In the State of Mexico we have springs of sulphureous waters, such as the Ojo de Almoloya and the Baths of Ixtlahuaca, Tilvito and the Rio San Gaspar in the Villa del Valle. Besides these we have Atempa in Yahualica, and Puentecillos in Sultepec.

From the studies of Messrs. Alfonso Herrera and Andres Almaraz I have extracted the following data.

The waters of Araró at Zinapécuaro in the State of Michoacan:

Temperature		85°
Fixed substances	per litre	1.50

Contents: chloride of sodium in abundance, sulphate of magnesia, free and combined carbonic and silicic acid.

Water from Tarameo, San Juan, State of Michoacan; contains 6.50 per litre of fixed substances, which are: chloride of sodium, magnesia, free and combined carbonic acid.

Water from Bartolilla, Zinapécuaro, Michoacan.

It contains a small proportion of fixed matters which mostly consist of silicic acid and carbonate of potasium. This water is so pure that it can be compared with that of certain artesian wells, the waters of which have passed through impermeable strata without having dissolved any large proportion of soluble matters. This water may very properly be used in all those operations for which distilled water is recomended.

## XIV

## HISTORICAL SECTION.

IMMIGRATION AND ANCIENT HISTORY.—FROM PREHISTORIC TIMES, UP TO 1521.

Up to the present date nobody has been able to penetrate the veil that hides the origin of the first inhabitants of Mexico. The ruins of buildings which are found scattered throughout our territory demonstrate a series of immigrations from the North to the South, a fact that is further confirmed by the way in which languages are distributed in this part of the American continent. These ruins, the importance of which is every day better appreciated, as well as the division of languajes, show at times, traces of the passage of different tribes in search of lands suitable for their purposes, and in other places show a fixed residence where the people had formed an organized community. In America, the same as in Europe, neither history nor tradition reveal the origin of the first inhabitants; in the new continent as well as in the old, we find the remains of great buildings, which have been destroyed in the course of centuries, but which are a standing proof of the persevering and laborious character of ancient and unknown generations.

Different historians, basing their suppositions on the interpretation of hieroglyphics and native papyri, have attempted to fix the itineraries which were followed by the races which populated the fertile regions of Anahuac, and particularly of the seven families which successively emigrated from the North, all speaking the same language, the Nahuatl or Mexican; but history does not reveal the mystery of the multiplicity of languages of such a different character, and still less does it reveal the reasons which obliged these races to abandon their original country. According to the descriptive and comparative tables of the Indian languages which have been prepared by Pimentel, none of the 108 languages which are there classified have any analogy with the Asiatic languages, and not even with the Othomí, which for its almost monosyllabic character and structure has been thought to be akin to Chinese. Nevertheless, the identity of the Esquimaux language proves a direct communication between Asia and America, a fact that to my mind is still further proved by the general form of the ancient monuments and the architecture employed in their construction. The tumulus, according to John Lubbock ("Prehistoric man"), are found scattered throughout Europe and Asia, from the Atlantic up to the Ural mountains, covering a great part of the steppes of Asia, from the frontiers of Russia to the shores of the Pacific, and from the plains of Siberia to those of Hindoostan. In the same manner, monuments of the same kind are found throughout Mexico; and from the shores of the Gila to the banks of the Usumacinta and from the coast of the Atlantic to that of the great Pacific, the pyramids in this country, like those in the old world, are a most admirable developement of the same idea.

To this observation it has been objected, that the necessity being the same, the manner of overcoming it must be similar; but this objection is completely destroyed if we only fix our attention on one very significant fact amongst many others. All of these peoples, whether of the ancient or of the new world, deposited different objects and utensils in the tumulus together with the bodies, under a uniform but independent idea of the necessity for doing so, and according to the opinion of Lubbock, with whom I agree with respect to the Americans,

it is demonstrated that these ancient races had a belief in the immortality of the soul, and in a material existence after death.

In my "Comparative Essay on the Mexican and Egyptian Pyramids," I not only draw attention to the form of these monuments, which might have been adopted by different peoples without any communication of ideas, but more particularly to their external and internal details, and from their undeniable similarity, I draw the deduction of the identity of knowledge in one and the other nation, though my inferences by no means mean to say that the ancient inhabitants of Mexico, are of Egytian origin, an inference that has been attributed to me by persons who doubtless got no further than reading the title of my pamphlet.

