

## 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 Interocenic 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 Matamores 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.	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	\$8,000
Mexico, Toluca and Cuautitlan.	Anon. company.	Dec. 22d, 1877.	120	46,280	8,000
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	8,000
San Luis Potosí to Tantoyuquita.	State of San Luis.	Feb. 14th, 1878.	209	6	8,000
Lagos and Guadalupe to San Blas.	State of Jalisco.	Feb. 14th, 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	8,000
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 repre- sented by S. Ca- macho and R. Guzman.	Sept. 8th, 1880.	913 Pac. 1043 fron.		7,000 6,500

Names of Railroads.	To whom Granted.	Date of Commission.	Length in Kilometers, completed.	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 Celestun.	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 Morelos and Mexican lines at a point between Te- pexpan 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		
From 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 GOVERNMENT 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 rapid 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 Rosenberg 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 REPUBLIC OF MEXICO IN 1881.

---

### 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.



## WEIGHTS AND MEASURES.

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 $\frac{2}{3}$  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 Centi- Decimals.	Metrical System.			American Acres.
					Hec- tares.	Ares.	Centi- ares.	
1 Hacienda.	25,000	5,000	125,000,000	205,117	8,778	05	22,143½	
1 Sitio de ganado mayor.	5,000	5,000	25,000,000	41,023	1,755	61	4,428	
1 Sitio de ganado menor.	3,333½	3,333½	11,111,111	18,233	780	27	1,968½	
1 Criadero de ganado mayor.	2,500	2,500	6,250,000	10,256	438	90	1,107½	
1 " de ganado menor.	1,666½	1,666	2,777,777½	4,558	195	06	492½	
1 Fundo legal para Puebla (town site).	1,200	1,200	1,440,000	2,363	101	12	255½	
1 Labor.	1,000	1,000	1,000,000	1,641	70	22	177½	
1 Caballeria de tierra.	1,104	552	609,408	1,000	42	79	107½	
½ " " " "	552	552	304,704	500	21	29	53½	
¼ " " " or suerte.	552	276	152,352	250	10	69	26½	
1 Fanega des embrodura de maiz.	276	184	50,784	83½	3	56	8½	
1 Solar para casa, molino ó venta.	50	50	2,500	4	17	55	810000	

ENGLISH WEIGHTS AND MEASURES COMPARED WITH THE METRICAL SYSTEM OF WEIGHTS AND MEASURES.

LINEAR MEASURES.

English.	Metrical.
1 inch (¼ of a yard) corresponds to . . . . .	2.539954 centimetres.
1 foot (½ of a yard) " . . . . .	3.0479449 decimetres.
1 yard " . . . . .	0.91438348 metres.
1 fathom (2 yards) " . . . . .	1.82876696 "
1 pole or perch (5½ 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.
1 decalitre equals . . . . .	0.2200967 gallons.
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 ( $\frac{1}{16}$ 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.
	0.643 pennyweights.
	0.03216 troy ounces.
1 kilogram, . . . . .	2.68026 troy pounds.
	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 Hectare.	Price of a Sitio de Ganado Mayor or 4,428 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 Potosi,	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.

## ABRIDGED

### 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			
woolen goods,	“ square metre,		1 40
Carriages (open), and			
coupés,	each,		176 00
Coaches, phaetons, lan-			
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