commerce.*—Consists principally in exporting to other States, grain and hides, and some woolen manufactures, for which is imported in return groceries and linens.

*Census.*—In 1856, this State assessed 1 city, 4 sanctuaries, 112 villages, 26 neighborhoods, 150 haciendas, 153 ranches and 16 (ventas) markets.

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## THE STATE OF VERA CRUZ.

This State is bounded on the north by the State of Tamaulipas ; on the east and southeast by the Gulf of Mexico ; on the east by the State of Tabasco ; on the southeast by the State of Chiapas ; on the southwest, by the State of Oaxaca ; on the west by the

States of Puebla and Hidalgo, and on the northwest by the State of San Luis Potosi.

It was created a State in 1824.

*Area.*—3,501 leagues.

*Population.*—552,918 inhabitants. It possesses 620 primary schools and nine colleges, attended by 24,000 scholars.

Value of real estate: \$6,202,928.91.

*Principal cities and towns.*—The City of Vera Cruz, formerly the capital of the State, and the principal seaport of the Republic of Mexico, is situated on a sand beach surrounded by lagoons, which, on account of its burning sun, makes it very unhealthy; yellow fever reigns there the greatest portion of the year. Population, 20,000 souls.

Jalapa, surnamed by all those who have seen it, the paradise of this continent, is situated on the side of the mountain of Macuiltepec, in latitude  $19^{\circ} 31' 26''$  north, and  $2^{\circ} 10'$  longitude east of the City of Mexico. It enjoys a fine and temperate climate. Its principal buildings are the old convent of San Francisco, the church of St. Joseph, an Hospital, and substantial public buildings.

Cordova, a town of some importance, surrounded by rich coffee plantations.

Orizaba, a city—the principal of the district, 90 miles from Vera Cruz and 80 miles from Jalapa—to-day the capital of the State, is located in a beautiful, healthy and rich country. It has good public buildings. Its population amounts to 20,000 souls.

*Natural productions.*—Among them are tobacco and coffee of superior quality, vanilla, sugar, rice, corn, Chili pepper, all kinds of tropical fruits in abundance, as well as vegetables of tropical climates; valuable timber of great variety, also dye and gum woods, and many valuable medicinal plants.

*Mines.*—Gold, silver, copper, iron and lead exist in this State. There are good smelting works at Zomelahuacan and Tenepanoya.

## THE STATE OF YUCATAN.

This State is bounded as follows: On the north by the Gulf of Mexico, on the east by the Caribbean Sea, on the southeast by the Republic of Guatemala, and on the west and northwest by the State of Campeche.

*Etymology of the name Yucatan.*—According to some, it originated from the word *Yucaltepen*, which means a pearl or necklace; and, according to others, from the words *Nathan cubiatan* "We don't understand what you say," (answer given by the Mayas, the nation of Indians that inhabited the country, when the Spaniards asked them what was the name of their country.)

The Mexicans called the peninsula of Yucatan and Tabasco, *País de Onohualco* (country of Onohualco).

*Principal cities and towns.*—District of Merida, 49,749 inhabitants. City of Merida, founded by Francisco de Montejo in January, 1542. Its principal buildings consist of a Government palace, palace of justice, city hall, jail, hospital, soldiers' quarters, a theatre, a public walk, a literary institute, Catholic college, medical school, school of pharmacy and jurisprudence, seminary, a conservatory of music, public library, museum of antiquities, various schools, a Catholic cathedral, four parochial churches, nine other churches, and a population of 56,000 souls.

In the District of Progreso, the city of the same name, founded in 1856. Population, 1,900 inhabitants.

The City of Motul de Zepeda Paraza, 2,900 inhabitants, in the District of Motul.

The City of Valladolid, in the district of the same name, founded by Francisco de Montejo, with sixty-three colonists, in May, 1543, at a place called *Chauachaa*, and removed to its present site in March, 1544. Its principal buildings consist of a city hall, hospital, six churches, a public walk. Its population numbers 3,000 souls.

The City of Tical, in the district of the same name, has good public buildings and a population of 6,000 souls.

The City of Ixamal, in the district of the same name, has also good public buildings. Its population numbers 4,797 inhabitants. There are many other towns of importance.

The total population of this State amounts to 422,365 inhabi-

tants, who reside in 7 cities, 13 towns, 152 villages, 1,136 haciendas or estates, 363 ranches, and 831 farms.

*Natural productions.*—Corn, rice, beans, a great variety of fruits and roots, all kinds of vegetables. Among those of more importance are the anil, tobacco of superior quality, coffee, cotton, vanilla, various gums and dye-woods.

*Industry.*—In this State it consists principally in the manufacture of sugar, in the working of a variety of the palmetto that produce a fibre called *hennequen*, in the exportation of logwood which is carried on in a large scale. It also produces a large quantity of wax.

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## THE STATE OF ZACATECAS.

This State is situated between the  $21^{\circ} 2'$  and  $24^{\circ} 29'$  north latitude, and  $1^{\circ} 46'$  and  $4^{\circ} 54'$  longitude, west of the City of Mexico. It is bounded on the north by the State of Coahuila, on the east by the State of San Luis Potosi, on the southeast by the State of Guanajuato, on the south by the State of Jalisco, and on the west and east by the States of Jalisco and Durango.

Its area contains 6,270 square leagues.

*Population.*—470,000 inhabitants.

*Configuration, topographical aspect, and climate.*—The interior of this State is rough and mountainous to its western boundary, and presents a succession of plains cut by mountain chains in its eastern portion, among which are found rich valleys.

The temperature is cold in the mountains and pleasant in the valleys.

*Mountains.*—This State, as all mineral countries, is rather mountainous. Its principal chains are those of Mazapil, Norillos, Guadaloupe, Mesa del Fraile, Palomas Pinos, Monte de Garcia, Concepcion del Oro, Matehuapil, etc.

*Natural productions.*—Among the timber: mountain cedar, oaks of various kinds, elm, millons, cotton-wood, ash, and many others. Excellent fruits: among them, pears, apples, peaches, apricots, grapes, etc. All kinds of vegetables, corn and wheat. Cattle, horses, mules, sheep and goats thrive well in this State.

*Minerals.*—This State ranks among the first in the Republic. The most noted districts are those of Bolaños, Carcamo, Cedros, Chalchihuites, Fresnillo, Mazapil, Noria, Nieves, Sombrerete, San Juan de Guadalupe, Sierra Hermosa, Pinos, Rio Grande, Teul, Pico de Freire, Zacatecas, Matehuapil, Concepcion del Oro and others.

*Principal cities and towns.*—Zacatecas, capital of the State, is situated in latitude  $22^{\circ} 46' 3''$  north, and  $2^{\circ} 47' 39''$  longitude, west of Mexico, at an altitude of 7,500 feet above the level of the gulf. This mining district was discovered by Captain Juan de Tolsosa on the 8th of September, 1546. Philip the Second granted it the title of city in April, 1585. This city is built in a ravine situated in the middle of a mountain. Its streets are very irregular. Among its principal edifices are the Government palace, city hall, markets, hospital, jail, mint, soldiers' quarters, a theatre, a public walk, a cathedral and fourteen churches, an amphitheatre for bull-fighting, and thirteen squares. Population, 62,000 inhabitants.

City of Fresnillo, mining district discovered in 1569, possesses a city hall, jail, a handsome theatre, a parochial church, market and well-adorned squares. Population, 15,000 souls.

City of Sombrerete, mining district discovered by Juan de Tolsosa in 1555, obtained the title of city in 1570 under the name of Town of St. John the Baptist of Yllerera, city with the name of Herrera, in 1824, which name was not maintained. Has a city hall, a hospital in ruin, various churches, thirteen chapels, and a population of 5,173 inhabitants.

City of Nieves, also a mining district discovered in 1559, 1,500 inhabitants.

City of Garcia, founded in 1531, under the name of St. John of Galicia. In 1572, the name of Jerez de la Frontera was given to the place on account of its being the residence of the military chiefs sent by the Viceroy of New Spain to prevent the invasion of the interior by the Nayarit Indians. Its present name was given it in 1856. Population, 7,255 inhabitants.

City of Villanueva was founded on the 7th of November, 1691, under the name of Gutierrez del Aguila. Has good public buildings. Population, 6,065 inhabitants.

City of Sanchez Roman created with its present name in 1860. Its Indian name was *Tlalli* (land) or *Tenamitl* (wall). Mazapil,

discovered in 1582, is a rich mineral district, with public buildings. Its Indian name was *Mazatl* (deer), and (*pilli*) small.

Albaradon and Guatemapile have rich mines in their vicinity. Population, 1,780 souls.

The State of Zacatecas has 7 cities, 14 towns, 33 villages, 4 Indian villages, 18 mining districts, 120 haciendas or estates, and 1,068 ranches or farms.

## THE TERRITORY OF LOWER CALIFORNIA.

### SITUATION, BOUNDARIES AND AREA.

Lower California is situated between the  $22^{\circ} 53'$  and  $32^{\circ} 42' 30''$  of latitude north, and the  $10^{\circ} 12'$  and  $18^{\circ}$  longitude west from the City of Mexico. Its greatest length is 240 leagues, and its mean width 32 leagues. It is bounded on the north by Upper California, now a State of the United States of America; on the east by the Sea of Cortez or Gulf of California; and on the west and south by the Pacific Ocean. It contains an area of 8,000 square leagues.

*Topographical aspect and climate.*—The peninsula of Lower California is properly a chain of mountains bathed by the sea, although in the centre there is a small interception, which forms the two great divisions of the Territory. The country is broken, its plains barren, and the landscape disagreeable and unpleasant to the eye.

The climate is temperate in its northern portion and extremely warm in the south.

*Islands.*—The principals are those of the Guardian Angel (Angelo de Guardia), which is over 60 miles long, and of Salsipuedes and del Carmen.

*Capes.*—In the Gulf of California, those of San Gabriel, south of the islands of Las Animas; Cape Virgenes, Cape San Marcos, on the same parallel of latitude as the port of Mazatlan, and Cape Porfia. San José and San Lucas on the Ocean; Cape Falso and other few smaller ones.

*Bays.*—The principal ones in the Gulf of California are those of San Luis Gonzaga, Los Angeles and Mulugé; and on the

Ocean those of San Barnabé, Santa Maria, Almejas and La Magdalena, of some importance as a rendezvous for whalers.

*Ports.*—The principal ones are those of Loreto, formerly capital of the Territory; Escondida, Pichilingue, and on the Ocean that of San Bartolomé, situated on the  $27^{\circ} 45'$  north latitude.

*Natural productions.*—They are but few, for the want of streams, the scarcity of rains and the barrenness of the soil. Some few fruits are produced, sugar-cane, olives, corn and grapes do very well.

But little stock is raised in the Territory.

*Mining.*—It is supposed that mining would pay well if it was developed properly. The mines of Flores, Santa Ana, Valle Perdido, San Antonio, Mulegé and La Guella were at one time worked with great profit. The untold wealth of mines in this Territory is equal to that of any of the Mexican States.

La Paz, capital of the Territory, is situated in latitude  $24^{\circ} 6' 40''$  north, and the  $111^{\circ} 1' 15''$  west longitude from the City of Mexico. Population, 4,000 souls and increasing.

The whole population of the Territory, in 1862, was set down at 12,000 people, but according to later statistics the population is now 21,645 inhabitants.

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## THE FEDERAL DISTRICT OF MEXICO.

*Limits.*—The Federal District of Mexico extends northward to the town of San Cristobal Ecatepec, westward to the town of Remedios, southward to the town of San Augustin de las Cuevas or Tlalpan, and eastward to El Piñon Viejo.

*Area.*—50 square leagues.

*Population.*—315,906 inhabitants.

*Political divisions.*—The Federal district is divided into four sub-districts, viz.: Guadalupe Hidalgo, Tacubaya, Tlalpan, Xochimilco.

The total value of real estate in the district is set down at \$51,650,464. The expenditures of the municipality of the City of Mexico amounts yearly to the sum of \$856,000.

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## THE CITY OF MEXICO.

The City of Mexico, capital of the Republic, seat of the Archbishopric of the same name, and one of the finest cities of the New World, is situated in  $19^{\circ} 25' 45''$  north latitude, and  $101^{\circ} 25' 30''$  west longitude, from the City of Paris, France, at an elevation of 7,108 feet above the level of the sea. Its site is in the centre of an oval-shaped valley about forty-seven miles long by thirty-two miles wide. It enjoys a healthy, temperate climate; the temperature of the city averaging  $17^{\circ}$  Réaumur; the atmospheric pressure being  $585^{\text{mm}}$ . The winds that prevail are from north and northwest. The longest day in the year has 13 hours 10 minutes, and the shortest 10 hours and 50 minutes.

The vegetation in the valley, as in the mountains that surround it, is noted for its vigorous growth and its endless variety. The winter is hardly felt. Thus it will be seen that the environs of the city are charming in the extreme, and well deserve to be visited.

"The soil of the valley," says the Count de la Cortina, "is composed of debris of modern alluvial soil, with beds of calcareous sweet-water, and other living-beds covered with humus or vegetable soil." In some places saline efflorescence predominates with an occasional covering of sand. At about three miles from the city in a northwest direction, springs of naphtha or fluid bitumen are found and eight miles north are found good thermal springs.

Mexico, according to the most reliable data, was founded by the Aztecs, on the 18th of July, 1327. Its origin, like Rome, has a curious tradition.

It appears that after a vagabond life, which lasted about fifty years, the Aztecs came in contact with the Alcohuas, who, being pursued by them, started for the lagoons, which in those days covered most of the valley. Among the Aztecs was an oracle, who, in one of his answers, had said to them that they should not found their city until they came to a place where they would find an eagle standing on a rock. The Aztec nation, led by the priest, reached the margin of the lagoon, they undertook to find and select the most convenient place for their city. Going ahead they explored the banks and canebrake about the lagoon so well that they soon came across the headland, upon which stood the *Tenuchtli*, or the real

ization of the oracle's promise. Here you have the origin of the coat-of-arms of the Mexican Republic.

The Aztec nation, being then convinced that they had reached their promised land, commenced building their cabins around the *Tenuchtili*, making artificial soil by means of vines and drift. In this manner the city was raised out of the waters of the lagoon.

The life the Aztecs led at first was a poor and miserable one. Their city, which they called Tenochitlan, or the city of the "cactus upon a rock," which, in a long course of years, was changed into "Mexico," which means fountain or flowing water; although it is more probable that it was named after an idol that the first settlers brought with them and named *Mexitly*.

At the time of the conquest it had a population of over three hundred thousand souls; but when it surrendered to Cortez, on the 13th of August, 1521, it was nothing but a heap of ruins and ashes, and the fine edifices and temples which had succeeded the first huts of the Aztecs were all destroyed.

The population of the city, at the present, can well be estimated at over two hundred and twenty-five thousand people.

*Buildings and institutions.*—In 1865 the city boasted of 482 streets, all at right angles, and not less than fourteen varas or forty feet wide, and of sixty squares.

The city has fourteen curacies or parish churches, fifteen monasteries for men, and twenty-two female convents, which were seized and sold by the Juarez Government; also, sixty-eight churches or chapels, six pantheons or vault cemeteries to bury the dead, three principal public walks, three first-class theatres and many small ones, two amphitheatres; for bull-fighting, ten hospitals, three public libraries, and other important establishments.

La Fuente del Salto del Agua, or the "spouting fountain," terminates the aqueduct at Belen, which brings to the city its water from the spring at the foot of the Chapultepec hill. It was begun by the Viceroy Fray Antonio de Bucarelli, and completed on the 20th of May, 1779.

La Fuente de la Tlaxpana (the Tlaxpana Fountain) on the Avenue of San Cosme, bears two inscriptions by the side of the coat-of-arms of the House of Austria, stating that it was constructed in 1737, when Don Juan Antonio Bizarro y Equiarreta was archbishop and viceroy of New Spain. It belongs to a peculiar

style of architecture, known as that of *Churiguera*. To reach this fountain you cross El Peunte de Alvarado (Alvarado's bridge), which now is a handsome street. A stone yet marks the place that became celebrated for the prodigious leap made by Alvarado when Cortez retreated from Mexico. A little further on, following the straight road, the little village of Popotla is reached, where, on the left side of the road, in a little enclosure near an old chapel, is found the venerable *Ahuahucte* tree, the same under which Cortez sat and cried over his disaster on the night of the 22d of August, 1521, which is called by the Spaniards the "*noche triste*," or sorrowful night.

*La Plazuela de Santo Domingo*.—The small square of St. Dominick, one of the smallest in the city, forms a quadrilateral, having a portico on the west, the church of Santo Domingo on the north, the Custom-house block on the east, a pertion of a block and a street on the south. In the angle between the Custom-house and the church is the building of the ex-Inquisition. The Convent of Santo Domingo was at one time one of the most famous and wealthiest convents in the city. It has been rumored that a treasure of some twelve millions was buried within its walls. Many searches have been made for it; even a company was formed at one time to raise the necessary capital to hunt up the treasure, but up to this day it has failed. The building of the ex-Inquisition is used as a medical college.

*Iturbide Market* (Ancient Square of St. John).—Its cornerstone was laid by the President of the Republic, Don José Joaquin de Herrera, on Sunday, the 13th day of May, 1849. Don Enrique Griffon, w. ; its architect. This edifice is one hundred feet front and sixty deep. It has one hundred and eight stalls or shops inside and outside, most of them occupied by butchers and porkmen. It has a fountain in the centre and six entrances, two east and two west, and one north and south.

*La Plazuela de Guardiola*.—It is a small square enclosed on the east by the old residence of the Condes del Valle, on the west by a portion of San Isabel Street, on the south by the residence of Mr. Escandon, one of the wealthiest citizens of the city and first promoter of the construction of railroads in Mexico, and on the south by the walls of the chapel of our "Lord of Burgos," which belongs to the great convent of San Francisco. This square was

named after the Marquis of Guardiola, who built his residence there, which is now the property of Mr. Escandon. In olden times the waters of the lagoon came as far as this place. It is reported that Chirino, who had revolted against Cortez, while absent on his expedition to Yucatan, was exposed in an iron cage on this square. On this square is a hack station.

*El Sagrario*.—This beautiful church (the name signifying the place where sacred relics are kept) is adjoining the cathedral, and was the first parochial church built in the City of Mexico after its conquest by Cortez. It is said that the Franciscan friars were the founders of the parish church, which is at present the cathedral, in 1524, and Don Pedro de Villagran was the first parish priest of Mexico. The Sagrario was burned, and was rebuilt by Don Francisco Antonio Lorenzana, archbishop of Mexico in 1767. The style of its architecture is one which is contemporary with the reign of Louis XV. in France; it was in its apogee in Spain at the end of the seventeenth and the beginning of the eighteenth centuries, and is considered by competent judges of architecture to be a style of decline; it was named after the Spaniard who invented it, "Churiguera," leaving out the defects that are proper to a style that has laid aside all known rules applicable to the different orders of architecture, the front of the Sagrario will captivate the attention of the traveler by the neatness and perfection of its mouldings, for the boldness of its columns, and the masterly finish in its smallest details.

*Palacio Municipal* (City Hall).—It is also called *Deputacion* (Deputation), *Casa de Cabildo* (corporation or chapter house). The present building was finished in 1792 at a cost of \$130,000; it has 91 varas, or over 252 feet, front on the main plaza of Mexico, and 122 feet deep, occupying an area of 4,004 square varas. Besides the city and district offices, the building contains the corporation jail, some apartments rented to private individuals, and the *Longa* or Merchants' Exchange, which is as fine as any in the world. The first municipal house was burned by a mob, together with the viceroy's palace and other buildings, in the year 1692, while the Count de Galve was viceroy, and a part of the city was also sacked by the mob.

*Iturbide Hotel*, or Stage Hotel.—This house was occupied by Don Augustine de Iturbide, Emperor of Mexico, and is known as

“La Casa del Emperador Iturbide.” It was built by the Count de Moncada, Marquis of El Jaral, one of the richest men in Mexico, as a private residence. It is used to-day as a hotel, where first-class accommodations can be had.

*Theatro Nacional* (National Theatre).—The corner-stone of this edifice was laid by General Santa Anna, on the 8th of February, 1842; it was, in consequence of this, called “Santa Anna Theatre.” It is second to none in America; it can accommodate an audience of three thousand persons. It was built by Don Francisco Arbue, an enterprising Mexican, on the site occupied by houses Nos. 11 and 12 of Bergara Street.

*Plaza Mayor*, or Main Square, also called Military Square. On the east side of it is the National Palace, where the President of the Republic resides, and where most all the Government offices are located. It is a huge mass of stone without any architectural significance; it covers all the east side of the square, and has three entrances fronting on the same. Its front extends 675 feet. It was originally the property of the family of Cortez, but was subsequently purchased by the Spanish Government for its viceroys for \$33,300; not being large enough, it was rebuilt in 1693. The Cathedral and Sagrario occupy the north side of the square. The Municipal House and Merchants’ Portico form the other two sides of the square; it is well paved and surrounded by spacious sidewalks.

*The Cathedral of Mexico*.—It would take a book to describe that fine monument; we can only afford to give a brief sketch of it. The edifice stands on the side of the main square, and is built on the same spot where stood the temple dedicated to the Aztec god “Huitzilspotchli,” tutelar god of the nation. It was begun in 1573, by order of King Philip II., Don Pedro Moya de Contreras being archbishop, and was completed in 1657, under the government of Don Fray Marcos Ramirez de Prado, 94 years after its corner-stone had been laid, at a cost of \$1,752,000, which sum was paid by Philip II., Philip III., Philip IV. and Charles II. (surnamed the bewitched). This building is about 432 feet long from north to south, and about 203 feet wide from east to west, without counting the space which is situated between its porch and the level of the square, about 140 feet, which is surrounded on the south, east and west by 124 columns over 5 feet high, to which are fastened heavy iron chains; about 15 feet from the chains are 77

ash-trees equally distant from the columns, and in a parallel line with them; these constitute one of the finest walks in the city, and is known as the *Paseo de las cadenas*; it is particularly attractive by moonlight.

The entrance to the prebendary (*canonigos*) is situated on the east, surrounded by a fine iron-railing; the principal front of the building, which faces south, has three entrances, composed of two styles of architecture—the first Doric, and the second Ionic, with statues in bas-relief.

Its two towers are 72 varas, or 200 feet, in height, and cost \$199,000.

Between the two towers, and above the main-entrance, is a beautiful clock, with a face of gilt metal, above which are three statues representing the three theological virtues, artistically executed. In the two towers are forty-eight bells; those worthy of notice are: 1st, Santa Maria de Guadalupe (Holy Mary of Guadalupe), which is 36 feet in height; 2d, that of "Dona Maria," which weighs 15,000 pounds; and 3d, called "Saint Angel," weighs 14,000 pounds.

Besides the entrances already mentioned, the cathedral has three more, two of which are situated on the north of the building, on one side of which is the chapel of Las Animas (the Souls), where the remains of the clergy are deposited.

The cupola and lantern, which in height is nearly on a level with the towers, show elaborate and tasteful art.

The interior of the edifice belongs to the Doric order; has beautiful and elevated arches, five naves, two closed and three opened, the latter with fourteen pillars with columns on each of its sides; from the pilasters start the arches to meet others before it, and on the sides of the two lateral naves are located fourteen chapels, all enclosed with balustrades of iron and carved-wood, besides the six chapels named as follows: 1st, De los Reyes (of the Kings), where are buried the viceroys; 2d, Las Animas (the Souls); 3d, Del Buen Despacho (of the Good Resolution); 4th, San José (St. Joseph); 5th, San Lorenzo (St. Lawrence); and 6th, the El Pardon (the Pardon). In the latter a mass is said every half hour every day during the year.

Between the vaults and other space of the temple are 147 windows, and in the cupola and lantern already mentioned, which

shape is octagonal, is a fresco painting representing the Assumption of our Lady, executed by the distinguished Spanish painter, Jimeno.

The presbyterium, where stands the main altar, which is situated in the middle of the church, between the choir and the altar of the kings, to which one ascends by a flight of wide steps; the four fronts of the altar is surrounded by a balustrade of metal called *tumbaga*, which extends in a straight line on either side until it reaches the choir; this balustrade is ornamented with sixty-two statues, who hold a chandelier of the same metal in one hand.

The cypress over the main altar is sustained by eight columns, covered with stucco, in which are located the magnificent statues of the apostles, evangelists and principal saints, all of natural size; above the second order of architecture is a group of angels, above which is the mother of our Redeemer; all, formerly, were covered with precious stones, etc. Its treasure, at one time, was enumerated as follows: 20 chalices of gold; 6 vessels of gold, in which wine and water are served for mass; 132 rubies; 1,676 diamonds, with 13 marcs of gold; 1 chalice, with 122 diamonds; 143 emeralds, with 107 marcs of gold; 2 gold vessels for incense; a silver image of the Conception, weighing 28 marcs (a marc, eight ounces); the principal reliquary, which is ornamented with 2,651 emeralds; 44 rubies, 3 sapphires and many more treasures too long to enumerate. Most of the jewels were presents from the Emperor Charles V.

*Theatro Iturbide* (Iturbide Theatre).—It was designed by the distinguished Mexican architect Don Santiago Mendez, who also constructed it. It cost \$180,000, and was opened on the 3d of February, 1856, with a brilliant masquerade ball. It is very richly ornamented inside with red velvet and gold, and is one of the finest halls in America.

*El Paseo de Bucareli* (the Walk of Buccareli).—This is one of the most fashionable promenades in the City of Mexico. Leaving the main-square and riding up the streets of Plateros and San Francisco, passing the house of Iturbide on his left, then the square of Guardiola to his right, the convent of San Francisco to the left, and the beautiful Alameda or public garden to his right, the old prison of the "Acordada" to his left, the promenader reaches the Paseo Nuevo, a beautiful ride planted with trees, and spacious sidewalks; the magnificent statue of Charles IV. is passed; it was designed

and moulded by Don Manuel Tolsa, and was placed on its pedestal in 1803. From four o'clock in the afternoon mounted police are placed on guard from the Acordada prison to the end of the *paseo*, from distance to distance, in order to preserve order among the numerous files of carriages circulating.

*The College of Mines.*—This grand edifice was planned and built by Don Manuel Tolsa, and was completed April 3, 1813, at a cost of \$1,500,000. The front of the building faces north on St. Andrew Street; it has 298 feet front; one of the sides of the edifice faces east on the alley of Bethemite, and has 344 feet front; the other, west, on the alley of the Countess, and has 2,123½ feet; the edifice occupies an area of 10,835 square varas (nearly two American acres); the lower floor has 7 court-yards, 5 fountains, 5 stairways and 76 rooms. The floor between the ground-floor and first-floor has 1 fountain, 4 stairways and 75 rooms. The first story has 3 fountains, 2 stairways, 83 rooms. The terraces: 2 fountains, 2 stairways and 5 rooms, making a total of 7 court-yards, 11 fountains, 13 stairways and 238 rooms. Its organization as a high-school leaves nothing to be desired, and well deserves the visit of the traveler.

*El Paseo de la Viga.*—It is situated on the bank of the canal of the same name, and is a beautiful walk, well planted with trees. This canal unites the two large lakes of the valley of Mexico. At times the canal and the walk presents one of the most picturesque sights that one can imagine; the little boats in which the Indians bring to market their great variety of fruits and flowers, their game, poultry and fish, the great variety of their costumes, and particularly those of the women, who always dress in bright colors, give this place a curious appearance to the traveler. It is a busy place on market days, this is really the people's walk, while the *Paseo de Bucareli* is the aristocratic walk and drive.

*The Street of Roldan Bridge.*—At this bridge is the real landing for boats going up or down the canal, and at this point a disagreeable smell, caused by the stirring of the turbid water of the canal, the fruits and garbage that is thrown into it, takes away a great deal of the charm that the place would otherwise have. But no one visiting the City of Mexico should fail to see it.

*Environs.*—The hall, castle, stately trees and spring of Chapultepec.



The beautiful hills, town and gardens of Tacubaya.

The town of San Angel.

The town of San Augustin de las Cuevas ; it was, before the conquest, a very important city, known as Tlalpan, which meant upland, and communicated with the city by means of causeways. It became celebrated on account of a gambling fair that used to be held there yearly.

The town of Ixtacalco, situate on the bank of the canal de la Viga.

The town of Guadalupe, situate one league north of the capital, on the border of the lake of Texcoco ; in this town is situated the holy sanctuary of Guadalupe, a beautiful and richly adorned church, which was built to commemorate the apparition of the Holy Virgin Mary to the poor Indian Juan Diego, from the 9th to the 12th of December, 1531.

The Theatro Principal, the Academy of San Carlos, the National Museum, the Military School of Tacubaya, should all be visited.

In the yard of the Academy of San Carlos can be seen the great sacrifice-stone upon which the Aztecs, in the practice of their inhuman religion, sacrificed their prisoners, and part of the people of both sexes designated for that purpose by the priest.

The great Indian calendar is to be seen on the west wall of the cathedral, where it cannot fail to attract the attention of the traveler.

A curiosity of the Lake of Texcoco is a white-fish with legs and feet.

*Public instruction in the City.*—There are in the City of Mexico the following high-schools :

A national second grade school for girls, kept in the old convent of Encarnacion.

A preparatory national school, kept in the old college of San Idelfonso.

A national school of jurisprudence, in Encarnacion Street.

A national school of medicine, in the old edifice of the Inquisition.

A national school of agriculture, in the hacienda of San Jacinto in Popotla, a suburb of the city.

A national school of engineers, in the College of Mines.

A national school of fine arts, situated in Academy Street.

A national civil service and commercial school, in the old hospital of Terceros.

A national school of arts and trades, kept in the ex-convent of San Lorenzo.

A national school for deaf and dumb, in the old convent of Corpus Christi.

The National Museum is situated in the old mint building.

The National Library is situated in the ex-convent of San Augustin.

All of these high-schools or academies are interesting to the scientist; they are perfect in their organization. Their libraries are interesting and can be consulted with profit. As much has been done in the City of Mexico to teach the highest branches of science as in any other large city of the world.

#### DESCRIPTION OF THE SANCTUARY OF THE HOLY VIRGIN OF GUADALOUPE, PATRONESS OF MEXICO.

*El Santuario de Guadalupe.*—Two fine causeways and a railroad, the first constructed in the Republic by Mr. Escandon, lead from the City of Mexico to the town of Guadalupe, distant a little less than three miles from the City, on the border of lake Texcoco.

Here is situated the sanctuary of Guadalupe, of which it may be said that there are few in the world as celebrated with the Catholics as this one, especially in the Republic of Mexico, where it is the symbol of religion and independence.

*Tradition.*—The tradition is simple and practical, and the participants of humble origin. Juan Diego was an Indian from the village of Cuautitlan—who had but recently been converted to the Catholic faith—of good conduct and behavior; his family consisted of his wife, Maria Lucia, and an uncle named Bernardino. Juan Diego earned his living by working in the town of Tolpetlac, from which place he was accustomed to often visit the village of Santiago Thaltlilco to hear the Franciscans that had charge of the parish preach the Catholic doctrine. In one of his trips, while crossing the ridge of brushy mountains that rise in that portion of the

valley on the border of a lake which the Indians called Tepetyecaczel, and the Spaniards pronounced Tepeyacac, which means "Nose of the Mountain" (a very appropriate name for it), Juan Diego heard soft and harmonious music, such as he had never heard among his people or among the Spaniards. He stopped to observe whence came these harmonious sounds, and then saw a rainbow of very bright colors, and in the centre a white and transparent cloud in the middle of which appeared the figure of a beautifully formed woman, dressed as the Indians of noble caste were dressed in those days. Juan Diego approached her without fear, and then the lady told him that she was the Mother of God, that she desired that a temple should be erected in that locality, and that she would devote herself and give aid and protection to all those that would have faith and would call upon her in distress. At the same time she told Juan Diego that he should without delay report to the bishop what he had seen and heard. The Indian accordingly went to the residence of Don Fray Juan de Zumarraga, of the order of San Francisco, who was then bishop of Mexico, and although he found much difficulty in gaining admittance, he was fortunate enough to speak to the prelate, and related what had happened to him, but did not receive a satisfactory answer, because the bishop believed that it was only the imaginary vision of an Indian who had but recently joined the Catholic faith and abandoned the worship of his idols.

Juan Diego returned to his home very disconsolate, but the Holy Virgin again appeared to him three times. The fifth time, Juan Diego, much depressed in spirits,—owing to the many repulses he had met with at the hands of the archbishop,—and his uncle, Juan Bernardino, being seriously ill, he concluded that he had better procure his uncle a confessor who might save him more surely than anything else; but in order not to meet again the apparition, he took a different road than the one which he used to travel. However, all this was in vain, because at the place where now is a thermal spring, held in respect by the sick and by all people, the Virgin met him and told him that his uncle was then perfectly well, or in other words that he had recovered from all his sufferings; and the Virgin also ordered him to go on the top of the hill,—the same one already mentioned as the "Nose of the Mountain," on the border of lake Texcoco,—and gather beautiful

flowers which he was to take to the bishop in proof of the truth of what has just been related.

In these hills, where nothing grows but chapparal, and where no flowers are ever seen, still Juan Diego found a great many beautiful and fragrant flowers; which he gathered in his cloak (*tilma*) and went to Mexico to take them to the bishop, who having heard that the Indian was bringing the proof he had called upon him to produce, received him in his parlor with much curiosity, and accompanied by many priests and friends.

The Indian, in a very modest way, related to the bishop what had taken place, then dropping the flowers he had in his cloak (*tilma*), the bishop and his followers dropped on their knees before the image of the Virgin that appeared painted on the cloak or *ayate* of the happy and fortunate Juan Diego.

This took place from the 9th to the 12th of December, 1531, nineteen years and four months after the conquest, Clement XII. being pope, and the Emperor Charles V. being king of Spain.

The above is the religious tradition, transmitted from father to son in regard to the Virgin which is venerated in the Sanctuary.

As soon as the Bishop Zumarraga recovered from his great emotion and admiration caused by the beautiful and rich flowers and by the sight of the singular image of the Virgin that appeared to him on the cloak of the Indian, he complimented Juan Diego and sent for his uncle, Juan Bernardino, who sure enough was found well and cured of all his infirmities, as the Virgin had announced to the poor Indian, Juan Diego. The bishop, accompanied by many priests and persons of notability, together with Juan Diego, visited all the places where the Virgin had appeared to him. While visiting these places, they kissed and prayed over them with great devotion and then returned to the episcopal palace, which in those days was situated on the site of the present street of Donceles, and there temporarily deposited the image of the Virgin, which a few days afterwards was transferred to the Cathedral. A short time afterwards, the building of an hermitage was begun on the hill of Tepeyacac at the expense of Bishop Zumarraga, and the following year, 1533, the image was removed to the hermitage amid a solemn procession made for that purpose.

Juan Diego built himself a little home adjoining the temple, and entirely dedicated himself to the worship of the Virgin for

seventeen years after the miracle, and died in 1548, at the age of seventy-four. His uncle, Juan Bernardino, died of yellow fever (*cocolixli*) in the year 1544, being eighty-six years of age, and was buried in the old chapel of the Virgin.

For ninety years the Virgin remained in this temple, which was rather small and of poor architecture, but among the good Catholics of Mexico the devotion to the Virgin of Guadalupe had, by this time, increased so much, that many contributions were made and the beautiful cathedral which now adorns the town of Guadalupe was begun, the corner stone of which was laid about the middle of November, 1622, by the most illustrious Lord Don Juan de la Serna, archbishop of Mexico. The building alone of the cathedral cost the large sum of \$800,000, not including a tabernacle of silver, a present from the Viceroy Count of Salvatierra, and sixty lamps of silver which were hung in the vaults of the temple.

The worshippers became so liberal that with their gifts and the amounts they subscribed, many rich ornaments were purchased, some of them more valuable than those owned by the Cathedral of Mexico. The ornaments and articles used for services in this great Church were of silver, and valued at five thousand marcs.

The chapel called Del Cerrito, which is built on the spot where the Virgin first appeared to Juan Diego, was constructed one hundred years later at the expense of Don Cristobal de Aguirre, and his wife Dona Teresa Peligrina. The causeway, built of rock, was constructed at the expense of Don Fray Payo de Rivera, archbishop and first viceroy of Mexico, as well as the aqueduct and fountain which is located in the square of the town.

For many years this temple was placed under the care of four or six priests, but in 1750, Don Manuel Jose de Rubio y Salinas being archbishop, it was transformed into an abbey, and the abbot and canons took possession of the abbey. About that time Pope Benedict IV. conceded to the church a special mass and prayer.

In 1751, an enquiry was held, at the demand of Dr. Don Francisco de Soles, and judicial proceedings were instituted to prove the apparition of the Virgin.

The Spaniards called the place Tepeatilla, and here were deposited all the treasures of Gonzalo de Sandoval during the bloody battles that preceded the storming of Mexico.

The Virgin of Guadalupe was stamped upon a cloth made of

the fibers of indigenous plants, manufactured by the Indians, "sons of the soil" (*hijos del país*). She appears clothed with a loose woolen gown falling from her neck to her feet, a mantle covering her head, the same as worn by the noble Aztec maidens; her color is dark brown, her hair black and loose, her physiognomy is amiable, candid and modest. She appeared to an Indian in a place celebrated among the Indians, all of which is entirely natural and characteristic of the country which had but just been conquered. The Virgin was called the Creole Virgin, and the poor race which had just been vanquished and humiliated, after having seen its fields destroyed, its cities and homes burned, and its blood run into streams, found itself with a divine being to whom they might appeal from the cruelties and injustice of humanity. After fire and sword, came the sweet and pacific conquest of religion.

When the old curate of Dolores, Don Miguel Hidalgo, raised the first cry in favor of Mexican independence on the night of September 16th, 1810, he caused a flag to be raised upon which was painted an image of the Virgin of Guadalupe. After the Mexican independence was gained, the village where the temple of Guadalupe is situated was raised to the rank of *ciudad* or city. Under the name of "Ciudad de Guadalupe de Hidalgo," a name which causes every Mexican to remember the civil and religious history of which we have just given a sketch.

In October, 1821, the Emperor Iturbide instituted the order of Guadalupe, which became extinguished after the overthrow of his Empire and the republican form of government established. This order given as a reward to civil and military merit was reestablished by General Santa Anna on the 19th of December, 1853.

Guadalupe also brings to recollection one of the greatest events that took place on this continent. It was in that city that the celebrated treaty of peace, that put an end to the war between the United States and Mexico, was signed on the 2d day of February, 1848. Messrs. Licenciado Don Bernardo Couto, Licenciado Don Miguel Atristani and Don Luis G. Cuevas being plenipotentiaries on the part of Mexico, and Mr. Nicolas P. Trist on the part of the United States of America.

The city has improved a great deal of late years. The principal income of the Cathedral, which is actually one of the finest churches on this continent, is derived from a lottery which is drawn in the

City of Mexico monthly ; but gifts from all classes of people amount yearly to very large sums.

The 12th of each month a high mass is celebrated, which is generally well attended by people from the City of Mexico ; but on the 12th of December is a great religious festival which is attended by people from all parts of Mexico to celebrate the day upon which the Virgin patroness of Mexico first appeared to Juan Diego. Thousands of Indians in their original dress attend the festivities every year.

The original flag used by Hidalgo in 1810 is deposited in this Cathedral.

The number of miracles which the Mexicans claim to have been performed by their patroness is much too large to be published in this notice, although a catalogue of them would be interesting to read by the faithful. Nevertheless persons going to Mexico should not fail to visit the place.

Among the distinguished dead buried there are the Viceroy Antonio de Bucarelli, one of the best executives Mexico ever had, and Colonel Obregon, who has a chapel in which a lamp is constantly kept burning.

# HISTORY OF MINING IN MEXICO UNDER SPANISH RULE

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## EXTENT OF THE SPANISH DOMINION.—THE FIRST BONANZA.

In 1737, the Spanish dominion extended as far as the "Pimeria Alta," that is to the Gila river, owing to the efforts made by the Jesuits to convert to christianity the savages who inhabited the country, and teach them the arts of civilization. This vast region of country is situated between the  $31^{\circ}$  and  $33^{\circ}$  of north latitude; it is about 300 miles in length, and is bounded on the east by the Apache country, on the south by Sonora, on the West by the Gulf of California (or Sea of Cortez) and the country of the Seris Indians, and on the north by the Coco Maricopa. In that portion of the country which is known as Arizona was found large pieces of mineral, almost pure silver. As soon as the Sonora miners heard of it, they rushed to the place, where they found a large quantity of metal, some of the pieces weighing 20 arrobas, or 500 pounds, and one piece of 120 arrobas, or 3,000 pounds; probably no such piece of native silver has ever been found in the world.

Such an abundance of silver raised a doubt in the minds of the counsellors of the Audiencia as to whether the regular fifth should be collected for the crown, or whether it should be regarded as a treasure, in which case, after paying the discoverer his share, the balance would revert to the crown. The case appeared doubtful to the counsellors of the Audiencia at the City of Mexico, who referred it to the council of the Indies, and while this appeal was pending the discoverer removed all the silver that was to be found on top of the earth, so that when the question was decided by the council of the Indies the commission reported that the wealth had vanished.



## THE GOLD PLACERS OF SONORA.

The gold placers of Ceineguilla, State of Sonora, situated 640 leagues, or 1,584 miles, north-west of the City of Mexico, produced from January, 1773, to November 17th of the following year, 4,832 marcs of gold, which paid into the royal treasury of the town of Alamos as duties to the king the sum of \$72,000, and it is estimated that at least one third of the yield of these placers was smuggled out. The immense richness of these placers greatly contrasted with the scarcity of provisions and water; as much as \$6 was often paid for a barrel of water.

## QUEBRADILLA PRODUCES GREAT WEALTH AND A TITLE.

In 1786, the mines of Quebradilla and la Vicayna, near Zacatecas, were worked with success. Don Antonio Obregon having sunk a new shaft, worked with great success the mine of La Valenciana, near the City of Guanajuato, from the year 1770 to the 14th of December, 1778; he presented to the royal treasury 4,699 bars of silver, weighing 28,039 marcs and 3 ounces, upon which the duties amounted to the enormous sum of \$648,972, and the further sum of 53,088 castellanos of gold, upon which the duties amounted to \$13,051. The above statement was made by the Viceroy Bucarelli in a letter to the king of Spain, in which he recommended to the king that the successful and fortunate miner be granted the title of Count of Valenciana, which distinction was granted by the king.

In June, 1778, the mining district (mineral) of Hostotipaguillo, distant 513 miles west north-west from the City of Mexico, in the then province of Guadalajara, at present the State of Jalisco, was discovered and promised great riches.

