



**ZAPICHO**—This baby companion to Paricutin, Mexican volcano, is throwing stones in the air. This photograph taken by Dr. Ordonez on Nov. 18 shows at the right the slope of the major cone of the big volcano. The cover photograph is a view from another angle.

GEOLOGY

## Baby Volcano Crater

At the northwestern edge of Paricutin, Mexico's new volcano, is a crater 100 feet high that has produced lava outburst larger than nine previous flows.

### See Front Cover

► A LITTLE volcano cone a hundred feet high is now erupting at the northwestern edge of the main cone of Paricutin, Mexico's active volcano. It is the only survivor of five lava blisters that rose in the Mexican volcano's basin on Oct. 16.

The new cone has been christened "Zapicho" by Dr. Ezequiel Ordonez, leading geological watcher of Paricutin, who recently revisited Paricutin before he left for a lecture trip to southwestern United States, as guest of the American Association of Petroleum Geologists. Zapicho means "small" in Tarascan, the native Indian language spoken in Michoacan, the state in which the volcano is located, some 200 miles west of Mexico City.

Zapicho is behaving like a small-scale replica of Paricutin, throwing out liquid lava, vapors and stones. Located so close to the main crater, it is considered another vent from the same volcanic source, but it is nevertheless worthy of a name of its own.

Zapicho has produced an outpouring of lava larger than the nine previous

liquid lava flows. It is a mass about a mile long and 1,200 feet wide.

The observatory used by Dr. Ordonez, in watching Paricutin frequently since its birth in February, was threatened by the moving lava and the light wooden hut had to be moved hurriedly to a safer spot. Near the earlier observatory hut there was a bomb-crater of ancient volcanic origin, and this hole, 100 feet deep and 600 feet in diameter, was completely filled with the flowing incandescent lava, which overflowed toward the observing post of Dr. Ordonez.

Blue vapors, yellowish gases, and liquid lava were being thrown 360 feet into the air. Frequently there were outbursts of ashes. The smell of sulfur was reported wide-spread.

Some lava emitted by the volcano is so light that it seems to be floating in the air and fragments are blown farther than 3,000 feet. Many of the pieces are fibrous and look like coarse blond hairs quite similar to Pele's hair of Hawaiian volcanic action.

Heavy ash is thrown out by the volcano and this has laid down a yellow mantle over the nearby countryside.

Dr. Ordonez found Paricutin more

beautiful than ever, but the destructive effect of its sand and dust has increased as the months have passed. In the nearest city, Uruapan, 20 miles from the volcano, all vegetation is covered by a thick film of dust and orchards and gardens are producing practically no crops as a result.

The nearest sizable village to the volcano, San Juan Parangaricutiro, is practically ruined. The Tarascan Indian inhabitants are poverty-stricken, agricultural production has stopped, and soon the village will have to be abandoned.

Those who live near the volcano are now calling Paricutin "she" referring to "la volcana," although when the eruption first occurred, it was called as the dictionaries have it, "el volcan," which is masculine.

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INVENTION

## New Whey-Drying Process Invented by Two Germans

► AN INVENTION of potential value to the milk-using industries is a more economical process for drying whey, the watery liquid left after milk solids have been converted into cheese or industrial casein.

Water in whey has long been one of the most troublesome of dairy-industrial problems. There are valuable sugars, acids and proteins in whey, but the cost of evaporating or otherwise getting rid of the water has made them prohibitively expensive.

In the present invention, on which patent No. 2,335,380 has been issued, the cost is reduced by whipping air through the whey in its last stage of processing, after it has already been thickened by evaporation in a more or less conventional vaporizer. Forcing the air into the thickened whey also cools it off, and leaves an end-product that is porous but not frothy, easily handled and with good keeping qualities.

Any American dairyman or industrialist can have the use of this patent practically without cost to himself, for the inventors are subjects of an enemy alien power, and their patent has accordingly been vested in the Alien Property Custodian, to whom inquiries about its use should be directed. The inventors are Kurt Bertram of Berlin and Erich Lemmerich of Mulheim-Ruhr—or perhaps one should say nowadays, formerly of these cities.

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