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## INSTRUMENTS AND METHODS

## IMPROVEMENT IN MAKING RUBBINGS OF GLACIER CRYSTALS

THE method of making rubbings with a pencil described in my paper (Journal of Glaciology, Vol. 1, No. 5, p. 255) has been found unsuitable when the ice is very wet. Professor Ahlmann overcame this difficulty by the "printing" method described on page 269 of the same issue, but I think it will be found that pencil rubbings are simpler and quicker. The following notes should overcome the difficulties experienced with pencil rubbings on wet ice.

Recent experiment has shown that it is better not to use "slightly absorbent" paper as formerly recommended. If the paper absorbs too much water the pencil will not mark. Non-absorbent paper must nevertheless be fairly soft but not nearly so thin as the towelling used by Professor

When the ice is very wet the paper should not be placed flat on the ice but should be rolled up into a loose roll. Assuming the pencil to be held in the right hand, place the roll on the righthand edge of the ice to be rubbed. Commence rubbing up and down this edge. As the pencil progresses leftwards it uncurls and flattens more and more of the roll. Thus the strip of paper immediately beneath the pencil only comes in contact with the ice at the moment the pencil is marking it. It therefore does not become wet through until after the pencil has passed by. The rubbings in Figs. 3 and 4 (p. 378) were made by this method on very wet ice.

"Heel ball," a black stick of solid dye as used by bootmakers to blacken shoes, sometimes works better than a pencil. G. SELIGMAN