## THE CATORCE MINES AND THE VICEROY.

In the year 1779, the mining district of Catorce, distant 164 leagues, 431 miles, north north-east from the City of Mexico, was discovered. It is situated in a cañon of the mountain of the same name, which rises above a high plateau in the State of San Luis Potosi. Its name Catorce, "fourteen," was given it because this cañon was inhabited by a band of fourteen robbers. It was

discovered in the following manner : A militia soldier from San Luis Potosi had lost his horse while on the way to the town of Matehuala, 162 leagues or 436 miles north north-west, situated on the east side of the Catorce mountain ; he returned to search for it, and, in crossing the mountain of the Conception of Alamos, or of San Antonio de los Coroncados, in the jurisdiction of Charcas, 150 leagues or 405 miles north north-west from the City of Mexico, distant 150 miles from San Luis Potosi, he found a large and rich silver lead. The metal found on top the earth when assayed rendered 20 marcs to the carga of 300 pounds. Having dug a little below the surface, ore was found rendering 50 marcs to the carga, or \$400 to 300 pounds of ore. The ore afterwards averaged 30 marcs to the carga. The soldier who discovered the mine was named El Negrillo (probably a nickname) ; he was a drunkard and a dissolute man, which caused the Viceroy Bucarelli to have him a guardian appointed. The notice of this discovery was the last made by Viceroy Bucarelli to the king, for he died thirteen days afterwards. He was much beloved for his valor and his many virtues, and was one of the best viceroys that governed Mexico. His memory is venerated to this day.

Don Carlos Maria Bustamente says that the news of the death of Viceroy Bucarelli, and the appointment of the President of Guatemala as his successor, was carried from the City of Mexico to the City of Guatemala, a distance of 400 leagues, or 1,052 miles, over a rough mountainous path, with many wide rivers to cross, in seven days. The courier's name who performed this feat was F. Varo. This extraordinary man in his way, was born in the province of Andalusia, Spain.

#### THE MINES OF GUANAJUATO.

Every (mineral) mining district was a prosperous centre and a great source of revenue to the treasury. The province of Guanajuato alone produced to the crown of Spain, from 1760 to 1781, in tax upon silver, tobacco, tributes, powder and playing cards, the sum of \$23,143,921, and the following years still produced more revenue, so that after paying all the costs of government left a clear revenue to the crown amounting to \$1,100,000 an-

nually. That was about the time of its greatest prosperity. In those days the mines of Cata and Mellado were in bonanzas. They were the property of the Marquis of San Clemente, one of the richest and most honored families of Guanajuato. After the above mentioned mines, those of Santa Anita and Rayas come next, also yielding large profits. The mine of Rayas was the property of Sardaneta. The head of that family, while that mine was in its great bonanza, was granted by the king of Spain the title of Marquis of Sardaneta.

#### THE ZACATECAS MINES.

The riches derived from the Zacatecas mines were anterior to that of Guanajuato.

Its mines were discovered about the time of the conquest, and during the 180 years that elapsed from the discovery or its leads to the year 1732, they had produced the sum of \$832,232,880, which paid as tax to the royal treasury the sum of \$46,523,000. From these mines the following wealthy and enobled families came forth : The counts of San Mateo Valparaiso, Santa Rosa, Santiago de la Laguna, and many others. In the year 1728, Zacatecas produced \$1,800,000 yearly, which was at that time one-fifth of all the silver coined in Mexico. It afterwards even produced more, and became a bonanza equal to the Quebradilla mines, the property then, in 1810, of Don Firmin de Apezechea. In other mineral districts many mines were very flourishing, such as the Bolanos mine, the property of the Marquis of Vivanco ; the mine of "El Pabellon," in Sombrerete, State of Zacatecas, distant 105 leagues, or 265 miles, north-west from the City of Mexico, the property of the family of Fagoaga, and those of Real del Monte, situated in the State of Mexico, about 21 leagues, or 50 miles, north-east from the City of Mexico, the property then of the Count of Regla, now worked by an English company. Most of these rich miners finally became the owners of the largest and best estates (haciendas) in the country, having mostly purchased the estates of the Jesuits when they were expelled from the country. These wealthy citizens expended generally a large portion of their fortune in charities. The large surplus of money existing in Mexico caused real estate to raise in value, and brought forth many new industries.

## MAMMOTH VEINS.

One of the peculiar features of the silver mines in Mexico, distinguishing them from all others in South America, is the large size of the veins more than the richness of the metals. The vein worked at Real del Monte, near the City of Mexico, which is called la "Biscaina," is several yards wide; the vein "Calle Veta Madre" (main vein), at Guanajuato, is about ten yards wide, and sometimes more; this one has been worked for a distance of thirteen kilometres.

One great advantage that Mexican mines have over those of other countries is the character of the climate where they are found. They are seldom situated more than six or seven thousand feet above the level of the sea, hence they enjoy a temperate climate. The mines of Guanajuato are situated in a country that produce, in the valleys, two crops of grain yearly; while the mines of Peru are at a height of 12,000 to 13,000 feet above the level of the ocean; although under the equator, the mines of Peru are situated in a country as cold as Siberia; this alone is greatly in favor of the Mexican mines.

## COINAGE OF THE MINT IN THE CITY OF MEXICO.

By consulting a statement published by Don Jose Maria Zamorra, it will be seen that the mint at the City of Mexico, from 1690 to 1822, had coined:

|  |                        |
|--|------------------------|
| In gold and silver, . . . . .  | \$1,640,493,786        |
| And from 1823 to December, 1839, . . . . .                                 | 32,834,361             |
| And in other mints established in other States<br>and Provinces, . . . . . | 162,263,021            |
| Making a total of . . . . .  | <u>\$1,835,591,168</u> |

From 1814 to January, 1873, the mint at the City of Mexico coined \$5,060,178.38 copper money. But it must be remarked that the amount of silver and gold coined does not indicate the products of the mines, as a large amount of *plata pasta* (silver bars) were sent to Spain, or smuggled out of the country to avoid paying export duty, and that a considerable amount was manufactured into plate and used in the mounting of jewels.

## THE PRODUCT OF LA VALENCIANA.

To conceive an idea of the products of some of the best mines of Mexico, it is only necessary to know that the mine of "La Valenciana," near the City of Guanajuato, produced to its owners, from the 5th of April, 1788, to the 20th of March, 1798, a net profit of \$8,000,000.

Until 1848, Mexico was the first country on the face of the earth in the production of precious metals; it produced more than all the American States together.

## HISTORY OF MEXICAN MINES.

Immediately after the conquest of Mexico by Cortez, its mineral wealth was hardly known, and Peru took the palm as a silver producing country. Its name Peru still seems to designate an unlimited wealth. The greatest mine in Peru was known as the *Paton Potocchi*, which has been corrupted into Potosi, and out of which \$280,000,000 have been extracted.

Under Montezuma, the Aztecs worked but few silver mines; they were not enlightened enough to work any but those that contained native silver, and such mines are very scarce. In most of the mines that are worked with advantage, the appearance of silver is entirely hid by its intimate association with sulphur, antimony, arsenic and other substances, so much so that a person who is not versed in science would not recognize the presence of silver. It is also very difficult to separate the silver from the various combinations. It is well known that with gold it is the contrary, as that metal is always found in a natural state. This, in all probability, explains the phenomena well proved by history, that the Spaniards found among the population of America more gold than silver, although silver mines are found in much greater number; or, to express it more correctly, they are much more prolific in metals than the gold mines.

At the beginning of the eighteenth century the mines of Mexico only produced in gold and silver from six to seven millions of dollars. In the middle of the last century, they produced about thirteen millions of dollars. At the end of the last and beginning of this century they produced from twenty-five to twenty-six millions of dollars. At present they do not produce as much.

## THE DISCOVERY OF THE PATIO PROCESS.

It was a Mexican miner, by the name of Bartholomew Medina (to whose memory no monument has ever been erected, and whose name and resting place is forgotten, a shame to our rich miners), who invented or discovered, in 1557, the method by which nearly all the mineral has been worked to this day. This method is called in Spanish *patio*, or cold amalgamation, and consists in mixing quicksilver, and other ingredients less expensive, such as salt and a substance called *magistral* (a mineral composed of sulphur of iron and sulphur of copper, which has previously been calcinated), by which method, silver can be extracted out of the poorest minerals without melting them. This was a fortunate discovery for a country where fuel was scarce, particularly in the vicinity of the mines, which are seldom found in places where fuel abounds, and many mines in Mexico have been abandoned on account of the difficulty or expense in procuring fuel to work them. On the other hand, this method consumed large quantities of quicksilver, as it is calculated that to extract a pound of silver it takes a pound and a half of quicksilver. All the quicksilver was furnished by the Almaden mines, of old Spain, until the California mines of New Almaden were put in working order. It was a monopoly in the hands of the crown of Spain, and its agents often abused it to the great distress of the miners.

## HUMBOLDT'S OPINION.

Mr. de Humboldt, at the beginning of this century, wrote as follows: "In general, the abundance of silver is such in the Cordillera chain, that when one reflects upon the mines that have not yet been worked or explored, one is tempted to believe that we have not yet begun to enjoy the inexhaustible richness that the New World contains."

The world would be inundated with precious metals if the mines of Bolanos, Batopilas Sombrerete, El Rosario, Pachuca, Moran, Zultepec, of Chihuahua, and many others which have heretofore been celebrated, were worked with the improved machinery that has been invented since 1848.

## MR. DUPONT'S OPINION.

Mr. Dupont, a competent Frenchman, after speaking of the wealth of Mexico, adds that a time will come, sooner or later, when the production of silver will only be limited by its certainly increasing depreciation. When we look at our production of silver to-day, we are tempted to believe that this time has arrived.

In the State of Guanajuato alone, from July, 1876, to July, 1878, the sum of \$4,437,286.92 in silver and gold has been coined.

## MINTS AND ASSAYING OFFICES.

## COINAGE.

|  |                    |
|--|--------------------|
| City of Mexico, from 1537 to 1867, . . . . .   | \$2,251,993,613 65 |
| City of Zacatecas, from 1810 to 1867, . . . . .  | 214,870,898 62     |
| City of Guanajuato, from 1812 to 1867, . . . . .   | 187,950,385 25     |
| City of San Luis Potosi, from 1827 to 1867, . . . . .  | 52,723,419 75      |
| City of Durango, from 1811 to 1867, . . . . .  | 39,827,608 68      |
| City of Guadalajara, from 1812 to 1867, . . . . .  | 30,307,755 96      |
| City of Chihuahua, from 1811 to 1867, . . . . .  | 18,055,570 08      |
| City of Culiacan, from 1846 to 1867, exclusive of<br>the year 1857, . . . . .  | 18,416,336 49      |
| Guadalupe y Calco, from 1844 to 1850, . . . . .  | 4,375,062 06       |
| Sombrerete, from 1810 to 1812, . . . . .   | 1,551,249 25       |
| Tlalpan, from 1828 to 1830, . . . . .  | 1,162,660 87       |
| Oaxaca, from 1859 to 1867, . . . . .   | 1,525,231 35       |
| Catorce, in 1865, . . . . .  | 1,321,545 00       |
| Alamos, Hermosillo, Cosala, Batoseagachi, Par-<br>ral, Jesus Maria.  |                    |
| Supposing that the mints of Mexico, Zacatecas,<br>Guanajuato, San Luis Potosi, Durango, Gua-<br>dalajara, Chihuahua, Culiacan and Oaxaca<br>coined, in 1868 and 1869, the same amount<br>as in 1867, we find the following amount, . | 36,557,733 92      |
| <i>Carried forward</i> , . . . . .   | \$2,860,639,070 93 |

|  |                           |
|--|---------------------------|
| <i>Brought forward, . . . . .</i>  | \$2,860,639,070           |
| And supposing that the amount of silver used in circulation and manufactured into silverware or jewelry, and the amount fraudulently extracted from 1521 to 1867, according to the calculation of the distinguished statesman Lerdo de Tejada, is \$2,500,000 per year, we find the sum of . . . . . | 862,500,000 00            |
| We find the products of the mines in Mexico amounting to the sum of . . . . .  | <u>\$3,723,139,070 93</u> |

The above statement only gives an idea of the mineral wealth of Mexico, which will yet astonish the world when American capital and industry develop the untold wealth of that country.

#### AMERICAN GOLD AND SILVER PRODUCTION SINCE 1848.

According to the best data, the production of California, Nevada, Colorado, Utah, Dakota, Montana, Idaho, Oregon, Washington, New Mexico and Arizona, from 1848 to the 1st of January, 1882, amounts to the following sums :

|                                   |                    |
|-----------------------------------|--------------------|
| Gold, . . . . .                   | \$1,713,174,508    |
| Silver, . . . . .                 | <u>583,421,678</u> |
| Making a grand total of . . . . . | \$2,296,596,186    |

Most of it produced in territory formerly belonging to Mexico.

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## CATALOGUE

OF SOME OF THE PRINCIPAL MINING DISTRICTS SITUATED IN THE DIFFERENT STATES OF THE REPUBLIC, AND DESCRIPTION OF SOME OF THEIR MINES.

### STATE OF AGUASCALIENTES.

This State possesses rich mines, which, as we will often have occasion to remark, are not operated, like many others in the Re-



public, for want of security of capital ; but, fortunately for beautiful and rich Mexico, such time is over, and this country will soon expose its latent wealth to the world.

In the mining Districts of Asientos and Tepesala, 15 leagues North East of the Capital, are found the abandoned mines of San Francisco, Romana and others, Descubridora, Cristo, San Antonio de los Pobres, celebrated in olden times for the richness of their silver ores. In the Descubridora mine a vein 11.7 metres wide was worked.

In the District of Calpulalpan are situated the mines of San Pedro del Bosque and La Purísima.

#### MINES OF "MAGISTRAL."

Those of La Magdalena, La Cruz, Santo Tomas, Santo Domingo, San Dimas, Corralillo, La Verde, San Vicente, La Chicaronna, El Aguila and La Peñuela.

In all 23 mines.

#### STATE OF CHIHUAHUA.

The State of Chihuahua is very justly considered to be one of the richest in minerals in the Republic. It is divided into twenty cantons—where 120 mining districts are known to exist ; in these mining districts 575 mines have been worked since the conquest of the country by the Spaniards. Some mines, yielding 16 ounces of silver to the carga of 300 pounds, have been abandoned on account of being too isolated and also for the want of laborers.

The mines that have been worked have only been worked at a depth of 300 metres, on account of the difficulties encountered in the extraction of the ores. The inundations of the mines and the necessity of fortifying the shafts with timber in a country where wood is scarce or only to be had at a great distance, has also been the cause of abandonment of well-paying mines, but with the completion of the projected railroads, and with American capital and enterprise, a wonderful change will take place in the next five years. Lands have already more than quadrupled in value since the completion of the Southern Pacific to El Paso and Texas.

CATALOGUE OF MINING DISTRICTS SITUATED IN THE  
STATE OF CHIHUAHUA.

| Number of mines<br>in each District. | Names<br>of Mining Districts. | In what Canton<br>situated. | Class of ores.   | Working or idle. |
|--------------------------------------|-------------------------------|-----------------------------|------------------|------------------|
| 15                                   | Cusihiuriachic.               | Abasolo.                    | Silver.          | Working.         |
| 6                                    | Cieneguilla.                  | "                           | Lead and silver. | "                |
| 3                                    | La Plomosa.                   | "                           | Lead.            | Idle.            |
| 2                                    | Milpillas.                    | "                           | "                | "                |
| 5                                    | Buenos Aires.                 | "                           | Silver.          | "                |
| 2                                    | Jajirachic.                   | "                           | "                | "                |
| 5                                    | Gavilana.                     | "                           | Lead and silver. | "                |
| 4                                    | Arroyo Hondo.                 | "                           | "                | "                |
| 3                                    | Santo Domingo.                | Aldama.                     | Gold.            | Working.         |
| 4                                    | Resureccion.                  | "                           | "                | "                |
| 6                                    | Guadaloupe.                   | "                           | "                | "                |
| 1                                    | Coyame.                       | "                           | Salt.            | "                |
| 1                                    | Cuchillo Parado.              | "                           | Silver.          | Idle.            |
| 1                                    | Los Lémus.                    | "                           | Lead and silver. | Working.         |
| 2                                    | San Ignacio.                  | "                           | Lead.            | "                |
| 2                                    | Almoloya.                     | Allende.                    | Silver.          | Idle.            |
| 1                                    | Valsequillo.                  | "                           | "                | "                |
| 26                                   | Urique.                       | Arteaga.                    | Lead and silver. | Working.         |
| 3                                    | Guapalaina.                   | "                           | "                | "                |
| 1                                    | Guadaloupe.                   | "                           | "                | "                |

| Number of mines<br>in each District. | Names<br>of Mining Districts. | In what Canton<br>situated. | Class of ores.   | Working or idle. |
|--------------------------------------|-------------------------------|-----------------------------|------------------|------------------|
| 6                                    | Cerocahue.                    | Arteaga.                    | Silver,          | Working.         |
| 5                                    | Piedras Verdes.               | "                           | Copper.          | "                |
| 3                                    | San Nicolas.                  | "                           | Saltpetre.       | "                |
| 4                                    | Tubares.                      | Andrés del Rio.             | Silver.          | Idle.            |
| 5                                    | Concepcion.                   | "                           | "                | "                |
| 52                                   | Batopilas.                    | "                           | "                | Working.         |
| 7                                    | Zapuri.                       | "                           | "                | "                |
| 4                                    | Guacaybito.                   | "                           | Copper.          | Idle.            |
| 2                                    | Guacaybo.                     | "                           | Silver.          | "                |
| 3                                    | Guaguieybo.                   | "                           | "                | "                |
| 2                                    | Satevo.                       | "                           | "                | "                |
| 2                                    | Loreto.                       | "                           | "                | "                |
| 4                                    | Guapenari.                    | Balleza.                    | "                | "                |
| 3                                    | Carmen.                       | Bravos                      | "                | "                |
| 4                                    | Jaco.                         | Camargo.                    | Gold and salt.   | Abandoned.       |
| 2                                    | Espiritu Santo.               | "                           | Salt.            | Working.         |
| 5                                    | Corralitos.                   | Galeana.                    | Lead and silver. | "                |
| 1                                    | Barranca.                     | "                           | "                | "                |
| 3                                    | Escondido.                    | "                           | "                | Abandoned.       |
| 3                                    | Mogollon.                     | "                           | Silver.          | "                |
| 1                                    | Dolores.                      | Guerrero.                   | Silver and gold. | Idle.            |
| 1                                    | Tutuaca.                      | "                           | Silver.          | Abandoned.       |

| Number of mines<br>in each District. | Names<br>of Mining Districts. | In what Canton<br>situated. | Class of ores.     | Working or idle. |
|--------------------------------------|-------------------------------|-----------------------------|--------------------|------------------|
| 1                                    | Guaynopa.                     | Guerrero.                   | Silver.            | Abandoned.       |
| 2                                    | Guaynopita.                   | "                           | "                  | "                |
| 2                                    | Calera.                       | "                           | "                  | Idle.            |
| 4                                    | Pichaché.                     | "                           | "                  | "                |
| 1                                    | Muguriachic.                  | Degollado.                  | "                  | "                |
| 4                                    | Namiquipéc.                   | "                           | "                  | "                |
| 2                                    | Tayapa.                       | "                           | "                  | "                |
| 15                                   | Parral.                       | Hidalgo.                    | "                  | Working.         |
| 9                                    | Minas Nuevas.                 | "                           | "                  | "                |
| 6                                    | Santa Bárbara.                | "                           | "                  | "                |
| 3                                    | San Francisco.                | "                           | Silver and gold.   | "                |
| 1                                    | San Julian.                   | "                           | Silver.            | "                |
| 2                                    | Buнавista.                    | "                           | "                  | "                |
| 1                                    | Huertas.                      | "                           | "                  | "                |
| 1                                    | Chihuahua.                    | Iturbide.                   | "                  | Idle.            |
| 3                                    | Chihuahuilla.                 | "                           | "                  | Abandoned.       |
| 2                                    | Nombre de Dios.               | "                           | Gold.              | Idle.            |
| 30                                   | Santa Eulalia.                | "                           | Gold and silver.   | Working.         |
| 4                                    | Magistral.                    | "                           | Copper.            | Exploited.       |
| 3                                    | Guaajuquilla.                 | Jimenez.                    | Silver and copper. | "                |
| 11                                   | Guazapares.                   | Matamoros.                  | Silver.            | Working.         |
| 5                                    | Batosigachic.                 | "                           | "                  | "                |

| Number of mines<br>in each District. | Names<br>of Mining Districts. | In what Canton<br>situated. | Class of ores. | Working or idle. |
|--------------------------------------|-------------------------------|-----------------------------|----------------|------------------|
| 6                                    | Refugio.                      | Matamoros.                  | Silver.        | Working.         |
| 2                                    | Los Laureles.                 | "                           | "              | "                |
| 1                                    | Uruapa.                       | "                           | "              | "                |
| 3                                    | Guadaloupe.                   | "                           | "              | "                |
| 4                                    | Palmarejo.                    | "                           | "              | "                |
| 1                                    | La Higuera.                   | "                           | "              | "                |
| 3                                    | Topago.                       | "                           | Gold.          | "                |
| 1                                    | Justina.                      | "                           | Silver.        | "                |
| 2                                    | Agua Caliente.                | "                           | Gold.          | "                |
| 4                                    | San Augustin.                 | "                           | Silver.        | Idle.            |
| 3                                    | Ocibo.                        | "                           | Gold.          | "                |
| 6                                    | Setentrion.                   | "                           | Silver.        | Working.         |
| 4                                    | Balmerachic.                  | "                           | Copper.        | "                |
| 3                                    | Reforma.                      | "                           | "              | "                |
| 9                                    | Aremaoibo.                    | "                           | Silver.        | "                |
| 2                                    | Guarogomichic.                | "                           | "              | Idle.            |
| 2                                    | Chorreras.                    | Meoqui.                     | Gold.          | Working.         |
| 4                                    | Sierra Rica.                  | "                           | Coal.          | Idle.            |
| 5                                    | Guadaloupe y Calvo.           | Mina.                       | Gold.          | Working.         |
| 30                                   | Morelos.                      | "                           | Silver.        | "                |
| 7                                    | San Xavier.                   | "                           | "              | "                |
| 5                                    | Refugio.                      | "                           | "              | Idle.            |

| Number of mines<br>in each<br>District. | Names<br>of Mining Districts. | In what Canton<br>situated. | Class of ores. | Working or idle. |
|---|-------------------------------|-----------------------------|----------------|------------------|
| 3                                       | Talconas.                     | Mina.                       | Silver.        | Idle.            |
| 2                                       | Galcana.                      | "                           | "              | "                |
| 4                                       | El Cuero.                     | "                           | Gold.          | "                |
| 3                                       | San Rafael.                   | "                           | Silver.        | "                |
| 2                                       | El Triste.                    | "                           | "              | "                |
| 2                                       | Sapopan.                      | "                           | "              | "                |
| 3                                       | Coscomates.                   | "                           | "              | "                |
| 2                                       | El Coscomate.                 | "                           | "              | "                |
| 1                                       | Piedra Larga.                 | "                           | "              | "                |
| 1                                       | Tentaduras.                   | "                           | "              | "                |
| 1                                       | San Simon.                    | "                           | "              | Working.         |
| 1                                       | La Guitara.                   | "                           | "              | Idle.            |
| 2                                       | San F. de Cruces.             | "                           | "              | "                |
| 4                                       | San Juan N.                   | "                           | "              | "                |
| 1                                       | Huarachic.                    | "                           | "              | "                |
| 1                                       | El Carnero.                   | "                           | "              | "                |
| 2                                       | La Higuera.                   | "                           | "              | "                |
| 17                                      | Uruachic.                     | Rayon.                      | "              | Working.         |
| 32                                      | Jesus Maria.                  | "                           | "              | "                |
| 4                                       | Bravo.                        | "                           | Gold.          | "                |
| 10                                      | Yoquibo.                      | "                           | Silver.        | "                |
| 14                                      | Maguarechic.                  | "                           | "              | "                |

| Number of mines<br>in each District. | Names<br>of Mining Districts. | In what Canton<br>situated. | Class of ores. | Working or idle. |
|--------------------------------------|-------------------------------|-----------------------------|----------------|------------------|
| 1                                    | Potrero.                      | Rayon.                      | Silver.        | Idle.            |
| 3                                    | Arechuybo.                    | "                           | Mercury.       | "                |
| 1                                    | Batuchic.                     | "                           | Silver.        | "                |
| 1                                    | Cajurichic.                   | "                           | "              | "                |
| 1                                    | El Carmen.                    | "                           | Coal.          | "                |
| 1                                    | S. J. del Pinal.              | "                           | Silver.        | "                |
| 1                                    | San Luis.                     | "                           | "              | "                |
| 4                                    | Rosario.                      | "                           | Gold.          | Working.         |
| 3                                    | Moris.                        | "                           | "              | "                |
| 2                                    | Naroxaigame.                  | "                           | "              | "                |
| 1                                    | Nayca.                        | Rosales.                    | Lead.          | Idle.            |
| 1                                    | La Plomosa.                   | Victoria.                   | "              | "                |

Of these mineral districts 14 are producers of gold, 4 of copper, 4 of lead, 1 of mercury, 3 of salt, 2 of coal and 541 of silver. They also contain zinc, antimony, arsenic, cobalt, nickel, bismuth, tin and other minerals. It is supposed that the Bolsom of Mapini, which has never been thoroughly explored, contains immense and untold wealth.

The mountains of this State are also rich in marble, alabaster, jasper and coal.

*Discoveries.*—Santa Bárbara was discovered in 1547; Parral in 1600; Cieneguilla in 1608; Guazapares in 1628; Urique in 1630; Bátopilas in 1632; Cusihuiiachic in 1666; Chihuahuilla in 1671; Santa Eulalia in 1704; Topago in 1750; Umachic in 1760; San Joaquin, in 1774; Umapa in 1778; El Refugio in 1810; Jesus Maria in 1821; Palmares in 1824; Morelos in 1826; Setentrion in 1829; Batouzachic in 1839; Santo Domingo in 1867; Guadalupe in 1869; Zapuri in 1873.

If classified according to their richness, they have to be placed in the following order, viz.: 1st, Batopilas; 2d, Parral; 3d, Santa Eulalia; 4th, Jesus Maria; 5th, Cusihuiiachic; 6th, Morelos; 7th, Guadalupe y Calvo; 8th, Uriqui; 9th, Umachic; 10th, Corralitos; 11th, Zapuri; 12th, Topago and 13th, Umapa.

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## STATE OF COAHUILA.

At one time, more than sixty mines were worked to advantage in this State. There are mines of iron, copper, silver, sulphur, nitre and amianthus, which would pay well if worked with American improved machinery.

The river Nazas runs through the important mining district of Real de San Juan de Guadalupe. In the mining district of Santa Rosa a number of mines are now worked with profit.

Castaña; this mine was worked with profit until it filled with water; it is now the property of an American company, which will in all probability be successful.

Viezca; this mine near Parras was at one time worked with profit.



Escondida.

Within the last two years, some veins have been discovered near the City of Monclova, but are hardly rich enough to pay.

It was claimed by this State that the territory upon which the Sierra Mojada mines are situated properly belonged to it.

There is now no doubt but that large quantities of ore are found in the Mojada mountains, but the lack of water and fuel, and more particularly the desert of one hundred miles without water which has to be crossed before reaching the mining district, is at present a great impediment to its development.

In the archives of the Presidio of Santa Rosa, now Villa (town) de Musquiz, can still be found a report made to the Government at Mexico, by Don Felipe Torralva, president of the mining board of the department in which Santa Rosa is situated; it is dated november 24th, 1844. It shows that, at that time, 51 mines were known in said mineral mining district, all producing easily smelted ores, and their yield in silver to have been as follows, viz. : 18 mines produced ores yielding from 4 to 6 ounces of silver per carga (300 Mexican pounds), or \$28 to \$42 per ton; 17 mines yielding 1 marc to the carga, or \$56 to the ton; 5 mines yielding 3 marcs to the carga, or \$168 to the ton; 1 mine yielding 4 marcs to the carga, or \$224 to the ton; 2 mines yielding 6 marcs to the carga, or \$336 to the ton; 1 mine yielding 8 marcs to the carga, or \$448 to the ton; 1 mine yielding 10 marcs to the carga, or \$560 to the ton; 3 mines yielding 30 marcs to the carga, or \$1,680 to the ton, and 1 mine yielding 100 ounces to the carga, or \$5,600 to the ton. In the latter mine, which is known as the San Juan mine, according to tradition, large pieces of pure silver were found. In the mines of Santa Gertrudis and El Pabellon, which produced ores yielding as much as thirty marcs of silver per carga or \$1,680 to the ton, pieces of virgin silver weighing one ounce and more were found—leaves of silver as thin as paper were also found mixed with slate.

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## STATE OF DURANGO.

In this State many mines have had to be abandoned on account of the Indian incursions. American companies have lately been formed to develop some of them.

The principal mining districts of this State are the following, viz. : San Dimas, Guarisamey, Tayoltita, Ventanas, Negros, Gavi-lanes, Tominil, Basiz, Huahuapan, Guasaya, Amaculy, Tamazula, Rodeo, Chacala, Bajada, Sianori, Topia, Metatitos, Birimoa, Cane-las, Copalquin, Todos Santos, Ocotál, Tamazula, Saucito, Santa Elena, Boca Ortiz, Comitála, Cerro de las Minas, Guanacevi, Cone-to, Papasquiario, Chiquihuistita, Indé, El Oro. In the interior of the State : Cuencame, Parilla, Mapimi, San Juan de Guadalupe, Noria de San Juan, Noria de Carleña, Agua Nueva, and lastly the inexhaustible iron mountain of Mercados. In all, 43 mining dis-tricts.

The inexhaustible iron mountain known as the Cerro del Mer-cado, was discovered by the Spanish captain Ginés Vasquez del Mercado in 1562, it is situated two kilometres north of the City of Durango. Speaking of this mine, Mr. Bouring says it could supply for 330 years, all the English iron foundries, which consume yearly 15,000,000 *quintals* of iron (a quintal is 100 lbs.) This would be worth 9,900 millions of dollars, a sum representing seven times the gold and silver coined in the mint at the City of Mexico from 1690 to 1803.

Five specimens of the ore from the Mercado mountain were essayed by M. H. Borje, of Philadelphia, on the 25th of May, 1880, and gave the following results.

*In one hundred parts of metal.*

|                              | 1st Essay. | 2d Essay. | 3d Essay. | 4th Essay. | 5th Essay. |
|------------------------------|------------|-----------|-----------|------------|------------|
| Oxide of iron, . . . . .     | 96.3       | 93.8      | 98.2      | 71.0       | 67.1       |
| Silica, . . . . .            | 2.6        | 3.4       | 0.6       | 28.1       | 25.5       |
| Aluminum, . . . . .          | 0.1        | 1.2       | 0.5       | 0.2        | 0.5        |
| Carbonate of lime, . . . . . | 0.3        | 0.0       | 0.0       | 0.0        | 0.5        |
| Water, . . . . .             | 0.7        | 1.6       | 0.7       | 0.7        | 6.4        |
|                              | <hr/>      | <hr/>     | <hr/>     | <hr/>      | <hr/>      |
| Total, . . . . .             | 100.0      | 100.0     | 100.0     | 100.0      | 100.0      |
|                              | <hr/>      | <hr/>     | <hr/>     | <hr/>      | <hr/>      |
| Pure iron, . . . . .         | 66.77      | 65.3      | 68.8      | 49.23      | 50.55      |

## STATE OF GUANAJUATO.

The mines of this State are celebrated as much for their antiquity as for their extraordinary richness, among the principal are those of

Guanajuato.

La Luz.

San Nicolas.

Santa Rosa.

Santa Ana.

La Valenciana.

Mellado.

Villalpando.

San José de los Muchachos.

The above mines contain gold, silver, copper, lead, iron, tin, cinnabar and other valuable minerals.

Capulin.

Comangilla.

Gigante.

Monte de San Nicolas.

Real del Marfil.

Real de Salinas.

Rincon de Centeno.

San Antonio de las Minas.

San Juan de la Chica.

San Rafael de los Lobos.

In the vicinity of the city of Dolores Hidalgo, is found a fine quality of rock for mill-stones.

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 STATE OF GUERRERO.

This State is very justly considered as one of the richest of the Republic in minerals; it is said that gold placers have been discovered far more rich than any found in Upper California; civil war in this State and the hostility of some of the population to

foreigners has in a great measure prevented the development of the immense wealth of this State. In 1880, 460 mines were known to exist in this State (too numerous to be described in this work). Among the principal mining districts are those of Cuitlanapa, Tasco, Hidalgo, Aldama, Brazos, Morelos, Chilapa. In Huilzucu are found rich quicksilver, silver and coal mines.

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### THE STATE OF HIDALGO.

This State embraces two well-defined hydrographical regions: that of the river Amajaque, and that of Tula and Moctezuma rivers, separated by extensive chains of mountains rich in minerals. This State was formed out of the States of Mexico, San Luis Potosi and Vera Cruz, comprising that rich portion of Mexico known as "La Huasteca."

The most important mining districts of this State are the following:

Pachuca.

Real del Monte.

Mineral del Chico—23 mines were worked in this district in 1879, and 17 remained abandoned.

Potosi.

Capula.

Santa Rosa—this district was formerly worked by the celebrated house of Jecker, whose pretended debt was the cause of the French intervention in Mexico. The following mines are situated in this district: Santa Rosa, San José, Franco-Mexicana, El Escribano, El Niño, Providencia, Trinidad, Buenaventura, Soledad, San Briguel, Santisima, and Santa Isabel.

Mineral de Tepeni.

Zimapan.

Tolenian, 24 mines.

Lomo del Toro, 19 mines.

Monte San Felipe, 17 mines.  
 Mineral de Jacala.  
 Mineral de la Encarnacion.  
 San Bernado, iron mines.  
 Mineral del Cardenal, 37 mines.

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### THE STATE OF JALISCO.

This State possesses mines of gold, silver, copper and iron. Among the richest districts are the following: The mining district of Tepic contains 8 *mineral*, or mining districts, and 56 mines; the Mountain of Mascota is said to be rich in minerals. The mining district of San Sebastian, 60 miles south of the city of Tepic, in which most of the mines are not worked actually; the mining district of Talpa, in which 36 mines are worked, and a great many more are either idle or abandoned; in the mining district of Tequila, 54 mines are worked at present; in the mining districts of Bolaños and Comanja. (Bolaños is one of the mining districts of Mexico that has produced immense wealth.) The following statement, showing the amount of coin, the produce of some mines in this great State of Jalisco, gives an idea of the state of mining industry in that State in 1879:

|   |                           |
|---|---------------------------|
| From the mining district of Bramador, . . . | \$399,394                 |
| “ “ “ “ Cuale, . . .                        | 281,466                   |
| “ “ “ “ Hostotipaquillo, . . .              | 235,643                   |
| “ “ “ “ Ixtlan, . . .                       | 178,643                   |
| “ “ “ “ Etzatlan, . . .                     | 167,578                   |
| “ “ “ “ Yesca, . . .                        | 70,779                    |
| “ “ “ “ San Sebastian, . . .                | 33,875                    |
| “ “ “ “ Santo Tomas, . . .                  | 27,366                    |
| “ “ “ “ La Bautista, . . .                  | 7,753                     |
| “ “ “ “ Bolaños, . . .                      | 883                       |
| Total, . . .                                | <u><u>\$1,403,380</u></u> |

TABLE SHOWING THE MINERAL DISTRICTS IN THE  
STATE OF JALISCO.

| Names of districts.              | Number<br>of mines. | Quality of metal.        |
|----------------------------------|---------------------|--------------------------|
| Bolaños, . . . . .               | —                   | Gold and silver.         |
| Comanja, . . . . .               | —                   | “ “                      |
| Amalco, . . . . .                | 9                   | Silver.                  |
| Santo Tomas, . . . . .           | —                   | “                        |
| Palmarejo, . . . . .             | —                   | “                        |
| Copala, . . . . .                | —                   | “                        |
| Amatlan de Jora, . . . . .       | 3                   | “                        |
| Ameca, . . . . .                 | —                   | Gold, silver and copper. |
| Ahualulco, . . . . .             | 3                   | Silver.                  |
| Anonas, . . . . .                | —                   | “                        |
| Hostotipaquillo, . . . . .       | 27                  | “                        |
| Etzatlan, . . . . .              | 6                   | Silver and lead.         |
| Garabatos, . . . . .             | 1                   | “                        |
| Yesca, . . . . .                 | 3                   | “                        |
| Montaje, . . . . .               | 7                   | “                        |
| Ixtlan, . . . . .                | 2                   | “                        |
| Mojo Cuatultlan, . . . . .       | 2                   | “                        |
| Acuitapilco, . . . . .           | 16                  | “                        |
| San José en Tatepusco, . . . . . | —                   | “                        |
| Amasaquas, . . . . .             | —                   | “                        |
| Santa Maria del Oro, . . . . .   | 4                   | “                        |
| Tenamiche, . . . . .             | 5                   | “                        |
| Estanzuela, . . . . .            | 4                   | “                        |
| Heutzisila, . . . . .            | 11                  | “                        |
| Chimaltitlan, . . . . .          | 7                   | “                        |
| Huanchinango, . . . . .          | —                   | Silver, gold and copper  |
| Altena, . . . . .                | —                   | Silver.                  |
| San Sebastian, . . . . .         | 22                  | Silver and gold.         |
| Avillas, . . . . .               | —                   | Silver.                  |
| Los Reyes, . . . . .             | —                   | “                        |
| La Navidad, . . . . .            | —                   | “                        |
| Ocotital, . . . . .              | 50                  | Negros.                  |
| Jalapa, . . . . .                | —                   | Silver.                  |
| Veladero, . . . . .              | 52                  | Copper.                  |

| Names of districts.    | Number of mines. | Quality of metal   |
|------------------------|------------------|--------------------|
| Cuale, . . . . .       | 30               | Gold, silver, etc. |
| Desmoronado, . . . . . | 3                | Black metals.      |
| Bramador, . . . . .    | 8                | Silver and gold.   |
| Aranguez, . . . . .    | 4                | Black metals.      |
| Ayulta, . . . . .      | —                | Silver.            |
| Guadaloupe, . . . . .  | 3                | Silver and gold.   |
| Agua Blanca, . . . . . | —                | Copper.            |
| Talpa, . . . . .       | —                | Gold and silver.   |
| La Bautista, . . . . . | —                | Silver.            |
| Tapalpa, . . . . .     | —                | Iron and silver.   |
| San Rafael, . . . . .  | 23               | Silver.            |
| El Jabon. . . . .      | —                | “                  |
| Providencia, . . . . . | —                | Iron.              |

In all, 47 mining districts, in which 303 mines are actually worked; there is in this State 46 smelting works for smelting ores.

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## THE STATE OF MEXICO.

This State possesses very rich mining districts, among which are the following, viz.: Mineral del Oro, situated in a group of mountains about 45 miles N. W. of the city of Toluca, capital of the State. It is a rich gold district, the principal veins are those named Chihuahua, San Acasio, La Descubridora, San Rafael, *vetilla* or smaller veins de los Mondragones, de la Caliza and de la Descubridora. There are at present seven mines not worked for want of capital and 18 more abandoned for various reasons.

Temascaltepec—In 1881, 39 mines were worked in this district. The best mine, known as La Magdalena, produces silver ore that yield 50 marcs to the carga of 300 pounds, or 2,100 ounces of pure silver to the ton of ore.

Tejupilco—3 silver mines are actually worked in this district and 4 are abandoned.

Nancitilla—There are 11 silver mines, at present abandoned.

Amatepec—3 mines are worked actually.

Ixtapa del Oro—4 mines are actually worked in this district and 13 are at present idle.

Jultepec—38 mines are actually worked in this district and 105 are either idle or abandoned.

Zacualpan—10 mines are actually worked in this district and 68 are either idle or abandoned.

In this State 65 mines are actually worked and 259 are either idle or abandoned.

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## THE STATE OF MICHOACAN.

This is also one of the richest mineral States of Mexico. Among the most celebrated mines of Mexico is that of Halpujahua, as well on account of its richness as on account of its historical record. Close to this mine is situated the peak known as "Campo del Gallo," where Padre Hidalgo established a gun foundry, and where the first Mexican cannons used by the revolutionists against their Spanish oppressors were cast. The following mineral districts are also worked in this State, viz. :

Anganguero.

Espiritu Santo.

Guayabo.

Omoltan.

Iguaran.

Curucupaceo.

Ozumatlan y barra.

Chapatuato.

San Antonio.

Cualcoman.

Tlalpujahua.

The metals of these mines consist of gold mixed with iron,



cinnabar, coal, antimony and emeril. The ores are worked both by the patio or cold amalgamation process and smelting.

In 1880, 32 mines were worked in the district of Tlapugahua 18 in that of Omatlan and 5 in that of Curucupasco. The names of the innumerable mines situated in the other mining districts are not known.

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## THE STATE OF MORELOS.

The principal wealth of this State consists in its agricultural productions, although the following mines are operated at present :

|                                  |                      |
|----------------------------------|----------------------|
| Mining district of Oaxtepec, . . | The mine of Tenango. |
| “ “ Huaulta, . .                 | “ Tlachichilpa.      |
| “ “ “ . .                        | “ San Esteban.       |
| “ “ “ . .                        | “ Concepcion.        |
| “ “ “ . .                        | “ San José.          |
| “ “ “ . .                        | “ Peregrina.         |

In the municipality of Cuernacaca is a peak called Barriga de Plata (Silver Belly), in old times some mines were worked in that mountain, but are now abandoned. In the municipality of Jutepec is a mountain whose formation consists of carbonate of lime, marble with metallic veins formed by various oxydes, and a fine quality of gypsum.

There is actually in this State 15 paralyzed mines, 7 silver mines, 1 of cinnabar, 1 of alabaster, 2 of jasper, 4 of marble.

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## THE STATE OF NUEVO LEON.

In this State mines are found in the valleys as well as on the mountain tops. Most of its mines are now abandoned, they

contain silver, gold, lead, iron, copper, sulphur, nitrate of potash, alabaster and white marble. Muriate of soda is also found in large deposits.

Great bonanzas were found during the last century in the mountains of Boca de Leones or Villadama, and the Iguana Hills, situated southeast of the latter place, as appears by the annexed reports of the Spanish governors and inspectors of that province.

The mines in the District of Serralvo, which produced great bonanzas last century are now worked again with success, and one of them is in bonanza.

The following mines have been worked successfully, and are now being placed in good working order, viz. :

Minas viegas.

La Catita.

La Ladera.

