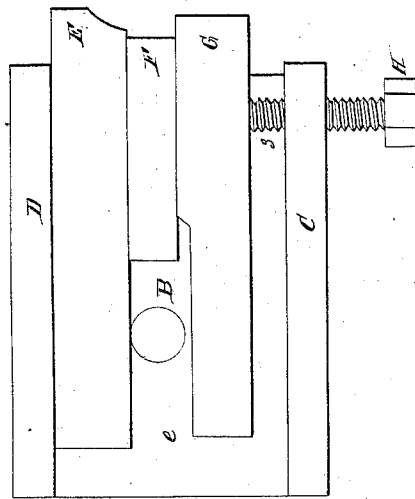
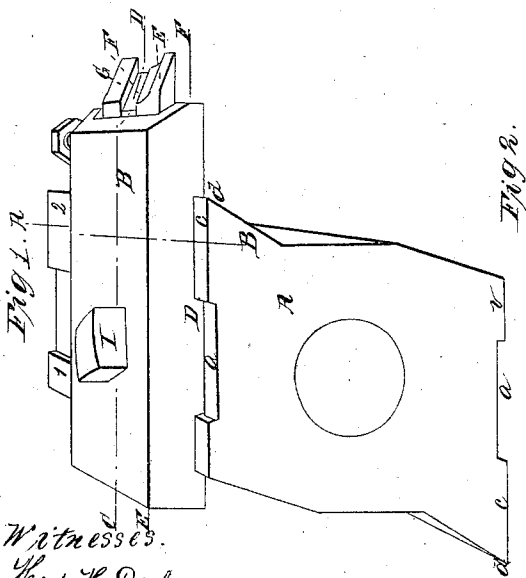
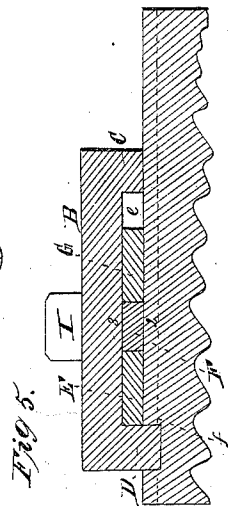
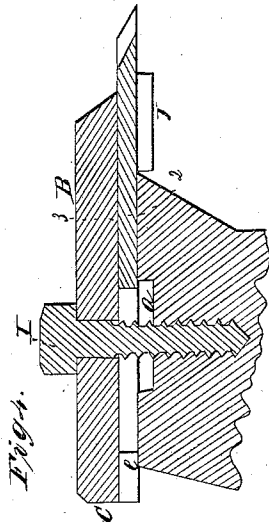
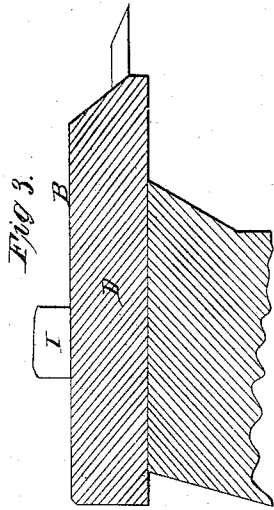


*Rorre & Nelson,  
Cutter Head.*

*N<sup>o</sup> 79,690.*

*Patented July 7, 1868.*



*Witnesses.  
Thos. H. Dodge  
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# United States Patent Office.

GEORGE ROWE AND S. W. NELSON, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 79,690, dated July 7, 1868.

## IMPROVEMENT IN CUTTER-HEADS.

The Schedule referred to in these Letters Patent and making part of the same.

### KNOW ALL MEN BY THESE PRESENTS:

That we, GEORGE ROWE, and S. W. NELSON, both of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Cutter-Heads for moulding-machines; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents so much of a cutter-head of a moulding-machine as is necessary to illustrate our present improvements.

Figure 2 represents a bottom view of the cap-piece in which the moulding-cutters are clamped.

Figure 3 represents a section on line E F, fig. 1.

Figure 4 represents a section on line C D, fig. 1, and

Figure 5 represents a cross-section on line A B, fig. 1.

Our invention relates to cutter-heads for moulding-machines, and it consists in attaching the moulding-cutters to a clamping-device, of peculiar construction, which in turn is secured to the cutter-head in the manner hereinafter described, our object being to secure by this means all the advantages possessed by open cutter-heads, as well as those which accompany the use of "closed" heads, while, at the same time, obviating many of the disadvantages attending the exclusive employment of either.

To enable those skilled in the art to which our invention belongs to make and use the same, we will proceed to describe it more in detail.

In the drawings, the main part of the cutter-head is lettered A. It is made with two grooves or slots, *a a*, and two projections, *b b*, and two projections, *c c*, the projections *c c* extending out in an inclined position, as fully shown in fig. 1 of the drawings.

The cutter-clamping piece, B, is recessed out upon the under side, as shown at *e*, leaving two flanges, C and D, the latter projecting out further than the former, so that when the clamping-piece is placed in position, as shown in the drawings, the flange D will fit into the recess or slot *f*, in the projections *b c* of the part A, while the flange C will rest upon the outer surfaces 1 and 2 of the projections *b* and *c*, all as fully shown in the drawings.

The cutters E F G, shown in the drawings, or any other number, with any desired form of cutting-edges, are placed in the slot or recess *e*, and clamped against one of the flanges C or D. In this instance, they are clamped against the flange D by means of a set-screw, H.

After the cutters have been arranged and fastened in the slot or recess *e*, as shown in fig. 2, the clamping-piece B is applied to the part A, and fastened thereto by means of a screw-bolt, I, as indicated in the drawings.

When the clamping-piece B is screwed down, the front parts of all the cutters are clamped securely between the face 2 of the projection *c*, and the inner surface 3 of the part B, whereby they are held in a very secure and safe manner.

The clamp-piece B is also held securely in place, since flange D, fitting in the slot *f*, retains the clamp from any lateral motion, while the projection J, on the front end of the flange C, resting as it does against the front part *d* of the part A, prevents all back motion of the clamping-piece B, while the bolt I binds it firmly to the part A.

All those accustomed to operating moulding-machines, will readily appreciate our present improvements.

Any shaped and any number of cutters can be used on our cutter-head. It possesses all the advantages of an open and closed cutter-head, is simple in construction, and is not liable to breakages or derangements of the parts.

Our invention can be applied with good effect to certain classes of planing-machines.

Having described our improved cutter-head for moulding-machines, what we claim therein as new, and desire to secure by Letters Patent, is—

The combination of the cutter-holding or clamping-piece B, having flanges C and D, with the head part A, and its projections *b c*, and bolt I, substantially as and for the purposes set forth.

GEO. ROWE,  
S. W. NELSON.

Witnesses:

THOS. H. DODGE,  
D. L. MILLER.