

residence of the priest Hidalgo, under whose auspices the revolutionary movement against Spain originated.

The mineral products of this State have been and still continue very valuable. The chief silver mines are those of Guanajuato, Villalpando, Monte de San Nicolas, Santa Rosa, Santa Anna, S. Antonio de las Minas, Comanja, El Capulin, Comangilla, San Luis de la Paz, San Rafael de los Lobos, El Duranzo, San Juan de la Chica, Rincon de Zenteno, San Pedro de los Pozos, El Palmar de la Viga, San Miguel y San Felipe. All these mines and mineral districts recognize the jurisdiction of the Deputacion de Mineria de Guanajuato, although some of them lie out of the immediate boundaries of the State.

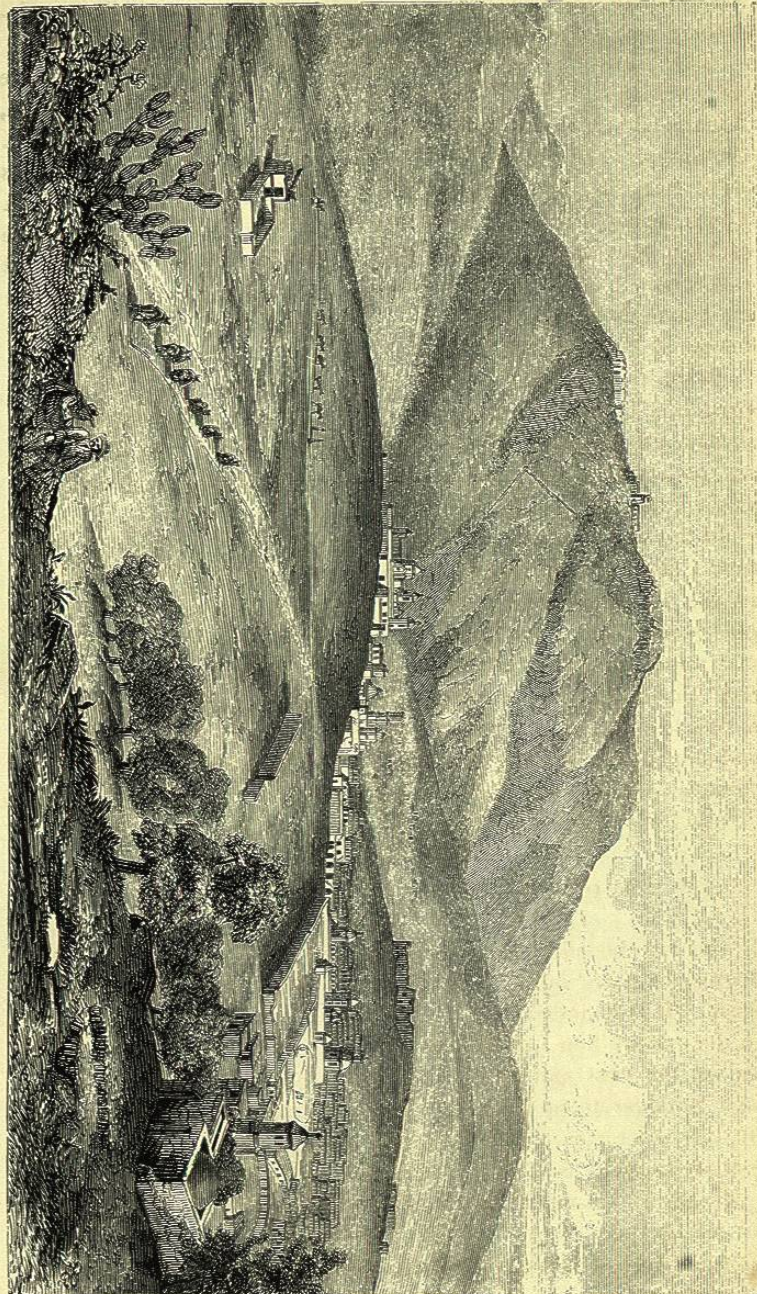
Besides the silver yielded at these places, copper and iron are produced by some of them; and at El Gigante cinnabar has been discovered disseminated among other substances. Lead is taken abundantly from the mine of La Targea; but the mining operations of the State are chiefly confined to silver.

