

part of every map of the world; it was also put on every map of Mexico and North America, and besides, after a good part of it was believed to be an island, many maps were made simply to show this feature."

Historians have rather neglected the

northwest, so far as its map story is concerned. It has had far less attention than the northeast, but as Mr. Wagner rightly protests, it is "quite as interesting."

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## GEOGRAPHY

# Ice Floe Rotation Prevents Magnetic Variation Measures

## Scientists Follow a Lifeline in Blinding Snow From Camp to Tent at Which Their Soundings Are Made

**R**OTATION of the ice floe on which four Russian scientists are drifting in the Arctic has forced Jenya Fedorov, expedition magnetologist, to give up measurements of magnetic variations, Tass, Soviet news agency, has learned by radio from the ice floe camp.

"But it does not affect the other observations," I. Papanin, chief of the group, radioed. "In general our specialists, Shirshov and Fedorov, have to work under very difficult conditions."

Reporting on 200 days of scientific work since they were landed on an ice floe near the North Pole on May 21, Papanin radioed:

"We have thoroughly studied the path of the ice floe from the North Pole to the coast of Greenland. We measured the depth of the ocean at 15 points and made hydrological soundings at 26 points, having taken samples of water at each point from 15 to 25 various depths.

"We made several series of observations for the study of the direction and the speed of the submarine currents. Our hydrological work finally established the existence of a sufficiently abundant organic life in the central part of the Arctic Ocean.

"During our stay on the ice floe we have made more than 100 astronomical observations. These will make it possible to trace precisely the entire path of the drift and to learn the laws governing the movement of the ice floes in the Central Polar Basin.

"In general, our program of scientific observations has been extensive. We hope that 35 definitions of magnetic elements, 13 observations on gravitation, several series of observations of the electric condition of the atmosphere will not prove useless.

"We are aware that our regular meteorological observations are received

with great interest by scientific institutions on the mainland. We note weather changes every two hours and send the results four times a day to the south.

"We watch the Polar Ocean attentively. We have gathered substantial scientific material and many scientists will now obtain reliable data on the entire area of our drift from the North Pole to the final point."

Describing the taking of soundings, Papanin reports that the expedition members use a rope to connect the small sounding tent to their camp so as not to lose time looking for it in the Polar night. "Along this rope we travel safely in any weather. Without this it would be rather difficult to find one's bearings in a snowstorm. Once Krenkel and I lost our way and while being within a few steps of our tent, we could not find it for quite a long time."

The floe on which the four Soviet scientists have been living for more than seven months is large enough for a small town, P. Shirshov, another member of the group, radioed.

"Our ice floe, shaped like a huge triangle, stretches for nearly four kilometers," he reveals. "There is enough space on it for a small town with all its boulevards, squares and parks. We have smooth ice fields here suitable for the landing of a whole squadron of heavy airplanes, there are picturesque little hillocks up to three meters high. In places strips of scarcely frozen water gleam darkly.

"Our hydrological tent has been pitched on a small field of new ice. Under our conditions a hydrological sounding means thirty hours of work with three brief intervals for rest right here on the ice. When you wind a windlass for twenty-four hours, hoisting up hundreds and hundreds of meters of seemingly

endless line, a fur shirt, even at a temperature of thirty degrees below zero, becomes an altogether superfluous item of one's costume."

Soundings have revealed shallower water as the floe approached Greenland, Shirshov adds. On November 8 a great submarine elevation projecting a whole kilometer (a little more than 3,000 feet) above the surrounding sections of ocean bottom was found. At least the previous and succeeding soundings were a kilometer greater than the depth found on that day.

The party's ice floe is turning in a clockwise direction as a result of the approach to the Greenland coast, a subsequent radio message declares.

"The ice current, flowing from the Polar basin into the Atlantic Ocean, strikes on its flank the rocky promontories of land. Therefore the right edges of the ice fields drag. The retardation is transmitted from one ice floe to the other, and as a result each one separately rotates clockwise."

*Science News Letter, January 22, 1938*

## INVENTION

## Typewriter Ribbon Inked On Only One Side Invented

**A**MERICAN inventors have been thinking out new gadgets and devices to add to the pleasure of existence, a survey of the 744 patents issued in one week by the U. S. Patent Office showed.

To prevent the clogging of typewriter keys and other printing media that print through a ribbon, and to enable an operator who handles things like addressing machine plates to avoid soiling his hands, George W. Schaefer of Quincy, Mass., has invented a typewriter ribbon that is coated on one side only. The type presses on the clean side of the ribbon, pressing the ink on the other side onto the paper, Mr. Schaefer explains in the specifications accompanying Patent No. 2,103,275.

Manuel Somohano of Mexico City has devised a non-blurrable mirror for the bathroom. Patent No. 2,103,384 has been granted him for his mirror, which uses electric heating units to prevent moisture from condensing on the mirror, and also is equipped with electric lights.

A fountain pen cleaner featuring a rubber bulb into which the pen point is inserted has been designed by Joseph D. Sheehan of Brooklyn, N. Y. Squeezing the bulb and releasing it exerts suction on the pen and thus cleans it out.

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