## THE CANADA LUMBERMAN



## LABOR SAVERS. D. M. ROBINS in the Wood-Worker.

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There are many little devices which may be employed around the machine room to save time and handling of material. A device which I have successfully used is for the band saw. I know of a porch column factory where thousands of Colonial columns are turned out in a year, and the caps and base blocks are sawed by hand, after being marked out with a compass in the way that was used long years ago. I herewith show you how to make an attachment for the band saw which will cut out circular stuff of this nature, any diameter which can be handled easily, without previous marking, and saw it so accurately that with a compass you cannot detect a variation from the true circle.

Take a piece of board the size of the saw table outside the saw, that is of a width equal



to that from the saw blade out to the edge of the table, and of a length equal to the table from front to back. This is a base. Suppose you want to saw out circular caps or base blocks for columns 12 inches diameter and 11/2 inches thick. The radius of the cap is 6 inches, so 6 inches in from the saw, on the base board, put a wooden 1/2-inch dowel into the base and let it stick up about an inch. Now cut another circular "form" of inch stuff and of same diameter as the caps you are to saw out (a circular form must be made for each size circle you want to cut), put a hole in the centre of it, to revolve freely on the dowel pin in the base board, put a couple of short, sharpened spurs into the top of the circular plate to hold the material in place, clamp the base board to the table so that the dowel pin comes exactly opposite the teeth of the saw, cut off the material in square pieces on the cut-off saw, put one on the "plate," tap it with a hammer so it will not slip from the spurs, then swing it around to the left against the saw and it will be cut smoothly and quickly-no marking out with a compass, no stooping over the machine to see the lines. It can also be operated with the eyes shut, as there are no lines to follow, and every piece will be cut accurately and of exactly the same diameter. A is the base board. B is the circular form, which revolves freely on the dowel pin set in the base board. C C are the spurs to hold the work in place on the form. D is the band saw. E E are the clamps holding the attachment to



FIG. 2-TOOL-HOLDER FRAME.

the table. The whole may be removed intact when not in use.

Another attachment is for making straight turnings on the lathe, such as bed rolls or any nature of straight work which is not too long to remain stiff between the centres without springing, and ot a large enough diameter to maintain its rigidity.

Suppose we want to make bed rolls about 3 feet long a 1 4 inches in diameter, of soft wood, for venuering. The stock should be roughed off first by hand, leaving it about  $\frac{1}{4}$ inch larger than finish size. It is well understood that work of this nature must be absolutely smooth and perfectly straight, in order that the veneering may set close and have no humps or wrinkles in it. It is perhaps as particular a piece of work as ever comes into the hands of the wood-turner.

Having roughed off the stock, set the rest as close to the work as possible, having it per-



FIG. 3—HARDWOOD REST.

fectly level from one end to the other and no higher than the two lathe centers.

Now, having adjusted the piece correctly in the lathe and with the rest in correct position, I will explain the automatic device for turning the roll absolutely smooth and straight. The attachments are easily made, consisting of a caliper-like frame, which is made of a 5%-inch bolt about 20 inches long, with the crosspiece riveted on the outer end—see Fig. 2.

We must next make a back rest of hardwood, or rather a back guide, as long as the pieces we are working, and it must be set exactly as high as the front chisel rest and exactly puallel to it. Fig. 3 shows how to make the set or guide from the back of the lathe. A is a wooden guide a little longer than the roll we are turning, so it will project over the work at each end. It is about 2 inches thick by 3 inches wide, and has a groove the whole length of the top, about  $\frac{1}{2}$ -inch deep and of the same width as the iron we riveted on the bent rod in Fig. 3. B B are wooden pins, turned the right size to fit into the lathe sockets C C.

Now we will give the reader a clearer conception of our appliance by putting our different pieces together and placing them on the lathe ready for service. A represents the roll hanging between the lathe centers, ready for finishing. B is the hardwood track or guide to



FIG. 4-COMPLETE ATTACHMENT.

carry the turning instrument. C C is the bed frame of the lathe. D is the front rest and sockets. E is the smoothing attachment. F is an ordinary wood-turner's 2-inch gauge, held ir. place by the collar and set-screw. It will readily be seen that the instrument is intended to travel lengthwise the work, bearing solidly upon the front rest and back guide. The proper adjustment of all the parts must necessarily make every roll perfectly smooth and straight and of an equal diameter. Tapered work may just as readily be turned out by setting either end of the back guide in such a position as will give the desired diameter at each end of the roll.

This appliance may be used with equal efficiency on small work or large work, even up to 8-foot columns, but the weight and strength of the instruments, guides, etc., must be in keeping with the work it is designed to accomplish.

The Rat Portage Lumber Company are installing new machinery in their saw mill at Vancouver, B.C., including a new band mill and two carriages. The work of rebuilding the mills of the company at Harrison River, B.C., is being proceeded with.