In the southern part of the State large quantities of soda are found near Celaya, Salamanca and Valle de Santiago; and in the north, in the vicinity of San Felipe, the earth is impregnated, in many places, with nitrate of potash or nitre. Mineral waters and thermal springs exist on the southern slope of the Cerro del Cubilete, near Silao, and are used by invalids; while in the jurisdictions of Leon, near Irapuato or San Miguel Allende and Celaya, other warm and sulphur springs are found which are beneficially frequented by persons who suffer from rheumatism and cutaneous diseases.

THE STATE OF ZACATECAS.

This rich metallic region and State lies between the 21st and 25th degrees of north latitude and 102½ and 105½ west longitude from Paris. It is bounded on the north by Durango and Nuevo Leon on the east by San Luis Potosi; on the south-east by Guanajuato; and on the west and south-west by Jalisco. Its greatest breadth, from Sombrereté to Real del Ramos, in the State of San Luis, is fifty-seven leagues, and its extreme length is 90. The superficial area of the State is reckoned at 2,355 square leagues.

Zacatécas is a mountain country of the high plateau of Mexico, cut up by spurs of the Cordillera and inhospitably arid. The region between Catorcé in San Luis Potosi, and Sombrereté and Mazapil in Zacatécas is a broad plain, interspersed by a few swell-



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ing knolls, and an occasional group of hills or small mountains. The agricultural productions are of course suitable to such a geological structure; but in the *Haciendas de Ganado*, or cattle farms, immense herds are constantly raised by the thrifty vaqueros of this region. As the country is unusually dry, water tanks, *algibes*, and *norias* are established on all the estates, and are watched with the greatest care. There is no river of any note whatever in Zacatécas. The Arroyo de Zacatécas, the Rio Xeres, the Rio Perfidio, del Maguey, and Bañuelos, are but slender streams.

Zacatécas is divided into eleven partidos or districts. 1st. Zacatécas, 2d Aguas Calientes, 3d Sombrereté, 4th Tlaltenango, 5th Villa Nueva, 6th Fresnillo, 7th Xeres, 8th Mazapil, 9th Piños, 10th Nieves, and 11th Juchipila; possessing in all 3 cities, 5 market towns, 34 villages and mining works, 139 agricultural and cattle farms, 562 smaller similar establishments, 683 ranchos, 11 convents for monks, 4 for nuns, and four hospitals. The population has been calculated at about 350,000; and it is remarkable that, according to reliable statistical data, 14,937 more individuals were born than died in this State during the year 1830.

Births, {	males, 14,709	Deaths {	males, 7,012	Births, 28,795
}	females, 14,086	}	females, 6,846	Deaths, 13,858
	28,795		13,858	Increase, 14,937

The most valuable agricultural district lies in the district of Aguas Calientes. The best cultivation begins at the *hacienda* of San Jacinto, 12 leagues from the town of Zacatécas, and in this region it is reckoned that the farmers annually gather from their harvests, 140,952 fanegas of Corn (of 150 lbs.); 4,719 cargas (of 300 lbs.) of wheat; 7,293 fanegas of frijoles or beans, and 4,291 arróbas (of 25 lbs. each,) of chile.

The mainspring of the wealth of Zacatécas is its mineral production. The vein of the Veta Negra of Sombrereté has been the most productive in the new or old world. El Pavellon, La Veta Grande, San Bernabé, and the isolated hill of Proaño at Fresnillo constantly yielded in former times the most extraordinary results for the labor bestowed in working them. Their present value may be estimated from the chapter on Mines in the preceding book.

The chief cities, towns and villages of this State are the capital, ZACATÉCAS, containing from 25,000 to 30,000 inhabitants. It lies in 22° 47' 19" of north latitude and 164° 47' 41" west longitude, at an elevation of 7,976 feet.

The town itself is not visible until the traveller approaches within a mile and a half, when it is seen below following the turns of a deep barranca or ravine, of which the mountain of *la Bufa*, with a chapel on its crest, forms one side. The streets are narrow and dirty, and swarm with uncleanly children, whose appearance, like that of their squalid parents, is by no means prepossessing. But the distant view of the city is picturesque from the number of religious edifices which rise above the roofs of the other buildings. In the vicinity of the *plaza* there are some fine houses, and the market place presents a curious and busy provincial scene.

