A Practical Caliper.

By Ellwood Wilson.

Some years ago the writer became much interested in the subject of tree calipers, and especially in those which could be used for recording the measurements as taken. Two pairs of Wimmenauer recording calipers were imported and given a thorough trial both in the woods and on logs. As all foresters are familiar with these no description is necessary. They are about four feet long, and so heavy that it is impossible to use them in the woods, and very clumsy.

In order to test the accuracy of this caliper,²³⁷ peeled blocks were measured with carefully calibrated K & E. calipers and these were then remeasured with the Wimmenauer. The individual measurements were fairly accurate, but the total as summed up by the recording mechanism was 20% out.

As a recording caliper seemed to be highly desirable, several designs were made up with the kind assistance of the engineering department of the Laurentide Company Limited, and the one illustrated in the photographs chosen. This was made up by the Keuffel & Esser Company and the model tried out very carefully in the woods. By actual test it was found that one man could do the work of three with the ordinary calipers, two measuring and one recording.

The caliper was designed for work where the trees scarcely ever run over 14 inches in diameter breast high, and where usually only spruce and balsam are calipered. It can easily be used for five different species. The instrument is designed to hang around the neck, so that when in use it will be at breast height, by lengthening or shortening the strap it can be made to hang exactly at breast height, and when not in use is not in the way when walking, chopping or using a tape.

The ends are rounded so as to slip easily over the tree and the greatest diameter is automatically chosen. Each time the slide "A" is opened, it registers a tree on the counter, so that there is a check on the total number of trees measured. This slide also serves the purpose of keeping out snow or rain. The counter can be disconnected by leaving the slide open if desired.

The method of using is to raise the arms of the caliper to the horizontal, as nearly level as possible, push them

past the centre of the tree, pull open the slide, make a dot or stroke, as in the United States Forest Service system, or the common one, in the segment which shows in the opening and in the proper concentric circle corresponding to the species, and let the slide fly back. A dozen or so separate sheets can be inserted at once and new ones can easily be put in.

The instrument can be used by anyone, needs only a few minutes practice to learn, is practically fool-proof, and has proved satisfactory. The cost to make up one instrument is about thirty dollars, using aluminum and steel, but if ordered in larger lots would be very much cheaper. It will outlast many pairs of wooden calipers and will always be accurate.