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? WHY THE WEATHER ? Mailed April 9, 1928

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VISIBLE SOUND WAVES IN THE AIR

A weird phenomenon reported several times during the world war was the appearance in the sky, during heavy cannonading, of rapidly moving parallel arcs of light and shade. They were generally seen against a background of clouds, but sometimes swept across the blue sky. These arcs were the sound waves from the discharge of the great guns, made visible by the varying refraction of light passing through the alternate zones of condensation and rarefaction in the atmosphere.

A phenomenon of similar character has sometimes been seen in connection with the explosive outbursts of volcanoes. They were first noted some years ago by Prof. Frank A. Perret, during an eruption of Vesuvius. Watching the cloud of smoke and dust above the crater, he observed that at each explosion a thin luminous ring flashed outward and upward from the volcano and disappeared in space. The movement of the rings was much more rapid than that of the material ejected from the crater. As their speed apparently corresponded with the speed of sound, there could be little doubt that they were, in fact, visible sound waves. Professor Perret named these appearances "flashing arcs".

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