DEVICE FOR SURFACING MOLDINGS OR THE LIKE

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To all whom it may concern:

Be it known that we, SIDNEY E. ESKEW and LEWIS HARRIS, both citizens of the United States, and residents of Benton, in the county of Franklin and State of Illinois, have invented a new and useful Improvement in Devices for Surfacing Moldings or the like, of which the following is a full, clear, and exact description.

Our invention relates to improvements in devices for surfacing, smoothing, or polishing moldings or other articles of an irregular form, and it consists in the combinations, constructions and arrangements herein described and claimed. While the invention is primarily designed for use with moldings, it will be understood that it may be applied to any article which is first roughed out and afterwards surfaced.

Usually in the making of moldings, the wooden strip is brought into contact with a revolving cutter, consisting of a solid body portion having blades or cutters thereon. This will serve to rough out the molding, but when the latter is to be placed in position, it is generally necessary for the carpenter to sand-paper the molding, in order to give it a finished or polished surface.

An object of our invention is to provide a means by which the molding can be surfaced or polished before leaving the mill, thus obviating the necessity of sand-papering subsequently.

A further object of our invention is to provide a device consisting of a shell having a contour conforming to that of a solid backing member, the shell itself being provided with an abrading surface, so that when the support for the shell is revolved, the latter will cause the smoothing or polishing of the strip of wood or other material, similar to that made by sand paper, but more thoroughly, for the reason that it reaches all parts of the surface.

A further object of our invention is to provide a device of the type described, in which a shell may be removed when worn, and may be replaced by another shell, without the necessity of removing the supporting form.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claims.

Our invention is illustrated in the accompanying drawings, forming part of this application, in which——

Figure 1 is a sectional view of the device as applied to a molding.

Figure 2 is an end view of the shell, and

Figure 3 is a view of a modified form of the shell.

In carrying out our invention, we make use of any suitable mandrel or rotating shaft, such as that shown at 1 in Figure 1. This mandrel is provided with a reduced portion 2, and a solid head 3, which has a contour conforming to that of the molding to be polished, is secured to the mandrel in any suitable manner, as for instance, by a key 4, or the mandrel and the head may be integral.

Arranged to fit over the head or supporting form 3 is a shell 5 which also conforms to the shape of the molding, and which lies close to the body portion of the head or supporting form. To this end the shell is provided with an opening which permits the reduced portion of the shaft 2 to extend therethrough. The shell is provided with an abrading surface, which may consist of ridges stamped or cut thereon, as shown at 6 in Figure 2, or a series of holes or indentations 7, as shown in Figure 3.

In order to hold the shell in position, we provide a nut 8 which is arranged to be drawn up against a washer 9, the latter bearing on the shell 5 and holding it firmly in engagement with the supporting form 3.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. The molding 10 is roughed out in the usual manner, and then is passed beneath the shell 5, while the latter is rotating. The rapid rotation of the shell causes the abrading surface thereof to polish the molding along the irregular surface thereof. With the solid form 5 to support the shell, the two act as one piece. There is this advantage, however, in the shell, over a solid head provided with an abrading surface: namely, that the shell may be made of a stamping, and the shells may be made very rapidly and at small cost. It is easy to turn a solid head, but not so easy to provide an abrading surface thereon, whereas with the shell it may be done very quickly by a power press. When the shell is slipped on the supporting form and secured thereto, it acts as if it were integral with the form.
When it is desired to change the abrading shell, as for instance, where the abrading surface of the shell is worn through continued use, it may be done very quickly, and a new shell may be provided, without the necessity of removing the supporting form. Obviously, the form itself may be removed, as well as the shell, and another form of a different shape may be applied so as to finish a molding of different shape.

In Figure 3 we have shown a shell of a different shape from that shown in Figure 2. In this figure, as stated, the abrading surface consists of holes or indentations which are punched in the shell, but which have substantially the same effect as the ridges shown in Figure 2.

Another advantage is that the shell can be made of wear resisting material, such as iron or steel or other metal which can be easily tempered to any desired degree.

We claim:
1. The combination with a rotatable mandrel of a supporting form removably carried thereby, said form having an irregular contour, a metal shell having its interior and exterior conforming to the contour of the form and arranged to be slipped over the latter and to engage the form frictionally, said shell being provided with an exterior abrading surface, and means common to said shell and said form for securing the shell and the form to the mandrel to prevent the relative rotation thereof.
2. The combination with a rotatable mandrel of a supporting form removably carried thereby, said form having an irregular contour, a metal shell having its interior and exterior conforming to the contour of the form and arranged to be slipped over the latter and to engage the form frictionally, said shell being provided with an exterior abrading surface, means common to said shell and said form for securing the shell and the form to the mandrel to prevent the relative rotation thereof.
3. The combination with a rotatable mandrel of a supporting form removably carried thereby, said form having an irregular contour, a metal shell having its interior and exterior conforming to the contour of the form and arranged to be slid over the latter and to engage the form frictionally, said shell being stam ped to provide an exterior abrading surface, and means common to said shell and said form for securing the shell and the form to the mandrel to prevent relative movement.

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