AGUAS CALIENTES is situated upon the banks of a stream of the same name, in a broad and rich valley, at the distance of 25 leagues south of Zacatécas. The neighborhood is famous for its warm thermal springs; the chief of which, El Baño de la Cantera, lies a league south-west of the town. Aguas Calientes contains several thousand inhabitants and is celebrated for its woollen manufactories, among which the one belonging to the family of Pimentel employed about 350 men and women at its looms.

FRESNILLO is a mining town, and capital of its district, 14 leagues north-west from Zacatécas, in the wide plain which divides the mountains of Santa Cruz and Organos from the mountain ranges about Zacatécas. It lies at the foot of the isolated knoll of Proaño, in which its mines are situated. The neighborhood of the town is pretty, but the region which intervenes between it and Sombrereté is a waste and sterile moorland.

SOMBRERETÉ is a mining town, and capital of its district, 25 leagues north-westward of Fresnillo, lying at the foot of the mountain of Sombreretillo, or "little hat," whose name is derived from a singular formation of rock on its summit which resembles that article of dress. In its vicinity are the once renowned and rich mines of La Veta Negra and El Pavellon.

Upon the table lands between Sombrereté, Fresnillo, and Catorcé, in the State of San Luis, are several towns or villages deserving of notice, and the *hacienda* of Sierra Hermosa, a cattle estate, which is one of the most remarkable in the Republic for its extent and production. It covers an area of 262 *sitios* or square leagues, and supports immense herds of horned cattle, horses, mules, goats and sheep. The latter, alone, are estimated at 200,000 head, about 30,000 of which are annually disposed of. The wool yielded by these animals amounts to from 4,000 to 5,000 arrobas yearly.

The other towns and villages of note are ASIENTOS DE IBARRA, Xeres, Villanueva, Mazapil.

The Sierra de Piños, Chalchiguitéc, Los Angelos, Plateros, and other metallic deposits were formerly celebrated for their productive value; but they are now either partially or entirely abandoned.

We may deduce some interesting statistical information from the labors of Berghes in regard to the mineral wealth of Zacatécas and the productiveness of its mines. According to the tables of this writer, published in 1834, it appears that from the year

1548 to 1810	the mines of this region produced	\$588,041,956
1810 to 1818	“ “ “	20,060,363
1818 to 1825	“ “ “	17,912,475
1825 to 1832	“ “ “	30,028,540
		\$656,043,335

These rates gave an annual mean product, from

1548 to 1810	“ “ “	of \$2,244,434
1810 to 1818	“ “ “	“ 2,507,545
1818 to 1825	“ “ “	“ 2,558,925
1825 to 1832	“ “ “	“ 4,003,128

It will be seen by reference to our table on page 88 of this volume, that the value of the products of Zacatécas in the ten years from 1835 to 1844, was \$43,384,215; giving a mean annual rate of \$4,338,421, and exhibiting the important fact, in spite of revolutionary troubles and consequent social, commercial and industrial disorganization, that the mineral yield of this region, instead of diminishing, has steadily *increased* with every year. In 1845, the *Mint* in Zacatécas issued \$4,429,353.

The State of Zacatécas contains some remarkable remains of Indian architecture on the CERRO DE LOS EDIFICIOS, situated two leagues northerly from the village of Villanueva, twelve leagues south-west from Zacatécas, and about one league north of La Quemada, at an elevation of 7,406 feet above the sea.

RUINS NEAR QUEMADA.

“We set out,” says Captain Lyon, in a volume of his travels in Mexico, “on our expedition to the Cerro de los Edificios under the guidance of an old ranchero, and soon arrived at the foot of the abrupt and steep rock on which the buildings are situated. Here we perceived two ruined heaps of stones, flanking the entrance to the causeway, ninety-three feet broad, commencing at four hundred feet from the cliff.

“A space of about six acres had been enclosed by a broad wall,

FIG. 1. RUINS NEAR QUEMADA. The present village and surrounding country present all the appearance of a fertile and well-cultivated valley. The hills, though in the distance, are not very high.