Moreno, Coyache, La Farandula and Chihuahua, four silver mines now in working order, the property of the Anglo-Texan-Mexican Mining and Smelting Company, organized by Mr. W. A. Gifford. Said company has its domicile at Houston, Texas, and its smelting works at the town of Villadama.

La Valenciana.

San Nicolas.

New mines in Potrero de la Parra.

El Rosario, now worked by a Texan company.

Vallecillo.

La Iguana.

Santa Rita.

Candela.

Pinitas.

Montanas.

Sabinas Hidalgo.

Real de Salinas.

La Plomosa, Sabarado and Sacramento

#### REPORTS FROM OFFICIAL DOCUMENTS.

Las Minas de San Antonio de la Iguana were discovered in the year 1757. They were very rich in native silver; and although

the bonanza lasted but a little while, it attracted many people from the interior.

A tour of inspection was made in 1775 by Lieut.-Colonel Don Melchor Vidal de Lorca, in the new kingdom of Leon, belonging to New Spain, while Governor of the same. The following is taken from his report :

“ In the Real de San Antonio de la Iguana, mining district of La Iguana, distant from this city (Montery) 37 leagues north-west, was discovered a bonanza in the year 1757, it was visited by me on the 27th of February of the present year. In this place there are fifteen Spanish families with thirty-two servants, mostly all males, who are all engaged in mining. None of the mines are worked regularly, but rocks taken from them here and there still maintain the hope in these people. Those mines were in Borrasca (eight leagues south-west of Lampasas) and situated between two small mountains divided by a creek having a small spring at its head, hardly giving a sufficiency of water for the population, which is obliged to dig wells in order to provide for the daily wants of that community.”

In his *Information and Catalogue of Mines* (written in 1806), Don Simon de Herrera, then Governor of Nuevo Leon and commander of the Corps of Observation sent to the Louisiana frontier (the same who, with Governor Salcedo, was butchered in cold blood on the Rosillo, in 1813, by order of Lara) speaking of these mines, says: “ In 1737, the celebrated mines of La Iguana (lizzard), well-known in mineralogy, produced many millions in a few days on account of the richness of its ore. Miners called it a lizzard of silver, which disappeared in a few days. Most of the silver was found in loose stones in a ravine in the direction of the mine that produced the lizzard.” The writer had one in his possession which weighed twenty-five pounds, and, being smelted, lost only eight ounces in weight. Being lead and silver it was easily smelted. To-day there are only a few buscones. Searchers now occasionally find small veins, which, although very rich, do not pay on account of the rebelliousness of the ore, in which much powder and steel are wasted. Mining engineers who have visited the district, say that it would become of great importance if its ores were steadily worked with sufficient capital, and prospecting made for the principal vein.

In 1757, near the frontier of Nuevo Leon, at La Iguana, was

discovered immensely rich silver mines, which, if the abundance of silver they furnished at first had continued, would no doubt have been by far the richest mines of New Spain. Its veins (*reta*) furnished three qualities of metal: The first was very curious (*Greta ó Leria*) being a quality of sand which hardened when exposed to the air, and which would, when broken, uncover threads of pure silver, so entangled together that art could not have imitated them. Though beautiful, this metal was inferior. The second vein was of silver lead, which, when smelted, produced 50 per cent. of silver. The metal found in the third vein was of a yellowish color, which, if cleansed of a few pebbles and sand, was pure silver.

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#### THE STATE OF OAXACA.

This State contains the following mining districts: Ixtlan, Villa Alta, Texocomulco and Peras.

The districts of Ixtlan and Villa Alta are producing nearly all the silver, whether coined or exported from the State. One hundred and forty mines are now actually in operation and forty are abandoned.

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#### THE STATE OF PUEBLA.

But little is known of the mining wealth of this State, though it is generally believed that important discoveries will hereafter be made. At present, a superior quality of stone-coal has been found in the department of San Juan de Los Llanos, and silver mines at Xihuitlipa, San Andres Chalchicomula, Techachalco and Teteta del Oro.

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## THE STATE OF QUERETARO.

The mining history of this State is only known with some degree of certainty since the year 1770, when a mining deputation was established at Cadereyta, that had within its jurisdiction the mining districts of El Doctor, San Pedro Escanela, Amoles, Rio Blanco and Majada Grande.

The variety of minerals found in this State are natural silver, sulphur of silver, galena, grey copper, copper, malachite, antimony, red iron, grey iron, cinnabar, native mercury, lignite, anthracite, opal, very fine and ordinary calcedoine, rock cristal, copperas, and many others.

In 1881, the following mines were either worked or abandoned as shown in the statement :

Mineral del Doctor ; mining district of Las Aguas.—The mines of Santa Ines, producing silver, and that of Sombrerete, producing green silver or chlorure, are both worked with profit.

Mining district of Vizarron.—The mines of La Sojonia and Nuestra Señora de las Nieves, are refractory earth and are worked.

Mining district of Tierra Colorada.—Five quicksilver mines are operated, viz. : San Joaquin, Señor de la Esperanza, San José and San Lorenzo.

## DISTRICT OF TALPAN.

*Mining District of Ahuacatlan.*

|                        |                  |
|------------------------|------------------|
| Peñasco, . . . . .     | Lead.            |
| Santa Clara, . . . . . | Lead and silver. |
| San José, . . . . .    | “                |
| El Carmen, . . . . .   | “                |
| Mina Grande, . . . . . | Silver.          |
| Purísima, . . . . .    | Lead and silver. |
| Rosario, . . . . .     | “                |
| La Merita, . . . . .   | “                |

## DISTRICT OF TOLIMAN.

*Mining District of Rio Blanco.*

|  |                  |
|--|------------------|
| Nuestra Señora de Guadalupe, . . . . . | Gold and silver. |
| Santa Ana, . . . . .                   | “                |
| San Antonio del Oro, . . . . .         | “                |

There are actually 23 idle mines in the mining district of Las Aguas, 3 in the district of Vizarron, 4 in the district of El Doctor, 11 in the district of San Cristobal, 16 in the district of Attuacatlan, 3 in the district of Toliman, 2 in the district of Tolomanejo, and 7 in the district of Rio Blanco, mostly for the want of capital and enterprise, one only on account of its poor ores.

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### THE STATE OF SAN LUIS POTOSI.

The rich mines of this State are not developed for the want of necessary capital to work them, they ranked at one time among the richest of the country.

The principal mining districts are the following, viz. :

Real de Catorce.

Guadalcazar.

Charcas.

Ramos.

Ojo Caliente.

San Pedro.

Santa Maria del Peñon Blanco.

The above mines contain silver, copper, lead, mercury, sulphur, native silver, gold ; and also others containing red and blue silver ores of rare beauty.

Santa Maria del Peñon Blanco has very rich salt deposits.

Blancas.

Los Pozos.

Matehuala.

### HISTORICAL SKETCH OF THE GUADALCAZAR MINING DISTRICT.

This mining town was first settled in the years 1612 and 1620. Don Diego Fernandez de Cordova, Marquis of Guadalcazar, being

then Vice-Roy of New Spain (Mexico). This mining district contains a great variety of metals, such as gold in placers, silver, copper, lead, mercury, iron and sulphur.

It was overflowed in 1622 by a water-spout; these mines are said to be very rich and only need capital to be developed profitably. They were known under the following names: Ascension de Alvarado, Veta Vizcaina, San Pedro, Santo Tomas, Tercias partes, Corcovada, San Clemente, Remedios, Estaquillo and San Amaranto: all of them situated on the eastern slope of the mountain of San Cristobal; on the west side of said mountain are also rich mines known as San Francisco del Ramillo, San José, El Cascajal, La Cocinera, Santa Catarina, La Angelica, La Compañia and the Sacramento. All of the above mentioned mines produced ores very rich in metal, but also were abandoned in those days on account of the rebelliousness of the ore, but no doubt that they could with improved American machinery be worked profitably. At the foot of the mountain is situated a mine known as San Juan Stanislao, it was discovered in the year 1648, and it produced a great bonanza in 1650. Its ores rendered \$80.00 per carga of 300 pounds when smelted. Adjoining this mine are those of Jesus, Promontorio San Juan de Encino, Marquesote, El Muerto, La Cruz, La Manavilla. On the south slope of said mountain the following mines are also found: that of San Rafael, which was discovered in 1627, and denominated as Santo Domingo, it produced immense wealth; also those of San Vicente, La Encarnacion, San José, La Concepcion, El Carmen, Guadaloupe, and San Miguel el Gato. In all of the above mentioned mines are found ores that do not average less than \$24.00 per carga of 300 pounds. They have the great disadvantage of becoming inundated when worked at a small depth. No doubt that they could be drained and worked with great profit.

Good quicksilver mines were also worked in this district until the year 1853, when this metal was abundantly produced by the new Almaden California mines.

#### HISTORICAL NOTICE OF THE MINING DISTRICT OF CHARCAS.

The town was founded in the year 1574 by Don Juan de Oñate Moctezuma, great-grandson of the émpereur of the same name. It

was burned by the wild Indians in 1583, and was removed to the present site. It is now situated about four leagues west of the old town. In the year 1574, the mines of San Cristobal, situated about a league south of the old town, were discovered. Their ores were easily reduced by smelting. These mines were abandoned soon after their discovery, on account of becoming inundated. In 1583, at the time that the town was removed to its present site, other valuable mines were discovered in the neighborhood. Large quantities of metal were taken from them—mostly argentiferous lead. In the year 1600, the mines of San Carlos, El Sabino, Preasitas, Verganza, Sierpe, Coronado, and San Pedro were discovered. Out of the above mentioned mines belonging then to the jurisdiction of Charcas only two were worked on a large scale—those of San Carlos and Sabino, the incursions of the Indians were a great drawback to their working.

#### MINING DISTRICT OF RAMOS.

It appears that the mines of Ramos were first worked about the year 1608, but were abandoned on account of a great Indian invasion of the country between the years 1636 and 1640, and were not reopened until the year 1796, when the rich mine of Cocinera was discovered, together with nine other mines situated on the same vein; they were also abandoned, though paying well, on account of being inundated. The principal mines of the district were those of La Cocinera, San Juan, San José, San Vicente, Animas, Aura, Valenciana, San Geronimo, Cinco Senores, and San Nicolas. They produce native silver, red and blue silver, pirites, galena, and rose-color silver (*Rosicler*). The stream that floods these mines is abundant, and they only can be drained properly with steam-engines of great power.

#### MINING DISTRICT OF OJO CALIENTE.

In this district is situated the mountain of San Miguel, containing valuable quicksilver mines.

Santa Maria del Peñon Blanco is a great salt mine, so rich



that the crown of Spain reserved it as a crown property. In 1868, it was the property of Don Joaquin Erraza.

The mines of La Nevada discovered in 1858. San Pedro, La Pastora, and La Ventura are situated on lands belonging to the estate of El Salado.

In the district of San Luis, the mountain of San Pedro and Bernalejo, 8 mines are actually worked and 66 are idle ; in the district of Catorce, 65 mines are worked and 26 are idle ; in the district of Charcas and Sabino, 8 mines are worked and 16 are idle ; in the district of Peñon Blanco and Ramos there are 23 mines lying idle ; in the district of Guadacalzar, 18 mines are worked and 99 are idle—making a total, in the State of San Luis Potosi, of 90 mines worked, and 231 lying at present idle or abandoned.

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## THE STATE OF SINALOA.

The mines of this State contain gold, silver, copper and lead. The richest are its gold mines, viz. :

Bacuvirito.

Chamelta, in the jurisdiction of Rosario.

Charcas, in the jurisdiction of Rosario.

Cosala.

Culiacan, capital of the State, situated 60 miles from the Gulf of California, on the River of Culiacan.

Frailles.

Guadaloupe de las Abas.

Noxotal.

Palo Blanco.

Pánuco.

Sivirijoa.

Tacupeto.

Todos Santos.

There is in this State 47 mineral districts containing 406 mines, 30 gold placers, 9 salt mines, and 52 smelting works. (The limitation of this work does not permit us to give all the names of the different mines.)

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## THE STATE OF SONORA.

The State of Sonora has always been considered one of the richest in minerals of the Republic of Mexico.

Immense masses of virgin iron are found in large veins in the Sierra Madre mountains and in the vicinity of the Colorado River. The mountain of Antunez, between the Sonora and Horcasitas rivers, north-east of the city of Aripe, and principally the Cananea, are renowned for the great quantity of copper they contain, which is of very good quality, and yields a large percentage of gold.

Lead ore containing silver abounds in Aguacaliente, Alamo, Papagueria, Aripe and Cieneguilla.

Sulphur of iron is found in abundance at San Xavier, San Antonio, La Huerta, Cieneguilla and Aguacaliente.

Silver is found in paying quantities in the districts of Topago, Sagaripa and Alamos. Among the most noted gold placers are the following: San Idelfonso, La Cieneguilla, San Francisco, Quitovac, San Antonio, Sonoita, El Zoni, La Basura, San Perfecto, Las Palomas, El Alamo, El Muerto, and El Vado Seco, that have in former years produced immense wealth. In Cieneguilla and vicinity pieces of gold have been found weighing from one to twenty-seven marcs.

According to the latest statistics the mineral productions of Sonora can be classified as follows:

In the district of Hermosillo—silver, gold, lead, copper, salt, alum, and marble.

In the district of Guayamas—gold, silver, copper, salt, lead, alum, iron, sulphur, and marble.

In the district of Ures—gold, silver, tin, iron, lime, gypsum, rock salt, precious stones, and topaz.

In the district of Aripe—gold, silver, copper, lead, iron, tin, nitrate of potassium, rock salt, and marble.

In the district of Alamos—gold, silver, copper, lead, iron, antimony, sulphur, salt, and marble.

In the district of Altar—gold, silver, copper, iron, salt, sulphur, carbonate of soda, and marble.

In the district of Saguaripa—gold, silver, copper, lead, iron, tin, alum, and antimony.

In the district of Magdalena—gold, silver, iron, copper, lime, gypsum, nitrate of potassium, and carbonate of soda.

In the district of Oposura—gold, silver, copper, lead, nitrate of potassium, carbonate of soda, lime, gypsum, and marble.

There are thirty-four mineral districts in the State, in which a great number of mines were abandoned for the want of security, as well as of labor and capital, but not on account of the low grade or lack of abundance of the ores.

In the mining district of Alamos, the mines of Alamos produced in gold and silver, \$146,236.61; the mines of Promontorios, \$61,128.92; the mines of Adriana, \$37,415.34; the mines of Minas Viejas, \$6,027.94, during the last six months from July to December of 1880.

STATEMENT SHOWING THE MINES ACTUALLY WORKED IN THE DISTRICT OF MAGDALENA.

| Number of mines<br>in each District. | Names of mines.        | Gold Mines.          |                     | In what Municipality<br>situated. |
|--------------------------------------|------------------------|----------------------|---------------------|-----------------------------------|
|                                      |                        | Locality.            | Hacienda or Rancho. |                                   |
| 1                                    | San Francisco.         | Schuaral.            | Jojaba.             | Magdalena.                        |
| 2                                    | Ventana.               | Ventana.             | Ventana.            | "                                 |
| 3                                    | Jesus Maria del Otate. | El Otate.            | El Otate.           | Santa Ana.                        |
| 4                                    | Miguelito.             | El Aguaje.           | Aguaje.             | "                                 |
| 5                                    | Tularcito.             | Tularcito.           | Tularcito.          | Terrenate.                        |
| 6                                    | Guacomoa.              | Guacomoa.            | Guacomoa.           | "                                 |
| 7                                    | Candelaria.            | Candelaria.          | Cocospera.          | Imuris.                           |
| 8                                    | Salazarena.            | Aguacaliente.        | Planchas Plata.     | "                                 |
| 9                                    | Buenavista.            | Cerro Santo Domingo. | Santo Domingo.      | Cucurpe.                          |
| 10                                   | Calera.                | Cerro de la Prieta.  | La Calera.          | "                                 |
| <i>Silver Mines.</i>                 |                        |                      |                     |                                   |
| 1                                    | Santa Maria.           | Cerro Verdosa.       | Cuevitas.           | Magdalena.                        |
| 2                                    | Soledad.               | Cerro de Enfrente.   | R. Monreales.       | Santa Ana.                        |
| 3                                    | Santa Barbara.         | Cerro Corral Viejo.  | Corral Viejo.       | "                                 |
| 4                                    | Pima.                  | Cerro de la Peña.    | La Pima.            | "                                 |
| 5                                    | La Purisima.           | Los Cantiles.        | Planchas Plata.     | "                                 |
| 6                                    | El Carmen.             | Cordon Planchas.     | "                   | Imuris.                           |
| 7                                    | La Dura.               | "                    | "                   | "                                 |

*Silver Mines (continued).*

| Number of mines<br>in each District. | Names of mines.  | Locality.           | Hacienda or Rancho. | In what Municipality<br>situated. |
|--------------------------------------|------------------|---------------------|---------------------|-----------------------------------|
| 8                                    | Santa Teresa.    | Cerro de Planchas.  | Planchas Plata.     | Imuris.                           |
| 9                                    | Serñena.         | Cordon Serna.       | "                   | "                                 |
| 10                                   | Sin Nombre.      | Cerro Sin Nombre.   | "                   | "                                 |
| 11                                   | La Mejia.        | Cerro de Mejia.     | "                   | "                                 |
| 12                                   | La Linea.        | Cerro de Pajarito.  | "                   | "                                 |
| 13                                   | Mina del Hilo.   | Cerro del Hilo.     | "                   | "                                 |
| 14                                   | Monumento.       | Sierra Atascosa.    | "                   | "                                 |
| 15                                   | Esmeralda.       | Cerro Grande.       | "                   | "                                 |
| 16                                   | La Verde.        | Cerro Verde.        | "                   | "                                 |
| 17                                   | Mina Pobre.      | El Picacho.         | "                   | "                                 |
| 18                                   | Santa Gertrudes. | El Cajon.           | Santa Teresa.       | Cucurpe.                          |
| 19                                   | Trinidad.        | "                   | "                   | "                                 |
| 20                                   | La Prieta.       | Cerro de la Prieta. | Agua Prieta.        | "                                 |
| 1                                    | Jojaba.          | Cerro de la Jojaba. | La Jojaba.          | Magdalena.                        |

*Silver and Gold Mine.*

## DISTRICT OF MOCTEZUMA.

Twenty-seven mines are worked in this district—two are idle and nine are held by parties who only work them enough to keep up their rights to the same. They are the following:

Mining district of Lampasas—La Grande, El Arroyo, San Antonio, San Juan, Animas, Los Tajos; all silver mines.

Mining district of San Bautista de Sonora—Santa Ana, El Rosano, and San Francisco, silver mines, and Cata de Agua, a copper mine.

Mining district of Nocosari—La Cobriza, San Pedro, El Rosario, El Barrigon, all silver mines.

Mining district of San Miguel—San Miguel and El Huacal, silver mines.

Mining district of Toriquipa—Toriquipa and Santa Genoveva, silver mines.

Mining district of Valenzuela—Valenzuela and San Ignacio.

Mining district of Tobacachi—Tobacachi, San Pedro, and La Prieta.

Mining district of San Miguel—Dagüiro, Chumbarri, and Guadaloupe.

Mining district of Promontorios—Promontorios.

#### DISTRICT OF ALTAR.

The Roseña mine, in the mining district of El Ploma; within the twenty border leagues on the frontier of Arizona. The lead runs from east to west, is 75 centimetres wide, and its inclination is  $40^{\circ}$ . It produces gold and bronze silver.

La Descubridera mine, is situated also within the twenty border leagues. The lead runs from north to south, its width varies from 28 centimetres to 1 metre 12 centimetres, and its inclination is  $20^{\circ}$ . It produces gold, silver and lead—\$16.00, gold; \$82.00, silver, and 72 per cent. of lead to the ton.

The mine of Cerro del Oro, in the mining district of San Antonio, situated as the above. The lead runs from east to west, its width varies from two to two and a-half metres, and its inclination is  $35^{\circ}$ . It produces \$26.00, gold; \$56.00, silver, and 70 per cent. of lead per ton.

The Mina Vieja de Oro, in the mining district of San Antonio. The lead runs from east to west. It produces gold about \$40.00 to the ton. The lead is 74 centimetres wide, with an inclination of  $50^{\circ}$ .

The mine of Rebosadero, also in the mining district of San Antonio. The lead runs from south-east to north-west, with a width varying from 56 centimetres to one metre and 40 centimetres, with an inclination of  $20^{\circ}$ . Its produce average \$15.00 to the ton.

The Cobriza mine, also in the same mining district. The course

of its lead is east and west ; its width one metre, with an inclination of  $35^{\circ}$ . It produces gold averaging \$25.00 to the ton of ore.

La Providencia mine, in the same mining district. The course of its lead is north and south ; its width averages a metre, with an inclination of  $35^{\circ}$ . It produces gold, silver, copper and lead ; yielding \$8.00, gold ; \$40.00, silver ; \$20.00, copper, and \$2.00 of lead per ton of ore. All these metals are smelted at the works established in said mining district.

Mine of Rosario, in the mining district of Sonoita. Its lead runs from south to north ; being 56 centimetres in width, which sometimes reaches 1 metre 25 centimetres. It produces silver averaging \$180.00 to the ton.

Mine of San Francisco, in the mining district of the same name. The course of its lead is from south to north, with a width varying from 28 to 84 centimetres ; its inclination is  $55^{\circ}$ . It produces gold averaging \$40.00 to the ton.

Mine of Rosales, in the mining district of San Antonio. Its lead runs from south to north, with a width varying from 28 centimetres to one metre ; its inclination is  $35^{\circ}$ . It produces gold averaging \$30.00 to the ton.

Mine of San Francisco, in the mining district of El Corazon. Course of lead, from south to north ; width, two and a-half metres ; inclination,  $65^{\circ}$ . It produces gold and silver ores averaging \$20.00, gold, and 56.00, silver, per ton.

The Mine Grande, in the mining district of Juarez. Its vein runs from south-east to north-west, with a width that varies from 84 centimetres to 3 metres, 36 centimetres, with an inclination  $35^{\circ}$ . It produces gold and silver averaging \$50.00, gold, and \$15.00, silver, per ton.

The Mina Juarez, in the mining district of the same name. The course of its lead is from south-east to north-west, with a width varying from 84 centimetres to 1 metre 68 centimetres ; with an inclination of  $65^{\circ}$ . It produces silver ore averaging \$30.00 to the ton.

The mine of San Felix is also situated in the mining district of Juarez, near the coast, 56 leagues from the frontier. The course of its lead is from north to south ; its width varying from 56 centimetres to 1 metre 68 centimetres ; its inclination is  $15^{\circ}$ . It produces silver ores yielding from \$35.00 to \$200.00 per ton.

Total number of mines worked at present in the district of Altar :

| Mining District.       | No. | Mining District.  | No.              |
|------------------------|-----|-------------------|------------------|
| Plomo, . . . . .       | 2   | Corzon, . . . . . | 1                |
| San Antonio, . . . . . | 6   | Juarez, . . . . . | <u>1</u>         |
| Sonoita, . . . . .     | 2   | In all, . . . . . | <u><u>12</u></u> |

#### IN THE DISTRICT OF ARISPE.

The mine of San Fernando is situated five kilometres west of the village of Sinoguipe. The course of its lead is from east to west ; its width, two metres, and its inclination, 75°. It produces silver ores averaging \$80.00 per ton. Its ores are worked by the Lixiviation process.

The mine of Santa Elena, situated six kilometres west of the village of Banamichi. The course of its lead is from east to west, with a width varying from 50 centimetres to two and a-half metres, and sometimes five metres. It produces gold and silver. Its ores average \$25.00 per ton—four parts gold and one of silver.

#### THE STATE OF TAMAULIPAS.

The mines of this State are not worked for want of capital, and on account of the indifference which the inhabitants show to the development of that branch of industry ; notwithstanding this, the few persons engaged in mining in this State during the five years elapsing between 1844 and 1848, took out of them 7,680 marcs of silver, valued at \$61,440.

There are six mining districts in this State which are known under the following names, viz. : San Nicolas, San José, Bustamente, El Zique, La Miquihuana and Villagran.

San Nicolas has twenty-five abandoned mines, known as San Nicolas, Santa Salomé, Remedios, San Gayetano, Santa Gidirina, Santa Gertrudes, Espiritu Santo, Animas, Soledad, San Augustin, La Mejora, Toyagua, Pilar, San José, San Roman, La Cruz, La Estaca, San Miguel, Dolores, La Luz, El Teniente, La Corroleña, La Mexicana, Las Hormigas and the Tres Candelarias ; four are



now worked, which are those of La Trinidad, Providencia, Pastores and Colorada.

The ore of these mines is extracted by men known in Mexico as "buscones" or searchers, who then sell it to the smelters.

The Miquihuana district has four abandoned mines known as Mina Verde, a copper mine; and San Cajetano, Refugio and Promontorio, silver mines.

The mine of El Zigué or La Muralla contains lead and silver; the depth of its shaft is 138 feet. Alabaster also abounds in these mines.

The mining district of Bustamente, originally known as Infantes, has twelve abandoned mines, known as Santa Ana, Cinco Señores, Guadalupe, San Rafael, Nuestra Señora del Refugio, San Simon and Judas, San Cayetano and Promontorio, all silver mines; Mina Verde, of copper, and La Ascencion, Dulce Nombre de Maria, Santo Niño de Atocha, lead mines. Judging from the duties that these mines paid to the Spanish crown, they must have been very rich.

The mining district of Villagran, known when first discovered as Real de Borbon, contains gold and silver mines, which have been abandoned many years ago. In the stretch of country situated between the towns of San Carlos, Morelos, Guerrero and Camargo, are found copper ore, and in the vicinity of the two latter places, coal mines; about Guerrero, red ochre and red lead.

In the vicinity of Ornillas, alabaster of fine quality is found. About Santa Ana of Tamaulipas, a fine quality of jasper marble abounds.

In the vicinity of Aldama, silver, copper and iron ores are found; also good slate quarries.

In the vicinity of Victoria, iron ore of good quality is found.

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## THE STATE OF ZACATECAS.

This State is considered as the first in the Republic of Mexico for its mineral productions. It would take a volume to attempt to describe its mineral wealth. Below we give the names of some of its most important mineral districts.

STATEMENT OF DISTRICTS ACTUALLY EXPLORED.

| Names of Mining Districts.             | Names of its mines.   | Class of metals.   |
|--|---|--|
| Quebradilla.                           | Quebradilla, Buena Vista.   | Sulphur, sulphurate of silver in many varieties.           |
| <i>Mining District of Veta Grande.</i> | El Piquete, La Acacia, Negociacion, Euterpe.  | Silver, argentiferous Galena, pyrites of iron, quartz, &c. |
| San Marcos.                            | Carniceria, San Marcos, La Union.   | Metals the same as Quebradilla.                            |
| Barones.                               | San José de Garcia and San Pablo.   | Ordinary.  |
| Cinco Señores.                         | Cinco Señores, San Carlos, Jesus Maria and Rosario.   | Green silver.  |
| El Loco.                               | Tunel of El Refugio and annex.  | Low grade ores.  |
| La Reforma.                            | La Reforma.   | 3½ marcs to the carga.                                     |
| El Bote.                               | The mines of Cerro del Bote, Clérigos and Caly Canto.   | Sulphur of silver.   |
| San Rafael.                            | San Rafael, San Bartolo, Bolsas, La Purísima, San Pascual, San Vicente, La Aurora and La Paz. | Ordinary.  |
| Purísima de Nápoles.                   | Purísima de Nápoles.  | Ordinary.  |
| <i>Veta Grandè.</i>                    | Purísima Concepcion and Sirena.   | Ordinary.  |
| Purísima Concepcion.                   | Zapopan, La Verde and Los Colorados.  | Bronze metal.  |
| Zapopan.                               | La Luz and Santa Rita.  | Not productive.  |
| Hércules.                              | La Soledad, San José and La Chica.  | Ordinary 3 marcs per carga.                                |
| Bilbao.                                | Bilbao, Esmeralda, Salto, Los Lirios and Talisman.  | Low grades.  |
| Nueva Gallega.                         | Guarda Raya, La Vista, Porvenir, San Antonio and Quiote.                                      | “  |

| Names of Mining Districts. | Names of its Mines.  | Class of metals.              |
|----------------------------|--|-------------------------------|
| La Asturiana.              | Asturiana, Nueva Granada, Taso, San Tiburcio and Sta. Teresa.  | Black bronzed ores.           |
| Euterpe.                   | 5 mines located upon a vein one metre wide.  | Sulphur of silver, irregular. |
| Mines of Veta Grande.      | Cata de Juanes, Gallega, San Francisco, San Borja, Uriata, Macias, Proano, Purisima, La Flor, Tiro General, Tiro Nuevo, Alvarada, Soledad, and Carolina. | Ordinary.                     |
| El Refugio.                | El Refugio, San Nicolas and la Ascencion.  | "                             |
| San Acacio.                | San Acacio and annex.  | Sulphurate of silver.         |
| <i>Panuco.</i>             |  |                               |
| Consuelo.                  | Consuelo and tunnel of San Pedro.  | Red ores.                     |
| Providencia de Panuco.     | Providencia, El Angel, La Victoria and Purisima.   | Sulphur of silver.            |
| Santa Rosa.                | Santa Rosa.  | Ordinary.                     |
| Moscosa.                   | Moscosa.   | Lead silver.                  |
| Santa Teresa.              | Santa Teresa.  | "                             |
| Bilbao.                    | Bilbao.  | "                             |
| Gloria.                    | Gloria.  | "                             |

## MINING DISTRICTS ACTUALLY PARALYZED.

| Names of Mining Districts. | Cause of Abandonment.  | Names of Mines.   | Class of Ores.          |
|----------------------------|--|---|-------------------------|
| Malanoche.                 | Grade of ores too low; in the plan of San Amador, rich ores were found, but had to be abandoned on account of the great flow of water. | San Clemente, San Antonio, Rondarena, San Nicolas, Loreto, La Luz, La Borrega, Coyotal. | Bronzed metal.          |
| San Martin.                | Cost that would require a new shaft.   | La Filarmonia.  |                         |
| La Filarmonia.             | Want of capital.   | San Vicente, Santa Ana, San Gregorio, and San Pablo.                                    |                         |
| San Rafael.                | Grade of ores too low.   |   |                         |
| <i>Veta Grande.</i>        |  |   |                         |
| Purissima Concepcion.      | Abundance of water.  | Purissima Concepcion.   | 15 ounces to the carga. |
| La Soledad.                | Want of capital.   | La Soledad.   | 3 marcs per carga.      |
| Guarda Raya.               | Unproductive.  | Guarda Raya and Lavista.  |                         |
| El Refugio.                | "  | Revolucion, San Pascual, San Antonio, San Pedro, and San Buena Ventura.                 | Ordinary.               |
| La Frontera.               |  | La Frontera.  | Not known.              |
| <i>Panuco.</i>             |  |   |                         |
| San Pablo.                 | Want of capital.   | San Pablo.  |                         |
| La Purisima.               | "  | La Purisima.  | Sulphur of silver.      |
| Las Vueltas.               | "  | Las Vueltas.  |                         |

MINING DISTRICTS ACTUALLY PARALYZED (*Continued*).

| Names of Mining Districts. | Cause of Abandonment. | Names of Mines.     |
|----------------------------|-----------------------|---------------------|
| Catillas,                  | Want of Capital.      | Catillas.           |
| Carolina,                  | " "                   | Carolina.           |
| Consuelo,                  | " "                   | Consuelo.           |
| San José de Garcia,        | " "                   | San José de Garcia. |
| Los Tajos,                 | " "                   | Los Tajos.          |
| Noche Buena,               | " "                   | Noche Buena.        |
| San Antonio,               | " "                   | San Antonio.        |
| El Descubrimiento,         | " "                   | El Descubrimiento.  |
| Santa Elena,               | " "                   | Santa Elena.        |
| Limoneilla,                | " "                   | Limoncilla.         |

## MINING DISTRICT OF FRESNILLO.

This mining district is next in importance to that of Veta Grande, in the State of Zacatecas. The Cerro of Proano, which is the principal mining point, is worked since the eighteenth century; it is located south of the city of Fresnillo, and is about 850 metres long and 650 wide, and only 100 metres above the surrounding country, which is 2,368 metres above the sea. This little hill contains within its bosom more than 100 metallic veins; some of them have been worked to a considerable depth. In the same plain, at a distance of about two leagues from Fresnillo, are situated the hills of Animas, San Demetreo, and Bueno Aïres, in which are found the mines of Plataros.

The principal mines of Proano are the following: Betena, Barranco, Obscura, Epasote, Salcedo, Colorado, Santo Domingo, Valdenegros, Barbosa, San Pedro, Valencia, Plateritos, San Nicolas, Espiritu Santo, Rosario, Amarilla, Tiro Nuevo, and Santa Ifigenia.

## MINING DISTRICT OF SOMBRERETE.

This rich mining district was discovered by Juan de Tolsa in 1555. It has had its ups and downs, having been in bonanzas several times.

Until 1792 the rich products of the mines of Veta Negra and Pabellon gave the mining district great renown, placing it among the first in Mexico.

Sombrerete is situated in a *cañada* near the boundary of the State, on the road to Durango, 36 leagues northwest of the City of Zacatecas, at an elevation of 2,369 metres above the level of the sea, and comprises the following mining districts: Sombrerete and La Noria, El Chacuaco, Chapultepec, Minollas, Chalchiquihuite, El Manto and Colorado.

In the conical hill del Pabellon, which rises above the plain north of Sombrerete, in a southeast to northwest direction, almost in a parallel line, are found the veins of El Pabellon and Veta Negra. Many mines, mostly abandoned, have been opened, and from them gold, silver, lead, copper and iron have been extracted, besides many other substances such as sulphur, antimony,

arsenic and copperas, whose combination have presented to the miner great difficulties for the extraction of silver. The principal cause of abandonment of these mines has been the difficulties encountered to work their ores. The principal mines situated on the vein of Pabellon which has an extension of three kilometres are the following: La Concordia, Aranzaza, Arrete, Santa Gertrude, La Cruz, El Carmen, El Oriste, San Juan Bautista, Soledad, San Nicolas del Arroyo, Tiro General de San Francisco, San Nicolas de la Cruz, La Esperanza, Quebradilla, Santo Catuna, Refugio, San Amaro, Santo Domingo, La Joya, Cata Rica, Cruz de Moros, San José de la Llanada.

The temperature at Sombrerete averages 18° to 20°. Six mines are actually worked (1881) and seventy-seven are abandoned.

These mines produce gold, silver, copper, iron, lead, tin and copperas.

#### MINING DISTRICT OF CHALCHIHUITES.

This mining district was also discovered by Juan de Tolsa, about the same time as that of Sombrerete. It is situated south, eight and a-half leagues from the latter mining district. It contains numerous mines of lead silver, which metal is easily smelted. Its mines are the following:

Working—Arellana, Santa Teresa, La Purisima, La Trinidad, Las Canoas, Chuzo, Sangre de Cristo.

Worked by searchers (*buscones*)—Santa Eduwigis, San Pedro, El Manzanillal, La Vidriosa, San Francisco el Duro, San Francisco el Blando, Candelaria, Manto, Guadalupe, Tajos de los Marciales, Colorado, Santo Domingo, Todos Santos, San Antonio, El Capulines, Guantes.

The ores of the above mines are worked in seven smelting works, and three *patio* or cold amalgamation works, all located within the mining district.

#### MINING DISTRICT OF NIEVES.

This old mining district and town, seat of the same, is situated 45 leagues northwest of Zacatecas, at the foot of a range of mountains running from south to north, whose principal peaks are

those of El Calvario, Las Cabras, Colorado. This range of mountains is situated on the same plain, south of which extend the mineral lands of this district and comprises the veins of Potrero, El Tapon, El Rosario and Santa Rita, all running from east to west.

The following mines are situated in this district, but it is not known whether they are at present (1882) in operation, viz.: Santa Rita, Guadalupe, San Francisco, El Cristo, El Patrocinio, Seriollaga, San José, San Nicolas, San Joaquin, San Antonio, Dolores, La Cruz, San Pedro, San Cayetano, Collachi, Guadalupe, Marquito, San Antonio, Tiburona, Dolores and San Joaquin

#### MINING DISTRICT OF SAN MIGUEL DEL MEZQUITAL.

This mining district is situated 59 leagues N. W. of the city of Zacatecas.

Its mines are those of San José, Santa Catarina, Tajo de Berun, La Bejareña, El Pabellon, Las Navajas, Animas, Guadalupe, Pozo de Santa Ana, La Blanca, Tiro del Calvario, El Guije, La Prieta, El Burro, El Corral, Tapetes.

There is no definite information as to which of the above mines are at present worked or abandoned.

#### MINING DISTRICT OF MAZAPIL.

In the northeast portion of the State of Zacatecas, which adjoins Coahuila, and at a distance of 70 leagues from the capital, rise several chains of mountains which are considered of great importance, on account of the large number of metallic veins that they contain, whose ores can easily be worked at but little expense. The principal chains are the following: *Mazapil* in the center of this group of mountains; those of Zuloaga, Pozo, Guadalupe, Potrero and others that unite on the south with those of Piquita and Sierra Hermosa. In the above mentioned group of mountains are found old mining districts which have produced immense wealth. Such are Mazapil, Albarradon and Bonanza, in the northeast; Cedros in the west, Concepcion del Oro in the east, and El Rosario in the southeast. Besides the *cordilleras* or chains of mountains above mentioned, others are found more distant from Mazapil;



west of that of *Novillos*, and actually known and worked as the mine of *Pico de Teyra*.

The section of country above referred to was inhabited by the Chichimec Indians until the latter part of the XVI century, at which time it was occupied by the conquerors. In 1612 Mazapil was made an *Alcaldia Mayor* and in 1786 was created a district of the province of Zacatecas with the boundaries which it has retained to this day. In the district of Concepcion del Oro are two very rich mines, those of San José and Santa Eduwigis, producing gold and silver ores easily worked.

It is generally known that these mines produce silver, copper, lead and gold: the principal of these are: Animas del Norte, Malcriado; La Cruz, San Pedro, El Abra, Aranzaza, San Antonio, El Placer, Albaradon, San Gregorio, Cuevas, Purísima, Catasillas, Alicante, La Cata Oportuna in Cedros, El Potrero. And in the district of Concepcion del Oro, San José and Santa Eduwigis.

#### MINING DISTRICT OF PINOS.

About 30 leagues east of the city of Zacatecas is found the mining district of Pinos. Its principal mines are: Cata Nava, San Rafael, Aposentillo, Cármen, Santa Gertrudis, Quebradilla, Mina Grande, Santo Niño, Cara de Perro, Animas, Don Julian, Dolores, Cinco Señores, Ave Maria, Almirante, Sapo Pinto, San Ignacio, Santa Brijida, Santa Anita, Sacramento, Purísima, Reyes, Zacatecas, San Matias, Aflijidos, San Miguel, Santiago, Restauradora, Valenciana, Cueva Santa, San Blas, Coyotes, San Antonio, Guapulito, Tinajas, Mala Noche, Cucurrasola, Popula, Gloria, Góngora, Campana, Tepozan, San Pedro, Mina Blanca, Concepcion del Oro, a very rich gold district, Guadalupe, Tunel of El Oro, Santa Margarita, San Luisito, San Felix, Patrocinio, Lobena, Doncellas, San Nicolas, Bernalejo, Trinidad, El Escarbadero, Estaño, Sacramento de Cascarona, San Francisco, Merced, Derrumbadero, de Ahualula, La Garriga, Maravilla, Refugio, Esperanza del Picacho, Guadalupe de Agostadero, La Providencia, La Luz, Ahualulco, Capulin, Peña del Colorado, Jocoqui, San Miguel de Agostadero, Maravillas de Agua Gorda, Los Narcisos, Purísima de Ahualulco, San José, Collazo, Angostura, San Pedro and San Pablo, San Juan, Santa Rosa de Ahualulco, Candelaria.

## MINING DISTRICT OF NOVIA DE ANGELES.

This mining district is situated 22 leagues east-south-east from the city of Zacatecas and 12 leagues west of the Town of Pinos. Its principal mines are: Santo Cristo, San Antonio, Cata Rica, San Juan, El Niño, San José, Mina Grande, Aurora, Purísima, Jesus Maria, Mantos, Belen, Atanasia, San Francisco, Guadalupe, San Antonio, La Cumbre, Dolores; all situated in the Cerro de los Angeles.

## MINING DISTRICT OF MEZQUITAL DEL ORO.

The only information we have of this old mining district is that it is situated 18 leagues south-west of the town of Tuchipila, founded in 1732, about the time a rich gold vein was discovered. Its owners obtained very profitable results up to the year 1741. The bonanza having given out, the inhabitants dedicated themselves to the pursuit of agriculture.

## THE STATE OF CHIAPAS.

No mines appear to be worked at present, although several silver mines were worked to advantage in olden times. Trementon, native load stone (magnet) is found; also sulphur in the vicinity of the town of San Bartolomé and in several springs situated in the southern portion of the State. In the neighborhood of the capital of the State, San Cristoval, lead and iron ores are found; also a sort of transparent fossil formation called in Spanish *talco*.

## IN THE STATE OF COLIMA.

The Mining District of Tuliapan.

## THE STATE OF VERA CRUZ.

Somelahuacan, a rich copper mine.

## THE STATE OF YUCATAN.

This State has never been well explored, but it is known that gypsum and a great variety of marbles are found in quantities.

## THE TERRITORY OF LOWER CALIFORNIA.

This vast territory is rich in minerals as are also some of the islands situated along its coasts.

In the municipality of La Paz are 3 gold, 7 silver, 1 diamond and 2 copper mines.

In the municipality of San Antonio are 16 gold mines, 3 gold placers, 42 silver mines, 3 of copper, 1 of lead, and 2 of lime.

In the municipality of Todos Santos are 1 silver, 1 copper and 1 lime mine.

In the municipality of Santiago are 3 gold, 8 silver, 2 copper, 2 gypsum, 1 stone coal, 1 lime, and 3 sulphur mines.

In the municipality of San José del Cabo are found 1 silver mine and two other mines whose mineral products are not given.

In the municipality of Mulegé there are 5 silver, 28 copper, 1 lead, 2 marble, 3 gypsum, 1 sulphate of lime, and seven more mines whose products are not specified.

In the municipality of Comondu are 2 gold mines, 3 silver, 14 copper, 1 of gypsum, 1 of lime and 17 whose products are not specified.

In the municipality of Santo Tomas are 2 sulphur, 1 salt-peter, 1 fine quarry, 1 gold and 3 other mines whose products are not specified.

