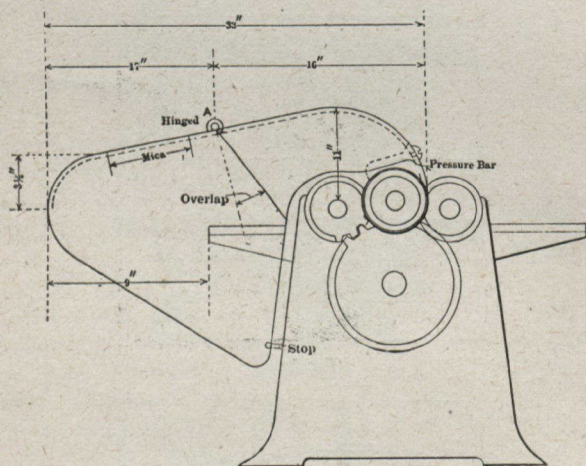


Fig. 3 illustrates the division of the guard K into adjoining sections. The several sections have their individual complements of levers and when narrow work is being done on the machine only so much of the guard moves out of the path of the stock as will allow the respective width of the knives to take effect.

### DUST FROM THE PLANER.

Trouble is often experienced, and I will relate one which happened to me owing to the dust that comes from the planer. Something had to be done and that at once. A dust collector was just then out of the question. The next best thing was a hood which was made from sheet metal. This was made the width of planer, secured to the pressure bar with machine screws and extending back to hinge A and down the sides as indicated by dotted lines. This scheme only served to shoot the dust cut from the back of machine owing to the



agitation of the air caused by the revolving cutter-head. To overcome this, an extension was made from hinge A and back 9 inches from the table top, the sides overlapping as shown. The top rounding down about  $3\frac{1}{2}$  inches left about 3 inches between top of table and bottom of this rounded edge. Through the top was cut an opening about 6 by 14 inches and in this was fastened a piece of mica such as is used for automobile shields; this made it possible to see the work as it came through the planer.

After this hood was put on you could not notice the dust six feet from the planer. When so desired, the back section can be folded up on top of front.—X. Z.

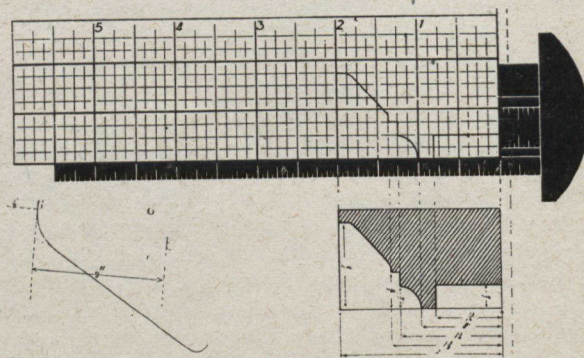
### RULE FOR SETTING KNIVES.

This device is for accurately grinding and adjusting cutters in setting up molding machines and setting surface knives on planers and matchers. It is an invention of practical man by a practical man. The object has been to design a rule that will find all requirements and combine necessary adjustments, with the fewest parts possible, and doing away with complications. It has adjustable surface projections and extends laterally and longitudinally, also reversible scales which are accurate for cutterheads of all diameters. To reverse the scale or change projection is the work of a few seconds. It is guaranteed accurate to  $1/1000$ -in. The following directions

for using the device are taken from the printed matter of the makers.

To line up rule with machine, extend the blade the same distance the cutterhead projects over the guide line. If the head projects over  $\frac{3}{8}$ -in., extend the blade in rule  $\frac{1}{2}$ -in., allowing  $\frac{1}{8}$ -in. for side head cutter, always remembering the distance blade is to be extended to line the scale with guide, and do not attempt to set cutters before this adjustment is obtained. After this adjustment is made, transform or extend the rule for any requirements.

To change surface projections, withdraw the blade and insert it in suitable groove. There are two projections, from  $3/16$  to  $9/16$ -in., on each edge of blade. To reverse either scale, withdraw blade and insert from opposite end. Rule can be extended laterally any given distance according to standard scale on blade. Longitudinal extension is obtained from any projection by inserting blade in third groove from surface projections. To transform the rule into a square, withdraw blade and insert it in vertical grooves across abutment end. To set surface knives on matchers and planers with worn-



down lips, set knives against squaring edge and screw down one bolt on each end, enough to hold them in place, then extend rule and caliper across ends of knives from face of head to cutting edge on knives, and ascertain if cutting edges, on all knives have uniform projection before knives are bolted down solidly.

To adjust molding cutters, square up and outline the pattern to be set on the scale (see sketch). Grind and set knives to these lines. For a simple pattern, when only one or two knives are to be set, this will not be necessary. Where two or more patterns have exactly the same members, but of different widths, like mullion casing, stops, detail work, etc., the cutters can be set over the same outlines by means of using the lateral extension. To set the cutters for a molding wider than length of scale, extend blade as many inches as necessary and proceed with the setting. The rule is good for all widths of moldings up to  $11\frac{1}{2}$  inches. To set cutters on moldings deeper than  $1\frac{1}{4}$ -in., insert blade in third groove from surface projection. The same rule applies on bottom and side heads as on top.

### TRUING CUTTER-HEAD KNIVES.

Because a cutter-head shows itself to be absolutely true when standing still is no sign that all the knife edges will move in the same cutting circle when it is speeded up to four or five thousand revolutions per minute. It is then that centrifugal force gets in its powerful work. Even the slightest spring or distortion then shows the result on the finished work. The one knife which is most prominent takes the largest or perhaps the entire cut, and leaves as a