The learned Don Fernando Ramírez, who is such a competent authority on Mexican history, in treating of arms and devices, shows how the oriental similarities are continually found in the ancient Mexican customs, finding in the commemorative stone of Tizoc, which is called the sacrificial stone, and in its groups of conquerors and conquered, a similarity with the reliefs of the same kind in Assyrian and Egyptian monuments.

To go further yet: the ancient monuments of India and those of the Peninsula of Yucatan, particularly those of Uxmal and Chichen-Itzá, which in the art of construction and ornamentation differ from the others on this continent, show a most remarkable similarity.

All these circumstances and many others which could be brought forward, place me in the ranks of those who believe in the direct communication between the inhabitants of the two continents, that the immigrations have proceed from the North of what is today called the New World, but at the same time, without decidedly disputing the belief that other people immigrated from other regions, and especially from the East. Perhaps with time new data will be discovered to confirm this idea, which has been so ably developed by my learned friend

Don Alfredo Chavero in his contribution to the work entitled "Mexico á través de los siglos."

The history of Mexico commences with the annals of the Toltecas, notwithstanding the existence of other nations, which like the Ulmecas, Xicalancas and Mayas, and even the Othomies, are considered the most ancient inhabitants of Mexican territory, but who, with the exception of the Mayas, belong to a pre-historic period.

The Toltecas, who constituted a civilized nation, building temples and cities and thoroughly understanding agriculture, the arts and the computation of time, inhabited a country called Huehuetlapallan. somewhere in the Northern part of the continent; but on account of civil discord which was promoted by two lords of the city of Tlachicatzin, the latter with a great number of their followers and families, were driven from the country, and finding themselves obliged to emigrate, they directed their steps in a southerly direction. This happened in the year 544 of the Christian Era, according to Orozco y Berra. During their peregrination they founded several cities, in which they remained for longer or shorter periods; afterwards continuing their journey, but always leaving a population behind them. These cities were Tlapallanconco or Tlapallan la Chica, in 552; Hueyxallan, 567; Xalisco, in 559, and Chimalhuacan-Atenco in 267. They afterwards passed on to Tochpan in 572; to Quiayahuitztlan-Anáhuac in 577, and to Zacatlan in 583. In 590 they founded the towns of Tutzapan; in 596 they settled in Tepetla; they passed on to Ixtachuexuca in 619, to Tollancinco in 645, and lastly to Tollan, which was the metropolis of their nation in 661. According to the annals of Cuautitlan that town was founded in 674, showing a difference of 13 years between the two chronologies. It therefore appears, that from the time of their exodus from their original country up to their arrival in Tula, where they laid the foundations of a powerful kingdom, their peregrination lasted 117 years.

This culturedpeople, lived prosperously through the reigns

of eleven monarchs, developing their civilization and the prosperity of their country through their respect for law, their love of work, and their great ability in agriculture and the arts, until the year 1116 when their nationality was completely destroyed through their civil wars with the people of Nextlalpam and the unfortunate war which they sustained against the king of Xalisco, who claimed the throne of Tula.

Once the Toltecas obtained full possession of the territory in which they founded their nation, they established a monarchical form of government, by the exaltation to the throne of Chalchiuhtlanetzin in 667, and according to the chronology of Ixtlilxochitl his successors were as follows:

1 Chalchiuhtlanetzin	667
2 Ixtlicuechahuac	719
3 Huetzin	771
4 Totepehu	823
5 Nacaxoc	
6 Mitl	927
7 Xiuhtlalzin, queen	986
8 Tecpancaltzin	990
9 Topiltzin	
Destruction of the Kingdom	

The destruction of the Toltecas was followed in 1117 by an invasion of Chichimecas, a tribe of hunters who spread themselves over an enormous extent of territory that to day constitutes part of the States of Mexico, Hidalgo and Puebla. Their starting point was the country of Amaquemecan, which historians place in a distant region of the northern part of the country, in the neighborhood of Huehuetlapallan. The Chichimecas having heard of the destruction of the Toltec kingdom, and obtained confirmation of the rumors through the explorers sent to Xalisco, they determined to occupy the abandoned territory, and with that object they started on their southerly journey in the year 1117. Starting from Oyame, according to Orozco

y Berra, "They touched in Cuextecatlichocayan and Coatlicamac, places which were also inhabited by the Mexi, which proves that they passed by Xalisco and Michoacan, and taking the direction of Tepenenec, they reached in the city of Tollan. They found the city entirely deserted, and leaving a few persons there to populate it afresh, Xolotl marched in a northeasterly direction so as to reach Mixquiyahualla and afterwards Actopan, after which, turning in a southerly direction, he entered the valley at a place where he found a great many caves, and at no great distance from Xaltocan, which he called Xoloc; this being in the year 1120." The Chichimecas continued discovering and taking possession of many other places.

