Tariff for the countries not included in the Postal Union.		
Postal card or letter card	0	20
Letters up to 15 grammes in weight	0	20
Periodical publications up to 480 grammes	0	08
Books, circculars, etc., for every 30 grammes	0	02
Articles not included in the previous clasifications, for every		
30 grammes	0	04

#### SUBSIDIZED STEAMERS.

Spanish Trans-Atlantic Company, formerly called "Antonio López."

Pacific Mail-Line between San Francisco and Panamá touching at intermediate ports.

Steamers of Don Joaquin Redo. Line between San Francisco and Guaymas, touching at San Diego and Mexican intermediate ports.

Steamers of Mr. Louis Huller, running between San Diego Ensenada de todos Santos and San Quintin.

Steamers of Mr. Enrique R. Mejía, running between Veracruz, Morgan City and Galveston.

Steamers of Regil & Co., running between Veracruz and Progreso, touching at intermediate ports.

German Imperial Mail and Harrison Line, running between European and Mexican ports.

West India and Pacific Mail S. S. Co. running between England, the West India Islands and Mexican ports.

Alexandre Steamers, between New York, Havana and Mexican Ports.

Royal Mail S. S. Company, between European and Mexican ports.

Furmann Steamers between New York, Progreso and Veracruz.

## XIV

# GENERAL DESCRIPTION.

CONFIGURATION AND PHYSICAL ASPECT.

The enormous Cordilleras which traverse the vast extent of Mexican territory, give it a most peculiar aspect. The land slopes upward from the coasts to the interior of the country, forming picturesque valleys and precipitous ravines with frequent and abrupt changes of level, and forming beautiful cascades in the rivers that carry off their abundant waters.

Seen from the coast plains, the long crests of the mountains appear to be drawn with a background, which at times consists of a clear and serene sky, whilst at other times it presents itself full of clouds charged with rains and electricity. This crest is in different parts penetrated by passes affording access to the great central table land, which is limited on its eastern and western sides by the succession of peaks which form the centres of the extensive branches in which the Gran Cordillera is divided, and which, although a little different in structure, is really a continuation of the Cordillera which may be said to form the backbone of South America. This enormous mountain range takes its rise in Patagonia and runs in a northerly direction, throwing out ramifications of more or less extent. It runs parallel to the Pacific Coast, traversing the territories of Chili, Bolivia, Peru, Ecuador and Colombia. In Panamá and

Nicaragua the Cordillera is depressed almost to the sea level, but it rises again in the Republic of Salvador and Guatemala, and entering Mexican territory by way of Soconusco, it divides in the State of Oaxaca into two great branches, called the Eastern Sierra Madre and the Western Sierra Madre. The latter branch is interrumpted by the Rio de las Balsas, near its mouth at Zacatula; it is depressed on the western boundaries of the State of Guerrero, but rises again in the State of Michoacan, from whence it continues to the north-west, acquiring larger proportions as it crosses the States of Jalisco, Sinaloa, Durango, Chihuahua and Sonora. The Central Table land which is thus elevated by the two Cordilleras is crossed in different direction by other and smaller ranges, and has a gentle slope towards the north, terminating in the bed of the Rio Bravo.

For example, commencing from the coast of Veracruz the ground rises by steps until it crosses the crest of the eastern Cordillera. First we have plains affording excellent pasture, and interrupted by a few forests; these are followed by the extensive slopes that constitute the foot of the Cordillera; after that we find valleys and ravines on the slopes of the high ranges, and lastly we arrive at the high table lands of Puebla which are reached by passes in the Sierra, like that at Boca del Monte, with an elevation of 2,000 metres above the level of the sea.

The Sierra Nevada or the Popocatepetl range rises to the westward of these table lands and elevates the valley of Mexico to a height of 2,270 metres above the sea. Farther to the westward, the mountains of Las Cruces and Monte Alto separate the Valley of Mexico from that of Toluca, thus forming the most elevated plain within the Mexican territory, its elevation being 2,580 metres, and from this point the ground slopes downwards towards the Pacific by the same succession of plains and valleys that we have seen on the eastern side.

