THE VOLCANIC ERUPTIONS IN GUATEMALA.

BY J. WINTERTON.

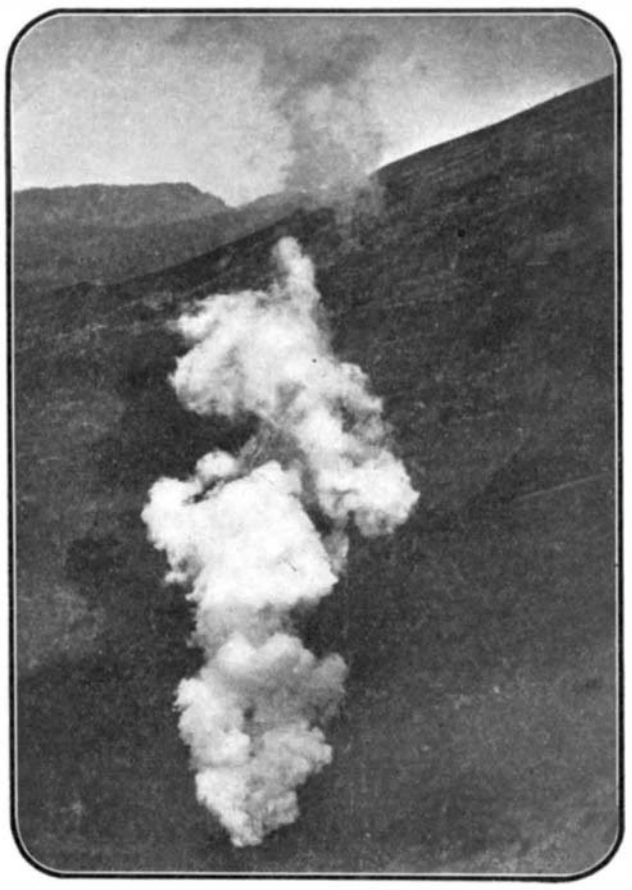
For three weeks last autumn a great column of smoke rose from behind the peak of Santa Maria near Quezaltenango. Then the eruption abated in violence, and the dense pillar of smoke gave place to smaller columns of white steam. Emboldened by the subsidence of the volcano, Mr. Heinrich Siegerest and a few others determined to explore Santa Maria. After no little difficulty they succeeded in reaching the crater.

Encouraged by their success, although somewhat disconcerted by their account of the hardships they had endured, I started from the railroad terminus at the town of Santa Felipe on December 15, accompanied by three Indian carriers, to ascend the volcano for the purpose of obtaining photographs. Our road passed through Palmar, once a flourishing coast town, now a devastated community with ruined dwellings, dismantled government buildings, and fields blighted by volcanic sand and ashes.

I began the ascent of the volcano from the plantation of La Sabina, a favorite health resort famous for its springs of mineral water. Journeying from Palmar to La Sabina, we passed two plantations whose buildings were ruined and fields devastated. Arriving at La Sabina, we found the hotel of the town buried many feet beneath mud. I found Mr. W. D. Middaugh, proprietor of the hotel, sinking a shaft for the purpose of recovering some of the hotel valuables. Mr. Middaugh advised me to climb the ridge to the left of La Sabina, in order to reach the peak of Santa Maria. I followed his advice, and discovered that the road was much easier than that pursued by Siegerest and his companions.

I found the crater a huge pit some 500 feet in depth, from the bottom of which spouted a magnificent geyser. The steam issued with terrible force, roaring and crackling. In order to secure the picture of the geyser herewith presented, it was necessary to place the tripod of the camera on the very edge of the crater, on a small ridge which had been partially destroyed by landslides. Almost at my very feet arose another geyser, through the vapor of which there could be dimly seen a large pool formed by the condensed steam. Besides the large geysers, innumerable small jets of steam spouted from the edge of the crater in a vaporous fringe, sending forth little clouds toward the center. At intervals a strong odor of sulphur assailed the nostrils. Fortunately, the wind was blowing from me most of the time.

It is probable that when the volcano was in full eruption the entire crater was open; for the earth seemed to have fallen in and to have formed a kind of floor. Otherwise it would be impossible to account for the enormous mass of material ejected by the crater. Around La Sabina the sand and ashes have been converted into mud by terrific floods that followed the eruption. One of the views which I took clearly shows how deep is this mud formation. From the manner in which the more distant plantations are recovering their verdure, it is evident that the volcanic deposit contains nothing injurious to vegetation



The Crater of Santa Maria.

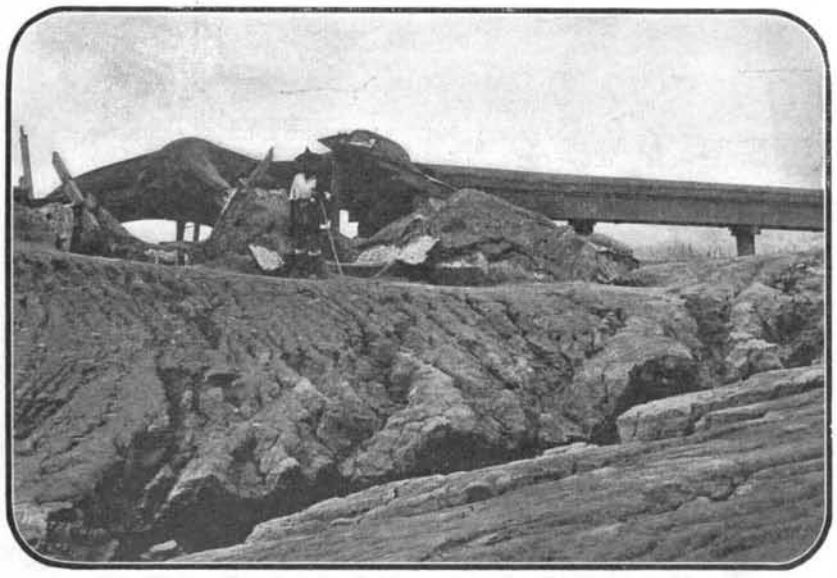
THE ORE-CARRYING WIRE ROPEWAY AT VIVERO, SPAIN.