During their perigrination, the Chichimecas found the towns that in other times had been flourishing and well peopled, like Tula and Teotihuacan, in a deserted and ruined condition, and when they arrived in the valley the few Toltecas who had survived the disasters of their nation were scattered in distant countries such as Tehuantepec, Quautemallan, Tecocotlan, Coatzacoalco and Tiauhcohuac, whilst they were settled in rather larger number in Quauhtitenco, Chapoltepec, Totoltepec, Tlaxcallan, Cholollan, Tepexomaco, and more especially in Colhuacan which formed a distinct kingdom, and from whose name is derived that of Colhuis.

In the year 1820 of the Christian Era, according to Fray Diego Durán, seven civilized tribes called Nahuatlacas started from Chicomoztoc, whose peregrination lasted over eighty years, bringing them at last to the valley of Mexico. Chicomoztoc is a word signifying seven caves, but preferably alludes to the seven tribes or to the cities from which they started.

The first of these tribes to arrive in the valley was that of the Xochimilcas, who overran the banks of the great lake and fixed their residence in the place which today goes by their own name, in the south of the valley, extending their dominion without any opposition from the Chichimecas, as far as Tochimilco on the southern slopes of Popocatepetl, and including many places which still exist. Shortly after the arrival of the Xochimilcas, the Chalcas arrived, settling themselves on the southern part of the lake in a place called Tlalmanalco, which they made the capital of their nation, and including Amecameca, Tenayo, Ayotzinco, Chalco and Atenco.

The Chalcas were followed by the Tepanecas who colonized the region to the west of the lake, and divided their court between Atzcapotzalco and Tlacopan (Tacuba) extending their dominion in a northerly direction to Tlalnepantla and Tizayuca, and in a southerly direction to Atlacuihuayan (Tacubaya).

The last tribe of Nahuatlacas to arrive in the Valley of Mexico, was that of the Aztecas, or Mexicans, whose annals form so interesting a part of the history of Mexico, both for the events which proceeded their settlement, as well as for those which afterwards prepared and brought about their complete ruin.

The Texcocan tribe reached Tenayuca, where they were received by the king Xolotl. They occupied the eastern shores of the great lake and founded the kingdom of Acolhuacan, one of the most powerful of Anahuac, establishing their capital in Texcoco. The Chichimecas entered into friendly relations with this tribe and adopted their more civilized language and customs

The Tlahuicas crossed the ranges of Axosco and took possesion of the country of Quauhnahuac (Cuernavaca), of Yautepec and other districts of the hot country.

The last but one of the tribes to arrive was that of the Tlaxcaltecas, who first settled between the Chalcas and the Texcocans; but not being satisfied with their neighbors, they continued their wanderings in an easterly direction and found a more ample territory at the foot of the mountain Matlalcueyatl or Malinche. They conquered the Ulmecas and Xicalancas and founded the famous oligarchy of Tlaxcala, governed by a senate formed of the chiefs of the four districts into which their territory was divided.

According to Clavigero, the Nahuatlacas who up to the year

1600 (820 according to Fray Diego Durán and the Codex Ramírez) lived in their original country of Aztlan to the north of the Gulf of California, were persuaded by Huitziton, a personage who enjoyed great authority amongst them, of the propriety of noving their residence, and they at once commenced their emigration to the south, crossing the river Colorado, which other historians, and amongst them Torquemada, believed to be a branch of the sea.

Having crossed the river Colorado above the 35th parrallel, they travelled in a southerly direction until they arrived at the river Gila, where they appear to have remained for some time, judging by the ruins of great buildings which are there found. From thence they continued their travels, and rested some time in another place about 250 miles to the northwest of Chihuahua, which is now known by the name of Casas Grandes, from an extensive building whose ruins remain to this day. From Casas Grandes they crossed the broken ranges of Tarahumara and reached Hueicolhuacan (Culiacan), where they remained for three years, building houses and carving a wooden statue, which represented Huizilopochtly their special god.

From this point they started afresh, taking their god with them, who was carried by priests selected for the purpose on the Teoicpalli (Divine Chair), and they arrived in due time at Chicomoztoc, a place that, according to the presumption of Clavigero, is today known under the name of La Quemada, to the South of the city of Zacatecas, up to which point the seven Nahuatlaca tribes travelled in company.

