

accurate barometer readings. He said that shipping people were not now ready to go to the expense of putting the proper instruments on their ships for obtaining information valuable in flying. He wanted fog soundings, and also information as to where cirrus clouds were to be found.

Lieutenant Maitland said that to have ships give accurate information was the first step. He added that "they don't do it now."

Dr. Rossby made public the recommendations of the committee for an experimental weather reporting service between Chicago, Cleveland and New York. It was proposed that each airport be surrounded by a dense local network of meteorological stations that will gather constant information on flying conditions.—Condensed by *L. R. S.* from *New York Times*, Nov. 15, 1927.

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### FIRST PILOT CHART ON WINDS OF THE UPPER AIR OVER THE ATLANTIC OCEAN

"The first pilot chart of the upper air for the North Atlantic Ocean was issued by the Hydrographic Office of the Navy on Nov. 29th. It is for the month of December, inaugurating a series which will be issued each month, and is the first of its kind ever published for the upper air of any area, land or sea. The charts will be sold at the Navy Hydrographic Office at ten cents each.

"The chart shows wind currents at the surface and at 2,500, 5,000 and 10,000 feet altitudes, based on data furnished by the Weather Bureau from nineteen stations, including two in Spain, two in Holland, one each in the Canary Islands, Porto Rico, the Dominican Republic, Jamaica, and the Panama Canal Zone, and ten along the Atlantic coast of the United States.

"The chart shows that changes in the winds on the upper air of the North Atlantic during December are much less than at the surface, and that at from 5,000 to 10,000 feet there is almost a stable condition, with the winds of an unvariable character. It indicates that for aviators flying across the North Atlantic during the month, the Southern routes, 1,790 miles long, between the Azores and Bermuda, would be desirable."—*New York Times*, Nov. 30, 1927.

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### SAFE FLYING IN FOG

Pilots flying on the London-Continental air routes are enabled to keep to their course in foggy weather by an efficient direction-finding system, in operation on both sides of the Channel. A pilot, during flight, can get his bearing from a single station on the ground, or his absolute position, as determined by cross-bearings, from two or more stations.

Having requested such information by radio, he is instructed to talk by radio-phone or transmit by Morse for 30 seconds. The stations listen to his signals and his direction or position, as the case may be, is re-

ported to him. The British stations employed in this service are at Croydon, Lympne and Pulham. When position is desired, the observations of the three stations are collected at Croydon and plotted on a chart, the results being transmitted to the pilot. The whole operation takes only about a minute, and the reported location is seldom in error as much as two miles.

Other aids to flying in fog or clouds are now being tested in England, and a complete solution of the problem seems to be at hand. There are automatic steering devices that keep the aircraft to its proper course in the air, turn-indicators to supplement the unreliable compass, and fog-piercing neon lights at landing fields. Lastly, it is proposed to guide the aircraft to a landing field by means of a "leader cable," similar in operation to the one that was installed in New York harbor a few years ago for the benefit of shipping. The cable will be charged with an alternating current. A signal on the pilot's instrument board will show him when he is flying over the cable and parallel to it, and will also indicate his height above the ground.—*C. Fitzhugh Talman, in Why the Weather? a Science Service feature.*

## NOTES

### New Uses for Rain Gauges

Ingenious bootleggers on the island of Oahu have been playing havoc with the records of the Weather Bureau and the territorial hydrographic office by stealing the metal rain gauges on some of the remote peaks of the Koolau and Waianae mountain ranges for use as moonshine stills.

The gauges are of yellow metal resembling copper, but containing about 30 per cent zinc. Government chemists say that the poison made in one of them is not apt to contaminate a large amount of liquor.—*Orlando Sentinel.*

### Scientists Regarded as Makers of Rain

The *Miami Herald* reports that the Hottentot tribesmen around Mount Brukkaros, Southwest Africa, consider the American solar observers sent out by the Smithsonian Institution on a grant from the National Geographic Society to be rainmakers. This is an interesting contrast to the natives of certain parts of the United States who consider rainmakers to be scientists. In both cases the result is the same. No rain comes.