Numerous mountain chains cross each other as well as the principal chains, forming in conjunction a series of eminences

which the illustrious Baron Humboldt styled the Mexican Andes.

The general configuration which has been above described and the different elevations referred to are shown in the following tables

THE RESERVE THE PARTY OF THE PA	ELEVATION.	
Valley of Toluca	2580	metres.
Cañada de Ixtlahuaca	2527	"
Valley of México	2270	,:
Plains of Apam [Tlaxcala]	2480	"
" " Puebla	2000 to 2150	. ,,
San Juan de los Llanos [Puebla]	2360	,,
Valley of Maltrata [Veracruz]	1691	"
" " Orizaba [Veracruz]	1227	,,,
", ", Oaxaca	1550	"
Cuernavaca [Morelos]	1525	"
Plains of San Gabriel, do	1008	"
Iguala [Guerrero]	919	"
Basin of the Rio Balsas in the pass		
of Mescala	520	"
Zitácuaro [Michoacan]	2000	"
Morelia "	1950	"
Pátzcuaro "	2190	"
Ario ,	1890	"
Jorullo "	850	"
Basin of the Rio Balsas in the pass		
of Las Balsas	123	"
Tula [Hidalgo]	2047	"
Tulancingo [Hidalgo]	2089	"
Plains of El Cazadero	2300	"
San Juan del Rio [Querétaro]	1950	"
Bajío [Guanajuato]		0 "
Guadalajara [Jalisco]		"
Valley of Ameca ,,		"
Tepic ,,		"
Acaponeta "		"
Sayula "	. 1385	,,

ELEVATION.		DN.
Zapotlan (Jalisco)	1495	metres.
Plain of Atenquique (Jalisco)	1248	,,
Colonia	532	"
Plains of El Salado (San Luis)	2000 to 2300	"
Valley of Maiz	1220	"
Tula de Tamaulipas	1171	,,
Ciudad Victoria	449	"
Monterey (Nuevo Leon)	486	"
Cerralvo "	380	,,
Cuencamé (Durango)	1740	"
Valley of the Nazas	1100	"

The predominating rocks throughout the territory of the Republic are porphyries, basalts, sienites and lime-stones, the mountains every where affording examples of these. The porphyries are found on the peaks in colossal and eccentric masses, such as the Cofre de Perote in Veracruz, the Organos de Actopan in Hidalgo and the Peña de Bernal in Querétaro. At all times they are found in veins and serve as walls for metalliferous veins, as is comonly found in extensive mining districts like that of Pachuca. The basalts are found presenting vestiges of enormous lava currents, as can be seen in the slopes of Ajusco in the Valley of México and on the Eastern-slopes of the Cofre de Perote, whilst very frequently found rising in compact and enormous masses or in handsome prismatic columns which form the sides of ravines, as can be seen in Santa María Regla and Barranca Grande which terminates in the beautiful and picturesque Vegas de Metztitlan in the State of Hidalgo. The sienite constitutes the bases of many mountains, and on it we find resting a formation of slate, chlorite and many others, of which we have an example in the Zacatecas ranges, The lime-stones predominate in the plains and constitute the mass of many other mountains, whose centres are often corroded by the waters, presenting enormous caverns like that of Cacahuamilpa which is found on the northern frontier of the

State of Guerrero, and which from its extensive and numerous galleries, besides its infinite and beautiful formations and the tantastical aspect which it presents when iluminated by electric light, is considered one of the greatest marvels of nature.

The uneven and mountainous character of a great part of the Mexican territory, results in many parts in giving us picturesque valleys and a beautiful and enchanting flora. The mountains have their heads covered with eternal snow whilst at their feet we find the most beautiful valleys watered with pure streams which give fertility to the rich and fertile soil.