Whether for the disputes which arose between these tribes, or whether it was in obedience to the orders of their god, as interpreted by the priests, the tribes separated, and each one pursued its way towards the south in the following order: XuchicaItecas, Tepanecas, Colhuas, Chalcas, Tlahuicas, Tlaxcaltecas, the Aztecas remaining behind with their god and afterwards continuing their journey by way of Ameca, Cocula, Sa-

yula, the maritime province of Colima, Zacatula, and Malinalco, and reaching the famous city of Tollan in 1196.

In Coatlicamac, during the journey, the tribe divided into two sections, which in spite of their rivalry travelled together until they settled on lake Texcoco, one tribe taking the name of Tlaltelolcos and the other that of Tenochcas. On their travels through Michoacan, according to the pictures left by the Aztecas themselves, they acquired the horrible practice of human sacrifice.

They remained nine years in Tula and eleven in other places in the neighborhood; after which they pased on to Tzompanco, where the Lord of the city married his son Ilhuicatl to a noble Mexican maiden, from which marriage was born Huitzilihuitl, in Tizayuca. From this latter place they successivelly passed on to Toltetlac, Tepeyacac, and Chapoltepec, and as they were continually disturbed in this latter place by the other tribes, they took refuge in Acocolco, a group of islands in the western part of the lake.

Twenty three years after their arrival in the valley, the Aztecas, obeying the suggestions of their priests, in spite of the theocratic authority of these having been substituted by the military authority of a warrior, recommenced in 908 the wanderings which are shown in the hieroglyphics now in the Museum. From Xico, which was their starting point on Lake Chalco, they marched in a northerly direction, traveling all over the valley, the boundaries of which they hardly crossed, and after many wanderings they returned in 1279 to Chapoltepec, where they settled in the immediate neighborhood of the Tepaneca nation, and by their establishment in that spot gave rise to a series of important events which prepared the fundation of the great Tenochtitlan.

The bellicose and warlike character of the Aztecs, who believed that their actions were adjusted to the divine orders issued by their God Huitzilopochtli, as spoken through the mouths of the priests, did not allow them to maintain peaceable relations with their neighbors during their residence in Chapoltepec; at times they appeared to be in submission to the King of Culhuacan, settling into the places like Tizapan which that monarch designated, whilst at other times they broke out into open rebellion, carrying on a war of extermination, their arms being ordinary canes and lances which they threw by hand or by a machine called *atlatl*.

The state of inquietude in which they were maintained by they priests and the continuous menaces of their jealous neighbors, amongst whom were included the powerful Tepanecas, whose capital was Atzcapotzalco, obliged them to elect the valiant Huitzilihuitl for their chief and to execute works of circumvallation for the defense of their hill. In their first skirmish with the Chalcas they had the misfortune to lose their intrepid chief, who was killed in Culhuacan, whilst his followers took refuge in Atlacuihuayan, where they reorganized and invented their new apparatus for throwing lances, called atlatl from which word is derived the name of Atlacuihuayan which is now Tacubaya.

This disaster was followed by the submission of the people to the King Colhua, who assigned them the land of Tizapan as a residence, afterwards permitting them to enter into trade with his own people and eventually condescending, either through fear or from the desire of procuring the adhesion of this valiant and dangerous people, so far as to grant them the privilege of entering into personal relations with his own subjects, and delivering his own daughter to them for the service of their god Huitzilopochtli. These circumstances, that ought to have constituted a solid foundation for the alliance of the two peoples, through the iniquitous conduct of the Mexicans, only resulted in increasing the odium in which they were held by the King. The princess was cruelly assasinated and her skin employed to cover a young man, a fact that was only discovered in the darksome temple, by the light of an incense burner, when the king himself had been invited to honor the festivities and to

