

A Science Service Feature

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? WHY THE WEATHER ? Mailed June 25, 1932.

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PHOTOGRAPHIC STUDIES OF LIGHTNING

The camera has revealed many interesting facts about lightning. One is that a lightning flash is never a zigzag line, with sharp angles, as it was drawn and painted for ages, and as it is still often represented in the "movies." The flashes may twist and meander and branch in every direction, but they do not turn sharp corners.

The flickering of a lightning flash is often perceptible to the eye, but before the days of photography nobody knew how it was caused. The mystery has been fully solved by the use of the revolving camera. This device is mounted on a vertical axis and is turned from side to side at a constant speed by clockwork. Exposed by night during a thunderstorm, it generally registers on the plate two different kinds of flashes. One kind is a narrow streak, while the other takes the form of a broad band or ribbon, made up of a number of parallel streaks. In the former case there was but one practically instantaneous flash, while in the latter several successive discharges occurred at intervals of a small fraction of a second along a common path. The motion of the camera causes these successive discharges to register side by side on the plate, instead of being super-imposed on one another. Such discharges are said to be "multiple," and they are the kind that flicker. Knowing the speed at which his camera revolves, the photographer can determine the intervals of time between the partial discharges with considerable accuracy.

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