In one zone which has been called the volcanic zone and which extends from east to west, with a width of 90 kilometres, having its centre on the line that unites the volcano of Colima with that of San Andres Tuxtla, we find the principal volcanoes of the country. Some of these are entirely extinct, like those of San Andres de Tajimaroa, in Michoacan; the peak of Toluca in Mexico; Ajusco, Sierra de San Nicolas and Cerro Caldera in the Federal District and in the Eastern Districts of Puebla: whilst other volcanoes are giving continual signs of ignition, either by means of recent eruptions as in the case of Colima and San Andres Tuxtla, or by means of permanent "fumarolas" as can be observed in the craters of Jorullo, Popocatepetl and the Peak of Orizaba, which are continually producing an excellent class of sulphur. To the catalogue of these volcanic mountains ought to be added the Cofre de Perote in the same zone, because although its peak is not in the form of a crater, nevertheless we find several extinct craters and basaltic lava currents on its slopes, the latter running down to the sea and forming the reefs known as Boquilla de Piedras.

Outside of the zone above mentioned, the country shows in many parts vestiges of the most tremendous convulsions. The volcano of Ceboruco, in the District of Ahuacatlan, in the State of Jalisco has lately caused great excitement in that neighborhood by its succesive eruptions, which have caused the formation of a mountain range with its sides over-run by currents of lava.

The northern part of the Peninsula of California which has a range of mountains running down its whole length, is of a volcanic formation, and the same may be said of the central part of that Peninsula where the volcano of Las Virgenes rises.

Another of the remarkable districts of this country, and one which in remote times has gone through serious volcanic upheavals, is that known under the name of La Breña, in the region which extends to the south of the District of Durango. Basaltic scoria is found scattered in all parts of that District as well as hills and other eminences of a volcanic character, whilst the Cerro del Fraile not only contains a central crater, but several secondary craters, and from this hill can be plainly seen the two lava currents which once flowed over the plain and which can be easily traced by the different colors of the rocks.

I terminate this chapter with the following table of the principal peaks in the Mexican Cordilleras.

	ELEVATION.	
Popocatepetl (México and Puebla)	5425 metres.	
Citlaltepec or Peak of Orizaba (Veracruz)	5295 ,,	
Ixtaccihuatl (México and Puebla)	4900 ,,	
Xinantecatl or Peak of Toluca (México)	4578 ,,	
Nauchampatepetl or Cofre de Perote (Vera-		
cruz)	4089 ,,	
Matlacueyatl or Malintzi (Ttaxcala)	4107 ,,	
Ajusco (Federal District)	4153 "	
Zempoaltepec (Oaxaca)	3396 "	
Peak of Quinceo (Michoacan)	3324 ,,	
Volcano of Colima (Jalisco)	4378 ,,	
" " Colima (Jalisco)	3884 ,,	
" " Geboruco (Jalisco)	1525 ,,	
Peak of Tancitaro (Michoacan)	3860 "	
Patamban (Michoacan)	3750 "	

ELEVATION.
2786 metres.
2511 "
2368 "
3212 ,,
3250 ,,
3360 "
3246 "
1300 ,,
1000 "

#### RIVERS AND LAKES.

As has already been shown, the territory of the Republic is exceedingly mountainous, its two principal ranges being excessively steep in the direction of the coast. This circumstance as well as the narrowness of the country in the more southern regions, prevents the collection of large masses of water, which with their slow current could facilitate the interior navigation of the country.

On the plains of the central table land, the rivers are generally small and shallow, and many of them only carry water to the interior lakes or to other larger rivers during the rainy seasons, the torrents which then fill their beds having opened passes to the mouths on the sea coast.

On both the eastern and western slopes of the Sierra Madre the water rushes in torrents down the ravines, giving a beautifull freshness and fertility to the country they irrigate, and only begin to have a tranquil flow when they reach the extensive plains close to the seacoast.

