

## RESEARCH IN FROZEN GROUND

EACH District Office of the United States Corps of Engineers is given a research programme related to a particular problem in engineering construction. It is of interest to record that the St. Paul Engineer District Office of the Upper Mississippi Valley Division of the United States Corps of Engineers has been assigned a comprehensive long-range research programme on permanently frozen ground. Work is in progress at a field laboratory near Fairbanks, Alaska. Also, the laboratories of the University of Minnesota have provided facilities for determining the thermal properties of soils and insulating materials. The object of this work is to find solutions to the many problems which are encountered in permanently frozen ground in the course of general service construction in the cold regions (*Highway Magazine*, April 1946).

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Investigations on partly built houses on chalk were carried out in this country in February 1947 at Saffron Walden. These were found to have frost-heaved about  $1\frac{1}{2}$  in. (3.8 cm.), the frost having penetrated 9 in. (22.9 cm.). It appears that the chalk is more seriously affected by frost-heaving than any other ground in the South. The Downs were obviously subjected to severe solifluction in the past when the climate was colder.

W. H. WARD.

## OBITUARY

Dr. Phil. h. c. Otto Lüschtg died in 1947 in his seventy-fifth year. A civil engineer by profession, he worked for the Swiss Federal Department of Hydraulics from an early age until 1924. For the next ten years he was head of the hydrological department of the Swiss Central Meteorological Office in Zürich. In 1935 the Hydrological Institute of the Swiss Federal Institute of Technology was founded on Lüschtg's initiative and he became its chief until his retirement in 1941.

Lüschtg supported or directed many societies and institutes. He was a member of the Swiss Hydrobiological Commission and of the Commission for Snow and Avalanche Research. He was Vice-President of the Swiss Glacier Commission. In 1933 he became President of the International Association of Hydrology, a post which he held until near the end of his life.

His many publications were characterized by immense thoroughness and were detailed most minutely. As a man Lüschtg was gentle and kindly and many of us miss a good and faithful friend.

G. S.

## NOTES

**SNOW SURVEY.** This issue contains the first report on the Snow Survey of Great Britain since the war. Its authors pay tribute to the many observers who have assisted them in its compilation. On behalf of this Society the Editors wish to record their thanks to Messrs. E. L. Hawke and D. L. Champion for the immense amount of time they have devoted to organizing the survey. The work has involved the study of individual reports which cannot have numbered much less than one thousand.

**MOUNTAINEERING CONTRIBUTIONS.** The Editors would welcome accounts from mountaineers or ski-mountaineers on any noteworthy snow or ice phenomena they may find.