RUINS OF QUEMADA.

the foundations of which are still visible, running first to the south and afterwards to the east. Off its south-western angle stands a high mass of stones which flanks the causeway. In outward appearance it is of a pyramidal form, owing to the quantities of stones piled against it either by design or by its own ruin; but on close examination its figure could be traced by the remains of solid walls to have been a square of thirty-one feet by the same height: the heap immediately opposite is lower and more scattered, but, in all probability, formerly resembled it. Hence the grand causeway runs to the north-east till it reaches the ascent of the cliff, which, as I have already observed, is about four hundred yards distant. Here again are found two masses of ruins, in which may be traced the same construction as that before described; and it is not improbable that these two towers guarded the entrance to the citadel. In the centre of the causeway, which is raised about a foot and has its rough pavement uninjured, is a large heap of stones, as if the remains of some altar, round which we can trace, notwithstanding the accumulation of earth and vegetation, the paved border of flat slabs arranged in the figure of a six rayed star.

"We did not enter the city by the principal road, but led our horses with some difficulty up the steep mass formed by the ruins of a defensive wall, inclosing a quadrangle two hundred and forty feet by two hundred, which to the east, is sheltered by a strong wall of unhewn stones, eight feet in thickness and eighteen in height. A raised terrace of twenty feet in width passes round the northern and eastern sides of this space, and on its south-east corner is yet standing a round pillar of rough stones, of the same height as the wall, and nineteen feet in circumference.

"There appear to have been five other pillars on the east, and four on the northern terrace; and as the vein of the plain which lies to the south and west is very extensive, I am inclined to believe that the square has always been open in these directions. Adjoining to this we entered by the eastern side to another quadrangle, surrounded by perfect walls of the same height and thickness as the former one, and measuring one hundred and thirty-four feet by one hundred and thirty-seven. In this were yet standing fourteen very well constructed pillars, of equal dimensions with that in the adjoining enclosure, and arranged four in length and three in breadth of the quadrangle, from which, on every side, they separated a space of twenty-three feet in width, probably a pavement of a portico of which they once supported the roof. In their construction, as well as that of all the walls which we saw, a common clay having straw

mixed with it has been used. Rich grass was growing in the spacious court where Aztec monarchs may once have feasted; and our cattle were so delighted with it that we left them to graze while we walked about three hundred yards to the northward, over a very wide parapet, and reached a perfect, square, flat-topped pyramid of large unhewn stones. It was standing unattached to any other buildings, at the foot of the eastern brow of the mountain which rises abruptly behind it. On the eastern face is a platform of twenty-eight feet in width, faced by a parapet wall of fifteen feet, and from the base of this extends a second platform with a parapet like the former, and one hundred and eighteen feet wide. These form the outer defensive boundary of the mountain, which from its figure has materially favored its construction. There is every reason to believe that this eastern face must have been of great importance. A slightly raised and paved causeway descends across the valley, in the direction of the rising sun, and being continued on the opposite side of a stream which flows through it, can be traced up the mountains at two miles distant, till it terminates at the base of an immense stone edifice which probably may also have been a pyramid. Although a stream (Rio del Partido) runs meandering through the plain from the northward, about midway between the two elevated buildings. I can scarcely imagine that the causeway should have been formed for the purpose of bringing water to the city, which is far more easy of access than in many other directions much nearer to the river, but must have been constructed for important purposes between the two places in question; and it is not improbable once formed the street between the frail huts of the poorer inhabitants. The base of the large pyramid measured fifty feet, and I ascertained by ascending with a line that its height was precisely the same. Its flat top was covered with earth and a little vegetation: and our guide asserted, although he knew not where he obtained the information, that it was once surmounted by a statue. Off the south-east corner of this building, and about fifteen yards distant, is to be seen the edge of a circle of stones about eight feet in diameter, enclosing as far as we could judge by scraping away the soil, a bowl-shaped pit, in which the action of fire was plainly observable; and the earth from which we picked some pieces of pottery, was evidently darkened by an admixture of soot and ashes. At the distance of one hundred yards south-west of the large pyramid is a small one, twelve feet square, and much injured. This is situated on somewhat higher ground, in the steep part of the ascent to the mountain's brow. On its eastern face, which is towards the