This extraordinary configuration of the country, has formed a multitude of watersheds as well as deep and extensive valleys, which although they make communication difficult, offer at the same time, a compensation in the additional beauty of the landscape and also present most favourable circumstances for the defense of the country against foreign invasion.

The principal river basins, both for their extent and for the number of the rivers which they contain, are the following:

### Basin of the Rio Bravo del Norte.

Its tributary rivers are: The River Pecos, in the United States territory; the River Conchos in Chihuahua, with its affluents the Florido, Parral, Allende, Nonoava, Sativó and Chuvisca; the Rio Sabinas or Salado, in Coahuila, Nuevo Leon and Tamaulipas, with its affluents the Sabinas Hidalgo; the River San Juan, in Nuevo Leon and Tamaulipas, formed by the confluence of the Monterey, and Pilon.

### Basin of the Mescala or Balsas.

The principal rivers in this basin are: The Zahuapam, which in the State of Tlaxcala forms the beautiful fall at the Mill of San Diego; the Acatlan, the Coetzala formed by the Rivers of Atlixco, Izucar and Atila in Puebla: the Mixteco in Oaxaca: the Rivers of Amatzinac or Tenango and Amacusac in the States of Morelos and Cuerrero. The waters of this last river rise on the slopes of the Volcano of Toluca and form the rivers of Almoloya, Coatepec and Ixtapa, and uniting in the Pilcaya River they are lost under the immense limestone ranges of Cacahuamilpa, where the famous cavern is found. These rivers afterwards reappear issuing from two beautiful grottoes in the neighborhood of that cavern, and then unite in one of the most picturesque spots of the country, where they form the river Amacusac. The basin that we are describing, also contains the Rivers Tlapa, Mescala, Yolotla, Tetela and others in the State of Guerrero as well as those of Cutzamala and Zitácuaro, Tacámbaro, and Marqués in Michoacan. This last river is formed by the Oro, Amatlan, Parácuaro, Urecho and others, the Parácuaro River being known by the name of Cupachito in the District of Uruapam, in the Southern part of which it forms the beautiful and picturesque falls of Tzaracua.

#### Basin of the Pánuco.

Under the successive names of Cuautitlan and Nochistongo in México; of Tula in Hidalgo; of Tantojon in San Luis and Pánuco in Veracruz and Tamaulipas, this river reaches the Gulf after traversing all these different States. Its tributaries are: the Ixmiquilpan and Amajac in Hidalgo; the San Juan del Rio and the Estoraz in Querétaro; the River Tamuin which is formed by the Tampoan, the Rio Verde and the Santa María in San Luis Potosí, and lastly, the River Capadera in Veracruz and Tamesin in Tamaulipas.

#### Basin of the Rio Lerma.

Like those already spoken of, this river is known under different denominations. From its rise in the mountains to the Southeast of the City of Toluca, to its fall in the great Lake of Chapala, it is known under the name of the Lerma River; afterwards it is known as the Guadalajara, forming within the Territory of Jalisco the magnificent falls of Juanacatlan; it passes to the north of the capital of the State and subsequently takes the names of Tololotlan and Santiago, until it falls into the sea near the Port of San Blas. During its long course through the country it receives the Rivers of Atlacomulco and Malacatepec in the State of Mexico; the Laja, Irapuato and Turbio in Guanajuato and the Zula, Rio Verde, Juchipila, Bolaños and Tepic in Jalisco.

# Basin of the Grijalva and Usumacinta.

The beautiful river of this name rises within the territory of Guatemala, and is known under the name of Mescalapa in Chiapas and Grijalva in Tabasco. Its principal tributaries are the Chicomucelo, Blanco Suluapa and Ocuilapa in Chiapas; the Ixtacomitan, Teapa, Puyatengo, Tacotalpa, Puscatan and Salto in Tabasco.

The Usumacinta takes its rise in the same district and re-