The following are the mines actually worked in the mining district of Santa Agueda in the municipality of Mulegé: Esperanza, Santa Rosalia, Fortuna, Reforma, Lucifer, Soledad, Providencia, A, Humboldt, Los Angeles, Nochebuena, San Juan, Fé, Gloria, Igualdad, Santa Rita, Título Octavo, Caridad, Ley, Libertad, Purísima, San Francisco, Purgatorio, Republicana, Porvenir, Abundancia and Hallazgo.

In old times Lower California was celebrated for its pearl fisheries, but it would take a whole volume to describe the placers and pearl fisheries of the territory. One pearl was sent to King Philip the Second that weighed 250 *quilates* and was estimated to be worth \$150,000.

## STONE-COAL.

Coal of good quality is known to exist in the following localities which will some day, when reached by railroads, prove a great

source or wealth and will materially aid in developing the industries of the country, viz.:

The Cerro del Ocre, State of Puebla.

Rancho del Tiber, Zacatula.

Tantoyuquita, State of Tamaulipas.

Tezontla.

Hacienda de la Imagen.

Cerro de Chimatitlan, near Tepic, in the State of Jalisco

Laguna de Enmedio, Tetipac.

Patatlan, Galeana.

South of the City of Culiacan, in the State of Sinaloa.

Tancauhuitz, State of Tamaulipas, near the port of Tampico.

Chilpancingo, in the State of Guerrero.

Santa Marta, Tepehi de la Seda.

Tlalnepantla, near the City of Mexico, State of Mexico.

Huehuetlan.

Orizava, State of Vera Cruz.

Ixhuatlan, Isthmus of Tehuantepec.

Espinal, State of Vera Cruz.

Juchi, near Chalco Valley of Mexico.

Rancho de Copula, Teziutlan.

Zomelehuacan, Zacapoaxtla.

On the Panuco River, State of Tamaulipas.

In the Sierra Madre mountains, in the State of Nuevo Leon, and will probably be found in abundance in many other points of the mountains which are to-day unknown.

#### PETROLEUM.

Petroleum has been found in the following localities and neighborhoods, viz.:

Guadalupe Hidalgo, Federal District of Mexico.

Puerto Angel, State of Oaxaca.

Pochutla, State of Oaxaca.

Cantarranas, near Huejutla.

Cerro del Ocre, State of Puebla.

Hacienda de Santa Ana, Tenancingo.

Tantoyuca.

San Pedro de las Vaquerias, near Atotonileo el grande.

De Moloacan á Tabasco, State of Tabasco.

Cerro Coapinoloaya.

Minatitlan.

Rancho del Baldwin.

Hacienda de Almagres, Acayucan.

Sayula, Acayucan.

Tamapache, Tuxpan.

Huehuetlan.

La Estrella, north of the City of Puebla.

Casa de Llorá, west of the City of Puebla.

Tierras de San Antonio, north-west of the City of Puebla.

Niscomel el Grande, north-west of the City of Puebla.

Rancho de Posadas, north-west of the City of Puebla.

Sán Francisco, north-west of the City of Puebla.

San Fernando, Macuspana, State of Tabasco.

Mascalapa, State of Tabasco.

Near Lake Tigre, State of Tabasco.

Cerro del Espinal, near the river of the same name.

Chapopote, Aldama District.

Tomatitas, near Tuxpan.

Tranhuigo, near Tuxpan.

Rancho del Cura Osorio, near Tuxpan.

Rancho de Juan Felipe, near Tuxpan.

Rincon de las Minas, near Mapimi.

Ceroncitos, west of Aldama.

Casa de la Pila, to the left of road leading to Toluca.

In the neighborhood of Juchi District of Chalco, Valley of

Mexico.

Mesa de San Diego, Huachinango, State of Vera Cruz.

Potrero de Otapa.

Jalapilla, near Papantla.

Rancho de Copula, State of Puebla.

Cerro de Zacapoaxtla, State of Puebla.

Macuipana, State of Tabasco.

El Limon, State of Tabasco.

Ixhuatlan, near Tehuantepec.

Paquatatempa, State of Puebla.

El Cedral, 2 wells, State of Vera Cruz,

El Jaguar, 6 wells, State of Vera Cruz.

El Espinal, State of Vera Cruz.

According to assays of Mexican petroleum, made by Doctor Manfred, it is estimated that every three pounds of 16 ounces or every 48 ounces, produces 44 ounces of oil,  $2\frac{1}{2}$  ounces of water, and  $1\frac{1}{2}$  of coke.

The consumption of the Republic of Mexico amounts yearly to more than half a million of dollars, and is daily increasing.

#### AMERICAN SILVER MINING IN CHIHUAHUA, MEXICO.

For centuries Chihuahua has ranked among the most famous Mexican States for the production of silver ; but, for various reasons useless to enumerate here, it was not until lately that the energies of Americans have been directed to this rich region.

There are now in the State of Chihuahua, at work and organized for work, no less than ten American companies owning and controlling the richest and best mining property in the State. Nine of them have been organized within the last fifteen months. A brief mention of these is all that will be attempted at present.

#### THE SANTA EULALIA MINES.

The Santa Eulalia Mining Company owns the mines of Santa Eulalia, sixteen miles from the City of Chihuahua.

Under Spanish rule these mines paid to the Catholic church a tax on \$111,000,000.

They are, without doubt, the most extensive deposit mines in the world. Owing to a want of capital they are still being worked by the ancient methods used by the Mexicans. The company proposes soon to tunnel the mountain, build a railroad twelve miles long to the fork of the Sacramento and Chihuahua rivers, and there establish large works for the reduction of ores by modern methods.

#### THE CUSIHUIRIACHIC MINES.

These mines were purchased last fall by a company from San Francisco for the comparatively trifling sum of \$500,000. These mines are situated ninety miles south-west from the City of Chihua-

hua. The records do not show their former wealth, but it is known to have been great. The veins are true fissures, containing at the depth of 600 feet solid metal in some places fifteen feet wide, averaging nearly \$100.00 per ton. The ores are now being reduced by the lixiviation process with excellent results.

#### SIERRA RICA MINES.

The Rich Mountain Mining Company, of New York, have purchased the Sierra Rica mines, located about thirty miles south of Presidio del Norte, on the Rio Grande, for \$150,000, and propose to erect reduction works at the very earliest date.

#### THE CORRALITAS MINES.

The Corralitas mining Company, of New York, have purchased the famous Corralitas mines, situated 200 miles north of the Chihuahua, for the sum of \$350,000, and will soon have their works in operation at a cost of over \$500,000, including the price of mines.

#### THE BATOPILAS MINES.

Are situated in the south-west part of the State, owned and operated by Wells, Fargo & Co., they contain large deposits of native silver and are enriching their owners. The record shows that under Spanish rule they produced \$400,000,000. Humboldt said that their wealth was inexhaustible.

#### THE MINE OF LA GABILANA.

The Chihuahua Silver Mining Company, of Logansport, Indiana, have secured the rich mine of La Gabilana, situated about eighty miles south of the city of Chihuahua, and will establish their works as soon as they can get their machinery on the grounds. These truly famous mines were worked by the Jesuits until about the year 1687, at which time they were driven out of the country by the Spanish Government, and owing to the fact that this section of Mexico was until within a very few years in possession of the Indians, the mines have remained undeveloped until secured by the above named company.

## THE CONSOLIDATED MINES OF HIDALGO OR PARRAL.

The consolidated mines of Hidalgo or Parral, owned by the Knott's Company, of Chicago, are situated in the city of Hidalgo or Parral. Their record shows that they have produced \$60,000,000. They are true fissure veins, aggregating in length three-fourths of a mile, with a width of from six to thirty feet. The last six years' working by the Mexicans yielded over \$900,000, the ore averaging \$81.00 per ton. These mines have been worked only at a depth of little over 400 feet.

This company claims that they own a larger body of good paying ore than *any other company* in the world.

The Philadelphia Mining Company have located their works three miles west of El Parral or Hidalgo, on the Parral river, and have secured several valuable mines in the immediate vicinity, and improved the river, for the purpose of obtaining water-power for their works. Their buildings are completed at a cost of about \$30,000, and when their entire works are fitted with machinery, which will be at an early date, it will cost not less than \$250,000.

## THE MINE OF LA LUZ.

The Dry Mountain Silver Mining Company of Terre Haute, Indiana, owns the mine of La Luz, situated four miles from Parral. This is one of the best mines in the district of Parral. It is a true fissure vein, nine feet in width, yielding from \$20 to \$100 per ton.

The Company propose to secure good water-power which is accessible to them, and establish large works for the reduction of ores. Having no water to contend with, the cost of mining will be comparatively small.

## LAS GIJAS MINES.

The Hidalgo Mining and Power Company, of Chicago, owns the mine of Las Gijas, in the dry mountain, five miles west of Parral, which is celebrated for having at one time produced a large pocket of native silver.

This company propose to establish works for the reduction of the castaway ores of the Knott's Company, and do a general custom



business; they also propose to establish a foundry and machine shop in Parral.

THE MINES OF EL DULCE NOMBRE, LA SANTA NIÑA AND  
SAN JUAN.

The Chihuahua Silver Mining Company, organized at Logansport, State of Indiana, for the purpose of working the Gabilana mines, situated in the Gabilana mountain, eighty miles from the City of Chihuahua, in the canton of Victoria, State of Chihuahua. This company owns three mines—that of El Dulce Nombre, La Santa Niña, and San Juan. Each mine is half a mile in length by one or to two hundred yards in width, and veins when opened are from six to fourteen feet in width.

The mines of this company are situated in the same range of mountains as the famous Cusihuiriacic, Batopilas, and Morelos mines, from which millions have been extracted. El Dulce Nombre was worked by the Jesuits about the year 1787. Fine specimens from these mines assayed by Don Manuel Merino, assayer of the mint of Chihuahua, with the following result :

|                 |                  |       |          |            |
|-----------------|------------------|-------|----------|------------|
| Specimen No. 1, | assay in silver, | . . . | \$112 00 | per ton.   |
| “               | “ 2,             | “     | . . .    | 112 00 “   |
| “               | “ 3,             | “     | . . .    | 380 00 “   |
| “               | “ 4,             | “     | . . .    | 440 00 “   |
| “               | “ 5,             | “     | . . .    | 1,612 50 “ |

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MINING IN NUEVO LEON.

THE ANGLO-TEXAS-MEXICAN MINING AND SMELTING CO.

*Officers of the Company.*—As we understand the matter, this Company is incorporated and organized under the laws of Texas, and with its headquarters in Houston, Harris Co., Texas, with the following well known persons as officers :

A. C. Schryver, of San Antonio, President; W. A. Taylor, of

Waco, Vice-President ; I. C. Stafford, of Houston, Treasurer ; A. W. Guifford, of San Antonio, Secretary.

*Prospectus of the Company and location of its works.*—The company's works and smelters are now located at the town Villaldama, in the State of Nuevo Leon. It is a prosperous little city, romantically situated at the foot of the mountains, on the bank of the river of the same name, in the center of a rich mining country. It has an industrious population of four thousand people, all Mexicans favorably disposed toward Americans and American capital and enterprise for the development of their mines. Its distance from Laredo, on the Rio Grande, is one hundred and thirty-five miles southwest ; from Monterey, the capital of the State, seventy-nine miles north. The town was founded as a mining settlement in 1646, and called Mineral de San Pedro Boca de Leones—meaning the mining district of St. Peter of the Lion's Mouth. In April, 1826, its name was changed to San Pedro de Villaldama—St. Peter of Villaldama—in honor of the Mexican patriot, Licenciado Don Ignacio Aldama, who was arrested at San Antonio, Tex., while on his way to the United States as special envoy of the leader of the Mexican revolutionist, Hidalgo, taken to Monclova, then the capital of Coahuila, and shot by the Royalists, in July, 1811.

*Property of company.*—This company now owns first-class machinery for crushing and smelting forty tons of ore per day, consisting of two boilers, two engines, one roaster, three smelters, diamond drill capacity three thousand feet, set of Howe scales, and saw mill capacity of ten thousand feet of lumber per day, together with the following mines : *Chihuahua*, with an inferior tunnel of five hundred feet, and a well-defined vein of galena ore, running from three to nine feet in width, and carrying from forty to sixty ounces of silver to the ton. This mine was considered by the Spaniards as one of the best in the district, and was abandoned after striking fifteen feet of water. The company have machinery to take the water from this mine in thirty days.—*Coayache* containing a valuable vein of earth ore, running from one to three feet wide, which produces from two hundred to three hundred and fifty ounces of silver to the ton.—To make this mine valuable and profitable a tunnel from two hundred to five hundred feet must be constructed lower down the mountain. *Moreno* containing a rich vein of galena ore, carrying silver running from one to three feet in width, producing from two hundred to three

hundred dollars silver to the ton. The *Farandula* was known by the Spaniards as the richest mine in the district, but was abandoned because of striking ore which they could not reduce by their crude Mexican machinery. The works and machinery of the company are especially adapted for working the ores of this mine and will undoubtedly yield for them an immense bonanza.

The company has secured for the erection of their works all the lands they needed from the municipality of Villaldama.

#### THE ROSARIO MINING COMPANY.

The Rosario Mining Company of the Republic of Mexico was organized at Dallas, Texas, by Jules Randle, Esq., of Brenham, with a capital stock of \$2,640,000. The officers elected for the present year are: John Martin, President; Jules Schumacher, Vice-president; J. L. Leonard, Secretary and Treasurer; S. O. Heminway, General Superintendent, and Srs. Licenciado Ygnacio Galindo, Federal Judge for the State of Nuevo Leon, Don José Maria Garza, Don José Maria Fernandez, of Mexico, Jules A. Randle, S. J. Adams, John Martin, Jas. H. Britton, and Jules Schneider, as Directors.

This mine, which is situated within six or eight miles of the flourishing town of Salinas Victoria, through which the Mexican Railway from Laredo to Monterey will soon pass, was worked for a period of 175 years, and only abandoned on account of Indian incursions. Its ores are what is called low grade ores, but are said to be abundant.

The men that are at the head of this company are a guarantee of its success. They are all capitalists of high standing in Mexico and Texas.

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## RAILROADS IN MEXICO.

### LIST OF RAILROADS IN OPERATION DURING THE YEAR 1880.

*The Vera Cruz Railroad.—Some of the most important railroad charters granted by the Mexican Government.—Tariff rates.—Railroad connections with the United States.—Jay Gould's south-west system.—The International and Great Northern, and International and Interoceanic Railroad.—The New York, Texas and Mexican Railroad, better known as Count Telfener's road.—The Sunset Extension into Mexico, or Col. Pierce & Huntington's roads.*

#### ✓ RAILROADS IN OPERATION IN 1880.

|                                       | Kilometers. | Traction. |
|---------------------------------------|-------------|-----------|
| 1. Mexican Railway, . . . . .         | 423,620     | Steam.    |
| 2. From Jalapa to Coatepec, . . . . . | 126,000     | Tramway.  |
| 3. " Esperanza to Tehuacan, . . . . . | 50,000      | "         |
| 4. " Merida to Progreso, . . . . .    | 32,000      | Steam.    |
| 5. " Vera Cruz to Medallin, . . . . . | 22,000      | "         |
| 6. Ferrocarril de Hidalgo, . . . . .  | 26,000      | Tramway   |
| 7. " de Zacatecas, . . . . .          | 6,500       | "         |

|  | Kilometers. | Traction. |
|--|-------------|-----------|
| 8. From Celaya to Leon, . . . . .                                  | 60,000      | Steam.    |
| 9. " Cuantitlan to Salto, . . . . .                                | 71,432      | "         |
| 10. " Morelos, . . . . .   | 95,000      | "         |
| 11. Tramways in the Federal District, . . . . .                    | 98,598      |           |
| 12. Other cross branches, . . . . .                                | 16,428      |           |
| 13. Other branches to the baths, . . . . .                         | 2,653       |           |
| 14. From Puebla to Cholula and Mata-<br>mores de Izucar, . . . . . | 15,617      |           |
| 15. From San Luis to Tampico, . . . . .                            | 6,000       |           |

#### THE VERA CRUZ RAILROAD.

The Mexican Railway Company presented at the annual meeting of the shareholders, held in the City of London, England, on the 29th of July, 1880, the following statement :

|                                |             |
|--------------------------------|-------------|
| Receipts for 1876, . . . . .   | \$2,175,000 |
| " 1877, . . . . .              | 2,700,000   |
| " 1878, . . . . .              | 2,895,000   |
| " 1879, . . . . .              | 3,512,000   |
| " five months, 1880, . . . . . | 1,512,000   |

Supposing that, for the remaining seven months of last year, the returns have been in the same proportion, it will give for the year 1880, \$3,628,000, which is the largest amount that has been received.

The Vera Cruz Railway and Puebla branch are, together, 292 miles long. The cost of construction was, for various reasons, excessive, yet its bonds and preferred stocks are at a premium on the market. —

TABLE SHOWING CONCESSIONS GRANTED BY THE MEXICAN GOVERNMENT  
FROM AUGUST, 1877, TO FEBRUARY 3d, 1881.

| Names of Railroads.   | To whom Granted.                                 | Date of Commission. | Length in Kilometers completed. | Subsidy granted. |
|---|--|---------------------|---------------------------------|------------------|
| National R. R. from Tehuacan to la Esperanza.                                       | General Governm't.                               | Aug. 14th, 1877,    | 50                              | 51               |
| From Celaya to Leon and Guanajuato.   | Gov't of the State of Guanajuato.                | Dec. 21st, 1877.    | 125                             | 60               |
| Mexico, Toluca and Cuantitlan.  | Anon. company.                                   | Dec. 22d, 1877.     | 120                             | 46,280           |
| From Salamanca to the Pacific coast.  | State of Michoacan.                              | Jan. 28th, 1878.    | 660                             | 8,000            |
| From Ometusco to Pachuca and Tulancingo.  | State of Hidalgo.                                | Feb. 2d, 1878.      | 92                              | 25               |
| San Luis Potosí to Tantoyuquita.  | State of San Luis.                               | Feb. 14th, 1878.    | 209                             | 6                |
| Lagos and Guadajajara to San Blas.  | State of Jalisco.                                | Feb. 27th, 1878.    | 737                             | 8,000            |
| From Celaya to San Juan del Rio.  | State of Queretaro.                              | Feb. 28th, 1878.    | 104                             | 8,000            |
| From Tehuacan, via Oaxaca, to Port Angel.   | State of Oaxaca.                                 | March 22d, 1878.    | 519                             | 8,000            |
| From Vera Cruz to Alvarado.   | State of Vera Cruz.                              | March 25th, 1878.   | 132                             | 9                |
| From Tantoyuquita to the limit or boundary line bet. Tamaulipas and S. Luis Potosí. | State of Tamaulipas.                             | March 27th, 1878.   | 105                             | 8,000            |
| Central, International and Interoceanic.  | Company represented by S. Camacho and R. Guzman. | Sept. 8th, 1880.    | 913 Pac.<br>1043 fron.          | 7,000<br>6,500   |

| Names of Railroads.  | To whom Granted.   | Date of Commission. | Length in Kilometers. | Kilometers completed. | Subsidy granted. |
|--|--|---------------------|-----------------------|-----------------------|------------------|
| From San Martin to the Hidalgo and Tlaxcala R. R.  | State of Tlaxcala.   | Sept. 14th, 1880.   | 65                    |                       | 8,000            |
| Puebla to San Marcos.  | State of Puebla.   | Sept. 14th, 1880.   | 51                    |                       | 8,000            |
| From Mérida to Kalkini and Celestum.   | State of Yucatan.  | Sept. 14th 1880.    | 142                   |                       | 8,000            |
| From Guayamas to the northern frontier.  | Limited company represented by S. Camacho and D. Ferguson. | Sept. 14th, 1880.   | 457                   | 30                    | 7,000            |
| From Patzcuaro to the Pacific.   | State of Michoacan.  | Sept. 15th, 1880.   | 342                   |                       | 8,000            |
| From Toluca to the mines of Ixtapa del Oro.  | José M. Amat.  |                     |                       |                       | no sub.          |
| Making a junction between the Te- and Mexican lines at a point between Tepexpan and Irolo. | State of Morelos.  | Nov. 27th, 1880.    |                       |                       | 6,500            |
| Carboniferous district, from the Yaqui to Morrito.   | Robert R. Syman.   | Dec. 15th, 1880.    |                       |                       | no sub.          |
| Merida to Valladolid.  | Francisco Canton.  | Dec. 15th, 1880.    | 160                   |                       | 6,000            |
| Jalapa to Vera Cruz.   | Ramon Zangroniz.   | Jan. 10th, 1881.    | 114                   |                       | 8,000            |
| From Salto to Mazavatio, via Tepehi and Jilotepec.   | Pedro del Valle.   | Jan. 19th, 1881.    |                       |                       | 8,000            |
| From San Luis Potosí to the Mex. Central, in the State of Aguascalientes.                  | State of San Luis & Aguascalientes.                        | Feb. 2d, 1881.      | 150                   |                       | 8,000            |
| Station and town of Tlalmanalco.   | State of Mexico.   | Feb. 3d, 1881.      |                       |                       | 6,000            |
| From Mérida to Petoria, Ticul and Tecax.   | State of Yucatan.  | March 28th, 1878.   | 126                   | 10                    |                  |

| Names of Railroads.                                   | To whom Granted.   | Date of Concession. | Length in Kilometers. | Kilometers completed. | Subsidy granted. |
|---|--|---------------------|-----------------------|-----------------------|------------------|
| From Zacatecas to San Luis, Aguascalientes and Lagos. | States of Zacatecas, San Luis, Aguascalientes and Jalisco. | March 28th, 1878.   | 448                   | 6½                    | 8,000            |
| From the port of Manzanillo to Tonela.                | State of Colima.   | March 30th, 1878.   | 104                   |                       | 8,000            |
| From Mexico to the bank of the Amacuzar.              | State of Morelos.  | April 16th, 1878.   | 395                   | 96                    | 8,000            |
| Matamoros Izucar.                                     | State of Puebla.   | May 6th, 1878.      | 57                    | 11                    | 8,000            |
| San Martin Texmelucan.                                | Gen. Government.   | Nov. 14th, 1878.    | 37                    | 2                     |                  |
| From Cuantitlan to Salto.                             | Toluca Company.  | April 2d, 1879.     | 63                    | 38                    | 7,000            |
| Tehuantepec.  | Edward Larned.   | June 2d, 1879.      | 200                   | 5                     | 7,500            |
| Matamoros to Monterey.                                | S. of Tamaulipas.  | June 7th, 1880.     | 400                   |                       | 8,000            |
| Mexico to Acapulco.                                   | State of Guerrero.   | June 7th, 1880.     | 465                   |                       | 8,000            |
| Chihuahua to the town of El Paso or Ojinaga.          | State of Chihuahua.  | June 9th, 1880.     | 350                   |                       | 8,000            |
| Patzcuaro to Morelia and Salamanca.                   | State of Michoacan.  | July 15th, 1880.    | 169                   |                       | 8,000            |
| From Culiacan to the port of Altata and Durango.      | State of Sinaloa.  | Aug. 16th, 1880.    | 440                   |                       |                  |
| Prom Anton Lizardo to Huatulco and Port Angel.        | State of Oaxaca.   | Aug. 25th, 1880.    | 450                   |                       | 8,000            |
| From Jalapa to S. Andres Chalchicomula.               | States of Puebla and Vera Cruz.                            | Sept. 6th, 1880.    | 80                    |                       | 8,000            |
| From San Augustin to Huehuetoca.                      | State of Hidalgo.  | Sept. 7th, 1880.    | 50                    |                       | 8,000            |



SKETCH OF SOME OF THE MOST IMPORTANT RAILROAD  
CHARTERS GRANTED BY THE MEXICAN GOVERN-  
MENT TO AMERICAN COMPANIES.

Contract made between the Department of Public Works, representing the Executive, and Messrs. Sebastian Camacho and Ramon G. Guzman, representatives of the Mexican Central Railway Company (limited), for a railroad to be constructed from the City of Mexico to Leon, connecting with the City of Queretaro, Celaya, Salamanca, Irapuato, Guanajuato and Silao ; from Leon, connecting with Aguascalientes, Zacatecas and Chihuahua, and from any convenient point between the cities of Mexico and Leon to any port on the Pacific coast, and connecting *en route* with the City of Guadalajara. This road is to be of standard gauge. The charter extends during the period of ninety-nine years ; the Government having to pay, in this case, cash upon the valuation to be made, as in other cases already stated, of all property of the company except the road-bed and structures comprising it. If the Government determine to sell or rent the road, the company to have the preference in either case. The line from Mexico to Leon to be finished on December 31st, 1882 (a very short time) ; the line to the Pacific within five years, and to Paso del Norte within eight years after the conclusion of the road from Mexico to Leon. A bond of \$250,000 to be deposited in the City of Mexico.

Contract between the Executive and James Sullivan, representative of the National Mexican Construction Company, for the construction and operation of a narrow-gauge railroad from the City of Mexico to the Pacific ocean at the port of Manzanillo or Navidad, passing through Toluca, Maravatio, Acambaro, Morelia, Zamora and la Piedad, and from Mexico to the northern frontier, leaving the Pacific line between Maravatio and Morelia, and passing through the cities of San Luis Potosi, Saltillo and Monterey to any point on the Rio Grande between Laredo and Eagle Pass. This concession is for ninety-nine years, the Government obligating itself to purchase for cash, or rent or sell to the company as under the concession of September 8th last. The line to the Pacific to be finished within five years, and that to the frontier within eight years from date of charter. A subvention granted of \$7,500 per kilometre, or

\$12,075 per mile, for the line from the City of Mexico to the Pacific, and \$6,500 per kilometre, or \$10,465 per mile, for that portion extending from the junction with the Pacific line to the northern frontier, to be paid out of the proceeds of four per cent. of the maritime and frontier custom duties, without interest. A subsidy granted of \$9,500 per kilometre, or \$15,295 per English mile, except when route adopted takes lines subsidized under other grants. Payment to commence after the construction of the first hundred and fifty kilometres, and paid in installments upon each succeeding fifty kilometres, except for those portions of the road already occupied by narrow-gauge roads, when the difference of \$1,500 per kilometre, or \$2,415 per mile, only will be paid, to be met out of an appropriation of six per cent. of the duties to be collected at all the maritime and frontier custom-houses of the Republic. The tariff for freight and passengers to be as authorized by act of Congress of June 1st, 1880. Length, 1,767 miles. Thirty miles of track laid north from the City of Mexico, and construction being pushed forward. Date of contract, September 8th, 1880.

First payment to be made upon the completion of one hundred and fifty kilometres, and succeeding payments upon the completion of each twenty-five kilometres. A bond of \$300,000 in cash to be deposited in the City of Mexico, to remain on deposit until one hundred kilometres of road are constructed.

The tariff rates fixed at the time of the granting of the charter; to be revised every two years, as is generally provided for under all charters; but in every case the company is prohibited from increasing these rates under any circumstances. Length of main line and branch, 1,230 miles. Construction said to be going on rapidly. Date of contract, September 13th, 1880.

#### THE INTERNATIONAL AND INTEROCEANIC RAILWAY CO.

*The Jay Gould South-west System of Railroads to connect with the City of Mexico and the Pacific and Atlantic Oceans in Mexico.*

The South-west system of roads consists of the Missouri Pacific, the Texas Pacific, the Missouri, Kansas and Texas, the Iron Mountain, the International and Great Northern, and the New Orleans

and Pacific. They comprise about 7,000 miles of line. They have all been placed under one head, with Mr. Gould as president of all the roads, with Mr. R. S. Hayes as vice-president and executive officer, with headquarters at St. Louis. The managers are A. A. Talmage, A. W. Soper, H. M. Hoxie. The general management of the seven roads has been reduced to one. Its eastern connection is through the Wabash, which connects with a line through Canada, reaching to the sea-board on one side, and a line south of the lakes reaching to New York on the other side, giving them two through outlets. These outlets are the Great Western of Canada, the Delaware and Lackawanna, and by means of the Pennsylvania road a link that connects with the New Jersey Central, which takes them to New York. This system of roads has obtained a charter from the Mexican Government under the name of the International and Interoceanic Railway Co. They are to run from Laredo to the City of Mexico via Guerrero, Mier Santander, Jimenes and Victoria in the State of Tamaulipas, and from Victoria via Jalancingo to the City of Mexico, with the option of building branches to Vera Cruz, to Tampico and Matamoros. This company is pushing the building of their roads in Mexico at a rapide rate. This line is of easy construction from Laredo to Victoria. At the latter place it will have to go through mountain ranges, and will be more expensive to construct ; but as it will run through the "*Huasteca*" country, one of the richest portions of Mexico in natural and agricultural productions and mineral wealth, as well as on account of its shortness, it will highly repay for the cost of its construction.

This system, at the City of Mexico connects with the concessions obtained by General Grant, which is part of the same scheme. The connections extend from the City of Mexico via the City of Puebla to the City of Oaxaca, and is to connect with the trunk line which is to run almost due south from Vera Cruz to the Pacific, passing through the State and City of Oaxaca.

**THE NEW YORK, TEXAS AND MEXICAN RAIROAD, BETTER  
KNOWN AS COUNT TELFENER'S ROAD.**

The initial point of this line is at Rosenburg Junction, in Texas, via Wharton, Victoria, San Patricio and Banquete. It will reach Brownsville on the Rio Grande.

This company has lately obtained a charter from the Mexican Government to construct a road from Matamoros to Tampico in Tamaulipas.

THE MEXICAN NATIONAL OR PALMER-SULLIVAN RAILROAD  
IN MEXICO (IN FEBRUARY, 1882).

Official reports, that are beyond a doubt, show that this company is progressing as rapidly as possible in the construction of their lines, viz.:

*Toluca Division.*

22 kilometres of completed road.  
37 " graded.

*Maravatio Division.*

42 kilometres completely graded.  
55 " nearly graded.  
8 " completed road from Maravatio to Acambaro.

*Zacatecas Division.*

20 kilometres of completed road.  
12 " of graded road.

*Morelia Division.*

58 kilometres of road graded east.  
20 " of road graded west.

*Colima Division.*

31 kilometres of graded road.

*Laredo Division.*

40 kilometres of completed road.  
40 " of graded road.

Making a total of 82 kilometres of road in running order and 339 of graded road. Since writing the above the line from Laredo to Monterey has been completed through the town of Lampasas, to Villaldama and will be completed to Monterey by September next.

## THE MEXICAN PACIFIC.

The Mexican Pacific, which is an extension of the Galveston, Harrisburg and San Antonio Railway in Texas (or Sunset Route), connects at Houston with the New Orleans and Houston Railway; also with the International and Great Northern, and at Rosenberg Junction with the New York and Texas-Mexican, or Count Telfener's road, and the Galveston and Santa Fé Railway. It is constructed through one of the prettiest portions of Western Texas. It is almost finished to Eagle Pass, on the Rio Grande, and is now the shortest and quickest route to the following points in Mexico: Piedras Negras (town opposite Eagle Pass), Monclova, Durango, Zacatecas, Guanajuato, Queretaro and the City of Mexico.

Within two months it will be completed to El Paso, where it will connect with the Southern Pacific, and also with the Mexican Central road. When completed, which will be about 1883, it will be the main artery of travel and trade in Mexico.

It is the intention of Cols. Pierce and Huntington to construct a railway which, starting from Eagle Pass and running through a rich portion of Mexico, will connect at the rich mining district of Parral with the Mexican Central, and reach the Pacific at or about the mouth of the Fuerte River, near the boundary line of the States of Sonora and Sinaloa. They will probably also construct another line running from Eagle Pass to Durango, to connect with the Mexican Central, and reach the port of Mazatlan on the Pacific.

The construction of these roads in the United States, by Cols. Pierce and Huntington, has been pushed with wonderful rapidity. They deserve great credit for the manner in which they have lavished capital to make them first-class roads in every respect, and for opening to the world the garden spot of Texas and the hidden wealth of Mexico. They must be looked upon not only as great railroad builders but as public benefactors.

## TELEGRAPHIC LINES IN THE RE- PUBLIC OF MEXICO IN 1881.

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### LINES BELONGING TO THE GOVERNMENT.

Eastern lines, 1,945 kilometres, 483 metres; 45 offices. Eastern lines, 6,440 kilometres, 119 metres; 99 offices. Western lines, 1,394 kilometres, 940 metres; 37 offices. Southern lines, 584 kilometres, 376 metres; 9 offices. Making a total of 10,364 kilometres, 918 metres, and 190 offices, which carried during the year 1881, 281,697 messages for the amount of \$126,962.43.

### LINES BELONGING TO THE STATES.

State of Zacatecas, 1,076 kilometres, 492 metres; 19 offices. State of Hidalgo, 314 kilometres 250 metres; 9 offices. State of Morelos, 251 kilometres, 400 metres; 12 offices. State of Michoacan, 11 kilometres; 2 offices. Making a total of 1,653 kilometres, 142 metres, and 42 offices, which carried 31,609 messages for the sum of \$11,031.28.

### LINES THE PROPERTY OF RAILROADS.

Mexican Railway, 485 kilometres; 39 offices that carried 349,092 messages for the estimated amount of \$203,704.82.

The Morelos Railroad, 127 kilometres; 9 offices that carried 30,300 messages for the amount of \$610.33.

The Cuantitlan and Salto Railroad, 81 kilometres, 995 metres; 8 offices that carried 3,855 messages for the sum of \$590.51.

The Central to Tula, 80 kilometres, 210 metres.

The line from San Marcos to Puebla, 49 kilometres, 169 metres; 2 offices.

Making a total of 887 kilometres, 834 metres of telegraphic lines, with 58 offices, the property of railroads in Mexico that carried 355,977 messages for the sum of \$204,905.66.

## LINES OWNED BY PRIVATE COMPANIES.

From Mexico to Vera Cruz, 1,047 kilometres 500 metres; 17 offices that carried 55,956 messages for the sum of \$42,170.78.

Lines in the State of Vera Cruz, 617 kilometres 980 metres; 14 offices whose receipts amounted to \$14,743.55.

Lines in the State of Jalisco, 1,635 kilometres 685 metres; 39 offices that carried 17,823 messages.

Making a total of 3,301 kilometres 165 metres; 70 offices that carried 71,779 messages for the sum of \$56,914.33.

Submarine cable, inaugurated in March, 1881, 703 kilometres 133 metres; 3 offices.

Making a grand total of 16,910 kilometres 192 metres of telegraphic lines, with 363 offices in the Republic that carried 744,917 messages for the amount of \$399,813.72.

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## WEIGHTS AND MEASURES.

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The French metric system of weights and measures has been adopted in the Republic of Mexico and is now in force.

But in the country, the inhabitants have not done away with the old system, (although it is no longer the legal one,) of which we give a sketch.

### MEXICAN LAND MEASURES.

*(Translated from the "Ordenanzas de tierras y aguas.")*

The Mexican vara is the same as the vara of Castile, and is divided into thirds or foot-fourths, sixths and thirty-sixths inch. It equals  $33\frac{1}{3}$  inches American measure.

Fifty Mexican varas make a measure called "cordel."

A Mexican league contains 100 cordels, or 5,000 varas.

The league is divided into halves and quarters. The half-league contains 2,500 varas, and a quarter of a league 1,250 varas.

*Sitio de Ganado Mayor (sitio, a farm for raising cattle).*

The figure of a *sitio de estancia de ganado mayor* is a square whose sides measure 5,000 Mexican varas. The area of a sitio is 25,000,000 square varas, or 4,428 acres.

*Criadero de Ganado Mayor (place for breeding animals).*

It is a square equal to a fourth part of a *sitio de ganado mayor*, whose sides measure 2,500 varas, and contains an area of 6,250,000 square varas.

*Sitio de Ganado Menor (farm for raising sheep or goats).*

The form of a *sitio de estancia de ganado menor* is a square whose sides measure  $3,333\frac{1}{3}$  varas. Its area contains 11,111,111 $\frac{1}{3}$  square varas.



*Criadero de Ganado Menor.*

It is a square whose sides measure  $1,666\frac{2}{3}$  varas, and its area contains  $2,767,777\frac{7}{8}$  square varas.

*Caballeria de Tierra (33 1-3 acres American measure).*

The form of a *caballeria de tierra* is a rectangular parallelogram whose north or small side contains 552 varas, and whose greatest length is 1,104 varas. Its area contains 609,408 square varas.

*Media Caballeria de Tierra.*

It is a square whose side measures 552 varas, and contains 304,704 square varas.

*Suerte de Tierra (lot of ground—a chance).*

It is the fourth part of a *caballeria de tierra* and the same figure, whose long side measures 552 varas and 276 in width. It contains 152,352 square varas.

The *Caballeria de Tierra* is also divided into twelve fanegas of good seed oats. The fanega is equal to three American bushels, or a superficies of 8.5624 American acres.

*Solar de Tierra (ground on which a house is built—town lot).*

Any parcel of land less than a suerte.

*Solar para Casas (for houses, mills and markets).*

It is a square of 50 varas; 2,500 square varas.

*Fundo Legal (piece of ground which is cultivated—town site).*

It is a tract of land whose form is a square of 1,200 varas on each side, and contains an area of 1,440,000 square varas.

*Porcion.*

*Porcion* is a measure sometimes used. It is a tract of land 1,000 wide, and 16,000 long.

*Labor (a cultivated field).*

A square containing 1,000,000 square varas or 177 acres.

*Texas Measure.*

League and labor, 26,000,000 square varas or 4,605 acres.

To find the number of acres in a given number of square varas, divide by 5,646, fractions rejected.

TABLE OF MEXICAN LAND MEASURE.

| Names of Land Measures in Spanish.     | Length in Varas. | Width in Varas. | Area or Superficy in Square Varas. | Area in Cahalleries and Decimals. | Metrical System. |            | American Acres.                           |
|--|------------------|-----------------|------------------------------------|-----------------------------------|------------------|------------|---|
|  |                  |                 |                                    |                                   | Hectares.        | Centiares. |   |
| I Hacienda.                            | 25,000           | 5,000           | 125,000,000                        | 205,117                           | 8,778            | 05         | 22,143½                                   |
| I Sitio de ganado mayor.               | 5,000            | 5,000           | 25,000,000                         | 41,023                            | 1,755            | 61         | 4,428                                     |
| I Sitio de ganado menor.               | 3,333½           | 3,333½          | 11,111,111                         | 18,233                            | 780              | 27         | 1,968⅓                                    |
| I Criadero de ganado mayor.            | 2,500            | 2,500           | 6,250,000                          | 10,256                            | 438              | 90         | 1,107½                                    |
| I " de ganado menor.                   | 1,666⅔           | 1,666           | 2,777,777⅔                         | 4,558                             | 195              | 06         | 492⅓                                      |
| I Fundo legal para Puebla (town site). | 1,200            | 1,200           | 1,440,000                          | 2,363                             | 101              | 12         | 255⅓                                      |
| I Labor.                               | 1,000            | 1,000           | 1,000,000                          | 1,641                             | 70               | 22         | 177½                                      |
| I Caballeria de tierra.                | 1,104            | 552             | 609,408                            | 1,000                             | 42               | 79         | 107 <sup>5,498</sup> / <sub>100,000</sub> |
| ½ " " " or suerte.                     | 552              | 552             | 304,704                            | 500                               | 21               | 29         | 53 <sup>5,519</sup> / <sub>100,000</sub>  |
| ¼ " " " or suerte.                     | 552              | 276             | 152,352                            | 250                               | 10               | 69         | 26 <sup>5,519</sup> / <sub>100,000</sub>  |
| I Fanega des embrodura de maiz.        | 276              | 184             | 50,784                             | 83½                               | 3                | 56         | 8 <sup>5,624</sup> / <sub>100,000</sub>   |
| I Solar para casa, molino ó venta.     | 50               | 50              | 2,500                              | 4                                 | 17               | 55         |   |

ENGLISH WEIGHTS AND MEASURES COMPARED  
WITH THE METRICAL SYSTEM OF  
WEIGHTS AND MEASURES.

LINEAR MEASURES.

| English.  | Metrical.             |
|---|-----------------------|
| 1 inch ( $\frac{1}{36}$ of a yard) corresponds to . . . . . | 2.539954 centimetres. |
| 1 foot ( $\frac{1}{3}$ of a yard) " . . . . .               | 3.0479449 decimetres. |
| 1 yard " . . . . .  | 0.91438348 metres.    |
| 1 fathom (2 yards) " . . . . .                              | 1.82876696 "          |
| 1 pole or perch ( $5\frac{1}{2}$ yards) " . . . . .         | 5.02911 "             |
| 1 furlong (320 yards) " . . . . .                           | 201.16437 "           |
| 1 mile (1,760 yards) " . . . . .                            | 1609.3149 "           |

| Metrical.                                    | English.                                |
|--|---|
| 1 millimetre corresponds to . . . . .        | 0.03937 inches.                         |
| 1 centimetre " . . . . .                     | 0.393708 "                              |
| 1 decimetre " . . . . .                      | 3.937079 "                              |
| 1 metre " . . . . .                          | 39.37079 "                              |
|  | 3.2808002 feet.                         |
|  | 1.093633 yards.                         |
| 1 kilometre, or 1,000 metres, corresponds to |   |
|  | 0.62137 miles, or 3,280 feet 10 inches. |
| 1 myriametre corresponds to . . . . .        | 6.2138 miles.                           |

SUPERFICIAL MEASURES.

| English.                               | Metrical.            |
|--|----------------------|
| 1 square yard corresponds to . . . . . | 0.836097 sq. metres. |
| 1 rod (or sq. perch) " . . . . .       | 25.291937 "          |
| 1 rod (1,210 sq. y'ds) " . . . . .     | 10.116775 acres.     |
| 1 acre (4,840 s. y'ds) " . . . . .     | 0.40467 hectares.    |

| Metrical.                       | English.            |
|---------------------------------|---------------------|
| 1 square metre equals . . . . . | 1.196033 sq. yards. |
| 1 are " . . . . .               | 0.98845 rods.       |
| 1 hectare " . . . . .           | 2.471143 acres.     |

## MEASURES OF CAPACITY.

| English.   | Metrical.            |
|--|----------------------|
| 1 pint ( $\frac{1}{8}$ of a gallon) equals . . . . . | 0.567932 litres.     |
| 1 quart ( $\frac{1}{4}$ of a gallon) " . . . . .     | 1.135864 "           |
| 1 imperial gallon " . . . . .                        | 4.54345794 "         |
| 1 peck (2 gallons) " . . . . .                       | 9.0869159 "          |
| 1 bushel (8 gallons) " . . . . .                     | 36.347664 "          |
| 1 sack (3 bushels) " . . . . .                       | 1.09043 hectolitres. |

| Metrical.                    | English.                                |
|------------------------------|---|
| 1 litre equals . . . . .     | } 1.760773 pints.<br>0.2200967 gallons. |
| 1 decalitre equals . . . . . |   |
| 1 hectolitre " . . . . .     | 2.2009668 "                             |
|                              | 22.009667 "                             |

## WEIGHTS.

| English Troy Weight.  | Metrical Weight. |
|---|------------------|
| 1 grain ( $\frac{1}{24}$ of a pennyweight) corresponds to . . | 0.06477 grams.   |
| 1 pennyweight " . . . . .                                     | 1.55456 "        |
| 1 ounce ( $\frac{1}{12}$ of a pound) " . . . . .              | 31.0913 "        |
| 1 pound " . . . . .   | 0.3930956 kilos. |

| English Avoirdupois.                                    | Metrical.        |
|---|------------------|
| 1 dram ( $\frac{1}{16}$ of an ounce) corresponds to . . | 0.06477 grams.   |
| 1 ounce ( $\frac{1}{16}$ of a pound) " . . . . .        | 28.3384 "        |
| 1 imperial pound " . . . . .                            | 0.4534148 kilos. |
| 1 cwt. (q'ntal of 112 pounds) " . . . . .               | 50.78246 "       |
| 1 ton (20 cwt.) " . . . . .                             | 1015.649 "       |

| Metrical.                       | English.   |
|---------------------------------|--|
| 1 gram corresponds to . . . . . | } 15.438 troy grains.<br>0.643 pennyweights.<br>0.03216 troy ounces. |
|                                 |  |
| 1 kilogram, . . . . .           |  |
|                                 | } 2.68026 troy pounds.<br>2.20549 avoirdupois p'ds.                  |
|                                 |  |

The troy weights are used to weigh principally precious metals and medicines, etc., and the avoirdupois for general use in commerce. (The above tables are taken from the Bureau of Longitudes, Paris, France.)