present his offering of flowers and partridges to this new divinity, which the Mexicans themselves called the woman of discord. The natural exasperation of the people of Culhuacan was such, that they impetuously threw themselves on their ferocious enemies, obliging them to take refuge among the rushes of the lake, from which they were hardly able to gain the banks, where they reformed and attacked their enemies, striking terror into them with the enormous number of lances which they threw. After passing a deep river, which undoubtedly must have been a natural canal of communication between the sweet and salt water lakes, they spread themselves over the villages of Ixtapalapan, Acatzintitlan, Ixtacalco and Mexicalcingo, where they constructed a bath or temazcalli, and to Mixiuhtlan, where one of their 'principal |women underwent her confinement, that being the signification of the word as represented in the hieroglyphics of the Museum. Mixiuhtlan is today the suburb of San Pablo. Submissive as they always were to the orders of their priests, their actions were always directed to further the objects which they proposed. This blind obedience, which was the principal cause of their religious fanaticism, always kept them in the place which had been elected by their god for the establishment of the city, believing as they did, that every object by them observed was nothing short of miraculous; whether it was a crystaline spring rising at the foot of a handsome tree, a common canebrake, the willow trees on the sides of the streams or even the aquatic animals floating on the water: all were taken to mean favorable omens for the termination of their sufferings. A group of islands washed by the transparent waters; a prickly pear tree growing out of a fissure in one of the islands; a corpulent eagle resting on the prickly pear with its claw still covered with the handsome feathers of the birds that it had eaten; and lastly a snake held in the claws of the eagle, made a vivid impression on the imagination of the Mexicans, and determined them to fix on this spot in the lake as the

place on which to found their nation, which from a condition of slavery eventually rose to dominate the whole valley.

This city was founded in 1325 under the name of Tenochtitlan, in honor of their priest and chief Tenoch, though it was afterwards changed to Mexico; which is derived from Mexitle, the god of war, otherwise called Huitzilopochtli. Having reclaimed some of the land and created a kind of platform, they raised a momoxtli close to the famous prickly pear tree, this being a humble temple which later on was converted into the teocalli which was seen by the Spaniards. Around this they constructed their huts with cane and rushes, the only material which at that time they could procure. The city was divided into four quarters or calpulli, in which were distributed the residences of their principal chiefs Tenoch, Mezitzin, Oceloapan, Cuapan, Ahuexotl, Xomimitl, Atototl and Xiuhcac. A part of the Tenochca or Mexicans, on account of ancient rivalries, seceded 13 years after the foundation of the city, and went to settle on the neighboring island of Xaltelolco (Sandhill) or Tlaltelolco (Earthbank) situated in the same lake.

In the Mexican Atlas I speak more extensively of that part of the history which refers to the foundation of Mexico and particularly to the foundation of the *Teocalli* and the present cathedral.

By means of hard work in the reclaiming of land so as to include the neighboring islands, the Mexicans gave the necessary expansion to their city, which from the begining was placed under the theocratic and military government of Tenoch, a valiant and sagacious chief, who rendering tribute to the Tepanecas, was able to counteract the revengful designs of the Colhuacs. He eventually paid a last tribute to nature in the year 1443 after an adventurous life dedicated to the good of his people.

Acamapictus (He who grasps the wand): 1376 to 1396. Three years after the death of Tenoch, the founder of Mexican nationality, the Tenochcas changed their form of government,

and in 1376 they elected their first king Acamapictli, a noble and valiant chief who at that time was residing in Texcoco, capital of the kingdom of Acolhuacan, the chief of which was Ixtlilxochitl of the Chichimeca tribe. Uneasy and precarious was the situation of the Mexicans during the reign of their first sovereign, submitted as they were to the domination of the jealous Tepanecas. The valor and perseverance of these new settlers, who raised a city in the middle of the lake and who developed their new form of agriculture by the formation and cultivation of their artificial islands or chinampas and who had constituted an orderly government, inspired terror and mistrust in the heart of Tezozomoc, king of Azcapotzalco, who in the hope of discouraging them and perhaps inducing them to abandon their undertaking and decide on settling elsewere, subjected them to new tribute, which they submitted to with resignation, in the hope of obtaining their complete liberty at a later date. The Tlaltelolcos, imitating the Mexicans, also changed their form of government by electing for king a son of the despot of Atzcapotzalco named Quaquauhtipitzahuac, conduct that contrasted very strongly with the Mexicans who had elected a king from their own nation, and which still further prejudiced the mind of Tezozomoc against the latter.

In spite of their tribulations, the Mexicans did not discredit their valor in the battles which, as allies of the Tepanecas, they sustained against the people of Mixquic, Cuitlahuac, Xochimilco and Quauhnahuac (Cuernavaca) nations of considerable power.

On account of the sterility of his wife Ilancueitl, Acamapictli was married, although without repudiating his first wife, to Tezcatlamiahuatl, daughter of the lord of Tetecango, of which marriage were born Huitzilihuitl and Chimalpopoca, whilst from a slave who was a native of Atzcapotzalco he had issue Itzcoatl.

Acamapictli died in 1396, without appointing his successor. HUITZILIHUITL (Feather of precious bird); 1396 to 1417. The