

lakes, that the temperature of liquid lava is 2,000 degrees Fahrenheit, and that there being an increase of one degree for each fifty or sixty feet of descent the temperature at 8,000 feet is 312 degrees, or boiling point. The level of the floor in a volcano like Vesuvius may rise nearly to the brink of the crater, or in one like Kilauea at least some hundreds of feet. The eruption begins when the pressure from the vapors generated and confined below and from the hydrostatic pressure of the lava column is too great to be withstood by the containing mountain. The mountain, therefore breaks, the conduit is rent open on one side or the other and the lava runs out. If the mountain is too strong the lava merely rises to the summit and overflows. The eruptions of the present day are usually through fissures, however, and the vibrations which attend the rending of the mountain may result in the underground rumbling and shock, which means earthquake. So it was at Martinique.

The volcanic "sound waves" is something like the discharge of heavy guns

in quick succession, but it can really be likened to no effect produced by human agency. Nothing ever heard from the sky, indeed, can equal it in range or volume. The great eruption of Krakatoa was heard 2,000 miles away! The "water wave" is the shock transmitted to the sea. The largest of these, as a consequence of the Krakatoa eruption, on reaching the shores of Sumatra and Java, rose to a height of fifty feet above normal water level, destroying 163 villages entirely and 132 partially. More than 30,000 human beings perished.

The "froth" upon the surface of lavas varies greatly in character. In the majority of cases the lavas consist of a mass of crystals floating in a liquid magma, and the distension of such a mass by the escape of steam from its midst gives rise to the formation of the rough, cindery looking material to which the name of "scoriae" is applied.

Dr. Whymper relates that, while standing on the summit of Chimbarazo, he witnessed an eruption of Cotopaxi,

distant fifty miles. The fine volcanic dust fell in great quantities around him, and he estimated that no less than two million tons of it must have been ejected during this slight outburst. Prof. Bonney examined the dust from Cotopaxi, and calculated that it would take from 4,000 to 25,000 particles of it to make up a grain in weight.

Of present and particular interest to the people of the United States is the fact that, like other regions in its neighborhood, the Philippine archipelago abounds in volcanoes. Spanish writers have left accounts of many destructive eruptions in the last 300 years. The most remarkable was that of January 4, 1641, when a volcano on the southwestern extremity of Mindanao, another to the west, on the northern coast of the island of Luzon, and a third, in Luzon, far to the north, became active at the same time.

The volcano of Mazon or Albay, province of Camarines, in the Philippines, has been in frequent eruption from 1616 down to within the past thirty years. In 1776 a village was destroyed

and some fifty persons perished. In 1814 12,000 were killed and many wounded by an eruption. "After the mountain had become quiet," the record says, "it presented a frightful appearance, its former picturesque, highly cultivated slopes being covered with barren sand which enveloped the coconut trees to their tops. The finest villages of the Camarines were destroyed, and the best part of the province was converted into a sandy waste."

The heights of the Philippine volcanoes vary from 10,000 and 9,000 feet (Albay or Mazon) down to Taal, only 780 feet high. This last and curious one is on an islet in the middle of Lake Bomban, south of Manila. The lake, originally, no doubt, a vast crater, is separated from the China sea by a narrow isthmus. It contains secondary craters, crevasses emitting vapor and lakelets of acid water. When it was in action in 1885 all the vegetation of the island was burned up. A further idea of the volcanic activity of the region may be gained from the fact that a volcanic island emerged from the sea on the northern coast of Luzon in 1856, grew to 700 feet in four years, and is now about 800 feet high. The earthquake is such a common event in Manila that it is always taken into account in building operations.

## EDWARD'S QUEEN AND HER CORONATION FINERY



Photograph by special artist.

The expected coronation of Queen Alexandra would have ranked in human interest with the crowning of King Edward. The Archbishop of York was to have performed the office on her majesty, the crown to be used being lighter than St. Edward's crown, as will be observed by the above authentic photograph. The above photograph shows her majesty exactly as she would have appeared at the ceremony but for the misfortune that so suddenly befell her royal spouse. This is the first photograph of the queen in the robes in which she rehearsed for the coronation.

## Up in the Dome

"Going up to the dome" is the nightmare of the state house janitors—that is the wish being expressed by other people. For in spite of the sign limiting the top of the capitol building as an observation point to 5 p. m. on week days, the public can never be made to understand. Consequently hosts innumerable flock in to climb the winding stairs at all hours.

So the dome and the limitations of the visitors cause more trouble for the janitors than myriads of dandelions firmly and maliciously planted on the state house lawn.

"Solid" couples attracted by the fabled darkness and obscurity of the upper portions of the capitol, flock in on Sundays. They have to be religiously turned down by such janitors as are on duty around the building. Sunday furnishes a fitting pretext in some cases. In others there are bold attempts to debauch the official by sneaking him a half dollar, but he must remain firm and he usually avoids responsibility by the true tale of the "keys being locked up." They are. But still he could get at them should the capitol take fire and be in imminent danger of burning down.

Many citizens of the state swarm to the dome to chew tobacco and spit. Others transform the place into a smoker and leave their cigarette and cigar stubs where they will be most conspicuous.

As the fourth of July season draws nigh, ambitious boys sneak homewards to toss lighted firecrackers into the atmosphere below.

One day last summer some boys allowed a heavy oaken frame to slide down one of the wires connected with the dome. It caught on a post just above the north entrance of the building and dangled there for a half day a menace to pedestrians and passersby.

Never a day passes but belated ones try to ascend after 5 o'clock. In such instances it is discovered that "the man who has the key to the dome has just gone home." No one seems to know just where he lives. Then the troops of visitors file away, sadly disappointed.

Occasionally strangers wish a pilot. In such instances the "dome janitor" must go up and point out the features of the city or be rated as sulky and sullen by those who seek his services.

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Jack—It is mighty hard to be the son of a self-made millionaire.

Tom—Why so?

Jack—A fellow can't decide whether to go into business and live up to his father's reputation, or go into society and live it down.