## TARIFF OF PUBLIC LANDS IN 1876.

|   | Price of<br>Hectare. | Price of a Sitio<br>de Ganado<br>Mayor or 4,428<br>acres. |
|---|----------------------|---|
| In the Territory of Lower California, . . . . . | \$0 06               | \$105 34  |
| “ State of Sonora, . . . . .                    | 0 12                 | 210 67  |
| “ “ Chihuahua, . . . . .                        | 0 12                 | 210 67  |
| “ “ Coahuila, . . . . .                         | 0 12                 | 210 67  |
| “ “ Nuevo Leon, . . . . .                       | 0 15                 | 263 34  |
| “ “ Tamaulipas, . . . . .                       | 0 15                 | 263 34  |
| “ “ Sinaloa, . . . . .                          | 0 18                 | 316 01  |
| “ “ Durango, . . . . .                          | 0 18                 | 316 01  |
| “ “ Zacatecas, . . . . .                        | 1 00                 | 1,755 61  |
| “ “ San Luis Potosí, . . . . .                  | 1 00                 | 1,755 61  |
| “ “ Jalisco, . . . . .                          | 1 00                 | 1,755 61  |
| “ “ Aguas Calientes, . . . . .                  | 1 50                 | 2,633 11  |
| “ “ Guanajuato, . . . . .                       | 2 00                 | 3,511 22  |
| “ “ Queretaro, . . . . .                        | 2 00                 | 3,511 22  |
| “ “ Michoacan, . . . . .                        | 1 00                 | 1,755 61  |
| “ “ Colima, . . . . .                           | 1 00                 | 1,755 61  |
| “ “ Guerrero, . . . . .                         | 0 75                 | 1,316 71  |
| “ “ Morelos, . . . . .                          | 2 00                 | 3,511 22  |
| “ “ Mexico, . . . . .                           | 2 00                 | 3,511 22  |
| “ Federal District, . . . . .                   | 2 50                 | 4,389 02  |
| “ State of Tlaxcala, . . . . .                  | 1 50                 | 2,633 41  |
| “ “ Puebla, . . . . .                           | 2 00                 | 3,511 22  |
| “ “ Hidalgo, . . . . .                          | 1 50                 | 2,633 41  |
| “ “ Vera Cruz, . . . . .                        | 0 65                 | 1,141 15  |
| “ “ Oaxaca, . . . . .                           | 0 75                 | 1,316 71  |
| “ “ Chiapas, . . . . .                          | 0 25                 | 438 90  |
| “ “ Campeche, . . . . .                         | 0 75                 | 1,316 71  |
| “ “ Yucatan, . . . . .                          | 0 25                 | 438 90  |

ITEMS OF INTEREST TO ALL IMPORTERS OF MERCHANDISE  
INTO THE REPUBLIC OF MEXICO.

All persons sending articles of commerce from foreign countries into the Republic of Mexico shall make out invoices in triplicate of all goods, fruits or effects remitted to each consignee.

The invoices shall be drawn up according to the form attached to the tariff.

It shall indicate :

1st. The name of the vessel, her captain, port of destination, consignee of articles contained in the invoice, and the nation from which the merchandise originally proceeds, the date of invoice and the signature of shipper ; same *in total*.

2d. An account, both in writing and figures, of the number of packages, boxes, barrels, bales, or any other kind of packing ; the same *in total*.

3d. The mark and corresponding number of each package as well as its gross weight, excepting that of iron, machinery and railroad material, which may be given with total weight of each lot ; same *in total*.

4th. The name, material, and class of merchandise specified in accordance with tariff ; same *in total*.

*B.* The quantity in writing and figures of articles that are to pay duty by piece, pair, dozen or thousand ; same *in total*.

*C.* The new weight of merchandise that are to pay by net weight, giving the unit taken as a basis.

The names of the goods contained in one and the same package, and paying different duties, should be given whether there is any duty on net weights on them, or whether they are free.

*D.* The length, width and number of pieces of merchandise that ought to pay by measurement, giving unit of measurement that has been used as a basis ; same *in total*.

Invoices should state the value of free goods.

Invoices must be presented with consular certificates.

As importers will always have to employ a custom-house broker, we do not deem it necessary to publish here the tariff—the law of December 14th, 1881—which is too lengthy. It is only necessary to say that the penalties imposed by the Mexican laws for non-compliance, bad faith and fraud are very severe, and importers should be careful in having their documents properly drawn up.

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## A B R I D G E D

## Mexican Tariff on Imports.

## Cotton Goods.

|   |                              |  |        |
|---|------------------------------|--|--------|
| Domestic (unbleached),  | per square metre,            |  | \$0 09 |
| “ (bleached),   | “ “ “                        |  | 16     |
| Calico,   | “ “ “                        |  | 14     |
| Thread (white),   | “ kilogram,                  |  | 60     |
| Thread (colored),   | “ “                          |  | 96     |
| Thread (spool),   | “ dozen,                     |  | 14     |
| Cassimeres and similar<br>woolen goods,                         | “ square metre,              |  | 1 40   |
| Carriages (open), and<br>coupés,                                | each,                        |  | 176 00 |
| Coaches, phaetons, lan-<br>daus, etc.,                          | “                            |  | 396 00 |
| Buggies,  | “                            |  | 132 00 |
| Sulkies,  | “                            |  | 66 00  |
| Wagons,   | “                            |  | 80 00  |
| Harness for carriages,  | per kilogram (gross weight), |  | 2 00   |
| Harness for wagons,   | “ “ “ “                      |  | 86     |
| Furniture, 55 per cent. on invoice and 25 per cent. additional. |                              |  |        |
| Pianos,   | per kilogram (gross weight), |  | 43     |
| Flour,  | “ “ net “                    |  | 10     |
| Wheat,  | “ “ “ “                      |  | 04     |
| Barley,   | “ “ “ “                      |  | 03     |
| Rice,   | “ “ “ “                      |  | 07     |
| Hops,   | “ “ “ “                      |  | 18     |
| Hams (smoked),  | “ “ “ “                      |  | 24     |
| Meats (salt and smoked),  | “ “ “ “                      |  | 24     |
| Lard,   | “ “ “ “                      |  | 24     |
| Butter,   | “ “ “ “                      |  | 24     |

|  |                               |               |
|--|-------------------------------|---------------|
| Cheese, . . . . .                                | per kilogram (net weight), .  | 14            |
| Candles (tallow), . . . . .                      | “ “ gross “ .                 | 08            |
| Candles (stearine), . . . . .                    | “ “ “ “ .                     | 19            |
| Candles (parafine), . . . . .                    | “ “ “ “ .                     | 38            |
| Crackers, . . . . .                              | “ “ “ “ .                     | 12            |
| Canned fruit (cans included), . . . . .          | “ “ net “ .                   | 50            |
| Canned meats and fish (cans included), . . . . . | “ “ “ “ .                     | 72            |
| Pickles (jars included), . . . . .               | “ “ “ “ .                     | 48            |
| Soap (toilet), . . . . .                         | “ “ gross “ .                 | 1 15          |
| Soap (common), . . . . .                         | “ “ “ “ .                     | 30 to 80      |
| Glass (common), . . . . .                        | “ “ “ “ .                     | 17            |
| Gunpowder, . . . . .                             | “ “ “ “ .                     | 2 00          |
| Nails of all kinds (iron), . . . . .             | “ “ “ “ .                     | 12            |
| Tools(iron, steel or wood), . . . . .            | “ “ “ “ .                     | 19            |
| Clothing (ready-made), . . . . .                 | all kinds, . . . . .          | 1.32 p. cent. |
| India-rubber clothing, . . . . .                 | per kilogram, (gross weight), | 1 43          |
| “ shoes, etc., . . . . .                         | “ “ “ “ .                     | 43            |
| “ cloth for table, . . . . .                     | “ “ “ “ .                     | 29            |
| Oil-cloth for floors, . . . . .                  | “ “ “ “ .                     | 29            |
| Leather boots (yellow), . . . . .                | “ dozen, . . . . .            | 16 50         |
| “ “ (calf or morrocco), . . . . .                | “ “ . . . . .                 | 27 00         |
| “ shoes (men's common), . . . . .                | “ “ . . . . .                 | 7 00          |
| “ shoes (men's fine), . . . . .                  | “ “ . . . . .                 | 16 50         |
| “ “ (women's fine), . . . . .                    | “ “ . . . . .                 | 17 00         |
| “ shoes (women's common), . . . . .              | “ “ . . . . .                 | 5 50          |
| Carpets (2 and 3-ply), . . . . .                 | “ square metre, . . . . .     | 80            |
| “ (Brussels), . . . . .                          | “ “ “ . . . . .               | 95            |
| “ (velvet), . . . . .                            | “ “ “ . . . . .               | 1 40          |
| Cocoa matting, . . . . .                         | “ kilogram (gross weight), .  | 16            |
| Vinegar (barrels), . . . . .                     | “ “ net “ .                   | 5             |
| Vinegar (bottles), . . . . .                     | “ “ “ “ .                     | 10            |
| Whisky (barrels), . . . . .                      | “ “ “ “ .                     | 33            |



|                             |                              |    |
|-----------------------------|------------------------------|----|
| Whisky (bottles), . . . . . | per kilogram (gross weight), | 38 |
| Beer (barrels), . . . . .   | “ “ “ “ .                    | 10 |
| Beer (bottles), . . . . .   | “ “ “ “ .                    | 20 |
| Petroleum (cans included),  | “ “ “ “ .                    | 09 |
| Rosin, . . . . .            | “ “ gross “ .                | 25 |
| Tar, . . . . .              | “ “ “ “ .                    | 3  |
| Salt, . . . . .             | “ “ “ “ .                    | 5  |
| Potatoes, . . . . .         | “ “ “ “ .                    | 2  |
| Onions, . . . . .           | “ “ “ “ .                    | 2  |

From the 1st of November machinery is taxed with a duty of 50 cents per hundred kilogram weight imported into the Republic.

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NEW TARIFF LAW OF JUNE 25th, 1881, THAT WENT INTO FORCE NOVEMBER 1st, 1881, IMPOSING AN ADDITIONAL PACKAGE DUTY UPON MERCHANDISE IMPORTED INTO THE REPUBLIC OF MEXICO.

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SECTION I.

The President of the Republic has thought proper to address to me the following decree :

Manuel Gonzales, Constitutional President of the United States of Mexico, to its inhabitants make known : That in accordance with the power granted to the Executive by the common law of the 31st of May last, to form tariffs corresponding to the new duties which said law establishes, have decreed the following :

ARTICLE I.

From the 1st of November next the foreign merchandise comprised in the schedule below, when imported through the mari-

time and frontier custom-houses, shall pay the following duty upon each and every one hundred kilograms (gross weight), viz. :

|  |        |
|--|--------|
| Iron or steel wires for carding from No. 26 and above, . . . . .   | \$0 50 |
| Rough alabaster, . . . . .   | 50     |
| Live stock (except castrated horses), . . . . .  | 50     |
| Ploughs with plough-shares, . . . . .  | 50     |
| Masts, spars and anchors for ships, . . . . .  | 50     |
| Oats in grain and straw, . . . . .   | 50     |
| Quicksilver, . . . . .   | 50     |
| Sulphur, . . . . .   | 50     |
| Cylindrical or angular steel bars for mining, . . . . .  | 50     |
| Fire engines and all kinds of pumps, . . . . .   | 50     |
| Crow-bars, common cutlasses without scabbards, scythes,<br>sickles, harrows, rakes, shovels, hoes and spades for<br>agricultural purposes, . . . . . | 75     |
| Hydraulic lime, . . . . .  | 50     |
| Water-pipes, . . . . .   | 50     |
| Iron and vegetal cards, . . . . .  | 50     |
| Wheelbarrows, . . . . .  | 50     |
| All collections of minerals, geology, and all branches<br>pertaining to natural history, . . . . .   | 75     |
| Crucibles, . . . . .   | 50     |
| Whalebone and parts of the whale, . . . . .  | 50     |
| Designs and models of machines, edifices, monuments and<br>ships, . . . . .  | 50     |
| Staves and heads for barrels, . . . . .  | 50     |
| Fresh fruit and vegetables, . . . . .  | 50     |
| Guano, . . . . .   | 50     |
| Ice, . . . . .   | 50     |
| Hyposulphate of soda, . . . . .  | 50     |
| Corn-meal, and hand corn-meal grinders, . . . . .  | 50     |
| Scientific instruments, . . . . .  | 1 00   |
| Books, pamphlets (bound or without binding), . . . . .   | 1 00   |
| Fire-wood, . . . . .   | 50     |
| Bricks and refractory earth, . . . . .   | 50     |
| Types, shields, chases, leads, rules, vignettes and printing<br>material, . . . . .  | 50     |
| Box-wood, . . . . .  | 50     |

|  |      |
|--|------|
| Building timber, . . . . .   | 50   |
| Corn, . . . . .  | 50   |
| Maps and spheres, . . . . .  | 1 00 |
| Machines and apparatus for industry, agriculture, mining,<br>science and arts, whole, or separate, or in extra pieces, | 50   |
| Sewing machines, whole or in parts, . . . . .  | 1 00 |
| Undressed blocks or marble slabs for paving, . . . . .   | 50   |
| Wicks and fercue-grass for mining, . . . . .   | 50   |
| Moulds and models for arts, . . . . .  | 50   |
| Cabinets of coins of all sorts, . . . . .  | 1 00 |
| Objects of natural history for museums and cabinets, . . . . .   | 50   |
| Hay and straw, . . . . .   | 50   |
| Plants and seeds for improving agriculture, . . . . .  | 50   |
| Lithographic stones, . . . . .   | 50   |
| Slates for roofs and pavements, . . . . .  | 50   |
| Common powder for mining and dynamite, . . . . .   | 50   |
| Vaccine virus, . . . . .   | 50   |
| Oars for boats, . . . . .  | 50   |
| Common salt introduced through Paso del Norte, . . . . .   | 50   |
| Saltpetre, . . . . .   | 50   |
| Sulphate of copper, . . . . .  | 50   |
| Anvils for silversmiths, . . . . .   | 50   |
| Printing ink, . . . . .  | 50   |
| Wooden type and other articles used in lithography, . . . . .  | 50   |
| Rags used to manufacture paper, . . . . .  | 50   |
| Iron rafters for roofs, . . . . .  | 50   |
| Anvils, . . . . .  | 50   |

## ART. II.

The merchandise specified in the Custom-House tariff, now in force from and after the 1st of November next, shall pay, besides the duties imposed by said tariff, an additional or package duty as follows ·

## SCHEDULE A.

Those comprised in the following fractions shall pay fifty cents for each one hundred kilograms gross weight.

1 to 3, 6 to 9, 13 to 16, 18, 21, 22, 26 to 36, 38 to 40, 42 to 46,

51, 52, 54, 58 to 65, 71 to 74, 76, 77, 79 to 84, 86 to 88, 90, 96, 97, 101, 103 to 107, 112 to 114, 117, 118, 120, 127, 129 to 131, 136 to 138, 149 to 151, 162 to 167, 170, 171, 183 to 185, 188 to 191, 198, 200, 202, 207, 208, 210, 212, 215, 233, 234, 252, 255, 256, 260 to 262, 265, 267, 268, 272 to 288, 290 to 299, 302 to 305, 314, 316, 317, 322, 324 to 330, 336, 343, 347 to 359, 364, 369, 371 to 373, 377 to 387, 391, 393 to 395, 397, 404 to 407, 409 to 412, 414, 416, 419 to 430, 434 to 437, 440 to 442, 444, 445, 447 to 453, 458, 460, 461, 465, 470 to 476, 481 to 489, 493, 495, 499, 502 to 504, 506, 507, 511, 515, 517, 522 to 527, 529, 530, 532 to 538, 540, 542 to 555, 559, 598, 599, 601 to 610, 612 to 614, 618 to 626, 631 to 634, 637 to 648, 651, 653 to 655, 657, 658, 660, 661, 663, 668, 686 to 705, 710 to 713, 717, 719, 725, 726, 728 to 731, 733, 735, 736, 738 to 740, 743 to 746, 749, 750, 752, 753, 756, 757, 759 to 762, 769 to 774, 793, 795, 797 to 799, 801 to 807, 816, 820 to 825, 827 to 838, 840, 841, 844 to 853, 855 to 864, 866 to 872, 874 to 882, 884 to 887, and 894.

#### SCHEDULE B.

All articles mentioned in the following fractions shall pay 75 cents for each one hundred kilograms (gross weight) :

4, 11, 19, 20, 23, 37, 41, 47, 56, 57, 78, 91, 92, 108, 111, 116, 119, 122 to 125, 132, 135, 141, 142, 153, 154, 155, 173, 186, 187, 192, 193, 203, 204, 209, 211, 213, 218, 253, 257, 264, 266, 300, 301, 312, 315, 360 to 363, 366 to 368, 389, 392, 408, 413, 415, 418, 433, 443, 446, 497, 498, 505, 528, 531, 539, 541, 557, 558, 617, 649, 650, 656, 664, 667, 669, 718, 724, 727, 734, 737, 751, 754, 755, 763, 767, 768, 792, 796, 839, 854, 883, 888, 889, and 891.

#### SCHEDULE C.

All articles mentioned in the following fractions shall pay \$1.00 for each one hundred kilograms (gross weight) :

5, 10, 12, 24, 25, 48 to 50, 53, 66 to 70, 75, 85, 89, 93 to 95, 98 to 100, 102, 109, 110, 115, 121, 126, 128, 133, 134, 139, 140, 143 to 148, 153, 156 to 161, 168, 169, 172, 174 to 182, 194 to 197, 199, 201, 205, 206, 214, 216, 217, 219 to 232, 235 to 251, 254, 258, 259, 263, 269, 270, 271, 289, 306 to 311, 313, 318 to 321, 323, 331 to 335, 337 to 342, 344 to 346, 365, 370, 374 to 376, 390, 396, 398 to 403, 417,

431, 432, 438, 454 to 457, 459, 462 to 464, 466 to 469, 477 to 480, 490 to 492, 494, 496, 500, 501, 508 to 510, 512 to 514, 516, 518 to 521, 556, 560 to 597, 600, 611, 615, 616, 627 to 630, 635, 636, 652, 659, 662, 666, 670 to 685, 706 to 709, 714 to 716, 720 to 723, 732, 741, 742, 747, 748, 758, 764 to 766, 775 to 791, 794, 800, 808 to 815, 817 to 819, 826, 843, 865, 873, 890, 892 and 893.

#### ART. III.

Raw petroleum and naphtha, when imported after the 1st of November next, instead of 88 per cent., which they pay at present on invoice value, according to section 393 of the tariff now in force, will pay 80 cents for each one hundred kilograms (gross weight) as additional or package duty.

#### ART. IV.

Foreign goods, not specified in the tariff now in force, after the 1st of November next, besides the duties now assessed on the importation, according to Article XXI of said tariff, shall pay an additional or package duty of 75 cents for each one hundred kilograms (gross weight).

#### ART. V.

Packages comprised in the same entry which, together, weigh less than one hundred kilograms, shall pay the same duty from 50 cents to \$1.00, according to their respective classification in the tariff.

#### ART. VI.

When a package contains goods of different value the duties shall be assessed upon the goods contained in said package having the greatest weight.

#### ART. VII.

The duty on packages shall not be collected on goods which are exempt from duties by virtue of the privileges granted to railroad companies, and upon those that in each importation the Secretary of the Treasury may think proper to exempt.

## ART. VIII.

From and after the 1st of November, 1881, the liquids mentioned in the schedule below shall pay, besides the present duties imposed by the tariff now in force and the package duty imposed by Article II of this decree, an additional duty per net kilogram as follows :

|   |        |
|---|--------|
| Gin in jars, bottles, jugs and demijohns, . . . . .   | \$0 10 |
| Gin in barrels, . . . . .   | 08     |
| Rum, arack and kirch-water in jars, bottles, jugs and demijohns, . . . . .                          | 12     |
| Rum, arack and kirch-water in barrels, . . . . .  | 10     |
| Whisky in jars, bottles, jugs and demijohns, . . . . .  | 8      |
| Whisky in barrels, . . . . .  | 5¾     |
| Brandy, cognac and aniseed in bottles, jars, jugs and demijohns, . . . . .                          | 8      |
| Brandy, cognac and aniseed brandy in casks, . . . . .   | 5¾     |
| Rum, absynthe, or other liquors not specified, in bottles, jugs and demijohns, . . . . .            | 8      |
| Rum, or other liquors not specified, when in casks, . . . . .                                       | 4½     |
| Beer and cider in bottles, . . . . .  | 1      |
| Beer and cider in barrels, . . . . .  | 0½     |
| Liquors in bottles or jars, . . . . .   | 8      |
| Liquors in barrels, . . . . .   | 3¾     |
| White wines, except those that are medicinal, when in bottles, jugs and demijohns, . . . . .        | 6      |
| White wine in casks, . . . . .  | 2¾     |
| Clarets (all sorts), except those which are medicinal, when in bottles, jugs and demijohns. . . . . | 4½     |
| Claret in casks, . . . . .  | 1¾     |

## ART. IX.

From and after the 1st of October, 1881, lumber for construction and cabinet work of all kinds, which are exported through the coast and frontier ports of the Republic, besides the duties collected, according to Section 19 of Article LXXVIII of the tariff now in force, shall pay an additional duty of \$1.00 per each ton of one cubical metre.

## ART. X.

From and after the 1st of October, 1881, lumber for construction and cabinet work of foreign production, which passes in transit by rivers and through part of the Republic, on their exportation shall pay a single duty of \$4.50 per ton of one cubic metre.

The above provision of this decree shall not be applied to foreign lumber in transit carried by railroads, when contractors have special contracts with the Mexican Government, containing clauses in regard to transits.

## ART. XI.

In liquidating the duties imposed on foreign goods, imported through the maritime and frontier Custom-House, they shall place in separate columns the amount of package duty and that of additional duty upon liquids established by this decree.

Ordered to be printed, circulated and enforced.

(Signed) LANDERO,  
*Secretary of the Treasury  
and Public Credit*

MEXICO, June 25th, 1881.

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LATE DECREE OF THE MEXICAN CONGRESS CONCERNING THE  
REVENUES OF THE MEXICAN REPUBLIC FOR THE  
FISCAL YEAR 1882 TO 1883.

*(Rendered May 26th, 1882.)*

*Tax upon Imports and Exports.*

Goods imported through the maritime and frontier custom-houses, which are subject to the duties fixed in the tariff of 1880 and to the laws of the 28th and 31st of May, 25th of June and 14th of December, 1881, will be subject to the following modifications.

A.—Shall be excepted from paying the package duties imposed

by the laws of 31st of May and 25th of June, 1881, the following articles :

Ploughs and plough-shares, masts and anchors for ships, quick-silver, live animals, bricks and tiles of all kinds, refractory earth, ordinary building timber, cotton, tobacco, coffee, sugar-cane seeds, slates for roofing, vaccine matter.

*B.*—All goods, arms, materials of war, etc., that the executive will purchase for the use of the public service, shall be imported free of duties.

*II.*—Duties on the consumption of foreign goods that are collected according to the law of the 11th of August, 1875, by the collectors of the Federal District and of the territory of lower California.

*III.*—Tonnage duties, pilot duties, storage and light-house duties shall be collected according to the tariff of November 8th, 1880, and the law of 28th of May, 1881.

*IV.*—Transit duties shall also be collected according to said tariff respecting the special concessions granted to railroad construction companies in the country.

*V.*—From and after the 1st of November next, silver and gold coin, or bullion, mineral ores in powder, mineral rock or mineral in any other form, shall be free from circulation duties while passing from one State into another, in the interior of the Republic, and shall be free from export duties. In order to provide for the deficit caused by the above fraction of incomes to the Treasury, on the same day the different quota fixed by the tariff on importation of foreign merchandise shall be raised two per cent. ; in the meantime the export duties upon gold and silver shall be collected according to the existing laws for the fiscal year.

*VI.*—From the 1st of November next, precious metals shall pay a tax of one-half of one per cent. upon the value of silver, and one-quarter of one per cent. upon the value of gold, the value of the same to be determined by a test of the metals. The executive shall determine the time and manner in which the same shall be collected.

*VII.*—Archil shall pay an export duty of \$10.00 per ton of 1,000 kilograms.



VII.—Building and cabinet timber shall pay an export duty of \$2.50 per *stère*, besides the duties imposed by the tariff of November 8th, 1880.

IX.—Tax on patents of navigation shall be collected according to laws in force, in the same manner as for this fiscal year.

X.—Fees may be collected by consuls, vice-consuls or commercial agents of the Republic, according to the tariff of November 8th 1880, and other laws in force. The executive is fully authorized to modify during the coming year all the regulations in regard to consular documents used for the importation of foreign goods.

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## NATURALIZATION LAWS.

(LAWS IN FORCE.)

*Minister of Foreign and Interior Relations.*

His Excellency the General-in-chief of the supreme executive power has thought proper to address me the following decree :

José Maria de Salas, General of Brigade and Chief of the liberating army of the supreme executive power, to the inhabitants of the Republic of Mexico be it known :

Having under my consideration the fact that one of the most efficacious means of procuring the felicity of the Republic, is to promote the augmentation of its population and facilitate the naturalization of industrious men, by removing the impediments that have opposed laws dictated by a principle less frank and liberal than those now professed by the administration, I have thought proper to decree, that before the national Congress will make the necessary reforms the following articles shall be observed :

1st.—Any foreigner who shall manifest the desire of becoming

a citizen of the Republic, and who will produce proof that he has a profession or carries on an industry that permits him to make an honest living, can obtain his letter of citizenship.

2d.—In the same manner any foreigner may obtain his naturalization letter by serving the nation either in the army or navy.

3d.—Letters of citizenship shall be issued by the President of the Republic, without any charge except those following for those named in Article I, stamp paper of the first-class, and for those under paragraph 1 upon common paper.

4th.—There shall be kept in the Ministry of the Interior and Foreign Relations a register where the names, country and profession of all foreigners that have become naturalized shall be entered.

5th.—The foreigners who will have become naturalized by virtue of the conditions of this decree, shall be considered as Mexicans, and in consequence shall be entitled to all rights and obligations imposed upon them.

6th.—No letter of citizenship shall be granted to any citizen of any nation at war with the Republic.

This is accordingly ordered to be published and circulated, and enforced. Done in the National Palace of Mexico, September 10th, A. D. 1846.

JOSE MARIA SALAS,  
MANUEL REJON.

I communicate the same for your information, and its enforcement.

GOD AND LIBERTY!

REJON,

*Secretary of State and of Foreign Relations.*

September 10th, 1846.

The President of the Republic has thought proper to direct to me the following decree:

Benito Juarez, Constitutional President of the United States of Mexico, make known to its inhabitants:

That the Congress of the Union has decreed the following:

*Sole and only article.*—All letters of citizenship shall be issued by the President of the Republic on common paper, stamped with

the seal of the Ministry of State. Accordingly Article III of the law of the 10th of September, 1846, is hereby repealed.

M. ROMERO RUBIO,  
*Deputy President.*

JUAN SANCHEZ AZCONA,  
*Deputy Secretary.*

JULIO ZARATE,  
*Deputy Secretary.*

HALL OF CONGRESS, Mexico, April 9th, 1870.

Accordingly, this decree is ordered to be printed, published and circulated, and enforced.

National Government Palace in Mexico, 11th of April A. D. 1870.

BENITO JUARES.

To the citizen, SEBASTIAN LERDO DE TEJADA,  
*Minister of Foreign Relations.*

The same is communicated to you for your information and desired end.

INDEPENDENCE AND LIBERTY!

LERDO DE TEJADA

To the citizen Governor of the State of ———  
April 10th.

ABSTRACT OF THE LAWS OF MEXICO FOR THE  
ACQUISITION AND OWNERSHIP OF REAL  
ESTATE AND MINES IN THE RE-  
PUBLIC OF MEXICO.

Foreigners established or residing in Mexico are authorized to acquire and possess real estate from private owners, and also mines of all kinds.

The legitimate means of acquiring real estate and mines or mining interests are by purchase, adjudication, denouncement, and by any other means established by the Mexican common law, and mining ordinances.

No foreigner can own any real estate in a frontier State or Territory of the Republic except by previously obtaining permission of the President of the Republic; or, without this permission, provided it is situated beyond sixty miles from the frontier line, or beyond fifteen miles from the coast.

Any foreigner who, desiring permission to own real estate within the above mentioned limits, must address his petition to the Secretary of Public Works at the City of Mexico, accompanied by a report from the Government of the State or Territory where the property is situated.

The foreigner proprietor of real estate forfeits his rights of possession under any of the following circumstances:

1st.—By being away from the Republic with his family for more than two years without permission from the general Government.

2d.—By residing outside of the Republic, even though he has a representative residing upon his property or in the Republic.

3d.—By the transferring or conveying said property by inheritance or any other means to any person non-resident in the Republic.

Any foreign property-owner who may fall into any of the three conditions above stipulated, is compelled to sell his real estate to a Mexican citizen within two years from the date of his absence from the Republic; or, in case he fails to comply with this prescription, the public authority will effect the sale of the property, depositing the proceeds of it to the order of the owner of the property. If said sale has been made by *denouncement* of the property, one-tenth of the proceeds shall go to the person who made the denouncement and the balance to the absent foreigner.

Are exempt from these rules, any foreigners who are members of any mining company that has either discovered or restored any abandoned mine. In this case he will keep his right to his property through his co-associates in it, no matter what may be the time and circumstance of his absence, as long as the labors of the association are kept up.

It is entirely forbidden to natives of neighboring nations and to those naturalized in them to obtain Government lands situated in a neighboring State or Territory.

In order that foreigners, who have acquired real estate, may become naturalized, it is sufficient that after reporting their acquisition to the proper local authority, they apply for their naturalization papers.

The foreigner residing in the Republic and able to acquire public lands, can denounce 2,500 hectares, and no more, as the same privilege is granted to native citizens.

In order to obtain public lands in Mexico, a denouncement must be made before the judge who may have charge of Federal matters in the judicial district where the land is situated. After the denouncement has been presented by petition in writing, the survey and measurement of the land has to be made by the engineer appointed by the judge. When the survey and measurement has been made and plated, the judge will ascertain if the land really belongs to the public domain. If such is the case, and there is no opponent, the judge will decree the adjudication and ownership of the person who has denounced it.

If there is an opponent to the denouncement, a judgment has to be passed after a legal trial.

If the land is not represented in the Federal Treasury to have been granted, the denouncement will be published three times within thirty days, in which time if an opponent to the denouncement appear, the same proceedings will take place as stated in the clause above. If no opponent appear, the judge will then decree the possession only, and not the title of the denounced lands.

The judicial decree of adjudication of public lands, either in possession or property, cannot take its whole effect, until it has been approved by the President of the Republic; for which purpose the papers in the case will be sent to that supreme authority through the Department of Public Works, accompanied by a report from the Government of the State, or the highest political authority of the Territory where the denouncement has been made. The approval of the President once obtained, and the value of the land having been paid by the denouncing party, according to existing tariff, the judge will then grant title of property or of possession as the case may be.

The adjudication in possession differs from that in property in that the former gives property as far as the Government and the opponent defeated in the trial are concerned, but not in regard to a third party, in which case the property may be obtained by limitation or any other legal title.

All expenses of surveying, measurement, and otherwise connected with the denouncement, must be paid by the denouncing party, but they may be charged to the opponent in case that judgment shall be passed to that effect.

Grantees of public lands are compelled to locate on their grant at least one inhabitant for every two hundred hectares, who shall reside thereon without interruption during ten years, not being absent more than four months during each year. In failing to comply with this clause of the law he will forfeit his right to the land as well as the price paid for it.

Any person enabled to own property by denouncement of public lands cannot obtain more than 2,500 hectares, by virtue of the law of limitation, until he has had possession of the land for ten years and has complied with the other requisites of law and those prescribed in the above clause.

Foreigners who have acquired real estate from private owners or the Government of Mexico, are subject to all kinds of taxation, and are bound to do military duty whenever called upon to protect the property they have acquired, preserve public order and tranquility in the place where they reside, and are bound to take part in the elucidation of all questions that may arise in regard to said property, according to the existing laws and before the tribunals of Mexico, without ever appealing to their rights of foreign citizenship, to any intervention from any foreign power.

The rules to be observed in the transfer of any property obtained from private owners are very simple, but it is always better for foreigners to observe the practice of the native citizen, which consists in engaging a notary public or a lawyer to examine the title and have it registered in the archives at the office of the notary public and in the register of the office where taxes are paid for the local (municipal) and Federal Government

## SYNOPSIS OF MEXICAN LAWS ON INHERITANCE.

Foreigners making their last will and testament within Mexican territory can select the law of their country in regard to the minor solemnity of the act; but, regarding the external legal formalities, will subject themselves to the Mexican laws upon the matter.

When the testator is not conversant with the language of the country, there must be present in the act, besides the witnesses, two interpreters appointed by the testator himself.

Testaments made in foreign countries will have their value in Mexico whenever they have been made authentically and in compliance with the laws of the country in which they are executed.

Only foreigners who, according to the laws of their country, can will or leave *ab intestado* their estate to Mexican citizens, are authorized to inherit or to obtain *ab intestado* the estate of any citizen of Mexico.

## INFORMATION FOR PERSONS DESIRING TO PURCHASE REAL ESTATE OR MAKE CONTRACTS OF ANY KIND IN MEXICO.

All transfers of property, arguments, contracts and all other documents in order to become valid in Mexico must be drawn up and executed before a notary public (*escribano público*).

The required stamps must be placed on the document, or it will be null and void (see stamp law), and parties using the same without stamps are subject to heavy penalties.

The original document remains in the archives, and only certified copies are delivered to parties interested.

The *Alcabala* is a tax that has to be paid into the Government Treasury upon the amount mentioned in every transfer of real estate. It is uniform all over the Republic—being one and a-half per cent. upon the amount mentioned in the deed or transfer, and twenty-five per cent. additional tax upon the one and a-half per cent.

Some States have imposed a railroad tax on real estate transfers. In the State of San Luis Potosi it is ten per cent. on amount paid as *alcabala* for transfer of dominion.

## STATISTICS.

FEDERAL REVENUE DURING THE FISCAL YEAR 1879 TO 1880,  
AS PRESENTED IN THE REPORT OF THE TREASURER  
OF THE NATION—\$21,936,165.39 DERIVED FROM  
THE FOLLOWING RESOURCES.

|     |   |                 |
|-----|---|-----------------|
| 1.  | From custom-houses (imports alone \$12,338,-<br>771.87), . . . . .  | \$13,438,284 35 |
| 2.  | Incomes from the District and Territory of<br>Lower California, . . . . .   | 1,173,877 81    |
| 3.  | From stamp duties, . . . . .  | 3,725,036 73    |
| 4.  | “ direct taxation, . . . . .  | 592,688 48      |
| 5.  | “ products of national property, . . . .  | 148,535 22      |
| 6.  | “ “ of mints, . . . . .   | 300,389 32      |
| 7.  | Renting of the following mints:—<br>Guanaguato and Zacatecas, . \$300,000<br>Alamos, Culiacan and Herme-<br>sillo, . . . . . 100,000<br>San Luis, . . . . . 100,000<br>Chihuahua, . . . . . 60,000<br>Durango and Guadalajara, . 160,000  |                 |
|     |   | 720,000 00      |
| 8.  | Fund belonging to public institutions, . . . .  | 46,716 68       |
| 9.  | Post office, . . . . .  | 967,927 23      |
| 10. | Smaller branches of revenue:—<br>Rents, . . . . . \$22,221 75<br>Miscellaneous profits, . . 188,136 04<br>General archives, . . . . 108 71<br>Gift to the Treasury, . . . . 120 00<br>Appointments of notary<br>publics, . . . . . 600 00<br>Legalization of signatures, . . . . . 2,305 60<br>From telegraphs, . . . . 119,890 15<br>“ fines, . . . . . 11,104 16<br>Naval patents, . . . . . 1,385 31 |                 |



|  |           |                 |
|--|-----------|-----------------|
| Premiums, . . . . .  | 7,306 26  |                 |
| Costs of courts, . . . . .   | 2,705 63  |                 |
| Redintegration, . . . . .  | 497 25    |                 |
| Salt mines, . . . . .  | 400 00    |                 |
| Public lands, . . . . .  | 33,061 49 |                 |
| Sale of useful objects, . . . . .                                  | 2,731 01  |                 |
| Privileges and patents . . . . .                                   | 565 00    |                 |
| Not specified, . . . . .   | 10,117 40 |                 |
| From consulates, . . . . .   | 70,366 00 |                 |
|  |           | 473,621 76      |
| 11. Products of property and capital, . . . . .                    |           | 856 25          |
| 12. Ten per cent. tax upon lotteries, . . . . .                    |           | 41,341 53       |
| 13. Product of the lottery of the Cuantitlan<br>Railway, . . . . . |           | 25,000 00       |
| 14. Duties on home manufactures, . . . . .                         |           | 148,178 09      |
| 15. Balance of taxes, . . . . .                                    |           | 90,320 09       |
| 16. Donation to pay the American debt, . . . . .                   |           | 43,391 85       |
|  |           | \$21,936,165 39 |
| Balance on hand from last year, . . . . .                          |           | 1,468,116 35    |
| Total amount to meet the budget, . . . . .                         |           | \$23,404,281 74 |

STATEMENT OF THE REVENUE AND EXPENDITURES OF  
THE DIFFERENT STATES OF THE REPUBLIC OF  
MEXICO DURING THE FISCAL YEAR  
1879 TO 1880.

|                             | Revenue.    | Expenditures. |
|-----------------------------|-------------|---------------|
| 1. Aguascaliente, . . . . . | \$66,748 57 | \$61,085 85   |
| 2. Campeche, . . . . .      | 126,301 32  | 183,061 21    |
| 3. Coahuila, . . . . .      | 57,116 66   | 57,116 66     |
| 4. Colima, . . . . .        | 96,365 43   | 90,357 44     |
| 5. Chiapas, . . . . .       | 79,958 55   | 78,400 00     |
| 6. Chihuahua, . . . . .     | 100,084 04  | 122,472 37    |
| 7. Durango, . . . . .       | 144,280 56  | 118,641 58    |
| 8. Guanajuato. . . . .      | 927,576 30  | 819,053 93    |

|                                |                       |                       |
|--------------------------------|-----------------------|-----------------------|
| 9. Guerrero, . . . . .         | 88,426 15             | 91,640 36             |
| 10. Hidalgo, . . . . .         | 382,385 39            | 361,026 00            |
| 11. Jalisco, . . . . .         | 307,540 51            | 325,050 27            |
| 12. Mexico . . . . .           | 415,633 40            | 449,734 09            |
| 13. Michoacan, . . . . .       | 271,555 69            | 233,763 42            |
| 14. Morelos, . . . . .         | 233,527 11            | 200,467 56            |
| 15. Nuevo Leon, . . . . .      | 97,460 23             | 96,083 00             |
| 16. Oaxaca, . . . . .          | 530,993 58            | 530,993 58            |
| 17. Puebla, . . . . .          | 688,155 00            | 688,155 00            |
| 18. Queretaro, . . . . .       | 178,831 20            | 178,728 83            |
| 19. San Luis Potosi, . . . . . | 332,927 78            | 327,429 91            |
| 20. Sinaloa, . . . . .         | 123,969 30            | 122,369 04            |
| 21. Sonora, . . . . .          | 142,000 00            | 167,296 50            |
| 22. Tabasco, . . . . .         | 91,425 26             | 84,019 91             |
| 23. Tamaulipas, . . . . .      | 100,000 00            | 98,525 25             |
| 24. Tlaxcala, . . . . .        | 87,369 79             | 87,787 34             |
| 25. Vera Cruz, . . . . .       | 618,557 75            | 607,335 43            |
| 26. Yucatan, . . . . .         | 229,172 44            | 228,792 33            |
| 27. Zacatecas, . . . . .       | 493,600 00            | 477,383 06            |
| Total, . . . . .               | <u>\$7,011,962 01</u> | <u>\$6,825,684 07</u> |

STATEMENT SHOWING THE EXPENDITURES OF THE DIFFER-  
ENT BRANCHES OF THE GOVERNMENT FOR THE  
FISCAL YEAR 1879-1880.

|                                      | Amount authorized<br>to be expended. | Amount actually<br>expended. |
|--------------------------------------|--------------------------------------|------------------------------|
| 1. Legislative Department, . . . . . | \$983,242 00                         | \$901,897 69                 |
| 2. Executive " . . . . .             | 48,832 40                            | 42,170 48                    |
| 3. Judicial " . . . . .              | 347,878 00                           | 319,915 91                   |
| 4. Exterior relations, . . . . .     | 273,711 46                           | 255,290 88                   |
| 5. Interior " . . . . .              | 2,831,648 24                         | 2,432,168 14                 |
| 6. Justice, . . . . .                | 1,152,347 36                         | 1,057,183 00                 |
| 7. Public works, . . . . .           | 3,018,119 42                         | 2,179,088 57                 |
| 8. Treasury, . . . . .               | 4,938,294 14                         | 4,565,519 87                 |
| 9. War and marine, . . . . .         | 9,938,224 10                         | 8,678,562 66                 |
| Total, . . . . .                     | <u>\$23,532,297 12</u>               | <u>\$20,431,797 20</u>       |

## RECAPITULATION.

*Sums of Authorized Budget.*

|   |                        |
|---|------------------------|
| For Federal Government, . . . . .       | \$23,532,297 12        |
| For divers State Governments, . . . . . | 7,657,897 05           |
| Total, . . . . .                        | <u>\$31,190,194 17</u> |

|   |                        |
|---|------------------------|
| Federal revenue according to Treasurer's Report<br>for 1879-1880, . . . . . | \$21,936,165 39        |
| Revenue of the different States as already stated, . . . . .                | 7,011,962 01           |
| Total, . . . . .  | <u>\$28,948,127 40</u> |

*Sums Expended.*

|   |                        |
|---|------------------------|
| For Federal Government, . . . . .           | \$20,431,896 15        |
| For the Government of the States, . . . . . | 6,825,684 07           |
| Total, . . . . .                            | <u>\$27,257,580 22</u> |

## THE VALUE OF REAL ESTATE.

The number of estates or farms in the Republic of Mexico in 1856 amounted to 13,000, according to documents on file with the collector of direct contributions, and the value of the same was assessed at \$720,000,000, and the value of city property was set down at \$635,000,000, making together the total value of real estate in Mexico at that time amount to \$1,355,000,000.

