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A Science Service Feature

? WHY THE WEATHER ?

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Authority on Meteorology

EXPERIMENTS WITH ICEBERGS

Dr. Howard T. Barnes, F.R.S., professor of physics at McGill University, Montreal, who has been studying icebergs along the Atlantic coast all the way from Hudson Bay to southern Newfoundland since 1910, has recently reported the results of his seventh "iceberg expedition," carried out last summer. The principal object of the expedition was to test the merits of the remarkable heat-producing mixture thermit as a means of destroying these dreaded obstacles to navigation.

Barnes and his party, equipped with a scaling-ladder, Alpine axes and other paraphernalia of mountaineering, climbed to the summit of three bergs and planted charges of thermit, which were subsequently fired. The result of firing was the emission of a veritable volcano of flame, followed by the gradual cracking and disintegration of the berg, which in each case went on for many hours. Dr. Barnes says: "There is no doubt of the disrupting action of the high temperature of the thermit and another time means will be found to sink the charge down 50 or 100 feet into the ice, which can be easily done by means of a rock drill in a very few minutes. Indeed the bergs can be drilled from a boat without going on them."

The party also made studies of the air imprisoned in icebergs. The white color of the bergs is due to the large air content. Measurements showed that from one-sixth to one-tenth of the volume of an iceberg consists of air; hence the density of a berg is such as to make it float out of the water much more than ordinary ice. Many bergs float with as much as one-third of their mass out of water. The statement published in so many schoolbooks and reference books that nine-tenths of an iceberg is submerged is, therefore, an error.

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