On the north coast of Spain, not far from the port of Ferrol, lies the little harbor of Vivero, from which there extend inland important iron mines. Especially rich and extensive are two mines worked by the Vivero Iron Ore Company, Ltd., London, and situated about three or four miles from the coast, near the Monte Silvarosa and gorge of Lavandeira which passes on inland from this mountain.

No highway leads from these mines to the coast, for which reason the matter of providing a suitable mode of transport is of supreme importance. The construction of a narrow-gage railway in this mountainous district would involve very considerable expense, merely in acquiring the land and in making a permanent way, which would necessarily be tortuous. The advantages of a wire ropeway, on the other hand, are just in a case of this kind most pronounced. The service is safe and cheap; gradients of one in one are surmounted without inconvenience, and valleys three or four thousand feet across are readily spanned. The work of constructing the ropeway was entrusted to the firm of Adolf Bleichert & Co., of Leipzig Gohlis, Germany, who, for the last thirty years, have made a specialty of this branch of engineering.

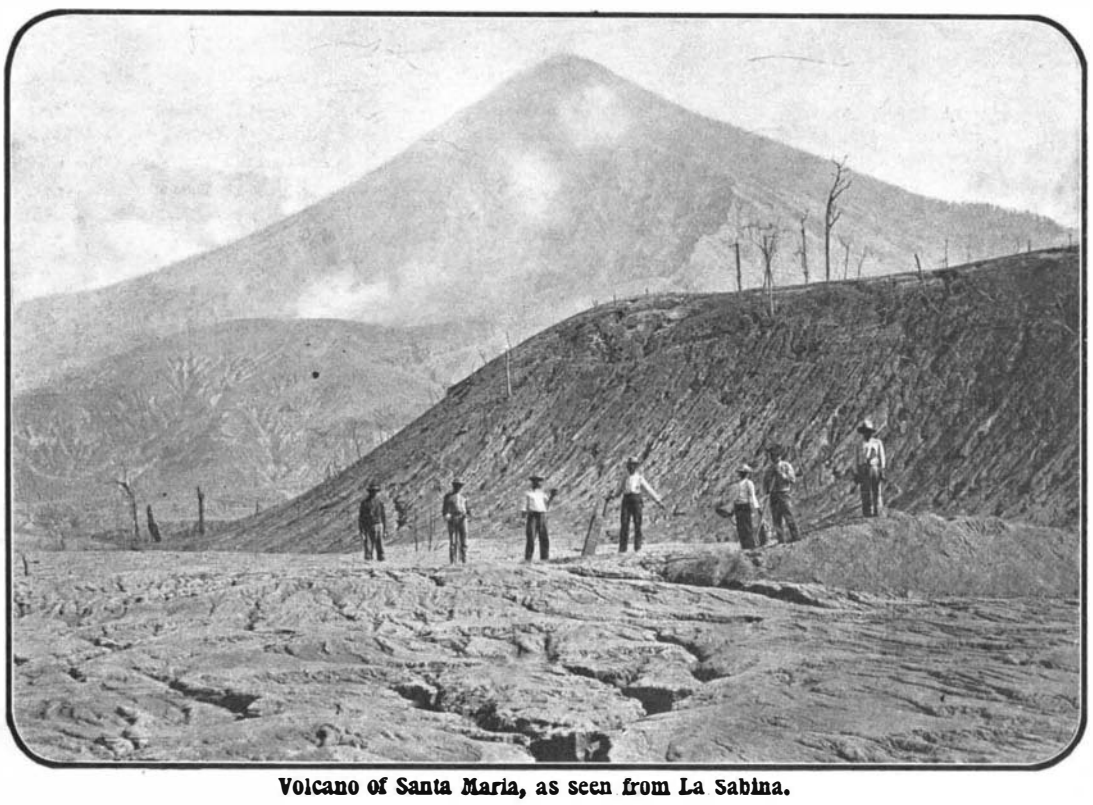
The purpose of our present article is to give a description of this installation, and, in order to make it more intelligible, it will be advisable briefly to explain the general construction of a Bleichert wire ropeway.

Wire ropeways are mostly used for continuous service, with one line for loaded cars and another for empties. Each consists of a wire rope or cable which is firmly anchored in the ground at one end, while the other end passes over a pulley and is heavily weighted, so as to keep the line tightly stretched. At the stations, a network of suspension rails provides for the charging, discharging, and shunting of the cars, according to the requirements of the plant, and also serves to effect the transference of the cars from the one line to the other. Each car consists of a two-wheeled carriage which is provided with an automatic grip and which carries the bucket. Traction is effected by



The Water-Wheel at La Sabina, covered with Volcanic Mud.

View from La Sabina, showing the General Devastation.



Volcano of Santa Maria, as seen from La Sabina.

A Plantation of La Sabina, showing Depth of the Mud.

SCENES FROM THE REGION OF THE GUATEMALA VOLCANIC ERUPTIONS.