The majority of the population of Mexico resided in 1856 in 26,468 cities, towns, villages, plantations and ranches, most of them situated on the plateau and on the planes of the Cordilleras or the inclined plane leading from the plateau to the coasts.

It was estimated that in 1856 over one hundred millions of dollars was in circulation in the Republic.

STATEMENT SHOWING THE VALUE OF REAL ESTATE IN THE  
REPUBLIC OF MEXICO IN 1881.

|    | Name of State.    | Value of<br>City Property. | Value of<br>Rural Property. | Total Value of<br>Real Estate. |
|----|-------------------|----------------------------|-----------------------------|--------------------------------|
|    |                   | \$                         | \$                          | \$                             |
| 1  | Aguascalientes    | 1,700,000 00               | 3,342,000 00                | 5,042,000 00                   |
| 2  | Campeche          | 552,509 00                 | 691,286 00                  | 1,243,795 00                   |
| 3  | Coahuila          | 1,140,828 00               | 1,809,865 00                | 2,950,693 00                   |
| 4  | Colima            | 1,891,790 00               | 800,852 00                  | 2,692,642 00                   |
| 5  | Chiapas           | 439,994 00                 | 1,836,286 00                | 2,276,280 00                   |
| 6  | Chihuahua         | 1,646,730 00               | 3,007,200 00                | 4,653,930 00                   |
| 7  | Durango           | 2,653,331 00               | 4,404,548 00                | 7,057,879 00                   |
| 8  | Guanajuato        | 8,572,982 88               | 21,285,290 89               | 29,858,273 77                  |
| 9  | Guerrero          | 1,993,304 00               | 11,503,400 00               | 13,496,704 00                  |
| 10 | Hidalgo           | 2,559,311 22               | 11,825,426 37               | 14,384,737 59                  |
| 11 | Jalisco           | 10,085,295 75              | 12,980,953 77               | 23,066,249 52                  |
| 12 | Mexico            | 4,444,651 43               | 18,946,445 46               | 23,391,096 89                  |
| 13 | Michoacan         | 7,299,057 00               | 13,650,657 00               | 20,949,714 00                  |
| 14 | Morelos           | 1,064,059 07               | 4,193,315 32                | 5,257,374 39                   |
| 15 | Nuevo Leon        | 5,029,463 00               | 4,555,327 00                | 9,584,790 00                   |
| 16 | Oaxaca            | 6,178,534 00               | 5,262,766 00                | 11,441,300 00                  |
| 17 | Puebla            | 18,411,678 55              | 14,609,865 91               | 33,021,544 46                  |
| 18 | Queretaro         | 4,861,238 00               | 5,699,245 00                | 10,560,483 00                  |
| 19 | San Luis Potosi   | 5,625,608 58               | 7,928,048 14                | 13,553,656 72                  |
| 20 | Sinaloa           | 2,996,313 00               | 1,611,477 00                | 4,607,790 00                   |
| 21 | Sonora            |                            |                             | 6,898,000 00                   |
| 22 | Tabasco           | 1,001,309 00               | 1,856,940 00                | 2,858,249 00                   |
| 23 | Tamaulipas        | 4,264,665 00               | 1,950,270 00                | 6,214,935 00                   |
| 24 | Tlaxcala          | 713,157 00                 | 5,069,457 00                | 5,782,614 00                   |
| 25 | Vera Cruz         | 18,139,822 14              | 5,793,565 00                | 23,933,387 14                  |
| 26 | Yucatan           | 1,449,604 44               | 1,728,573 62                | 3,178,178 06                   |
| 27 | Zacatecas         | 5,774,416 42               | 9,841,235 59                | 15,615,652 01                  |
| 28 | Ter. of L. Cal.   |                            |                             | 7,598,682 00                   |
| 29 | Federal districts | 49,194,724 04              | 5,689,697 97                | 54,884,422 01                  |
|    | Total             | 169,684,376 52             | 181,873,994 04              | 366,055,052 56                 |

The estimated value of real estate in Mexico, without regard to its taxable value, sums up for the year 1881 to the amount of \$432,000,000. The author of the present work, from his own observations in traveling through the country, believes that the above sum does not actually represent more than one-fourth of the true value of real estate in Mexico.

#### MINING STATISTICS.

During the time that Mexico was a colony of Spain, that is from 1537 to 1821, the sum of \$2,086,269,703 silver and \$68,768,411 gold, making a total of \$2,155,038,124, was produced by the Mexican mines; and after independence was effected, from 1822 to 1880, the mines produced in silver \$900,658,309, and in gold \$49,413,786, making a total of \$950,072,095, which amounts in all to the sum of \$3,105,110,219. This immense amount of coin is about the sum in round numbers that *France* lost in the Franco-Prussian war. What is mining compared with industry?

TABLE SHOWING THE EXPORTS OF TIMBER TO FOREIGN COUNTRIES FROM THE REPUBLIC OF MEXICO  
THE FISCAL YEAR ENDING IN 1875.

| Quality of Timber.          | Total value exported through all the ports, in dollars. | Amount of duties paid the Mexican Government. |
|-----------------------------|---|---|
| Mahogany, . . . . .         | \$877,973 97  | \$103,455 78                                  |
| Cedar, . . . . .            | 79,859 00   | 8,114 25                                      |
| Lumber, . . . . .           | 3,963 14  | 8 64  |
| Palo Moral, . . . . .       | 105,555 20  | —   |
| Palo de tinte (dye wood), . | 543,378 06  | —   |
| Tapinceran, . . . . .       | 150 00  | 3 00  |
|                             | <hr/>   | <hr/>   |
|                             | \$1,610,879 37  | \$111,581 67                                  |
|                             | <hr/>   | <hr/>   |

TOTAL IMPORTS FROM FOREIGN COUNTRIES INTO THE  
REPUBLIC OF MEXICO DURING THE FISCAL  
YEAR ENDING IN 1875.

| From what countries imported. | Invoice value.         | Value at Mexican ports. | Custom House duties.   |
|-------------------------------|------------------------|-------------------------|------------------------|
| England, . . .                | \$8,657,168 68         | \$12,523,745 77         | \$5,157,476 92         |
| France, . . .                 | 3,096,990 17           | 4,453,327 26            | 1,811,713 42           |
| Germany, . . .                | 1,005,763 33           | 1,658,394 12            | 721,912 75             |
| Spain, . . .                  | 914,908 58             | 1,329,527 02            | 610,738 42             |
| South America, .              | 90,031 94              | 202,553 93              | 74,869 89              |
| United States,                | 5,028,635 91           | 7,133,307 83            | 3,444,822 09           |
|                               | <u>\$18,793,493 61</u> | <u>\$27,300,855 93</u>  | <u>\$11,821,523 49</u> |

TABLE INDICATING THE COST OF RAISING AND GATHERING ONE "ARROBA," OR 25 POUNDS, OF COTTON IN THE DIVERS STATES OF THE MEXICAN REPUBLIC, AND ITS COST LAID DOWN AT THE NEAREST PORT OF EXPORTS, AND THE PROFIT ITS CULTIVATION WILL GIVE TO THE AGRICULTURIST.

Taken from a memoir upon the culture of cotton in Mexico by Señor Don José Andrade in August, 1864.

(Since that time other States have been created out of the State of Mexico: Puebla, Tamaulipas, San Luis Potosi, etc., and Yucatan.)

The price of freight given in this table is at present much reduced, but it must be remembered that in 1864 nearly all the means of transportation was engaged in hauling cotton from Texas to Mexico, and that all the facilities for transportation were inadequate to the task.

The price of 18 cents is a fair average price as is also the cost of raising the same.

| Cotton gathered in the following States. | Transported to the following-ports. | Cost of                       | Cost of                          | Total                           | Average              | Profit         | Profit                 |
|--|-------------------------------------|-------------------------------|----------------------------------|---------------------------------|----------------------|----------------|------------------------|
|  |                                     | raising cotton per 25 pounds. | freight per arroba of 25 pounds. | expense to port of embarkation. | Value per 25 pounds. | per 25 pounds. | per fanego or 9 acres. |
|  |                                     | \$                            | \$                               | \$                              | \$                   | \$             | \$                     |
| Aguascalientes                           | San Blas,                           | 1 38                          | 2 25                             | 3 63                            | 4 50                 | 87             | 264 00                 |
| Baja California                          | { Any port in that }                |                               | 37 1                             | 75                              |                      | 2 75           | 836 00                 |
| Chiapas                                  | Tonala                              |                               | 55 1                             | 93                              |                      | 2 57           | 781 00                 |
| Chihuahua                                | Altata                              | 2 50                          | 3 88                             |                                 |                      | 62             | 188 00                 |
| Coahuila                                 | Matamoros                           | 1 62                          | 3 00                             |                                 |                      | 1 50           | 456 00                 |
| Colima                                   | Manzanillo                          |                               | 37 1                             | 75                              |                      | 2 75           | 836 00                 |
| Durango                                  | Mazatlan                            | 1 12                          | 2 50                             |                                 |                      | 2 00           | 608 00                 |
| Guanajuato                               | Tampico                             | 1 37                          | 2 75                             |                                 |                      | 1 75           | 532 00                 |
| Gerrero                                  | Acapulco                            |                               | 62 2                             | 00                              |                      | 2 50           | 760 00                 |
| Island of Carmen                         | Carmen                              |                               | 25 1                             | 63                              |                      | 2 87           | 872 00                 |
| Jalisco                                  | San Blas                            | 1 50                          | 2 88                             |                                 |                      | 1 62           | 492 00                 |
| Mexico                                   | Vera Cruz                           | 1 25                          | 2 63                             |                                 |                      | 1 87           | 568 00                 |
| Michoacan                                | Zacatula                            | 1 70                          | 3 08                             |                                 |                      | 1 42           | 431 00                 |
| Nuevo Leon                               | Matamoros                           | 1 25                          | 2 63                             |                                 |                      | 1 87           | 568 00                 |
| Oaxaca                                   | Huatula                             |                               | 84 2                             | 22                              |                      | 2 28           | 693 00                 |
| Puebla                                   | Vera Cruz                           |                               | 87 2                             | 25                              |                      | 2 25           | 684 00                 |
| Queretaro                                | Tampico                             | 1 10                          | 2 48                             |                                 |                      | 2 02           | 614 00                 |
| San Luis Potosi                          | do.                                 | 1 37                          | 2 75                             |                                 |                      | 1 75           | 532 00                 |
| Sierra Gorda                             | do.                                 | 1 10                          | 2 48                             |                                 |                      | 2 02           | 614 00                 |
| Sinaloa                                  | Altata                              |                               | 87 2                             | 25                              |                      | 2 25           | 684 00                 |
| Sonora                                   | Guaymas                             |                               | 62 2                             | 00                              |                      | 2 50           | 760 00                 |
| Tabasco                                  | Frontera                            |                               | 50 1                             | 88                              |                      | 2 62           | 796 00                 |
| Tamaulipas                               | Tampico                             |                               | 52 1                             | 90                              |                      | 2 60           | 790 00                 |
| Tehuantepec                              | { Tehuantepec or }                  |                               | 24 1                             | 62                              |                      | 2 88           | 875 00                 |
|  | { Minatillan }                      |                               |                                  |                                 |                      |                |                        |
| Tlaxcala                                 | Vera Cruz                           |                               | 87 2                             | 25                              |                      | 2 25           | 684 00                 |
| Vera Cruz                                | do.                                 |                               | 37 1                             | 75                              |                      | 2 75           | 836 00                 |
| Yucatan                                  | Campeche                            |                               | 45 1                             | 83                              |                      | 2 67           | 811 00                 |
| Zacatecas                                | San Blas                            | 2 00                          | 3 38                             |                                 |                      | 1 12           | 340 00                 |

TABLE SHOWING THE NUMBER OF PUBLIC SCHOOLS IN THE STATES AND THE TERRITORY OF LOWER CALIFORNIA, AND THE COST OF THEIR MAINTENANCE FOR THE YEAR 1880.

| STATES.                    | Male schools. | Female schools. | Total. | Number of male pupils. | Number of female pupils. | Total number of pupils. | Annual cost of the schools |
|----------------------------|---------------|-----------------|--------|------------------------|--------------------------|-------------------------|----------------------------|
|                            |               |                 |        |                        |                          |                         | \$                         |
| 1. Aguascalientes }        | 53            | 26              | 79     | 4,800                  | 1,200                    | 6,000                   | 10,000                     |
| 2. Campeche                | 43            | 14              | 57     | 3,600                  | 700                      | 4,300                   | 15,000                     |
| 3. Coahuila                | 70            | 30              | 100    | 5,230                  | 2,127                    | 7,357                   | 26,000                     |
| 4. Colima                  | 18            | 17              | 35     | 1,452                  | 1,502                    | 2,954                   | 18,000                     |
| 5. Chiapas                 | 78            | 12              | 90     | 2,125                  | 500                      | 2,625                   | 10,000                     |
| 6. Chihuahua               | 73            | 40              | 113    | 3,350                  | 928                      | 4,278                   | 28,473                     |
| 7. Durango                 | 95            | 30              | 125    | 3,102                  | 1,350                    | 4,452                   | 20,000                     |
| 8. Guanajuato              | 176           | 145             | 321    | 10,754                 | 7,045                    | 17,799                  | 81,386                     |
| 9. Guerrero                | 392           | 28              | 420    | 13,006                 | 1,755                    | 14,761                  | 34,965                     |
| 10. Hidalgo                | 442           | 76              | 518    | 15,819                 | 3,371                    | 19,190                  | 82,287                     |
| 11. Jalisco                | 439           | 275             | 714    | 28,376                 | 11,160                   | 39,536                  | 100,000                    |
| 12. Mexico                 | 887           | 181             | 1,068  | 41,321                 | 10,245                   | 51,566                  | 187,216                    |
| 13. Michoacan              | 154           | 89              | 243    | 7,000                  | 3,200                    | 10,200                  | 52,756                     |
| 14. Morelos                | 47            | 40              | 87     | 8,209                  | 5,387                    | 13,596                  | 22,866                     |
| 15. Nuevo Leon             | 181           | 104             | 285    | 8,928                  | 4,732                    | 13,660                  | 68,000                     |
| 16. Oaxaca                 | 234           | 47              | 281    | 16,420                 | 3,296                    | 19,716                  | 50,982                     |
| 17. Puebla                 | 889           | 118             | 1,007  | 50,320                 | 15,000                   | 65,320                  | 153,000                    |
| 18. Queretaro              | 101           | 62              | 163    | 6,271                  | 2,922                    | 9,193                   | 30,000                     |
| 19. San Luis Potosi }      | 183           | 56              | 239    | 9,486                  | 3,690                    | 13,176                  | 40,000                     |
| 20. Sinaloa                | 238           | 42              | 280    | 6,600                  | 2,600                    | 9,200                   | 58,000                     |
| 21. Sonora                 | 80            | 25              | 105    | 3,500                  | 740                      | 4,240                   | 20,000                     |
| 22. Tabasco                | 48            | 17              | 65     | 2,695                  | 525                      | 3,220                   | 20,000                     |
| 23. Tlaxcala               | 176           | 18              | 194    | 8,100                  | 1,550                    | 9,650                   | 20,000                     |
| 24. Tamaulipas             | 60            | —               | 60     | 4,000                  | —                        | 4,000                   | 10,000                     |
| 25. Vera Cruz              | 580           | 149             | 729    | 20,021                 | 5,937                    | 25,958                  | 218,935                    |
| 26. Yucatan                | 163           | 39              | 202    | 8,659                  | 2,643                    | 11,302                  | 50,000                     |
| 27. Zacatecas              | 311           | 178             | 489    | 13,738                 | 6,653                    | 20,391                  | 72,000                     |
| Ter. of Lower California } | 17            | 9               | 26     | 677                    | 367                      | 1,044                   | 10,000                     |
| Total                      | 6,228         | 1,867           | 8,095  | 307,559                | 101,125                  | 408,684                 | 1,510,446                  |



In 1874, according to a statement presented by Señor José Covarrubias, in a laborious report that he made upon public instruction in the Republic of Mexico, there were 8,103 primary schools, attended by 349,001 scholars of both sexes. According to the latest datas received in the Secretary of State's office in 1880, there were in the Republic 8,536 primary schools, attended by 435,953 scholars. This shows in six years an augmentation in favor of public schools of 433, and of 86,952 children more attending the same.

TABLE SHOWING THE ALTITUDES OF SOME IMPORTANT POINTS IN THE REPUBLIC.

| Names of Places.                                   | Latitude.   | Latitude west of Greenwich. | Altitude in feet. |
|--|-------------|-----------------------------|-------------------|
| Fort Brown, Texas, . . . . .                       | 25° 53' 16" | 97° 26' 22"                 | 165.5             |
| Edinburgh, Texas, . . . . .                        | 26° 5' 53"  | 98° 13' 37"                 | 422.4             |
| Ringold Barrack, Texas, . . . . .                  |             |                             | 521.6             |
| Laredo, Texas, . . . . .                           | 27° 30' 22" | 99° 28' 47"                 | —                 |
| Eagle Pass, Texas, . . . . .                       | 28° 42' 43" | 100° 30' 26"                | —                 |
| Presidio del Norte, Texas, . . . . .               | 29° 33' 53" | 104° 26' 27"                | 2,779.0           |
| San Eleazario, Texas, . . . . .                    | 31° 35' 12" | 106° 16' 15"                | 3,607.3           |
| El Paso, Texas, . . . . .                          | 31° 44' 15" | 106° 29' 5"                 | 3,795.0           |
| El Paso Plaza, Mexico, . . . . .                   | —           | —                           | } bank of river   |
| Laguna Encenilla, . . . . .                        | —           | —                           | 3,814.0           |
| Camp between Encenilla and Chihuahua, . . . . .    | —           | —                           | 5,317.0           |
| Curihuiriacic, . . . . .                           | 28° 12'     | —                           | 4,940.0           |
| Mining town 90 miles west of Chihuahua, . . . . .  | —           | —                           | 6,275.0           |
| La Bufa Mountain, west of Curihuiriacic, . . . . . | —           | —                           | 7,918.0           |

| Names of Places.  | Latitude.   | Longitude west of Greenwich. | Altitude in feet. |
|---|-------------|------------------------------|-------------------|
| Chihuahua,  | _____       | _____                        | 7,918.0           |
| San Bernardo, spring route of Coahuila to Mapimi,                   | _____       | _____                        | 4,700.0           |
| San Sebastian, Nazas River,   | _____       | _____                        | 3,785.0           |
| San Lorenzo, near Rio de Nazas,                                     | _____       | _____                        | 3,815.0           |
| San Juan, Valley of Nazas,  | _____       | _____                        | 3,775.0           |
| Pozo,   | _____       | _____                        | 3,990.0           |
| Parras (city),  | 25° 25'     | _____                        | 4,987.0           |
| Encantada, rancho near the road to Parras and San Luis Potosi Fork, | _____       | _____                        | 6,104.0           |
| Rinconada Hacienda, at the descent of plateau,                      | _____       | _____                        | 3,381.0           |
| Montery (city),   | 20° 40' 13" | 100° 25' 36"                 | 1,626.0           |
| Cerralvo,   | _____       | _____                        | 1,000.0           |
| Pontiaquedo,  | _____       | _____                        | 700.0             |
| Reynosa (Rio Bravo),  | _____       | _____                        | 184.0             |
| Catorce,  | _____       | _____                        | 7,193.68          |
| Cerro de los Angels,  | _____       | _____                        | 10,467.60         |
| Charcas,  | _____       | _____                        | 6,994.0           |
| San Luis Potosi,  | _____       | _____                        | 6,018.48          |

## MEXICAN STAMP DUTY—ABRIDGED.

This work does not permit us to give in full the stamp duty law (*ley del timbre*), but we make such abstracts as will be found most interesting to foreigners.

Article 1st of the law says : “ The Federal Revenue, known as stamp duty, shall be made effective by means of stamps, according to the disposition of this law.”

Article 2d.—The stamp shall consist of three different classes, first, stamps for documents and books ; second, stamps for goods, and, third, stamps for Federal contributions.

Article 3d.—The stamps shall only be valid for the year mentioned in their faces, or during the time the executive may determine, changing their value, if necessary.

Article 4th.—*The stamps for documents and books* shall be of the following denominations :

- I.—First, ten dollars.
- Second, five dollars.
- Third, one dollar.
- Fourth, fifty cents.
- Fifth, twenty-five cents.
- Sixth, ten cents.
- Seventh, five cents.
- Eighth, three cents.
- Ninth, one cent.

II.—The stamps for merchandise shall be of the following denominations, viz., one, three, five and ten cents.

III.—The stamps to be used for the payment of Federal contributions shall be of the following denominations, viz. :

- First, five dollars.
- Second, one dollar.
- Third, twenty-five cents.
- Fourth, five cents.
- Fifth, one cent.

IV.—The stamp duty may be paid with the stamps specified in this law, or with several stamps together amounting to the value required.

## E.

42.—*Public documents (testimonio), titles, etc.*

A.—When no sum is expressed or determined in the first page, five dollars, and for each additional page, fifty cents.

B.—When sums are mentioned or expressed on every page, fifty cents.

And for each one hundred dollars, and every fraction of a hundred dollars, ten cents.

C.—When sums are mentioned, and at the same time include objects whose value cannot be determined: for the first page, five dollars, and each additional page, fifty cents.

And for each one hundred dollars or fraction thereof, ten cents.

D.—Contract of rent or yearly lease, for each page, fifty cents, and for each hundred dollars or fraction of one hundred dollars mentioned in the same, *ten cents*.

E.—For a division or partition sale, for each leaf, fifty cents; and *one cent* on all sums from one to twenty dollars, and *one cent* for each additional twenty dollars or fractions thereof.

43.—*Titles to Mines*, for each page, fifty cents.

## I.

50.—*Inventories*, taken by order of court, per page, fifty cents.

## L.

51.—*For each legalization of signature*, ten cents.

52.—*Bills of exchange*.

From one to twenty dollars, one cent; over that sum, for each twenty dollars or fraction thereof, one cent.

53.—*For drafts*, as above.

## M.

58.—*Memorials, petitions, etc., before any authority*, for each leaf, fifty cents.

65.—*Promissory notes*, from one to twenty dollars, one cent; exceeding that amount, for each and every twenty dollars or fraction thereof, one cent.

67.—*Patent rights*—Shall be written upon special paper and contain stamps to the amount of twenty dollars.

76.—*Private power of attorney*.

A.—In which no sum is specified, and in which none can be determined, for each page, fifty cents.

B.—If any quantity is determined, in all cases where it is legally admissible from one to twenty dollars, one cent; exceeding that amount, for each and every twenty dollars or fraction thereof, one cent.

77.—*For a judicial power*.

A.—On the first page of the document, five dollars, and each succeeding one, fifty cents.

B.—For substitution of powers of attorney, for each page, fifty cents.

80.—*Protest*, for each page, fifty cents.

81.—*Protocol*, for each page, fifty cents.

## R.

82.—*Receipts, or any document given to prove payment or deposit of goods or money*. For sum of twenty dollars or less one cent; exceeding the sum of twenty dollars or fraction, one cent.

## T.

For each will or testament, for the first page, five dollars, and fifty cents for each additional page.

89.—*Testimonio*.

A.—For any legalized document, each page, fifty cents.

B.—And for each and every hundred dollars or fraction of a hundred dollars mentioned in the sum, *ten cents*.

C.—If no sum of money is mentioned in the document, and the same is not determined on the first page, for the first page, five dollars, and each succeeding page, fifty cents. And for each and every hundred dollars or fraction, *ten cents*.

90.—*Professional titles.*

A.—Titles and license tax shall be extended on special paper, and the following stamp duty shall be attached to the same:—

|  |         |
|--|---------|
| For lawyer, . . . . .  | \$20 00 |
| Business agent, . . . . .                                    | 10 00   |
| Agriculturist, . . . . .                                     | 5 00    |
| Broker, 1st class, . . . . .                                 | 10 00   |
| “ 2d “ . . . . .   | 5 00    |
| Dentist, . . . . .   | 5 00    |
| Notary public ( <i>fiat</i> ), . . . . .                     | 15 00   |
| Apothecary, . . . . .  | 20 00   |
| Flebotomist, . . . . .                                       | 5 00    |
| Engineer, . . . . .  | 15 00   |
| Teacher, professor, . . . . .                                | 5 00    |
| Doctor, . . . . .  | 20 00   |
| Midwife, . . . . .   | 5 00    |
| Scientific professors not mentioned in the tariff, . . . . . | 10 00   |

91.—*Titles to lands.*

When value does not exceed two hundred dollars, for each title, *fifty cents*.

92.—*Titles to mines.*

A.—When no quantity or sum is expressed, nor can be determined on first page, five dollars, and fifty cents for each following page.

B.—When a sum is mentioned. For each page *fifty cents*, and *ten cents* for each one hundred dollars or fraction of a hundred dollars mentioned in the same.

Penalties for not complying with this law are very heavy.

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## THE MAGUEY PLANT,

OR AGAVE AMERICANA.

The maguey plant is a true vegetal spring. When the plant is about to bloom it is anxiously watched by the patient Indian, who, as soon as he discovers the true signs, which consist in the stem beginning to shoot up, the leaves, which are usually bent toward the ground, close up, and the appearance of the plant changes completely. The stem is then cut short and an incision made with a sharp spoon into the heart of the plant, and the leaves tied close over it; the sap or juice is then gathered as often as three times a day. One Indian can attend to three hundred plants, usually called a *quebra*. A plant will commonly furnish, in twenty-four hours, four cubic decimetres (or 242 cubic inches, English measure), equal to eight Mexican quartillos. Of this total quantity they obtain three quartillos at sunrise, two at midday, and three at six in the evening. A very vigorous plant will yield as much as fifteen quartillos, or 454 cubic inches, English, per day, for four to five months, which amounts to the enormous volume of more than 1,100 cubic decimeters, or 67,130 inches. This abundance of juice, produced by a single maguey of scarcely a yard in height, is so much more astonishing from the fact that the plantations are generally situated on arid ground where nothing else will grow except yuca. It is well to add that the produce of the maguey, like the produce of the vine, varies very much according to the latitude and the atmosphere, etc.

After the plant has furnished its crop of juice it dies off. Then out of the leaves a very good paper can be manufactured; the point of the leaves are used by the Indians as needles. Out of the leaves is made a kind of hemp called istle, which is worth as much as 12½ cents per pound, and is exported to manufacture rope, brushes, etc. The plant is prevented from blooming, because all that nature destined to produce, the growth of the stems, flowers and fruit is to become the favorite beverage of the Mexicans, *pulque*. The plant which has until then been abandoned to itself as the wild tree of the

forest, when it is about to blossom, becomes an object of the greatest care and vigilance. The Mexican Indian, with the patience that characterizes his race, watches the appearance of the indications of the growth of the stem, the straightening and closing of the leaves, and, in fact, the general appearance of the plant; he inspects carefully the field and marks each plant that is about to bloom. It is then that the sap is gathered, which is called in Mexico *agua miel* (honey-water) on account of its sweet flavor, and with it the *pulque* is prepared. After cutting the sprout or stem of the plant and taking away the leaves surrounding it with the spoon, the stem is hollowed out six or seven inches in diameter, and four to six inches in depth. It is in this cavity that the sap is gathered; the hole or wound made in the plant, enlarged gradually, is covered by closing the leaves growing around the stem, tying them together at the points, or bending them by placing a flat rock over them. The liquid sap is carried off two or three times a day, and in order to facilitate the flow of sap, the cavity made in the plant is rasped with a sharp instrument each time that it is emptied, something like a spoon with sharp edges. To gather this sweet sap the Indians use an instrument acting like a pipette, which they call *Acocote*. It consists of a long gourd, to each end of which are affixed two pieces of sharp horn: while one end is plunged in the liquid, the other placed in the mouth draws the liquid, which is then emptied in an earthen jar and then carried into the cellar where the fermentation is to take place.

Although the maguey will grow in soil where no other plant will, it matures with more precocity when planted in good soil and is cultivated, and in some localities watered occasionally. In some soil the agave will mature in five years. Heat has great influence over the expansion of the growth of the stem and its blooming. Experience shows that the maguey acclimated in Africa and in South America will travel over the cycle of its vegetation much more rapidly than on the table lands of Mexico and Peru. This rapid growth is, however, unfavorable to the accumulation of the sweet sap, and that is probably the reason why in Spain and Italy the agave is not, as in the plateau of Anahuac, cultivated as a produce.

In northern climes the maguey vegetates but rarely matures. That is probably the reason that has caused the popular belief that



it only blossomed in a hundred years. In the State of Oaxaca, in the Republic of Mexico, at an altitude of 10,000 feet, the *furcræa longæva* being forty-two to forty-five feet in height, bearing leaves from six to nine feet long, only brings forth its yellow flower once in every hundred years—if the Indian's statement can be relied on. In the vicinity of Toluca and Cacanumecan, State of Mexico, and Cholula, State of Puebla, the cultivated maguey reaches its maturity in eight years. In that section of the country a plant furnishes a gallon of liquid daily, and a vigorous plant will furnish as much as seven quarts in every twenty-four hours, during four or five months; this is the maximum yield. In bad soils a plant will not render in the same period of time more than 112 quarts of juice (*agua miel*).

Dr. Dreyer, military apothecary in the French army, has observed that one plant during three months yielded one to two quarts daily; altogether, 136 quarts. The difference in the yield of this plant is attributed to the locality, the quality of the soil, and the culture or the care taken of the plant when the first signs of maturity are shown, and, above all, of the choice in the variety of the plant to be cultivated. In the State of San Luis Potosi the maguey matures in from four to eight years, according to locality; five years are considered a fair average. The cost of planting 100,000 magueys in that State is from \$400 to \$600. A large maguey can produce twenty-five pounds of istle, worth from \$2.50 to \$3.00.

The maguey stands at the head of the alcohol producing plants, producing fifty per cent. more alcohol than corn, sugar-cane, Irish potatoes, grapes, and in fact of all plants on an equal space of ground. It excels all other products in its production of alcohol.

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## ITINERARIES

### ITINERARIES OF ROUTES THROUGH THE ISTHMUS OF TEHUANTEPEC, NICARAGUA AND PANAMA.

#### *From the Atlantic side.*

From New Orleans, crossing the Isthmus of Tehuantepec, to the port of Ventosa on the Pacific, 956 miles; time, 46 days.

From New Orleans, crossing the Isthmus of Nicaragua, to the port of San Juan del Sur, 1,430 miles; time, 7½ days.

From New Orleans, crossing the Isthmus of Panama, to Panama, 1,458 miles; time, 6¾ days.

From New York, via Tehuantepec, to La Ventosa, 2,053 miles; time, 9½ days.

From New York, via Nicaragua, to San Juan del Sur, 2,182 miles; time, 10½ days.

From New York, via Panama, to Panama, 2,045 miles; time, 9½ days.

#### *From the Pacific side.*

From the port of La Ventosa, in the Isthmus of Tehuantepec, to San Francisco, Cal., 2,118 miles; time, 9¼ days.

From the port of San Juan del Sur, in the Isthmus of Nicaragua, to San Francisco, Cal., 2,670 miles; time, 11¼ days.

From Panama, Isthmus of Panama, to San Francisco, Cal., 3,210 miles; time, 14 days.

#### ROUTE NO. I.

#### *From the City of San Antonio, Texas, to the City of Mexico, overland in 1866.*

From San Antonio several roads lead to the City of Mexico, but they have more or less inconvenience, and many of them are scarce of water and forage at long intervals between the towns, haciendas and ranches situated along the routes. The writer of this itinerary will describe those which he has found the best and

safest at all times of the year, having made the trip several times with one companion and two servants.

The route by way of Eagle Pass is good, but is much longer than by way of Laredo. It was preferred during the rebellion for trains and travelers because all the streams along that route are fordable, and having good grass and also safer from robbers and Indians than the Laredo route.

From San Antonio to Eagle Pass, passing through the towns of Castroville, Dhanis and Uvalde, it is 145 miles, over a good road with abundance of water and grass, and stores and hotels along the road where the traveler can find all he desires.

At Eagle Pass, which is situated opposite the town of Piedras Negras, in the State of Coahuila, in the Republic of Mexico, the Rio Grande is crossed in a good ferry-boat. The first thing the traveler has to do is to repair to the custom-house, and either pay the duties on his outfit or give bond to return the same at the custom-house where he took the permit within sixty days or return a certificate from any other custom-house in the Republic, showing that he has recrossed into the United States with the same outfit that he took into Mexico. [By outfit is meant the ambulance or conveyance and animals with which one travels.]

The next thing is to procure a passport from the authorities, with permission to carry the weapons necessary for the defense of the party; to obtain this, no impediment is thrown in the way of the traveler, if any respectable citizen will answer for his good behavior.

The road the writer traveled to Monterey and Saltillo is the one described here as route number one. There are several others, but I will only describe one or two.

#### ROUTE NO. 2.

*From Piedras Negras, in the State of Coahuila, to the town and old presidio of La Punta de Lampasas, in the State of Nuevo Leon.—Distance by way of the Alamo de Los Borregos, 134 miles.*

The distance from Piedras Negras, in Coahuila, situated opposite the town of Eagle Pass, in Texas, to the agricultural town of Nava, where forage, lodging and good water can be had,

is twenty-six miles. From the town of Nava to the old town and fort of Peyotes, it is eight miles. From the town of Peyotes to the San Diego cave and ranch, on the arroyo (creek) of the same name, it is thirteen miles.

From San Diego, where the desert is reached, to a stopping place known as El Potrillo, is distant forty-two miles; here water is scarce, but seven miles further the river Sabinas is reached, and forded at the *passo del coche*, a short distance below a small village; total distance, forty-nine miles.

From the *passo del coche* to the large hacienda del Alamo de los Borregos, on Alamo river, it is about ten miles. At this place lodging, forage and good water can be found.

From the Alamo to the arroyo of el Saus, where the water is generally bad, it is distant thirteen miles. The road is level to the city and old fort of La Punta de Lampasas; distance, fifteen miles.

Lampasas has some irrigable lands. A mine of some value was formerly worked in its vicinity. In former times it was established as a frontier post, where a company of Spanish troops were stationed. The soldiers used a sort of armor called "*escopilla*," which was entirely arrow-proof. Some years ago many of these accoutrements could still be seen, as they were preserved as curiosities. The people of Lampasas manufacture good Mexican blankets. Opposite this town is the (table) Mesa de los *Cartuhanes*, a plateau that rises about two thousand feet above the surrounding plain. On this plateau there is good water, good grass, and timber is found; its extent is about twenty miles from north to south, and fifteen from east to west, and is only accessible from one point. In old times it was an Indian hiding place. It is now the property of Don Patricio Milmo, a rich merchant and proprietor, of Irish descent, who is transforming it into one of the finest stock ranches in this part of Mexico.

#### ROUTE NO. 3.

*From San Antonio de la Punta de Lampasas, in Nuevo Leon, passing through Laredo. — San Antonio to Laredo, 170 miles; Laredo to La Punta, 79 miles; making together 249 miles.*

From San Antonio to Laredo, in Webb county, plenty of water, good grass, and stores where supplies can be procured, are

found on the different roads ; its distance being 170 or 180 miles. The best road is by crossing the Medina at the old Presidio crossing or above, and taking the Castroville and old Fort Ewell road. By this road you avoid the sand. The Frio has a good ford near the Waul pasture, and from thence rolling hills to Fort Ewell where the Nueces is forded or ferried according to the season. Here is a little village and store provided with everything the traveler needs. From here to Laredo it is seventy miles, mostly through an open country.

New Laredo is situated opposite Old Laredo, of which it formed a part before Texas was separated from Mexico. It is also improving very fast, as some large foreign importing houses have established depots for their goods at this place.

From New Laredo to the Aguaje of Las Habras del Maiz, fifteen miles ; from Habras del Maiz to the Aguaje la Lomeria, road good between hills, the Peyotes chain ; distance, fifteen miles ; Aguaje la Lomeria, road level through a bottom of huisache to the Rio Salado ; distance, fifteen miles. From Rio Salado to Rancho la Barranca of Mogina, road over a prairie to the ranch ; distance, thirteen miles. From Mogina to the town of La Punta de Lampasas, crossing this side of the town, the San Matias river, partly covered with mesquites, is distant eleven miles. In dry seasons water and grass are more scarce on this route than on that from San Antonio to Monterey by way of Piedras Negras, particularly the distance from Laredo la Punta.

#### ROUTE NO. 4.

*From the town of Lampasas to Villa Aldama, Salinas and Monterey, distance, 103 miles.*

From the town of La Punta de Lampasas to the ranch of Golondrinas the road is rough. Here are pens for animals, and a good well and tank. This rancho is a stock farm formerly belonging to the Hacienda del Carrizal. It is twenty-one miles from Lampasas, and six miles further is the rancho of Lagunillas, formerly belonging also to the Carrizal, where good water and forage can be had. Here comes in the straight road from El Sauz through the town of Santiago de Valladares, leaving the town of Lampasas to the right. From the Lagunillas to Villa Aldama it is ten miles.

Villa Aldama, formerly known as Boca de Leones, is a town of some importance owing to the mines situated near it, which were formerly of great profit. To-day a large amount of lead silver is extracted from these mines, also containing silver. The mineral is galena. At this place was located a hospital used as a resting place for the Franciscan Friars and other priests, who attended the missions of Texas while traveling between Mexico, Guadalajara and Texas. Its population is mostly descendants of Spaniards. About two leagues north-west of this place is the town of Tlaxcala, also known as San Miguel Aguayo, and presently as Bustamente, settled by people from the original Tlaxcaltec tribe. It is a pretty little village where cultivated gardens could produce all kinds of fruit and vegetables. From this village a good road through the Gap of Tlaxcala leads to the Bajan well. The distance from Villa Aldama to Las Cuevas, a stopping place, is ten miles.

From Las Cuevas to the Hacienda de Palo Blanco the road is through a palm forest, not bad, but heretofore considered dangerous on account of Indians; distance, fifteen miles. At this large ranch, water and forage can be procured.

From Palo Blanco to the pueblo of Los Morales, passing through a forest of palm trees, is the pass of La Gacha, a noted place for Indians in former days, and further down the valley is Los Morales, where forage and water can be had. This road is eight miles.

From the rancho of Los Morales, over rolling prairie to the town of Salinas Victoria, it is seven miles.

The town of Salinas Victoria, situated on the river of the same name, has a fine church, well-paved streets, a good square, and presents a neat appearance. Its people cultivate the soil, raise stock and work the silver mines in the cañon de Saliñas. The metal is galena and is easily smelted; population, about 4,000 people. Orange trees were formerly cultivated here in the open air.

From Salinas to the City of Monterey the road is very good, and six miles before reaching the city the road passes the village of La Etanzuela, a beautiful place shaded with a stately forest and fruit trees. From Salinas to Monterey the distance is twenty-six miles.

Monterey, capital of the State of Nuevo Leon (formerly the New Kingdom of Leon) is situated  $25^{\circ} 40' 6''$  north, and longitude  $0^{\circ} 49' 0''$  of the City of Mexico, on the river of the same name, which is

sometimes called Rio de Santa Catarina. It is  $602\frac{2}{3}$  miles distant from the City of Mexico, and 1,626 feet above the level of the sea. It is probable that this portion of Mexico was conquered by the celebrated Spanish Gen. Francisco de Urdinola, surnamed "El Viego" to distinguish him from his son who was also a distinguished warrior. It was probably thirty years after the conquest of Mexico by Cortez, that Urdinola conquered this portion of Mexico from the Chichimecas (the Spaniards were in the habit of calling all wild tribes of Indians, Chichimecas); no exact date is, however, fixed for the foundation of Monterey. It was first named after Santa Lucia, a beautiful spring situated in the heart of the city. It is well known from the archives that in 1569, that portion of the country was known as the New Kingdom of Leon, that it had a Governor, etc. In 1569, Don Luis de Caravajal, was Governor at the City of Leon (now Monterey), then the capital of the New Kingdom, and in 1596 Don Diego de Montemayor solemnly founded the metropolis of our Lady of Monterey, the present city.

Monterey is built mostly of stone, has several fine churches, a good hospital, a college, a convent of sisters of charity, a spacious city hall, several well paved squares ornamented with shade trees and stone benches; it has several good hotels, and one of the best populations in Mexico. Its people seem to be more industrious than their neighbors. Among the noted buildings is the Bishop's palace, which is situated on a hill west of the city, on the right of the Saltillo road. The Black Fort is situated north of the city, and was intended for a cathedral, but has been used as a fort, and since the downfall of Maximilian this property has been donated to meritorious soldiers. The convent of San Francisco is now used as a jail. The Governor's palace, now stands where the Jesuits formerly had a church and school.

Monterey has a good market, and fine gardens where the orange tree grows indigenous without any attention. Its climate is warm, but is much tempered by the breeze that comes through the valley of Juahuco, situated between the Sierra Madre Mountains and the mountain of La Silla, the saddle mountain. Population, 40,000 souls.

