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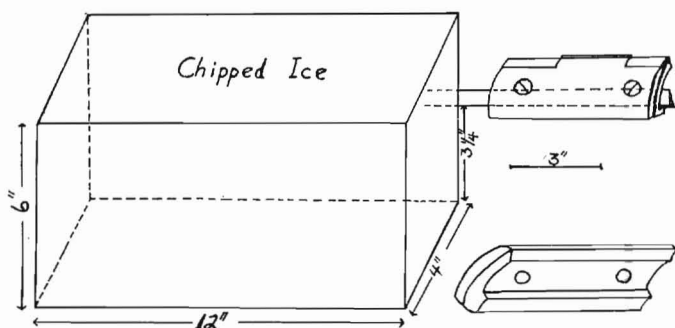
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A MICROTOME KNIFE COOLER

By RAY C. FRIESNER

Artschwager¹ described a cooling apparatus for handling paraffin ribbons during hot weather. Use of this device in our laboratory during the summer months has proven highly satisfactory and at the same time it suggested to us the idea of using the same principle to keep the knife blade cool while cutting. Accordingly, a copper box was made 12x6x4 inches, as shown in the accompanying figure. A suitable lid should be made from the same material. On the back of this box was



soldered a narrow strip of copper, which was allowed to project approximately seven inches beyond the end of the box. This projecting strip should be just wide enough to fit into the groove on the back of the blade holder of the microtome, which happens to be just one-half inch in the case of the blade holder used in our laboratory.² It should be soldered to the back of the box just high enough from the bottom to permit it to slide easily into the blade holder groove when the holder is in place on the microtome. This height is just three and nine-sixteenths inches for our Spencer Rotary microtome.

When ready for use, the copper box is filled with chipped ice, to which sodium chloride may be added to increase the cooling effect. The lid is then placed on the box and the low temperature is then rapidly conducted through the extending arm to the microtome blade holder, which is made of brass. This device has permitted paraffin cutting to be done throughout the summer session and on the very hottest of days.

¹Artschwager, Ernest. A Paraffin Ribbon Cooler. *Stain Tech.* 1: 112. 1926.

²Made by Mr. Ralph B. Larsen, 7126 Woodlawn Ave., Chicago.



Figure 1. Ridge-type heath balds in the spruce-fir subalpine zone, between Mt. LeConte and the North Carolina-Tennessee state line, Great Smoky mountains. Photograph by courtesy of Jim Thompson Co., Knoxville.



Figure 2. Detail of vegetation at the margin of a heath bald of the type illustrated in Figure 1, at approximately 6,500 feet elevation on Mt. LeConte.