declivity, the height is eighteen feet; and apparently there have been steps by which to ascend to a quadrangular space, having a broad terrace around it, and extending east one hundred feet by a width of fifty. In the centre of this enclosure is another bowl-shaped pit, somewhat wider than the first. Hence we began our ascent to the upper works, over a well buttressed yet ruined wall built of the rock. Its height on the steepest side is twenty-one feet, and the width on the summit, which is level, with an extensive platform, is the same. This is a double wall of ten feet, having been first constructed and then covered with a very smooth kind of cement, after which the second has been built against it. The platform, (which faces to the south, and may, to a certain extent, be considered as a ledge from the cliff,) is eighty-nine feet by seventy-two; and on its northern centre stand the ruins of a square building, having within it an open space of ten feet by eight, and of the same depth. In the middle of the quadrangle is to be seen a mound of stones eight feet high. A little farther on we entered by a broad opening between the perfect and massive walls, to a square of one hundred and fifty feet. This space was surrounded on the south-east and west by an elevated terrace of three feet by twelve in breadth, having in the centre of each side steps by which to descend to the square. Each terrace was backed by a wall of twenty-eight feet by eight or nine. From the south are two broad entrances, and on the east is one of thirty feet, communicating with a perfect enclosed square of one hundred feet, while on the west is one small opening, leading to an artificial cave or dungeon, of which I shall presently speak.

"To the north, the square is bounded by the steep mountain; and, in the centre of that side, stands a pyramid of seven ledges or stages, which in many places are quite perfect. It is flat topped, has four sides, and measures at the base thirty-eight by thirty-five feet, while in height it is nineteen. Immediately behind this, and on all that portion of the hill that presents itself to the square, are numerous tiers of seats either broken in the rock or built of rough stones. In the centre of the square, and due south of the pyramid, is a small quadrangular building, seven feet by five in height. The summit is imperfect, but has unquestionably been an altar; and from the whole character of the space in which it stands, the peculiar form of the pyramid, the surrounding terrace, and the seats or steps on the mountain, there can be little doubt that this has been the grand Hall of Sacrifice or Assembly, or perhaps both.

"Passing to the westward, we next saw some narrow enclosed spaces, apparently portions of an aqueduct leading from some tanks

on the summit of the mountain, and then we were shown to the mouth of the cave, or subterraneous passage, of which so many suspicious stories are yet told and believed. One of the principal objects of our expedition had been to enter this place, which none of the natives had ever ventured to do, and we came provided with torches accordingly: unfortunately however, the mouth had very recently fallen in, and we could merely see that it was a narrow, well built entrance, bearing in many places the remains of good smooth plastering. A large beam of cedar once supported the roof, but its removal by the country people had caused the dilapidation which we now observed. Mr. Sindal, in knocking out some pieces of regularly burnt brick, soon brought a ruin upon his head, but escaped without injury; and this accident caused a thick cloud of yellow dust to fall, which, on issuing from the cave, assumed a bright appearance under the full glare of the sun;—an effect not lost on the natives, who became more than ever persuaded that an immense treasure lay hidden in that mysterious place. The general opinion of those who remember the excavation is that it is very deep; and from many circumstances there is a probability of its having been a place of confinement for victims. Its vicinity to the great hall, in which there can be little doubt that the sanguinary rites were held, is one argument in favor of this supposition; but there is another equally forcible;—its immediate proximity to a cliff of about one hundred and fifty feet, down which the bodies of victims may have been precipitated, as was the custom at the inhuman sacrifices of the Aztecs.¹ A road or causeway to be noticed in another place, terminates at the foot of the precipice, exactly beneath the cave and over-hanging rock, and conjecture can form no other idea of its intended utility, unless as being in some manner connected with the dungeon.

"Hence we ascend to a variety of buildings, all constructed with the same regard to strength, and inclosing spaces on far too large a scale for the abode of common people. On the extreme ridge of the mountain were several tolerably perfect tanks.

"In a subsequent visit to this extraordinary place, I saw some buildings which had at first escaped my notice. These were situated on the summit of a rock terminating the ridge, and about a mile and a half north north-west of the citadel.