To Santa Catarina, the road to Saltillo, after following the main street of the city, leads to the foot of the hill where the Bishop's palace is situated, leaving the Monterey River to the left.

and a high ridge of hills situated south of it. The road is good but a little rocky. Beyond the Bishop's palace hill is another hill called Independence Hill, upon which it is said the American army in 1847 mounted a gun that commanded the Bishop's palace and finally caused it to surrender; the gun, I believe, was under the command of Lieutenant, now Comander-in-chief of the United States army, W. T. Sherman. The road then follows the beautiful Cerro de la Mitra, a high mountain, rich in galena, silver, marble, alabaster and plaster of Paris. To the left, about eight or ten miles, is the Sierra Madre, which looks as if it was within reach. The next place is the Molino of Jesus Maria, one of the largest wheat mills in the country. A little further on the road passes an important cotton factory, which was established by an American called Steel, one of nature's noblemen, who, through friendship to Gen. Trevino, was killed in some revolutionary engagement, fighting on Gen. Trevino's side. At a short distance further is an aiameda, the road being surrounded by fields as far as the town of Santa Catarina. Distance, four leagues from Monterey. The road is very good, being an inclined plane of pretty heavy grade. One passes the rancho of Carabajal, to reach a point called El Alto, where is found a pretty good Mexican hotel, and forage for animals. From this point the road still leads down the valley of the hacienda de la Rinconada, leaving the hacienda to the right, and turning to the left is a point situated on a high hill between the mountains, called Los Muertos, and another of the Sierra Madre Mountains. It is said that the Mexican Gen. Ampudia intended to stop Gen. Taylor's advance at this point and had begun fortifying it. It can be added here that a few determined men with artillery could stop a whole army, but it has a great disadvantage as it could be easily turned, first by the pass of Santa Catarina to the left, and by the pass leading to Pesqueria on the right, and was therefore abandoned by the Mexicans. Los Muertos is the dividing line between the States of Nuevo Leon and Coahuila. It has always been considered a dangerous point for robbers and Indians. The road leads down hill to a poor little rancho called los Muertos, and from there it rises; you reach the hacienda of San Gregorio, where forage and accommodation can be had for travelers. This place is twenty-one miles to Saltillo. The straightest road being by way of el Jarral. Another good road is by the hacienda of Santa Maria.



## ROUTE NO. 5.

*From Piedras Negras by way of Monclova, leaving out Santa Rosa and traveling the straightest and best road, where water and forage are found at all seasons of the year—170 miles. From Monclova to Saltillo, 134 miles.*

From the town of Piedras Negras, opposite Eagle Pass in Texas, over a good road crossing the Rio Escondido and one creek with good water, it is thirty miles to the town of San Fernando de Rosa, known at present as Saragoza. The town has a good church soldiers's quarters; it is principally built of stone, and adobe houses with flat roofs; has very good irrigable lands, and cultivates, with profit, wheat, corn, sugar-cane and beans. Its population is about 6,000 people.

From Saragoza to the Cabecera Springs, passing the rancho of La Sorra, it is about ten miles. From Cabecera Springs through the plains of San Jose to the town of San Juan de Sabinas it is forty-two miles; a little further on Alamo River is crossed. A little this side of the Alamo River a road to the right leads to Santa Rosa, about 13 miles distant from the Alamo.

From San Juan de Sabinas to the village of La Aura, the road is good. Distance, twenty-four miles.

From the village of La Aura to the stock rancho of Lampasitos it is twenty-one miles. From Lampasitos to the hacienda of Hermanas it is thirteen miles. This was a rich grain and stock place at one time.

(Santa Rosa was made headquarters of the military department of the eastern international provinces, after the decree of the court of Spain ordering the international province of New Spain to be divided in two separate departments, had been carried out, in the year 1788. The province of Tejas formed a part of this military department, and Colonel Don Juan de Ugalde was appointed its commanding general. This officer having concentrated his forces which consisted of the presidio troops, militia and a few auxiliaries, made a successful campaign against the Indians in the year 1789, which ended in a complete destruction of the combined forces of the wild Indians in the cañon de Uvalde, Uvalde Co., Texas (this has by mistake been altered, and should be Ugalde, as the cañon

was named after the distinguished Spanish officer). This great success so completely demoralized the Indians that they kept at peace with the Spaniards until the revolution broke out. Santa Rosa was almost entirely washed away by a great freshet that took place about the beginning of this century. It is now a large town, and the silver mines situated in its vicinity, and which are now developed by American capital and industry, will give it greater importance.)

The distance from Hermanas to the springs known as Ojo Caliente, which are famous throughout the country and are recommended for rheumatism and syphilitic diseases, is three miles. From the Hot Springs to the Salado River it is about four miles. From the Salado River to a point called Los Adjuntas it is ten miles. Thence following the margin of the Rio de Monclova to the city of Monclova, it is thirteen miles.

From the city of Monclova, formerly the capital of Coahuila to the village Castano, the road, although broken, is good. Distance, thirteen miles.

From Castano to the Estanque del Marquez, level road, over an open country, covered with scattering mesquite. Distance, thirteen miles.

From El Estanque del Marquez to the rancho de Bajan, good road. Distance, fifteen miles. Forage doubtful. Here is to be found a good well of fresh water. This point in the desert has become celebrated on account of it being the place where Padre Hidalgo, the Generalissimo of the Insurgents and leader of the first Mexican struggle for independence, was captured with all his retinue, after having lost the battle of Puente de Calderon, and while making his way to the United States, by Colonel Elisondo, the same that was afterwards defeated at the battle of the Alazan, one mile from San Antonio, in 1813. This important event—the capture of Hidalgo, took place on the morning of the 21st of March, 1811. The remainder of Hidalgo's army was dispersed, 893 prisoners taken, and 40 killed; 24 pieces of artillery and 3 swivels, and over half a million in silver taken, besides many officers and all the leaders of the revolution—Hidalgo, Allende, Jimenes, Aldama, Ballezo, Abasolo, Camargo, Lanzagorta, Mariano Hidalgo, brother of the curate, who was Treasurer-General of the Insurgents, and many

others. This important capture virtually ended the revolution of Hidalgo.

From Bajan to Anheló, the road is good, one and a half miles to the hills, then over a level prairie, ten miles, then about eight miles through a huisache thicket, to la punta del Espinazo (the point of the spine, which is the end of a spur of high mountains), where there is a small rancho and a tank of water; here a fork of roads leads to the city of Parras. It is a disagreeable place on account of three gaps in the different ranges of mountains; high winds prevailing all the year around.

From La Punta the road is good, having the mountains of Espinazo to the south; for twenty-five miles it is level to la punta de Anheló; from la punta to the rancho of Anheló it is six miles over a good road.

Anheló has a fine tank, some good buildings, and is a grain country where large quantities of oats are raised. Distance from Bajan to Anheló, fifty miles and a half.

From Anheló to the rancho of Mesillas, good road for seven and a half miles to the hills (cerrito), where there is a small rancho called Los Cerritos; then two and a half miles to the arroyo del Barreal, and from there seven and a half miles over a good road to Mesillas. Distance from Anheló to Mesillas, seventeen and a half miles.

From Mesillas (aguaje) of la cuesta del Cabrito, three miles level road and seven miles of broken, rough road to la Cuesta. Distance from Mesillas, ten miles. At this point Don Francisco Guilbeau was attacked by a band of robbers from Saltillo, which he succeeded in driving off with his brave Mexicans from San Antonio. It was about the year 1848. This place has been considered dangerous from Indians and robbers.

From La Cuesta del Cabrito to the city of Saltillo the road leads up the Cabrito hill, and is good to the hacienda de Capellania, four miles. A very pretty place, where Dr. Hewitson, many years ago, erected a cotton factory. This place used to be General Taylor's favorite ride at the time he was in Saltillo. Then four miles to the rancho de los Bosques, which is situated between two little peaks. This is also a pretty place. Then over a level road six miles to the city, making the whole distance from the Cuesta del Cabrito to Saltillo fifteen miles.

From Monclova to Saltillo, 121 miles. Over this road, when the season is good, grass and water are found, but in dry times it is a hard road to travel. General course of road, south  $\frac{1}{4}$  degree south-east.

ROUTE NO. 6.

*From the City of Saltillo, the capital of the State of Coahuila, to the City of San Luis Potosi, capital of the State of the same name, 266 American miles.*

Saltillo.—The City of Saltillo, the present capital of the State, formerly province of Coahuila, to which Texas was at one time attached, is a well-built city with paved streets, situated on the slope of a ridge that crosses the whole valley coming from Monterey; after leaving the hacienda of San Gregorio you have it in sight. In the valley of Saltillo several important cotton factories have been established for the manufacture of unbleached cotton goods, and are doing well. This city is situated  $25^{\circ} 25' 15''$  north latitude, and longitude  $1^{\circ} 31' 30''$  west, from the City of Mexico; its population is estimated at 17,000; it has several hotels, and stores supplied with all kinds of goods. A considerable trade in goat and sheep skins is carried on here, and the country about produces wheat. Saltillo has a fine parochial church fronting on its main square; the church of the convent of San Esteban a convent for the sisters of charity, who keep a school for girls, with its chapel situated on the main street; an abandoned church used at present as a soldiers' barracks (this latter was built by the Jesuits); there is also a fine amphitheatre for bull fighting, situated on the square of San Esteban. The beautiful alameda is one of the prettiest parks of the kind in Mexico. On the hill to the southward of the city, is a small fort built during the empire.

NOTE.—This city and its surroundings afford much entertainment for travelers or tourists. Its gardens, its maguery plantations, and a hundred other objects, are equally interesting to the stranger.

Buena Vista.—From Saltillo to the hacienda of Buena Vista the road is good for four miles and then rough to the hacienda. Passing Angostura, the traveler reaches La Encantada (enchanted ranch). This is the place where the American army, under Gen.

Taylor, was encamped, at the time of the approach of Santa Ana with his army of 25,000 men. Previous to the battle of Buena Vista, Gen. Taylor, not finding this position a good one, fell back and took position at Angostura, the narrowest point of the valley. This pass lies between two ridges of mountains, five or six miles apart, which approach to the north-east until at Angostura the space is not more than two miles; the eastern range is much the highest, rising more than 1,200 feet above the plateau; the western range is about half that height. The plateau from the eastern ridge extends about a mile or half way across the valley, where it drops off abruptly to the first or alluvial plain. In this plain runs a small rivulet, which takes its rise at Encantada, but at times, after heavy rains, it becomes so large that it has cut for itself a deep bed, with perpendicular banks of thirty to forty feet deep; this bed is quite inaccessible from above, except in a few places. These deep gullies or ravines are called "barrancas," and peculiar to the country; the tenacity of the soil prevents it from crumbling except at the base where the water washes it away, the portion projecting until it becomes so much undermined that it cannot sustain itself, and breaks off, leaving perpendicular walls. These barrancas extend for more than a mile above and below the narrow pass of Angostura, and also intersect at various points in the flat, rendering it impossible for a body of troops to traverse it. Hence all the operations of the battle were confined to the plateau above, which extends to the eastern range of mountains; the battery of Col. Washington was stationed between the barrancas and a spur of the plateau forming a narrow pass of some sixty or seventy feet in width. (This is the substance of a description of the battle-field as given by J. R. Bartlett, and the correct one.)

At La Encantada, the road to Parras forks to the right. From Monterey to this point, a distance of about seventy-six miles, the traveler rises 4,478 feet, as Encantada, according to Dr. Wislizenas, is 6,140 feet above the sea. Over a rough road you reach the hacienda of Agua Nueva, distant from Saltillo twenty-one and a-half miles. At Agua Nueva plenty of good water can be found, and comfortable rooms in the buildings of the haciendas; forage, corn and large corrals for animals. In good times this place could accommodate six or eight hundred animals. Beyond the hacienda is the pass of Agua Nueva, where Gen. Taylor had his advance

guard ; the road up the pass is very good and leads down to a valley about two miles wide to another pass called Puerto del Carnero.

This has been a point celebrated for the exploits of robbers and Indians, and here a battle was fought between General Jimenes, commanding the revolutionary forces of Mexico, and Colonel Cordero, Governor of Coahuila, on the 9th of January, 1811. Most of Cordero's forces having passed over to the so-called insurgents, he fled towards Messillas on the road to Mexico, was captured and well treated by Jimenes. Three days after this battle, a royalist force that came to reinforce Cordero, consisting of 700 men from Zacatecas and four pieces of artillery, commanded by Colonel Ochoa, found Jimenes occupying the pass with 8,000 men ; a battle ensued, which terminated in the retreat of Ochoa.

From this pass the eye reaches far away, as the country is open ; the road is good. Passing a point called Messillas you reach Tanque la Vaca, where plenty of good water is found in the tank. This stock ranch was abandoned on account of Indians. It is now the town of Gomez Farias with a population of 400 souls. It is said that in its neighborhood are very rich silver mines that have never been worked. Distant twenty-one and three-quarter miles from Tanque la Vaca is the hacienda de la Encarnacion.

In this place lodging can be had for several hundred people, plenty of forage, also well-water and a good tank. The population of the hacienda is over 200 people ; it is a large stock ranch.

At Tanque la Vaca the road forks, the left-hand road goes to the ranch of Jesus Maria, situated eight miles east of Encarnacion, and to that of La Ventura, a small stock ranch about six miles this side of the San Salvador rancho comes into the direct road from Encarnacion to San Salvador ; it is a plain good road ; course, south  $\frac{1}{4}$  south-east ; distance, twenty-six miles. La Ventura has been made a fine hacienda ; it is now the property of Gen. Trevino.

San Salvador is also a stock ranch, whose population is about 1,500 hundred souls. Here is a well and a tank of sweet water. San Salvador to the little rancho of San Miguel, which consists of only two houses. Here is a good well but nothing else ; it is eight and a-half miles to the hacienda del Salado, one of the largest estates in Mexico, as it contains over 885,600 acres of land, all well adapted to stock raising, and over one-half well adapted to the raising of small grains ; cotton could also be raised with advantage.

This vast estate is covered with natural productions such as the maguey (*agave Americana*), the *lechuguilla*, the *pita*, the *zolomandoque*, the *zotol* and other plants whose fibre, if properly exploited, would bring an immense income. Water and grass abounds all over the estate. The various cordilleras that run from south to north on the lands of this estate are covered with innumerable metallic veins rich in silver, lead copper, gold and other metals. At this place, which will hereafter be a railroad centre, good accommodations can always be found.

From El Salado to Las Animas the road is good, through a vast plain, mountains in view in the distance; general course, south, south one-quarter west; distance, eighteen miles. Las Animas is a stock ranch belonging formerly to the hacienda del Salado; there is good enclosure; water not plentiful, and very salty on account of the quantity of nitrate of potash it contains; forage plentiful. Las Animas to La Punta de Vanegas: general course of the road, south, south-west; road good, through plain covered with palm trees. At this point the road to San Luis Potosi, forks, the shortest is to the right by way of San Cristobal, hacienda de Guadalupe, El Canicero, and that of Laguna Seca, leaving the mountain of Catorce that rises several thousand feet above the plain to the left; and the other route, which leads to the left by the hacienda of San Juan de Vanegas, the mining towns of Cedral, Matehuala and hacienda de Solis, and leaving the mountain of Catorce to the right, coming into the other road at Laguna Seca. I will describe the shortest by way of San Cristobal:

La Punta de Vanegas is a good ranch, belonging to the hacienda of the same name; it has a fine tank of good sweet water; and contains about twenty houses. Three miles further on is the hacienda of San Juan de Vanegas; distance, from Las Animas, twenty-one miles.

San Juan de Vanegas is a very large hacienda where ore from the Catorce mines is worked both by smelting and by patio, or cold amalgamation process. It raises large crops of grain and all kinds of stock; there is a beautiful bath about half a mile from the hacienda; it is a bountiful spring that comes out of a grotto hollowed out of the granite; the water is clear and beautiful and possesses no mineral taste although it comes out of the Catorce Mountain which is one of the richest in Mexico.

From San Juan de Vanegas to San Cristobal, the road lies over small hills covered with brush and palm trees to a place called Las Ratas (the rats) where there is a house and a good well. From there the road is over a large plain, the mountain of Catorce to the left, and a range of mountains to the right, in the distance; general course of road, south, south-west; distance, sixteen miles. San Cristobal consists of about twenty small houses, inhabited by about a hundred poor people; they generally get their forage from San Juan de Vanegas or the Real de Catorce. Nothing can be had here but kids or sheep; there is a well and a tank, but the water is bad.

From San Cristobal to the hacienda of Guadalupe el Carnicero. Half a mile takes you to the hacienda of San Miguel, where minerals from Catorce are smelted; its buildings are good. You pass the rancho of San Rafael and of El Refugio, insignificant places, the latter distant eight miles from Guadalupe. The road is through a large plain to the hacienda, general course of road south; distance, twenty-one and one-third miles. This hacienda is also a stock ranch; it has a little chapel and a population of 150 souls; has good enclosures and good lodgings; forage can be had here. From this place a road leads to the city of Catorce, a Mexican Leadville in former days, situated in a depression on top of the Catorce mountain, and containing 20,000 inhabitants; it is about eighteen miles from this hacienda to the city. The wealth of its mines was such that at one time a mint was established at that place; one of the principal miners is a wealthy Spaniard, Don Santos de la Massa.

From Guadalupe el Carnicero to the hacienda of Laguna Seca, road hilly for some distance to the pass of Messillas, where there is a ranch consisting of twelve or fifteen houses, and an enclosure of stone about 500 yards in length. To the left of the road, about half a mile further on, is the rancho of Mata Pulgas (kill fleas). At one time an old friendly Indian kept the only house in the place, and would graciously furnish the traveler with a good meal and a glass of mescal. Road through a vast plain, small hillock to the right of the road; to the ranch of El Berendo, where there is a tank of good water; road south-west, with a small chain of hills to the left, leaving a tank to the right. A mile further on you reach the hacienda of Laguna Seca, distant from Guadalupe el Carnicero fifteen miles. Laguna Seca was at one time one of the richest haciendas of the State of San Luis; it was celebrated for



its good horses ; it has good buildings ; lodging and forage can be obtained here ; population, about one hundred.

From hacienda de Laguna Seca to hacienda de los Charcos, road with stone wall sometimes to the left and sometimes to the right for a long distance, and finally the wall to the right and hills to the left to Charcos, fifteen miles. Charcos has a church ; forage and lodging can be had ; this was at one time a large grain hacienda.

From the hacienda de los Charcos to the city of El Venado. Leaving Los Charcos, the road runs between a stone wall to the right and within gunshot, a range of hills for about eight miles, when the rancho of Laborcillo is reached, which consists of one good house, situated in an open plain, and commands a good view of the country ; for three miles the earth is very white, to the rancho del Troncon, where there is a good house. Here we begin to enter the cactus country ; course of road south-west to the rancho of San Sabino, a village of huts ; a mile and a half further on, crossing a stone bridge over a ravine in which flows a small stream, the city of El Venado is reached ; distance from Los Charcos, thirteen miles. The city of El Venado is situated in a hollow surrounded by hills ; it is a paved city, has two large churches and a cotton factory. I estimate its population at 8,000 inhabitants ; the people cultivate the soil and manufacture very good blankets.

From the city of El Venado to La Hedionda, sometimes called Montezuma, course of road south-west one-quarter west, level, passing through a large "potrero" (pasture) enclosed by a stone wall, the ranch del Garatillo is reached ; then over hills to the town of La Hedionda.

The little stream that the road crosses before entering the town is so impregnated with sulphur that it is disagreeable to drink. This place is surrounded by shade and fruit trees ; it is really a beautiful place, an oasis in the desert ; forage abundant ; population, about 3,000 ; its people are mainly engaged in cultivating the soil ; distance, thirteen miles.

From la Hedionda to Bocas, a large hacienda, the road is generally good ; passing through maguey hedges, then up hill to the hacienda de la Monterilla, about six miles from la Hedionda ; about three miles further on, a lone hill is seen to the left of the road ; a short distance from the road, to the right, is a large grange

(troja), where there is a good well of water, then over plain to rancho del Colorado, which is about half way between la Hedionda and Bocas ; course, west-south-west, up a pass the road becomes rocky to the huisache rancho ; then over hill to the rancho de las Sartenegas ; then over a plain covered with cactus and maguey, crossing the bed of a dry creek about 600 yards from the hacienda, Bocas is reached ; distance, twenty-one and a half miles.

The hacienda de Bocas was one of the richest in the State of San Luis ; it is built of rock on a small plateau ; it has a square surrounded by substantial buildings ; a neat church, a (meson) hotel with good rooms and large court yard well paved ; it has a fine orchard surrounded by high walls ; an alameda of large trees leads from the hacienda to the " huerta " (orchard) and to the dam, which is a fine piece of masonry, closing the outlet of a creek as it comes out between two hills. It is several hundred yards long and about fifty feet high, forming a beautiful lake, from which the water is taken to irrigate the large fields of the hacienda ; on the right hand of the dam is a pretty little chapel. During the Mexican revolution the owner of this hacienda mounted and equipped a squadron at his own expense, to sustain the cause of the King of Spain. It was, until a few years ago, the property of the Countess of Perez Galvez, one of the descendants of the Vice-Roy Galvez, and was almost ruined by the different factions that took possession of it ; at present it is in good working order.

From Bocas to the hacienda del Penasco. Leaving the hacienda the road is rocky and up hill through the Tinajeula pass, when the high plateau of Anahuac is reached ; from the rancho de Tinajeula to the hacienda del Penasco, quantities of maguey and cactus are found. Passing several houses on the way, in a little plain before reaching the hacienda, is a curious formation in the shape of a lone hill formed of balsatic columns, hence the name, " Penasco." The hacienda has a population of about a thousand people ; good buildings and its fields enclosed by stone walls. Large crops of grain and extensive plantations of maguey are its principal resources. Distance from Bocas, eighteen miles.

From the hacienda del Penasco to the city of San Luis the road is good and settled, passing through maguey and cactus of all kinds. About six miles this side of the city a fine causeway is

reached, which is shaded by stately trees all the way to the Indian town of Tlaxcala, a suburb of San Luis Potosi.

San Luis Potosi is seen in the distance as soon as the plateau above Bocas is reached, for at least twenty-five miles ; it presents, with its eighteen domes and towers, a beautiful appearance, looking in the distance like a Moorish city. The city of San Luis Potosi, capital of San Luis Potosi, is situated on the east side of the grand plateau of Anahuac, in a valley extending from north to south about forty-five miles, in latitude  $22^{\circ} 8'$  north and longitude  $1^{\circ} 40'$  west of the city of Mexico. Its streets, although narrow, are straight and intersect at right angles. Among the principal buildings are the city hall, the granary, the market block and the theatre. This city possesses churches that rival any in Mexico ; among them may be particularly cited : "San Francisco," "El Carmen," "San Augustin." La Merced, the colleges of Loreto and San Nicolas, the hospital of San Juan de Dios, the chapel of El Rosario and of los Remedios, the Alameda, and the sanctuary of Guadalupe, are all very interesting to visit on account of their architecture and the fine paintings some of them still possess. I suppose that the population of the city, with the suburbs of Tlaxcala, San Juan de Guadalupe and San Miguelito, reaches to about 60,000 souls. This city, by its situation, when a railroad reaches it, will be one of the greatest commercial centres of the Republic. It carries on a great trade in groceries and home manufactures, such as leather, shoes, saddlery, roping, bagging, cassimeres, hats, blankets and grain. In its vicinity is situated the great San Pedro mine, out of which was taken the largest piece of solid gold found in America up to that time ; it was sent to the King of Spain as a present, and in return the King presented the cathedral with a beautiful clock, where, to this day, it strikes the hours. The pillars of this mine having been cut away and the mine has caved in. Competent engineers who have carefully examined this celebrated mine say that by an expenditure of two millions, from twelve to fifteen millions could be taken out of it.

## ROUTE NO. 6.

*From the City of San Luis Potosi, capital of the State of the same name, by way of San Miguel de Allende, to the City of Queretaro, capital of the State of Queretaro : 160 American miles.*

From the city of San Luis Potosi to the city of Queretaro, capital of the State of Queretaro, level road to Los Posos : six miles.

From Los Posos to the town of San Francisco, a place of about 5,000 inhabitants, the road is good ; distance, twenty-six miles.

From San Francisco to Ojo dei Gato, road stony and hilly ; three miles.

To Rancho de las Russias, partly hilly and partly level ; distance, five miles.

To the hacienda del Jaral, road level, through a forest consisting principally of "huisache" and "arbol del Peru," a species of mesquite ; distance, eight miles.

El Jaral was at one time probably the largest estate in Mexico, as it worked or owned twenty thousand peones. It has a fine church and a chapel of red granite, where the remains of the family of the Marquez del Jaral, Count of Moncada, are buried. It is a grain and stock farm ; it was renowned for its horses, and when the revolution of Hidalgo broke out, in September, 1810, the Count of Moncada raised, mounted and equiped from his estate one whole regiment of cavalry, of which he was the Colonel, in favor of the King's arms ; he greatly aided with his men, money and influence General Calleja, the Spanish commander, at San Luis Potosi, in quelling the revolution and re-establishing the King's authority. Afterwards, when Mina, with 300 men, invaded Mexico, having marched from Soto la Marina to el Jaral, he levied heavy contribution on this hacienda, where he found in specie alone the sum of \$180,000.

The road runs between adobe and stone walls of this hacienda for nearly thirty miles. Between El Jaral and La Russia is the dividing line between the State of San Luis and that of Guana-

juato. From El Jaral to San Bartolo, partly through a forest before reaching the hacienda, seven and a half miles.

Road a little rough, up the hill of San Bartolo, for six miles to the town of San Felipe, a place of about 5,000 or 6,000 inhabitants.

From San Felipe to the hacienda de la Quemada, road level through rich cultivated fields of wheat and corn. In this portion of Mexico two crops are raised annually, mostly by irrigation. The water, during the rainy season, is gathered in large tanks and used in the dry season. The mountains to the right of the road are among the richest in silver in the Republic. At La Quemada a stage hotel is kept for the entertainment of travelers. Before reaching the hacienda you cross the dry bed of the Cubo River, which, during the rainy season, runs a mighty torrent. Distance from San Felipe,  $10\frac{1}{2}$  miles.

From ranch La Quemada to the ranch de Laborcilla, road broken near La Quemada and broken before reaching the ranch; distance, three miles.

From the ranch de Laborcilla to the hacienda de Trancas, good road; distance, ten miles.

From the hacienda de Trancas to the city of Dolores Hidalgo, the road crosses the pass of el Gallinero, where there is fine quarries of mill and "metate" stone, a stone used by the Mexicans to grind corn for their *tortillas*, a kind of corn pan-cake, their principal article of food; distance, ten miles.

The city of Dolores Hidalgo has become celebrated on account of having been the parish of Padre Hidalgo, and the place from which he gave the first cry for the independence of Mexico, on the 16th of September, 1810. A Mexican chronicler says that "Don Miguel Hidalgo y Costilla (that was the name of the hero of the first revolution) addressed the people from the balcony of his house." The misfortune is that the Padre's house being of one story, has no balcony; it must be inferred that it was from the window: in fact, I was told this was the case by an old corporal who was among the few soldiers that were in that city at the time and was sent as a courier to carry the news to the city of San Miguel. The old corporal then belonged to the Queen's dragoons, a corps in which Allende, another hero of the revolution, was a

captain, and had been in 1865 installed a keeper of Padre Hidalgo's house by the Emperor Maximilian, where I met him.

From the city of Dolores Hidalgo to the hacienda de la R, road level; distance, five miles.

From hacienda de la R to Atotonilco, road over barren hills; distance, seven and a half miles.

The town of Atotonilco is an Indian town, where there is a church with curious fresco paintings.

From the town of Atotonilco to the fine city of San Miguel de Allende, the road is over barren hills; just before arriving at the city the road crosses the bed of a river; distance, seven and a half miles.

San Miguel de Allende is a city of about 20,000 people; its streets are well paved; there are fine churches, a college and several squares, and the city presents a very neat appearance. It is situated on the declivity of a high hill and can be seen almost from Atotonilco.

From San Miguel el Grande, as it was called before the Mexican independence, to the ranch de los Ricos, the road is level; distance, fifteen miles.

From Rancho de los Ricos to the town of Santa Rosa the road is hilly and stony (bad for robbers); distance, ten miles.

From the town of Santa Rosa to the city of Queretaro the road is rough and hilly; distance, thirteen miles.

Queretaro, capital of the State of Queretaro, was founded by the Aztecs in 1445 or 1446. It was conquered by the Spaniards under Don Fernando de Tapia, a lieutenant of Cortez, in July, 1531, and converted to the Christian religion by the Licenciado Don Juan Sanchez Alaniz, a celebrated secular priest. Its climate is temperate; it is surrounded by gardens. This city has very fine churches and convents; it is noted among the cities of Mexico for the great religious devotion of its people. Among the principal edifices the convents of San Francisco, Santa Cruz, San Antonio, Santo Domingo, San Augustine and El Carmen are to be noted, also the hospital of la Merced.

Although the city has irrigation ditches, water is brought to it by an aqueduct from the neighboring hills, some of the arches of which are ninety feet high. It was certainly a great piece of masonry at the time it was built, in the last century; it cost

\$124,000, most of which sum was paid by Don Juan Antonio de Urutio y Arana, Marquis del Villar del Aguila, whom the Queretanos consider to this day the benefactor of the city. A statue of the Marquis exists on one of the squares. The city also boasts a fine Alameda.

Near the city is the factory of "Herculus," one of the finest in the world. No traveler should pass Queretaro without visiting it. In 1866 it was the property of Don Francisco Rubio. It cost \$4,000,000. It was worked by water, steam and horse power. It turned out 1,500 pieces of unbleached cotton daily, and at night run a large number of mill stones, grinding principally wheat. It has probably the highest overshot wheel in the world. The buildings of the factory are of stone, and are surrounded by fine gardens, with artificial ponds, after the European style. Among the statues that adorn the grounds is that of "Herculus;" it cost in Italy \$15,000. The superintendents are very polite and have always a clerk at hand to show the stranger about this beautiful establishment.

There are several hotels in Queretaro; among the best is that of the "Red Eagle;" the city has also a fine theatre.

It was in this city that Maximilian sustained a siege against the liberal forces under Gen. Escobedo, which resulted, through the treachery of his bosom friend, Colonel Miguel Lopez, of the Empress' regiment, whom he had just made a general, and who betrayed him, in his surrender to Generals Palaclo and Escobedo, on the 19th of May, 1867. Maximilian was subsequently tried before a drum-head military tribunal, and shot, with his unfortunate companions, Gens. Miramon and Mejia, at the foot of the "Cerro de la Cruz," on the 19th of June, 1867.

The delicious climate of Queretaro, the abundance of fruits and flowers, the country produces, makes it a delightful place.

#### ROUTE NO. 7.

*From Queretaro to the City of Mexico, the capital of the Republic, 134 1-2 miles.*

From Queretaro to the hacienda de la Noria, the road leads up a hill, called "Cuesta de China." There are very large

cactus of several varieties on the road-side, among them the "organos." Distance, five miles.

From La Noria to the hacienda del Colorado, road up hill through thickets, dangerous for robbers; distance, five miles.

From El Colorado to Arroyo Seco, level road; distance, seven and a-half miles.

From Arroya Seco to El Sauz, five miles.

El Sauz to las Trojas Mocha, good road; here road forks more direct to San Miguel Allende by way of Chichimequillas, and crossing a river over a good stone bridge, the City of San Juan del Rio is reached; distance, six miles.

San Juan del Rio has been, and will be again, a large commercial centre, on account of its situation, as it is from this point that all roads to the interior branch out. It was, in former times, one of the greatest manufacturing cities of Mexico, renowned for its woolen textures. Its streets are wide and well paved, and at one time it had 20,000 inhabitants.

From San Juan del Rio to hacienda de Palmillas, six miles.

From Palmillas to San Antonio, a small town on a high plain, road rolling; distance, seven and a-half miles.

From San Antonio to Ruano, ten miles.

From Ruano to Encinillas, down hill; distance, five miles.

From Encinillas to the hacienda of Arroyo Zarco; the limits of this estate is the boundary line between the State of Queretaro and Mexico. It is a large grain estate, has a fine hotel and spacious yards for animals, also a fine cotton mill; distance, four and a-half miles.

At this place two stages meet daily—one coming from Mexico and the other from Queretaro; they are large Concord coaches, carrying twelve passengers inside.

From the hacienda of Arroyo Zarco the road goes up hill to the highest point reached on this route than Queretaro to Mexico, which is 9,675 feet above the level of the sea.

This road runs through stunted pines, then goes over a road down hill to the village of San Miguelito de Capulalpan. This portion of the road is noted for robbers, so much so that the Mexican Government formerly sent an escort along with the stages. San Miguelito is a small Indian village, and is celebrated not only on account of the robberies committed in its neighborhood, as on



account of the battle of the same name, fought between the liberal forces commanded by Gen. Ortega, and the reactionists commanded by Gen. Miramon.

From San Miguelito to San Francisco, Soyaniquilpan, a large Indian village, the road is over a rough hog-wallow prairie; distance from Arroyo Zarco, thirteen miles.

From San Francisco Soyaniquilpan to the hacienda de la Canada road is a little rough, then down hill; a small rivulet is crossed over by a stone bridge to the hacienda, which has good buildings; it is a grain plantation; distance, ten miles.

From the hacienda de la Canada to the large town of Tepehi del Rio, six miles. This place is located between a hill and the river of the same name; has good buildings, fine gardens and stately shade trees.

From the town of Tepehi del Rio to San Miguel you cross the Tepehi River, which is a fine mountain stream, crossed by a good stone bridge; distance, nine miles.

From San Miguel, a small rancho, to the large town of Cuatitlan the distance is eleven miles.

This place seems to be a very active business place; its population may amount to 12,000 or more people. Going towards Mexico you pass a stone bridge over a river of the same name. It is said that Cortez entered the valley of Mexico at this point. Some years ago a rock on the left-hand side of the bridge, going towards the city, was still standing upon which was an inscription to that effect. Here you enter the beautiful valley of Mexico; flowers and fruit abound.

From Cuatitlan to the hacienda of la Lecheria (which is said to have been purchased by Maximilian at one time), distance, about three miles.

From la Lecheria to the large Indian town of Tlalnepantla, distance, seven and a-half miles. This is a very pretty place, shadowed by stately trees.

From Tlalnepantla to the City of Mexico the distance is seven and a-half miles.

You enter the city by the causeway of San Cosme, and pass the house built by Cortez, the conqueror of Mexico; this house is to the left of road before passing the city gate, and which but few people have noticed. It should be visited.

## DISTANCES

IN MEXICAN LEAGUES FROM THE CITY OF MEXICO TO SOME  
OF THE PRINCIPAL CITIES OF THE REPUBLIC.

| From Mexico to—                               | Leagues. |
|---|----------|
| Aguas Calientes, . . . . .                    | 132      |
| Acapulco (sea port on the Pacific), . . . . . | 110      |
| San Blas (sea port on the Pacific), . . . . . | 210      |
| Colima (capital of Colima), . . . . .         | 149      |
| Culiacan (capital of Sinaloa), . . . . .      | 403      |
| Chihuahua (capital of Chihuahua), . . . . .   | 333      |
| Chiapas, . . . . .                            | 289      |
| Durango, . . . . .                            | 203      |
| Guanajuato, . . . . .                         | 88       |
| Guadalajara, . . . . .                        | 161      |
| Monterey, . . . . .                           | 234      |
| Matamoros, . . . . .                          | 326      |
| Morelia, . . . . .                            | 69       |
| Merida, . . . . .                             | 386      |
| Oajaca, . . . . .                             | 108      |
| Puebla, . . . . .                             | 28       |
| Queretaro, . . . . .                          | 57       |
| San Luis Potosi, . . . . .                    | 114      |
| Saltillo, . . . . .                           | 209      |
| San Juan Bautista de Tabasco, . . . . .       | 239      |
| Tampico (by way of San Luis), . . . . .       | 218      |
| Tampico (by way of La Huastica), . . . . .    | 103      |
| Textla, . . . . .                             | 70       |
| Toluca, . . . . .                             | 16       |
| Ures, . . . . .                               | 582      |
| Vera Cruz (sea port), . . . . .               | 93       |
| Victoria (Tamaulipas), . . . . .              | 195      |
| Zacatecas, . . . . .                          | 130      |
| La Paz (Lower California), . . . . .          | 416      |
| Tlaxcala, . . . . .                           | 28       |

*Itinerary No. 1.—From the City of Mexico to the Cities of Queretaro, San Luis Potosi, Saltillo, Monterey and Matamoros.*

| From Mexico to—             | Leagues. | Total. |
|-----------------------------|----------|--------|
| Cuautitlan, . . . . .       | 7        | 0      |
| Tula, . . . . .             | 11       | 18     |
| Arroyozarco, . . . . .      | 13       | 31     |
| San Juan del Rio, . . . . . | 12       | 43     |
| Queretaro, . . . . .        | 14       | 57     |
| San Miguel, . . . . .       | 14       | 71     |
| Dolores,, . . . . .         | 8        | 79     |
| San Felipe. . . . .         | 10       | 89     |
| El Jaral, . . . . .         | 7        | 96     |
| Valle, . . . . .            | 6        | 102    |
| San Luis, . . . . .         | 12       | 114    |
| Bocas, . . . . .            | 12       | 126    |
| El Venado, . . . . .        | 11       | 137    |
| Laguna Seca, . . . . .      | 9        | 146    |
| Guadaloupe, . . . . .       | 5        | 151    |
| San Cristobal, . . . . .    | 8        | 159    |
| La Parida, . . . . .        | 8        | 167    |
| Salado, . . . . .           | 10       | 177    |
| San Salvador, . . . . .     | 7        | 184    |
| Encarnacion, . . . . .      | 9        | 193    |
| Agua Nueva, . . . . .       | 8        | 201    |
| Saltillo, . . . . .         | 8        | 209    |
| Santa Maria, . . . . .      | 6        | 215    |
| La Rinconada. . . . .       | 7        | 222    |
| Santa Catarina, . . . . .   | 8        | 230    |
| Monterey, . . . . .         | 4        | 234    |
| Cadereyta, . . . . .        | 9        | 243    |
| Ayancual, . . . . .         | 8        | 251    |
| Salto, . . . . .            | 8        | 259    |
| China, . . . . .            | 12       | 271    |
| Zacate, . . . . .           | 11       | 282    |
| Noria, . . . . .            | 12       | 294    |
| Reynosa, . . . . .          | 13       | 307    |
| La Mesa, . . . . .          | 10       | 317    |
| Matamoros, . . . . .        | 11       | 328    |

(328 leagues, or 863 and a fraction American miles.)

*No. 2.—From the City of Mexico to the port of Acapulco on the Pacific Ocean.*

| From Mexico to—                    | Leagues. | Total. |
|------------------------------------|----------|--------|
| Tlalpan, . . . . .                 | 4        | 0      |
| Venta del Arenal, . . . . .        | 3        | 7      |
| Huichilaque, . . . . .             | 6        | 13     |
| Cuernavaca, . . . . .              | 4        | 17     |
| Sochiltepec, . . . . .             | 5        | 22     |
| Puente de Ixtla, . . . . .         | 5        | 27     |
| Los Azuchiles, . . . . .           | 6        | 33     |
| Tuxpan, . . . . .                  | 5        | 38     |
| Tepecoacuilco, . . . . .           | 3        | 41     |
| Venta de Papula, . . . . .         | 6        | 47     |
| Venta de Estola, . . . . .         | 1        | 48     |
| Rio de Mezcalo, . . . . .          | 5        | 53     |
| Venta del Zopilote, . . . . .      | 7        | 60     |
| Zumpango, . . . . .                | 4        | 64     |
| Chilpancingo, . . . . .            | 3        | 67     |
| Hacienda de Acahuizotla, . . . . . | 7        | 74     |
| Hacienda de Bueua Vista, . . . . . | 4        | 78     |
| Dos Caminos, . . . . .             | 3        | 81     |
| Venta de Palo Gordo, . . . . .     | 5        | 86     |
| Los Pozuelos, . . . . .            | 7        | 93     |
| Dos Arroyos, . . . . .             | 6        | 99     |
| Venta del Egido, . . . . .         | 4        | 103    |
| Venta Viega, . . . . .             | 3        | 106    |
| Acapulco, . . . . .                | 4        | 110    |

(110 leagues, or about 289½ miles.)

*No. 3.—From the City of Mexico to Queretaro, Guatuzlajajara, capital of Jalisco, and the port of San Blas on the Pacific Ocean.*

| From Mexico to—           | Leagues. | Total. |
|---------------------------|----------|--------|
| Tlalnepantla, . . . . .   | 3        | 0      |
| La Lechería, . . . . .    | 3        | 6      |
| Cuantitlan, . . . . .     | 1        | 7      |
| Huehuetoca, . . . . .     | 4        | 11     |
| Rancho de Bata, . . . . . | 4        | 15     |

|                                       | Leagues. | Total. |
|---------------------------------------|----------|--------|
| Tula, . . . . .                       | 3        | 18     |
| San Antonio, . . . . .                | 3        | 21     |
| La Goleta, . . . . .                  | 3½       | 24½    |
| Capulalpan, . . . . .                 | 3        | 28     |
| Arroyozarco, . . . . .                | 3        | 31     |
| Tenazat, . . . . .                    | 2        | 33     |
| San Isidro, . . . . .                 | 2        | 35     |
| Palmillas, . . . . .                  | 6        | 41     |
| San Juan del Rio, . . . . .           | 2        | 43     |
| El Jarez, . . . . .                   | 5        | 48     |
| Colorado, . . . . .                   | 4        | 52     |
| Queretaro, . . . . .                  | 5        | 57     |
| Rio Cuichiti, . . . . .               | 5½       | 62½    |
| Celaya, . . . . .                     | 5½       | 68     |
| Salamanca. . . . .                    | 6        | 74     |
| Irapuato, . . . . .                   | 4        | 78     |
| Horcones, . . . . .                   | 11       | 89     |
| Punta de San Juan, . . . . .          | 4½       | 93½    |
| Hacienda de Frias, . . . . .          | 7½       | 101    |
| Los Alamos, . . . . .                 | 3        | 104    |
| Sauz, . . . . .                       | 8        | 112    |
| Ranchos de Tierra Colorado, . . . . . | 4        | 116    |
| Puente de Calderon, . . . . .         | 9        | 125    |
| Rio Grande, . . . . .                 | 3        | 128    |
| Guadalajara, . . . . .                | 7        | 135    |
| El Mezcal, . . . . .                  | 5        | 140    |
| Hacienda de Huasca, . . . . .         | 6        | 146    |
| Amatitan, . . . . .                   | 4        | 150    |
| Tequila, . . . . .                    | 5        | 155    |
| La Magdalena, . . . . .               | 10       | 165    |
| Rancho de Tepequiste, . . . . .       | 10       | 175    |
| Hacienda de Portezuelo, . . . . .     | 9        | 184    |
| Las Barrancas, . . . . .              | 4        | 188    |
| Ixtlan, . . . . .                     | 9        | 197    |
| Aguacatlan, . . . . .                 | 4        | 201    |
| Tetitan, . . . . .                    | 8        | 209    |
| Santa Isabel, . . . . .               | 6        | 215    |
| Zapotlan, . . . . .                   | 5        | 220    |

|                        | Leagues. | Total. |
|------------------------|----------|--------|
| San Leonel, . . . . .  | 6        | 226    |
| Tepic, . . . . .       | 8        | 234    |
| Guaristemba, . . . . . | 9        | 243    |
| San Blas, . . . . .    | 8        | 250    |

(250 leagues, or about 660½ miles.)

