

**NEW AND CURIOUS.**

**In Earth's Depths.**

Several holes have been dug deep enough into the earth to encounter physical conditions very different from those usually found on the surface. Some of these holes are in the form of wells, which are a mile deep in the older rock.

At Paruschowitz, near Reibnik, in Eastern Siberia, there is a well which is now 6,700 feet deep. Unquestionably this is the deepest artificial hole in the world.

Many of these deep holes have been made the subject of scientific investigation. Temperature measurements are being made in all the wells as they are drilled. In this country the heat increases on the average about one degree for every 60 feet of depth.

In the ocean bed there are holes so deep that if the highest mountains in the world were to be dropped into them, there would still be plenty of room for ships to sail safely over their summits.

At the bottom of a 5-mile pit in the ocean which yawns between the Kermadecs and the Friendly Islands, the temperature stays always near the freezing point of water. Low temperatures are characteristic of all the subaqueous deep holes. Besides the chasms in the ocean bed, the holes in the land are as pin punctures, for more than half of the whole sea floor lies two miles below the surface of the water. One eighth of this latter area is depressed below three miles. This eighth contains basins which dip in places over five miles below the surface. Only three soundings of five miles or more have been made. The deepest of these holes exist in the South Pacific, to the east of the Kermadecs. It is 5155 fathoms deep. The soundings that went to its bottom represents the farthest reach of human hand toward the center of the earth. Yet what came back with the rod was meager in view of what might have been expected. A little globigerina ooze, a little of that curious red clay which covers nearly half the sea floor, a few manganese nodules, some minute magnetic spherules of cosmic origin, that was all; these and the positive assurance of intense darkness and bitter cold. The ooze was what was left of animal carcasses sweeping downward through centuries; the clay was plastic remnants of even earlier periods; the spherules were representatives of meteoric particles which had plunged through immeasurable distance from outer dark to inner dark.—[Washington Star.

A Massachusetts physician recently gave an amusing illustra-

tion of the dread that some people have of fresh air in their sleeping rooms. In the western part of the state a few years ago lived a family who were accustomed to keep doors and windows all tightly closed. The head of the house was a carpenter, and one fall, undertook to remodel a part of his dwelling. The task was not completed when winter set in, and the family to their horror, had to endure an amount of fresh air that filled them with alarm. The wife, speaking about it afterward, said she "didn't know how they could have stood it if it hadn't happened that they were all in better health than usual."

The chemical composition of the atmosphere differs but little, wherever the sample may be taken. The London Lancet considers that the favorable effect of a change of air is not due to the change in the proportion of gaseous constituents. One important difference, however, is the bacteriological one. The air of high altitudes contains no microbes, and is in fact sterile, while nearer the ground they are abundant. In the air of towns and crowded places, not only do the microbe impurities increase, but other impurities are found, such as the products of combustion of coal, etc. Several investigators have found traces of hydrogen and certain hydrocarbons in the air and especially in the air of pine, oak and birch forests. It is these bodies, which doubtless consist of traces of essential oil, to which the curative effects of certain health resorts are ascribed. Thus the vicinity of a fir forest is said to give relief in diseases of the respiratory tract; but these traces of essential oils and aromatic products must be counted, strictly speaking, as impurities, since they are not apparently necessary constituents of the air. Recent analyses have shown that these bodies tend to disappear in the air as a higher altitude is reached, until they disappear altogether. It would therefore appear that microbes, hydrocarbons and entities other than oxygen and nitrogen, and perhaps argon, are only incidental to the neighborhood of human industry, animal life, damp and vegetation.

Dr. Thomas Wilson, speaking at the recent meeting of the American Association for the Advancement of Science, argued that the celebrated theory of Lombroso, associating certain types of crime with definite physical characters, was based upon untrustworthy statistics. Doctor Wilson thought it would be more correct to say that crime determines the physical structure than vice versa, and that environment is more responsible for crime than is hereditary character.

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