"The first is a building originally eighteen feet square, but having

¹The writings of Clavigero, Solis, Bernal Dias, and others describe this mode of disposing of the bodies of those whose hearts had been torn out and offered to the idol.

the addition of sloping walls to give it a pyramidal form. It is flat topped, and on the centre of its southern face there appears to have been steps to ascend to its summit. The second is a square altar, its height and base being each about sixteen feet. These buildings are surrounded at no great distance by a strong wall, and at a quarter of a mile to the northward, advantage is taken of a precipice to construct another wall of twelve feet in width from its brink. On a small flat space between this and the pyramid are the remains of an open square edifice, to the southward of which are two long mounds of stone, each extending about thirty feet; and to the north-east is another ruin, having large steps up its side. I should conceive the highest wall of the citadel to be three hundred feet above the plain, and the base rock surmounts it by about thirty feet more.

"The whole place in fact, from its isolated situation, the disposition of its defensive walls, and the favorable figure of the rock must have been impregnable to Indians; and even European troops would have found great difficulty in ascending those works which we have ventured to name the Citadel. There is no doubt that the greater mass of the nation who once dwelt here must have been established on the plain beneath, since from the summit of the rock we could distinctly trace three straight and very extensive causeways diverging from that over which we first passed. The most remarkable of these roads runs south-west for two miles, is forty-six feet in width, and crossing the grand causeway is continued to the foot of the cliff immediately beneath the cave which I have described. Its more distant extreme is terminated by a high and long artificial mound immediately beyond the river toward the hacienda of La Quemada. We could trace the second road south and south-west to a small rancho named Cayotl, about four miles distant, and the third ran south-west by south still farther, ceasing, as the country people informed us, at a mountain six miles distant. All these roads have been slightly raised, were paved with rough stones, still visible in many places above the grass, and were perfectly straight.

"From the flatness of the fine plain over which they extended, I cannot conceive them to have been constructed as paths, since the people who walked barefoot and used no beasts of burden, must naturally have preferred the smooth earthen foot-ways which presented themselves on every side, to these roughly paved roads. If this be admitted, it is not difficult to suppose that they were the centres of streets whose huts constructed of the same kind of frail materials as those of the present day, must long since have disappeared. Many places on the plain are thickly strewn with stones

which may once have formed materials for the town; and around the cattle farms there are extensive modern walls which, not improbably, were constructed from the nearest street. At all events, whatever end these causeways answered, the citadel itself still remains, and by its size and strength confirms the accounts given by Cortéz, Bernal Diaz, and others of the conquerors of the magnitude and strength of the Mexican edifices, but which have been doubted by Robertson, De Pau, and others. We observed also in some sheltered places, the remains of good plaster, confirming the accounts above alluded to; and there can be little doubt that the present rough, yet magnificent buildings were once encased in wood, as ancient Mexico, the towns of Yucatan, Tabasco, and many other places are described to have been in the voyage of Juan De Grijalvis in 1518, and also in the writings of Diaz, Cortéz and Clavigero.

"The Cerro de Edificios and the mountains of the surrounding range, are all of gray porphyry, easily fractured into slabs, and this, with comparatively little labor, has furnished materials for the edifices which crown its summit. We saw no remains of obsidian among the ruins or on the plain — which is remarkable, as it is the general substance of which the knives and arrow-heads of the Mexicans were formed; but a few pieces of very compact porphyry were lying about and some appeared to have been chipped into a rude resemblance of arrow-heads.

"Not a trace of the ancient name of this interesting place, or that of the nation which inhabited it, is now to be found among the neighboring people, who merely distinguished the isolated rock and buildings by one common name, 'Los Edificios.' I had inquired of the best instructed people about these ruins; but all my researches were unavailing until I fortunately met with a note in the Abbé Clavigero's history of Mexico which appears to throw some light on the subject. 'The situation of Chico-moztoc, where the Mexicans sojourned nine years is not known, but it appears to be that place, twenty miles distant from Zacatécas, towards the south, where there are still some remains of an immense edifice, which, according to the tradition of the ancient inhabitants of that district was the work of the Aztecs during their migration; and it certainly cannot be ascribed to any other people, the Zacatecanos themselves being so barbarous as neither to live in houses nor to know how to build them.'"