*No. 4.—From the City of Mexico to the City of Morelia, capital of the State of Michoacan, formerly known as Valladolid.*

| From Mexico to—                  | Leagues. | Total. |
|----------------------------------|----------|--------|
| Cuajimalpa, . . . . .            | 5        | 0      |
| Lerma, . . . . .                 | 7        | 12     |
| Toluca, . . . . .                | 4        | 16     |
| Ixtlahuaca, . . . . .            | 9        | 25     |
| San Felipe del Obraje, . . . . . | 7        | 32     |
| Hacienda de Tepetongo, . . . . . | 8        | 40     |
| Maravatio, . . . . .             | 9        | 49     |
| Ucareo, . . . . .                | 6        | 55     |
| Zinapécuaro, . . . . .           | 4        | 59     |
| Indaparapeo. . . . .             | 3        | 62     |
| Charo, . . . . .                 | 3        | 65     |
| Morelia, . . . . .               | 4        | 69     |

(69 leagues, or 181½ miles approximately.)

*No. 5.—From the City of Mexico to the City of Oajaca, capital of the State of the same name.*

| From Mexico to—          | Leagues. | Total. |
|--------------------------|----------|--------|
| Ayotla, . . . . .        | 7        | 0      |
| Rio Frio, . . . . .      | 7        | 14     |
| San Martin, . . . . .    | 7        | 21     |
| Puebla, . . . . .        | 7        | 28     |
| Amozoe, . . . . .        | 4        | 32     |
| Tepeaca, . . . . .       | 4        | 36     |
| La Venta, . . . . .      | 5        | 41     |
| Tlalcotepec, . . . . .   | 5        | 46     |
| Tehuacan, . . . . .      | 9        | 55     |
| San Sebastian, . . . . . | 6        | 61     |

|                                | Leagues. | Total. |
|--------------------------------|----------|--------|
| La Venta, . . . . .            | 2        | 63     |
| La Calavara, . . . . .         | 7        | 70     |
| San Juan de la Cues, . . . . . | 8        | 78     |
| Quiotepec, . . . . .           | 4        | 82     |
| San Pedro, . . . . .           | 6        | 88     |
| Dominguillo, . . . . .         | 4        | 92     |
| Trapichi de Aragon, . . . . .  | 6        | 98     |
| San Juan, . . . . .            | 7        | 105    |
| Oaxaca, . . . . .              | 7        | 112    |

(112 leagues, or  $294\frac{3}{4}$  miles in round numbers.)

*No. 6.—From the City of Mexico to the Cities of Zacatecas and Durango, capitals of the States of the same names.*

| From Mexico to—  | Leagues.       | Total.          |
|--|----------------|-----------------|
| San Juan del Rio (see itinerary to Queretaro), . . . . . | 0              | 43              |
| La Palma, . . . . .                                      | 6              | 49              |
| Chichimequillas, . . . . .                               | 8              | 57              |
| Los Ricos, . . . . .                                     | $6\frac{1}{2}$ | $63\frac{1}{2}$ |
| Jacales, . . . . .                                       | 5              | $68\frac{1}{2}$ |
| Atotonilco, . . . . .                                    | $5\frac{1}{3}$ | 74              |
| Gallinero, . . . . .                                     | 6              | 80              |
| Quemada, . . . . .                                       | 7              | 87              |
| San Felipe, . . . . .                                    | 4              | 91              |
| Santa Eugenia, . . . . .                                 | 8              | 99              |
| Ojuelos, . . . . .                                       | 5              | 104             |
| Encinillas, . . . . .                                    | 7              | 111             |
| Las Letras, . . . . .                                    | 5              | 116             |
| Cuniga Grande, . . . . .                                 | 6              | 122             |
| Santa Gertrudis, . . . . .                               | 7              | 129             |
| San Francisco de Adames, . . . . .                       | 5              | 134             |
| Refugio, . . . . .                                       | 6              | 140             |
| Zacatecas, . . . . .                                     | 7              | 147             |
| La Calera, . . . . .                                     | 6              | 153             |
| Fresnillo, . . . . .                                     | 7              | 160             |
| Rancho Grande, . . . . .                                 | 8              | 168             |
| La Escondida, . . . . .                                  | 5              | 173             |

|  | Leagues. | Total. |
|--|----------|--------|
| Sain, . . . . .                                | 6        | 179    |
| Arenal, . . . . .                              | 6        | 185    |
| Sombrerete, . . . . .                          | 5        | 190    |
| Calabazal, . . . . .                           | 6        | 196    |
| Muleros, . . . . .                             | 5        | 201    |
| San Quintin, . . . . .                         | 7        | 208    |
| La Punta, . . . . .                            | 6        | 214    |
| Anaracoyan, . . . . .                          | 7        | 221    |
| Durango, . . . . .                             | 3        | 224    |
| (224 leagues, or 589½ miles in round numbers.) |          |        |

*No. 7.—From the City of Mexico to the City of Culiacan, capital of the State of Sinaloa.*

| From Mexico to—                    | Leagues. | Total. |
|------------------------------------|----------|--------|
| Gualajara (see No. 3), . . . . .   | 159½     | 159½   |
| Amatitan, . . . . .                | 10½      | 170    |
| La Magdalena, . . . . .            | 8⅔       | 178⅔   |
| Hacienda de Mochitiltic, . . . . . | 8⅔       | 187⅔   |
| Ixtlan, . . . . .                  | 10       | 197½   |
| Ahuacatlan, . . . . .              | 3⅓       | 200⅔   |
| Hacienda de Titan, . . . . .       | 5⅓       | 206    |
| Hacienda de San Leonel, . . . . .  | 10       | 216    |
| Cuidad de Tepic, . . . . .         | 8⅓       | 224⅓   |
| Rancho de Santa, . . . . .         | 10⅓      | 234⅓   |
| Santiago, . . . . .                | 3⅓       | 238    |
| Posole, . . . . .                  | 8        | 246    |
| Rose Morada, . . . . .             | 6⅔       | 252⅔   |
| Acaponeta, . . . . .               | 16       | 268⅔   |
| Esquinapa, . . . . .               | 16⅔      | 285⅓   |
| Rosario, . . . . .                 | 8        | 293⅓   |
| Potreriillo, . . . . .             | 4        | 297⅓   |
| Aguacaliente, . . . . .            | 5        | 302⅓   |
| Ciudad de Concordia, . . . . .     | 7        | 309⅓   |
| Los Veranos, . . . . .             | 8        | 317⅓   |
| La Noria, . . . . .                | 5        | 322⅓   |
| Limoncito, . . . . .               | 9        | 331⅓   |
| Coyotitan, . . . . .               | 3⅓       | 354⅔   |



|                              | Leagues.        | Total.            |
|------------------------------|-----------------|-------------------|
| Piastla, . . . . .           | 4               | 358 $\frac{2}{3}$ |
| Elota, . . . . .             | 8               | 346 $\frac{2}{3}$ |
| Guarimas, . . . . .          | 10              | 356 $\frac{2}{3}$ |
| Higuerita, . . . . .         | 2               | 358 $\frac{2}{3}$ |
| Vinapa, . . . . .            | 5               | 363 $\frac{2}{3}$ |
| Abuya, . . . . .             | 2               | 365 $\frac{2}{3}$ |
| Higueras de Abuya, . . . . . | 2               | 367 $\frac{2}{3}$ |
| Tlacuichamona, . . . . .     | 5               | 372 $\frac{2}{3}$ |
| San Lorenzo, . . . . .       | 4               | 376 $\frac{2}{3}$ |
| Salado, . . . . .            | 4               | 380 $\frac{2}{3}$ |
| Milpa, . . . . .             | 2               | 382 $\frac{2}{3}$ |
| Pueblo Viego, . . . . .      | 3               | 385 $\frac{2}{3}$ |
| Carrizal, . . . . .          | 2               | 387 $\frac{2}{3}$ |
| Culiacan, . . . . .          | 8 $\frac{1}{3}$ | 396               |

*No. 8.—From the City of Mexico to Ures, capital of the State of Sonora.*

| From Mexico to—  | Leagues.        | Total. |
|--|-----------------|--------|
| Culiacan (see No. 7 preceding this itinerary), . . . . . | 396             | 396    |
| Moholo, . . . . .  | 3               | 399    |
| Paredones, . . . . .                                     | 4               | 403    |
| Las Higueras, . . . . .                                  | 4               | 407    |
| La Mosita, . . . . .                                     | 4               | 411    |
| Los Mescalitos, . . . . .                                | 5               | 416    |
| Palmar de los Leyvas, . . . . .                          | 7               | 423    |
| Mocosito, . . . . .                                      | 4               | 427    |
| La Cienega, . . . . .                                    | 6               | 433    |
| Los Coyotes, . . . . .                                   | 3               | 436    |
| Rancho Negro, . . . . .                                  | 3               | 439    |
| Los Cerillos, . . . . .                                  | 2               | 441    |
| Sinaloa, . . . . .                                       | 2 $\frac{1}{2}$ | 443    |
| Cabrera, . . . . .                                       | 4               | 447    |
| Ocoroni, . . . . .                                       | 8               | 455    |
| Tarajera, . . . . .                                      | 6               | 461    |
| Los Ojitos, . . . . .                                    | 7               | 468    |
| Montoya, . . . . .                                       | 4               | 472    |

|                                   | Leagues. | Total. |
|-----------------------------------|----------|--------|
| Canutillo, . . . . .              | 3        | 475    |
| Fuerte, . . . . .                 | 1        | 476    |
| Mesquite, . . . . .               | 8        | 484    |
| Caranate, . . . . .               | 3        | 487    |
| Jerocha, . . . . .                | 8        | 495    |
| Real de Alamos, . . . . .         | 8        | 503    |
| Comicari, . . . . .               | 8        | 511    |
| Real de Sobia, . . . . .          | 4        | 515    |
| Rancho de los Vasitos, . . . . .  | 4        | 519    |
| Real de Baroyeca, . . . . .       | 8        | 527    |
| Presidio de Buenavista, . . . . . | 16       | 543    |
| Comuripa, . . . . .               | 12       | 567    |
| San Francisco de Borja, . . . . . | 12       | 555    |
| Rancho de Sanguijuela, . . . . .  | 10       | 577    |
| San José de Pimas, . . . . .      | 6        | 583    |
| Hermosillo or Pitic, . . . . .    | 11       | 603    |
| Molino de Monterey, . . . . .     | 5        | 608    |
| Villa de Guadaloupe. . . . .      | 6        | 619    |
| Ures, . . . . .                   | 2        | 621    |

*No. 9.—From the City of Mexico to the City of Chihuahua, north-west 1-4 north, 404 leagues.*

| From Mexico to—                          | Leagues. | Total. |
|--|----------|--------|
| Durango (see itinerary No. 6), . . . . . |          | 234    |
| Sauz Bendito, . . . . .                  | 10       | 244    |
| Molino de la Cienega, . . . . .          | 10       | 254    |
| Molino de Huichapa, . . . . .            | 12       | 266    |
| San Salvador de Horta, . . . . .         | 11       | 277    |
| Estancia del Casco, . . . . .            | 12       | 289    |
| Hacienda de la Zarca, . . . . .          | 10       | 299    |
| Cerro Gordo, . . . . .                   | 14       | 313    |
| La Parida, . . . . .                     | 7        | 320    |
| La Noria. . . . .                        | 7        | 327    |
| La Florida, . . . . .                    | 6        | 333    |
| Hacienda la Concepcion, . . . . .        | 3        | 336    |
| “ de Salais, . . . . .                   | 10       | 346    |
| “ del Rio del Parral, . . . . .          | 11       | 357    |

|                              | Leagues. | Total. |
|------------------------------|----------|--------|
| Puerto de la Cruz, . . . . . | 12       | 369    |
| San Pablo, . . . . .         | 14       | 383    |
| Ojito, . . . . .             | 11       | 394    |
| Chihuahua, . . . . .         | 10       | 404    |

*No. 10.—From the City of Mexico to the Rio Grande via Tula, Ciudad, Victoria and Guerrero, the straightest route to reach the Texas frontier.*

| From Mexico to—   | Leagues. | Total. |
|---|----------|--------|
| Quantitlan, large and Prosperous city, on the river of the same name, . . . . . | 7        | 7½     |
| Huehuetoca—altitude, 2,296 metres,  | 4½       | 11½    |
| Atitalaquia, . . . . .  | 8        | 19½    |
| San Pedro Tlascuapa, . . . . .  | 2        | 21½    |
| Misquiahuala, . . . . .   | 5        | 26½    |
| Ixmiquilpan, a large Indian town whose altitude is 5,638 feet, . . . . .        | 7½       | 34     |

Mountain pass between Ixmiquilpan and Zimapan the altitude is 8,383 feet; to Rio de Moctezuma, situated west of the former mountains to a point where the road from Tecosantla to Zimapan crosses the river at the crossing of Las Maromas—altitude, 4,815 feet.

|                                  | Leagues. | Total. |
|----------------------------------|----------|--------|
| Zimapan, . . . . .               | 10       | 44     |
| Las Adjuntas, . . . . .          | 4½       | 48½    |
| Jiliapa, . . . . .               | 4        | 52½    |
| Pacula, . . . . .                | 1½       | 54     |
| Jalpan, . . . . .                | 8½       | 62½    |
| La Purisima de Arista, . . . . . | 4        | 66½    |
| Paculilla (S. G.), . . . . .     | 4        | 70½    |
| Rancho de Tierra Fria, . . . . . | 4        | 74½    |
| Rancho de Saus, . . . . .        | 3        | 77½    |
| Santa Maria Acapula, . . . . .   | 5½       | 83     |
| San Ciro de Alberca, . . . . .   | 7½       | 90½    |
| Rio Verde, . . . . .             | 14       | 104½   |
| Ciudad del Maiz, . . . . .       | 25       | 129½   |

|  | Leagues. | Total. |
|--|----------|--------|
| Hacienda del Meco, . . . . .                                       | 10       | 139½   |
| Tula, . . . . .  | 8        | 147½   |
| Rancho de las Norias (road over<br>timbered hills—water scarce), . | 5        | 152½   |
| Las Presas, . . . . .  | 5        | 157½   |
| Town of Palmillas, . . . . .                                       | 6        | 163½   |
| Town of Jamauve, . . . . .   | 5        | 168½   |
| La Maroma, . . . . .   | 2½       | 171    |
| La Mulita, . . . . .   | 3½       | 174½   |
| Rancho de Minas, . . . . .   | 4        | 178½   |
| City of Victoria, . . . . .  | 8        | 186½   |
| Town of Hidalgo, . . . . .   | 17       | 203½   |
| “ Villagran, . . . . .   | 8        | 211½   |
| “ Linares, . . . . .   | 14       | 235½   |
| “ San Cristoval, . . . . .   | 9        | 244½   |
| “ Montemorelos, or el Pilon, .                                     | 6        | 250½   |
| “ Cadereita, . . . . .   | 9        | 259½   |
| “ Pescheria Chica, . . . . .                                       | 6        | 265½   |
| San José, . . . . .  | 4½       | 270    |
| Serralvo, . . . . .  | 10       | 280    |
| Guerrero, . . . . .  | 14       | 294    |
| Bank of Rio Grande, . . . . .                                      | 2        | 296    |

*From the City of San Louis Potosi to the Port of Tampico.*

| From San Luis Potosi to—  | Leagues. |
|---|----------|
| Hacienda de Laguna Seca (over a plain and<br>partly rolling—a good wagon-road), | 10       |
| Hacienda de la Corcobada (barren hills),  | 2        |
| Hacienda de Peutillos (over rocky hills),                                       | 2        |
| Ranch of the defile of San José (partly level<br>and rolling), . . . . .        | 4        |
| Indian town of San Isidro (broken and<br>woody), . . . . .                      | 5        |
| Indian town of Turubiates (road as above),                                      | 5        |
| Hacienda de Viejo, . . . . .  | 5        |
| Ranch of Orulital (water scarce), . . . .                                       | 4        |
| Hacienda of Buena Vista, . . . . .  | 4        |

|   | Leagues. | Total.     |
|---|----------|------------|
| Rancho de la Incada, . . . . .  |          | 4          |
| La Vignita, . . . . .   |          | 5          |
| Rancho del Coronel (between this and the<br>above mentioned point is the boundary<br>line between the State of San Luis<br>Potosi and Tamaulipas—a rough road<br>for wagons), . . . . . |          | 3          |
| Hacienda de la Viga, . . . . .  |          | 5          |
| Hacienda de la Borrega, . . . . .   |          | 3          |
| Town of Tula, . . . . .   |          | 4          |
| La Boquilla, . . . . .  |          | 4          |
| Los Gallos, . . . . .   |          | 4          |
| La Laja, . . . . .  |          | 5          |
| Town of Santa Barbara, . . . . .  |          | 6          |
| Rancho del Chamal, . . . . .  |          | 4          |
| Cucharas, . . . . .   |          | 5          |
| El Commandante, . . . . .   |          | 4          |
| El Limon, . . . . .   |          | 4          |
| Horcasitas or Magicatzin, . . . . .   |          | 6          |
| Rancho del Carrizal (rocky road), . . . . .   |          | 8          |
| Chocoy (heavy sandy road to Tampico), . . . . .   |          | 6          |
| Éstero de la Tuna, . . . . .  |          | 5          |
| Altamira or Villerias, . . . . .  |          | 10         |
| Tampico, . . . . .  |          | 6          |
| Total, . . . . .  |          | <u>142</u> |

The Mexican league equals 5,000 varas, and the American mile 1,900 varas.

Distance from San Luis Potosi to Tampico by the above route 370 miles.

*Itinerary from San Luis Potosi to Victoria in Tamaulipas.*

| From San Luis Potosi to—  | Leagues. |
|---|----------|
| Tula (the same road as described above),                                  | 65       |
| From Tula to Las Norias ranch (timbered<br>hills—water scarce), . . . . . | 5        |
| Las Presas Rancho (road level and woody),                                 | 5        |

|  | Leagues. | Total.     |
|--|----------|------------|
| Town of Palmillas (about the <i>Sierra</i> ), . . . . .  |          | 6          |
| Town of Jamauve (about the mountain and water scarce), . . . . .   |          | 5          |
| La Maroma (rancho in the mountains—water scarce), . . . . .  |          | 2½         |
| La Mulita (water scarce), . . . . .  |          | 3½         |
| Mining place in the mountains (water abundant), . . . . .  |          | 4          |
| Ciudad Victoria (road in the mountain—water plentiful, crossing a deep ravine called el Voladero), . . . . . |          | 8          |
| Total, . . . . .   |          | <u>104</u> |

*From Victoria to Soto Lamarina,*

| From Victoria to—                     | Leagues.  |
|---------------------------------------|-----------|
| The town of Casas or Croix, . . . . . | 12        |
| La Puerta, . . . . .                  | 10        |
| Soto la Marina (port), . . . . .      | 10        |
| Total, . . . . .                      | <u>32</u> |

*From Victoria to Monterey.*

| From Victoria to—                                 | Leagues.  |
|---|-----------|
| Hacienda of Santa Engracia, . . . . .             | 8         |
| Town of Hidalgo or Hoyos, . . . . .               | 9         |
| Town of Villagran or Cerro de Santiago, . . . . . | 8         |
| City of Linares, . . . . .                        | 14        |
| Town of San Cristoval, . . . . .                  | 9         |
| Town of Montemorelos or El Pilon, . . . . .       | 6         |
| Los Guajes, . . . . .                             | 12        |
| Monterey, . . . . .                               | 3         |
| Total, . . . . .                                  | <u>59</u> |

*From Saltillo to Zacatecas—118 south south-west.*

| Saltillo to—                     | Leagues. |
|----------------------------------|----------|
| Encantada, . . . . .             | 4        |
| San Juan Vaqueria, . . . . .     | 6        |
| Puerto del Capulin, . . . . .    | 4        |
| Santa Elena, . . . . .           | 8        |
| Rancho de Santiago, . . . . .    | 9        |
| Cedros, . . . . .                | 11       |
| La Candelaria, . . . . .         | 12       |
| Hacienda de Gruñidora, . . . . . | 8        |
| Charco del Muerto, . . . . .     | 5        |
| Rancho del Gato, . . . . .       | 8        |
| Barranquita, . . . . .           | 5        |
| Sierra Hermosa, . . . . .        | 3        |
| Sancarron, . . . . .             | 7        |
| Pueblo de San Cosme, . . . . .   | 7        |
| Hacienda de Baños, . . . . .     | 7        |
| “ San Antonio, . . . . .         | 6½       |
| “ Guadalupe, . . . . .           | 6        |
| “ Zacatecas, . . . . .           | 1½       |

*From the town of Piedras Negras, in the State of Coahuila, Mexico (opposite Eagle Pass, Texas), to the Sierra Mojada mines, 138 leagues.*

| From Piedras Negras to—                        | Leagues.   |
|--|------------|
| The town of Morelos, . . . . .                 | 14         |
| Las Cabeceras (spring), . . . . .              | 6          |
| San Juande Sabinas, . . . . .                  | 20         |
| La Aura, . . . . .                             | 12         |
| Oballos, . . . . .                             | 5          |
| Las Borregas, . . . . .                        | 2          |
| La Rainas, . . . . .                           | 3          |
| Puerto del Carmen, . . . . .                   | 5          |
| Rancho Nuevo, . . . . .                        | 3          |
| Cuatro Cienegas, . . . . .                     | 8          |
| Through the desert to Sierra Mojada, . . . . . | 50         |
| Total, . . . . .                               | <u>138</u> |

*Itinerary from Saltillo, the present capital of the State of Coahuila, to the City of Durango, capital of the State of Durango.*

| From Saltillo to—   | Miles.                             |
|---|------------------------------------|
| Hacienda de Buena Vista road over the battle-field where General Taylor won that glorious battle over General Santa Anna, . . . . . | 8                                  |
| Hacienda de Patos, one of the finest estates in the country, . . . . .  | 31 $\frac{3}{4}$                   |
| Castañuela, . . . . .   | 18 $\frac{1}{2}$                   |
| Town of Parras, well-buil place in a rich country, . . . . .  | 21                                 |
| Hacienda la Peña, rough road, forage scarce   | 39 $\frac{1}{2}$                   |
| Alamo de Parras, level road, . . . . .  | 18 $\frac{1}{2}$                   |
| Estancia (stock ranch) de Poso y Calvo, .   | 31 $\frac{3}{4}$                   |
| Rio Guanaual, dividing line between Coahuila and Durango, . . . . .   | 8                                  |
| Cuencame (large mining town), good road between high mountains, . . . . .   | 39 $\frac{1}{2}$                   |
| Yerbanis, . . . . .   | 16                                 |
| Tapias, . . . . .   | 21                                 |
| Sauces (road rough), . . . . .  | 10 $\frac{1}{2}$                   |
| Porfias Rancho (level road), . . . . .  | 18 $\frac{1}{2}$                   |
| Hacienda del Chorro (good road—water scarce), . . . . .   | 16                                 |
| City of Durango, . . . . .  | 23 $\frac{3}{4}$                   |
| Total, . . . . .  | <u>322<math>\frac{1}{4}</math></u> |



## DILIGENCIAS GENERALES.

---

### GENERAL MEXICAN STAGE-LINE FARES.

| From Mexico to—                           | Fare.  |
|---|--------|
| Cuantitlan, . . . . .                     | \$1 50 |
| Tula, . . . . .                           | 4 00   |
| San Juan del Rio, . . . . .               | 12 00  |
| Queretaro, . . . . .                      | 15 00  |
| Celaya, . . . . .                         | 18 00  |
| Salamanca, . . . . .                      | 21 00  |
| Irapuato, . . . . .                       | 22 00  |
| Guanajuato, . . . . .                     | 25 00  |
| Leon, . . . . .                           | 28 00  |
| Lagos, . . . . .                          | 31 00  |
| San Juan de los Lagos, . . . . .          | 34 00  |
| Guadalajara, . . . . .                    | 45 00  |
| From Lagos to Zacatecas, . . . . .        | 10 00  |
| “ Aguas Calientes to Zacatecas, . . . . . | 13 00  |
| “ Guadalajara to Zapotlan, . . . . .      |        |
|   |        |
| From Mexico to—                           |        |
| San Miguel, . . . . .                     | 19 00  |
| Dolores Hidalgo, . . . . .                | 21 00  |
| San Luis Potosi, . . . . .                | 32 00  |
| Venado, . . . . .                         | 38 00  |
| Charcas, . . . . .                        | 40 00  |
| Matehuala, . . . . .                      | 46 00  |
| Saltillo, . . . . .                       | 64 00  |
| Montery, . . . . .                        | 69 00  |
| From Montery to Metamoros, . . . . .      | 30 00  |
| “ San Luis to Zacatecas, . . . . .        | 16 00  |
| “ Mexico to Morelia, . . . . .            | 19 00  |
| “ Mexico to Cuernavaca, . . . . .         | 4 50   |
| “ Mexico to Cuautla, . . . . .            | 6 00   |
| “ Zacatecas to Durango, . . . . .         | 12 00  |

Passengers on the general stage line are only allowed twenty-five pounds of baggage; they are also allowed, when taking a through ticket, to stop at any point on the line where there is an agent of the company, by notifying said agent of their intention of doing so upon their arrival at the station. Hotel fare on the line is \$2, for supper, bed and breakfast; price of meals, for breakfast or dinner, is 75 cents per meal. Most of the hotels in Mexico are kept on the European plan.

Passengers carrying arms have to procure a permit from the authorities.

ITINERARY OF THE FERROCARRIL MEXICANO (MEXICAN RAILWAY) FROM THE CITY OF MEXICO TO VERA CRUZ—PRINCIPAL LINE.

| Stations.                         | Distances in Kilometres, |
|-----------------------------------|--------------------------|
| Mexico,                           |                          |
| Tepexpan, . . . . .               | 32½                      |
| San Juan Teotihuacan, . . . . .   | 43¾                      |
| Otumba, . . . . .                 | 55¼                      |
| La Palma, . . . . .               | 61¼                      |
| Ometusco, . . . . .               | 67½                      |
| Irolo, . . . . .                  | 77¼                      |
| Apan, . . . . .                   | 92¾                      |
| Soltepec, . . . . .               | 112¼                     |
| Guadaloupe, (hacienda), . . . . . | 124                      |
| Apizaco, . . . . .                | 139¼                     |
| Huamantla, . . . . .              | 182                      |
| Rinconada, . . . . .              | 200                      |
| San Andrés, . . . . .             | 220½                     |
| Boca del Monte, . . . . .         | 251¼                     |
| Alta Luz, . . . . .               | 257¾                     |
| Bota, . . . . .                   | 266½                     |
| Maltrata, . . . . .               | 271½                     |
| Encinal, . . . . .                | 281¼                     |
| Orizaba, . . . . .                | 291¾                     |
| Fortin, . . . . .                 | 310                      |
| Cordova, . . . . .                | 318                      |
| Atoyac, . . . . .                 | 337¾                     |

| Stations.                 | Distances in Kilometres. |
|---------------------------|--------------------------|
| Paso del Macho, . . . . . | 347 $\frac{1}{4}$        |
| Camaron, . . . . .        | 360 $\frac{1}{2}$        |
| Soledad, . . . . .        | 381 $\frac{3}{4}$        |
| Tejeria, . . . . .        | 408 $\frac{1}{4}$        |
| Vera Cruz, . . . . .      | 423 $\frac{1}{4}$        |

*Branch to Puebla.*

|                      |                  |
|----------------------|------------------|
| Apizaco.             |                  |
| Santa Ana, . . . . . | 16 $\frac{3}{4}$ |
| Panzacola, . . . . . | 35               |
| Puebla, . . . . .    | 47               |

INFORMATION TO TRAVELERS.

1.—Tickets sold to passengers are only good for the day they are sold, but passengers with through tickets are allowed to stop over night a Orizaba, if they desire it.

2.—Passengers for Puebla must change and take the train at Apizaco.

MEXICAN STEAMSHIP LINE.

*Line from Progreso to Bagdad and Tabasco.*

From Frontera to Progreso, touching at Laguna and Campeche, and from Frontera to Bagdad, at the mouth of the Rio Grande, touching at Minatillan, Vera Cruz, Tuxpan and Tampico.

The agent of the line in Matamoros is Sr. Francisco Armendaiz.

NAMES OF PROMINENT MERCHANTS RESIDING IN LAREDO,  
NUEVO MEXICO.

Patricio Milmo, banker.

Gilgan, importer of foreign goods and commission merchant.

Francisco Viscaya, importer of foreign groceries and commission merchant.

Joseph Brosig, custom-house broker.

NAMES OF PROMINENT MERCHANTS RESIDING IN MONTEREY.

Francisco Palacio, "La India."

Francisco Oliver, commission merchant.

Pedro Mais.

P. Milmo.

John Weber, commission merchant.

TABLE GIVING AN IDEA OF THE EXTENSION AND VALUE OF SOME OF THE PRINCIPAL ESTATES SITUATED BETWEEN THE CITY OF SALTILLO AND THE CITY OF MEXICO.

Of the largest of them there is not one to be found that contains half of the area of that of "*San Rafael del Salado and Aguadulce.*"

*From Saltillo to San Luis Potosi.*

| Names of Haciendas.             | Area in sq. m. | Value.    |
|---------------------------------|----------------|-----------|
| Agua Nueva, . . . . .           | 110            | —————     |
| Santa Helena, . . . . .         | 25             | —————     |
| La Encarnacion, . . . . .       | 50             | —————     |
| Potosi, . . . . .               | 120            | —————     |
| Penuelo, . . . . .              | 120            | —————     |
| Soledad, . . . . .              | 130            | —————     |
| Rocamonte, . . . . .            | 45             | —————     |
| San Tiburcio, . . . . .         | 190            | —————     |
| Palo Blanco, . . . . .          | 90             | —————     |
| Canelo, . . . . .               | 70             | —————     |
| Salado, . . . . .               | 600            | —————     |
| Vanegas, . . . . .              | 210            | —————     |
| Carbonera, . . . . .            | 45             | —————     |
| Pastorizo, . . . . .            | 48             | —————     |
| La Tresa, . . . . .             | 52             | —————     |
| Santa Gertrudis, . . . . .      | 52             | —————     |
| San Cristobal, . . . . .        | 36             | —————     |
| Solis, . . . . .                | 170            | —————     |
| Guadaloupe Carnisero, . . . . . | 84             | —————     |
| Mingole, . . . . .              | 62             | —————     |
| Laguna Seca, . . . . .          | 130            | —————     |
| Los Charcos, . . . . .          | 48             | —————     |
| Coronado, . . . . .             | 60             | —————     |
| Guaname, . . . . .              | 220            | \$500,000 |
| Cruces, . . . . .               | 270            | 400,000   |

| Names of Haciendas.        | Area in sq. m. | Value.  |
|----------------------------|----------------|---------|
| Bocas, . . . . .           | 48             | 250,000 |
| Rancho de Bocas, . . . . . | 40             | 230,000 |
| La Parada, . . . . .       | 80             | 400,000 |
| Tenasco, . . . . .         | 30             | 150,000 |
| El Corte, . . . . .        | 20             | 100,000 |

*Between San Luis Potosi and Mexico.*

| Names of Haciendas.          | Area in sq. m. | Value.  |
|------------------------------|----------------|---------|
| Gallinas, . . . . .          | 60             | 250,000 |
| Cienega de Mata, . . . . .   | 100            | 500,000 |
| Matazas, . . . . .           | 70             | 300,000 |
| La Tila, . . . . .           | 50             | 250,050 |
| Peutillos, . . . . .         | 180            | 500,000 |
| Poso de Carmen, . . . . .    | 40             | 400,000 |
| La Saucedá, . . . . .        | 37             | 150,000 |
| Arroyos, . . . . .           | 37             | 120,000 |
| La Laguna, . . . . .         | 18             | 130,000 |
| Bledos, . . . . .            | 50             | 500,000 |
| Tardo, . . . . .             | 84             | 180,000 |
| Gogorron, . . . . .          | 84             | 600,000 |
| Garal, . . . . .             | 51             | 800,000 |
| Sauceda Mulatos, . . . . .   | 60             | 250,000 |
| Carretas, . . . . .          | 40             | 200,000 |
| Norias de Charcas, . . . . . | 30             | 400,000 |
| Santana de Lovasa, . . . . . | 30             | 250,000 |
| Trancas, . . . . .           | 22             | 200,000 |
| El Gallinero, . . . . .      | 38             | 150,000 |
| La Erre, . . . . .           | 10             | 450,000 |
| Noria de Vasques, . . . . .  | 20             | 200,000 |
| La Venta, . . . . .          | 18             | 160,000 |
| Tuerto de Nieto, . . . . .   | 15             | 120,000 |
| Buena Vista, . . . . .       | 12             | 150,000 |
| Chichimegillas, . . . . .    | 40             | 350,000 |
| Amascala, . . . . .          | 12             | 160,000 |
| La Griega, . . . . .         | 32             | 160,000 |
| La Esperanza, . . . . .      | 37             | 230,000 |
| Cochitlan, . . . . .         | 19             | 150,000 |

| Names of Haciendas.            | Area in sq. m. | Value.  |
|--------------------------------|----------------|---------|
| La Llave, . . . . .            | 32             | 450,000 |
| Toachi, . . . . .              | 17             | 140,000 |
| El Saus, . . . . .             | 20             | 180,000 |
| Llano del Casadero, . . . . .  | 120            | 800,000 |
| Venta Hermosa, . . . . .       | 16             | 120,000 |
| Arroyo Zarco, . . . . .        | 70             | 500,000 |
| La Goleta, . . . . .           | 24             | 150,000 |
| Canada Flautla, . . . . .      | 18             | 160,000 |
| San Antonio Tula, . . . . .    | 20             | 200,000 |
| Talpa, . . . . .               | 13             | 300,000 |
| Batla, . . . . .               | 8              | 80,000  |
| El Salto, . . . . .            | 9              | 250,000 |
| Tetla, . . . . .               | 9              | 250,000 |
| La Condesa, . . . . .          | 3              | 200,000 |
| La Teja, . . . . .             | 3              | 150,000 |
| La Gaupa, . . . . .            | 9              | 900,000 |
| San Juan de Dios, . . . . .    | 2              | 150,000 |
| Potreros de Balmena, . . . . . | 3              | 170,000 |
| Ahuahuetes, . . . . .          | 2              | 190,000 |
| Amores, . . . . .              | 1              | 120,000 |
| El Cabrito, . . . . .          | 1              | 90,000  |
| El Hospital, . . . . .         | 13             | 350,000 |

There are many small estates that are worth millions of dollars, situated between Queretaro and Mexico, not mentioned in this statement because their extension is insignificant when compared to their great value.

In the estate of San Rafael del Salado and Aguadulce, parties who desire to enter largely upon stock-raising, agriculture and the development of mines, will find a vast and productive field beside the exploitation of the natural products, like the Lechuguilla Maguey, Zolmandoque, Palmetto, Cactus and Zotol, that will, if properly worked, alone pay for the hacienda in less than ten years.

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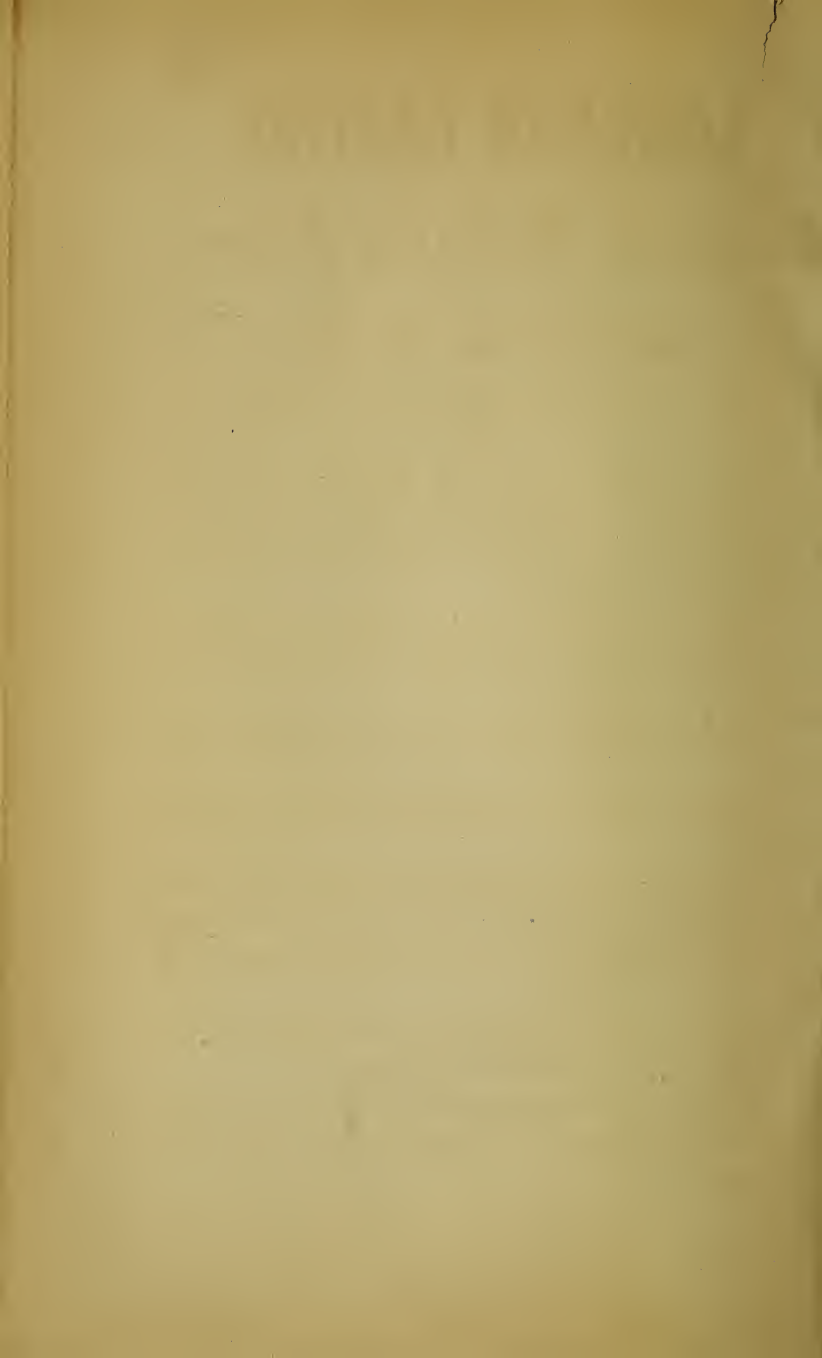
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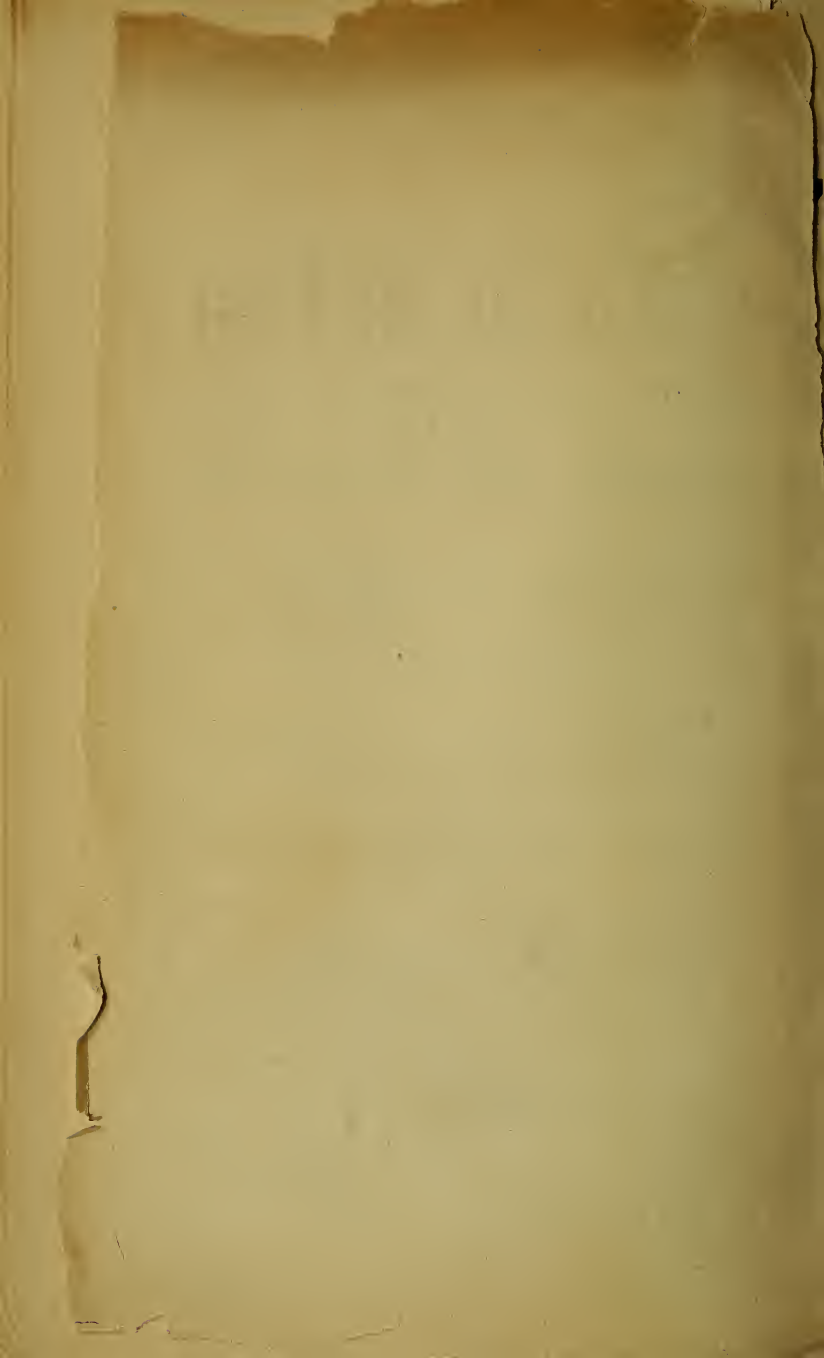


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