



pears, a perfect and permanent record of its shape remains in the hardened plastic, which may be studied and photographed at leisure and in indoor comfort.

The illustration on the front cover of

this SCIENCE NEWS LETTER is from a photograph of a glacite model of a snow crystal, made by Edwin H. Reiber of Webster, N. Y., for the Buffalo Museum of Science.

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**EVOLUTION**—A snow crystal, born in the cold regions of the upper air, begins with the nucleus of frozen water molecules, the first six radiating arms shown at the far left prophesying the final hexagonal form shown in the cover picture. This series of pictures of models, made by Edward H. Reiber for the Buffalo Museum of Science, shows the various stages of development through which this snow crystal passed.

METEOROLOGY

## Long-Range Forecasting

Timing the establishment of a new European front will be greatly aided by weather predictions for a month ahead, General Arnold's report discloses.

➤ LONG-RANGE weather forecasts, a peacetime dream that seemed unrealizable, have become a working actuality because fighting men, especially winged fighting men, simply had to have them. Pictures of what the weather will be like at the end of two days, 10 days, 30 days are now possible, "with sufficient accuracy to permit of making preparatory plans for future operations," Gen. H. H. Arnold, in command of the Army Air Forces, states in his report to Secretary of War Stimson.

At the beginning of the war, 48-hour forecasts were common enough. But that little time is insufficient margin when plans for a continental-scale invasion of hostile shores are being made. Insistence on working long-range forecasts "at first met considerable opposition both inside and outside the Army Air Forces," General Arnold comments. By pooling all information in United Nations meteorological brains, together with some further knowledge captured from German sources, the job was done, and put on a world-wide scale, at that.

Forecasting weather for the Army Air Forces is often as perilous a job as flying through that weather at its worst, the report indicates. The story is told of one group of meteorologists who undertook to

set up an observing station on a narrow ledge in an ice-jammed fjord at Prince Christian Sound on the desolate, uninhabited southern coast of Greenland. The buildings have to be tied down to the rocks with cables, to keep from being blown off by the 90- to 175-mile-an-hour winds that prevail there.

There has been a tremendous increase in Air Weather Service, as in all other branches of the fighting forces, General Arnold points out. For this particular work, the personnel has been multiplied ninety-fold.

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