C. M. COULTER.
Cutter-Head.

No. 200,980. Patented March 5, 1878.

Fig 5

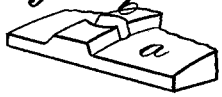


Fig 1.

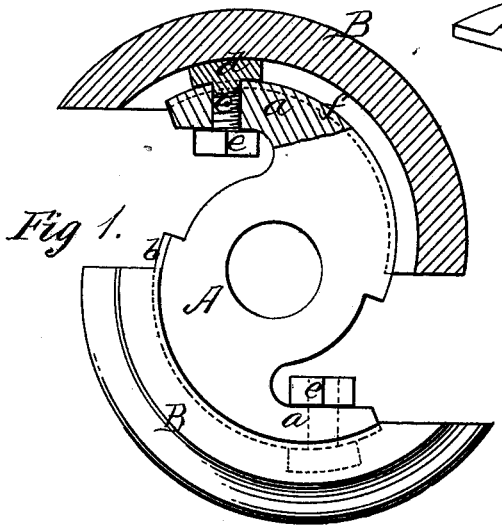


Fig 2.

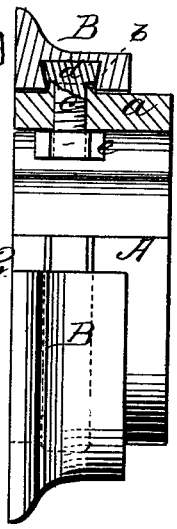


Fig. 3.

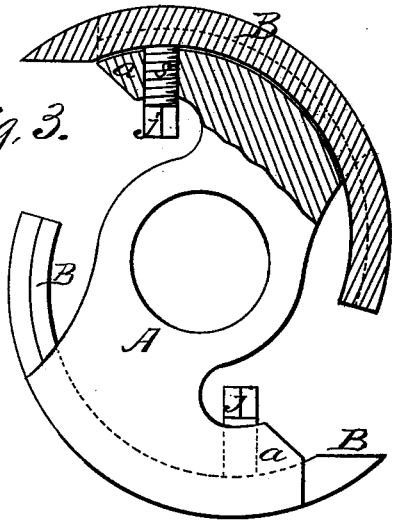
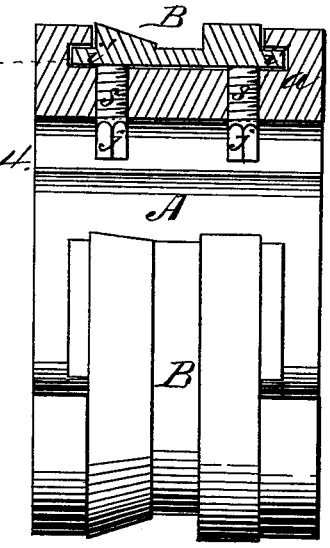


Fig. 4.



WITNESSES

Villette Anderson

F. J. Masi.

INVENTOR

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ATTORNEY

UNITED STATES PATENT OFFICE.

COLUMBUS M. COULTER, OF DANVILLE, ILLINOIS, ASSIGNOR OF ONE-HALF HIS RIGHT TO EZRA A. LEONARD, OF SAME PLACE.

IMPROVEMENT IN CUTTER-HEADS.

Specification forming part of Letters Patent No. **200,980**, dated March 5, 1878; application filed February 9, 1878.

To all whom it may concern:

Be it known that I, COLUMBUS M. COULTER, of Danville, in the county of Vermillion and State of Illinois, have invented a new and valuable Improvement in Rotary Cutter-Heads; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my invention, partly in section. Fig. 2 is an end view thereof, also partly sectioned. Figs. 3 and 4 are side and end views of a modification of the cutter-head, and Fig. 5 is a detail view.

This invention has relation to improvements in cutter-heads for molding and other machines.

The nature of the invention consists in the combination, with a bit-holder having opposite offsets and curved bearing-surfaces, of a curved bit, having a dovetailed groove upon their under sides, and the adjusting-bolts, having dovetailed heads adapted to enter the said grooves, as will be hereinafter more fully shown and described.

In the annexed drawings, the letter A designates a metallic holder, having a central aperture, by means of which it is secured upon the mandrel. The hub of the holder is cylindrical, and has springing therefrom the offsets *a*, the curved perimeters of which are eccentric to the cylindrical hub. The holder is of the general form of the letter **S**, and there is a space between its offsets and hub sufficiently large to receive the jaws of a wrench. The outer curved surfaces of the hub and offsets are continuous, and upon each of the surfaces is a raised rib, *b*, through which, at about the middle of the length of the said offsets, a perforation is made to receive a bolt, *c*, having a dovetailed head, *d*. A nut, *e*, is applied upon the threaded end of these bolts in the space between the offsets and hub of the holder, as shown in Fig. 1. The bits B are sections of an annulus, and their inner concave edges conform strictly to the convexity of the curved surfaces of the holder. Their exterior faces are of various forms for cutting the various forms of moldings, as the cyma recta and reversa ogees and others.

These bits are provided upon their under sides with a dovetailed groove, *f*, of a size to receive the head *d* of the bolt *c*. The groove *f* extends from point to heel of the bit. The latter is passed onto the holder by engaging the dovetailed head of the bolt in the open end of the groove in the bit, and thrusting the same endwise on the holder until it is adjusted thereon. The nut is then set up and the bit rigidly secured to the holder thereby. When adjusted to the holder, the groove of the bit receives the rib *b* of the said holder, by which means the bit is prevented from all lateral displacement or vibration, while the action of the bolt holds it against any endwise displacement.

Fig. 4 shows a modification of this construction, wherein an inverted **T** groove, *i*, is formed in the curved sufaces of the holder, and a curved bit, B, having edge flanges *i'*, is passed endwise into the groove *i*, and adjusted therein by means of the set-screws *s*, passing upward through the offset *a* and bearing forcibly against the under side of the bit. These set-screws are provided with wrench-seats *j*, by means of which they are the more readily applied.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with a bit-holder having opposite offsets and curved, flanged bearing-surfaces, of the correspondingly-curved bits, having a dovetailed groove upon their under sides, and the adjusting-bolts, having dovetailed heads adapted to enter the said grooves, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

COLUMBUS M. COULTER.

Witnesses:
G. G. MABIN,
P. WILBER.