

bubbles. The formation of the caps that finished off the completed, or dead, columns is, perhaps, to be explained in this way: When the column rose to a point where the wind reached it above the lee of the dam, the spray from the bursting bubbles would lodge chiefly on the leeward, or downstream, side of the orifice and in freezing would build up that side faster than the upstream side. The top would thus curve over upstream, the freezing spray building not only upwards but back against the wind, just as the hoar-frost or frozen mist of mountain-tops builds against a high wind. This would, of course, close the orifice in time and put a stop to the growth of the column.

It is not entirely clear how the bubbles rise to so considerable a height in the tubes—whether they are forced up by the rush of water over the dam and under the hood of ice, or whether it is because the air they contain is heated by the water to a higher temperature than the surrounding air. On this point, as on the whole subject, we should be very glad to get the opinions and observations of any one else who has seen this formation. Inquiry among friends has failed as yet to bring to light any similar observations on the part of others, and we find no mention of this phenomenon in the fourteen volumes of Thoreau's "Journal," observant as he was of the forms taken by ice, snow and frost along the Concord River and its tributaries. This has made our observation seem worth recording, though we can not doubt that under similar circumstances it might be repeated any cold winter.

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#### CELLULOID LANTERN SLIDES

TO THE EDITOR OF SCIENCE: In a recent letter to SCIENCE regarding celluloid lantern slides, Mr. A. W. Gray states that "tracing cloth and waxed paper are usable; although their limited transparency produces a rather dark field, and the texture of the material shows plainly." The writer experimented some time ago with

substitutes for glass lantern slides, giving special attention to slides which could be prepared quickly for temporary use.

I found that a satisfactory slide could be made by drawing figures or diagrams on thin white paper with india or colored ink. After the ink had become thoroughly dry both sides of the paper were brushed over with a light-colored penetrating oil. The thin glazed white paper used for duplicating typewritten letters serves admirably for the paper and a light neatsfoot makes a satisfactory oil. These paper slides may be inserted in cardboard holders and with suitable projecting apparatus the results are all that could be desired.

The effect of the oil is to increase greatly the transparency of the paper and when new the texture of the paper is quite imperceptible. Figures of lesser sharpness can be made with a fountain pen or even with a pencil. Diagrams and pictures of appropriate size may be cut from magazines or bulletins and treated with oil as outlined above. These are more satisfactory, of course, if no printing appears on the back, but for temporary use the printing in many cases will not destroy the usefulness of a diagram.

I have also made good slides in the same manner by treating  $3\frac{1}{4} \times 4\frac{1}{4}$  photographic prints with oil. The projected pictures, while less bright than those procured with glass plates, present a softer effect and are especially interesting in the case of portraits. Since the usual photographic paper is quite heavy the lantern must be placed nearer the screen but if thinner paper could be obtained the results would be quite satisfactory if the usual distance were maintained.

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#### HOLDING LARGE SPECIMENS FOR DISSECTION

In the zoological laboratory there are many things which are valuable aids in time and convenience. In dissecting large specimens it is often necessary to have some method of holding parts of the anatomy away so as to allow freer rein to one's actions, or of holding