

E. A. ROWLEY.

Improvement in Cutter Heads.

No. 125,618.

Patented April 9, 1872.

Fig. 1.

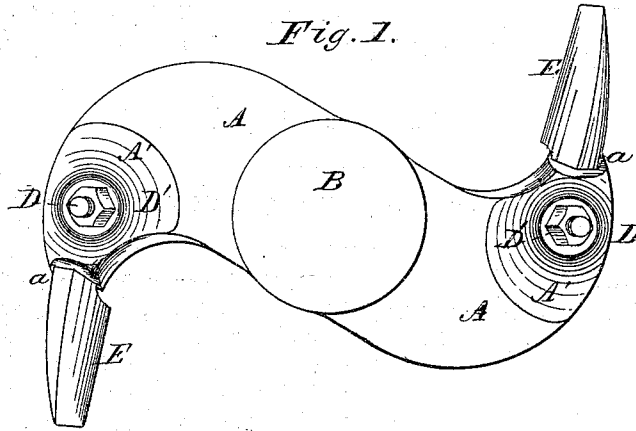


Fig. 2.

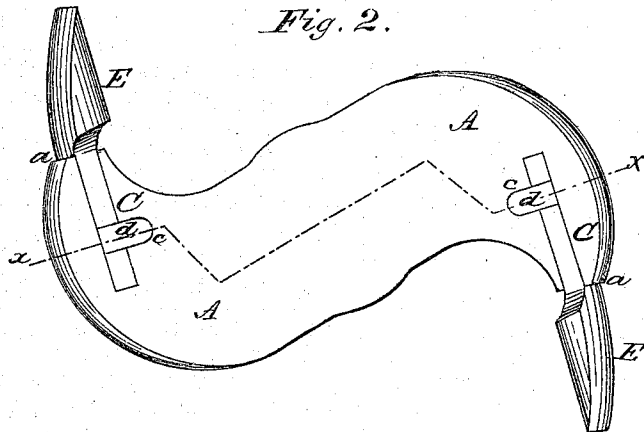


Fig. 3.

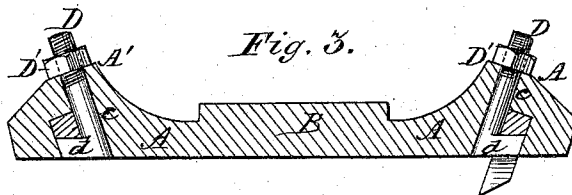


Fig. 4.

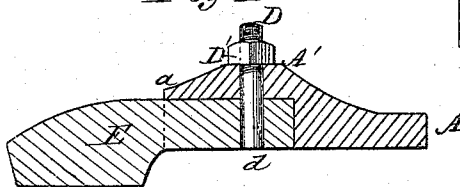
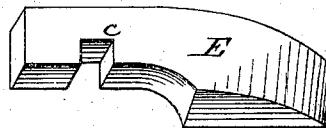


Fig. 5.



Witnesses:

J. C. Buecht.

John R. Young

Inventor:

Edwin A. Rowley, by
Orendle and Lo, his
attorneys.

UNITED STATES PATENT OFFICE.

EDWIN A. ROWLEY, OF WILLIAMSPORT, PENNSYLVANIA, ASSIGNOR TO
MILLSPAUGH, ROWLEY & MILLSPAUGH, OF SAME PLACE.

IMPROVEMENT IN CUTTER-HEADS.

Specification forming part of Letters Patent No. 125,618, dated April 9, 1872.

To all whom it may concern:

Be it known that I, EDWIN A. ROWLEY, of Williamsport, in the county of Lycoming and in the State of Pennsylvania, have invented certain new and useful Improvements in Cutter-Heads for Panel-Raisers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is plan view of the face of the cutter-head. Fig. 2 is a like view of the rear face of said head. Fig. 3 is a longitudinal section on the line *xx* of Figs. 1 and 2. Fig. 4 is a cross-section of the same on the line *zz* of Figs. 1 and 2; and Fig. 5 is a perspective view of the cutter detached from its head.

Letters of like name and kind refer to like parts in each of the figures.

My invention belongs to a class of wood-working devices termed cutter-heads, and used as panel-raisers; and it consists, principally, in the construction and relative arrangement of the cutters and head, substantially as and for the purpose hereinafter specified. It consists, further, in the means employed for securing the cutters to or within their head, substantially as and for the purpose hereinafter shown.

In the annexed drawing, A represents the cutter-head, having in plan view the general form of the letter S, and provided upon its rear face and center with a boss or hub, B, through which passes the shaft or axial bearing, upon and around which said head revolves when in use. Extending inward from each of the curved ends *a* of the head A, and in a line at a right angle to the central longitudinal line of the same, is a slot, C, which is open upon the forward face of said head, and from thence extends rearward and slightly outward (as shown in Fig. 3) to a distance about equal to the thickness of said head, while upon the opposite side of the arm is provided a boss, A', which covers said slot, and gives to the part strength equal to that possessed by other portions of the device. A semicircular groove, *c*, is cut within the inner face and at the longitudinal center of the slot C, and at its lower end, becoming circular, passes through the boss A', and furnishes a passage for a bolt,

D, the inner or face end of which is provided with a head, *d*, that projects across said slot, and has an inclination corresponding to the line of the face of the cutter-head, while the opposite end of said bolt is threaded and provided with a nut, D'. The face of the boss A', immediately beneath the nut D', is inclined at a corresponding angle, so as to furnish a firm bearing for the same. The cutter E is formed of or from a bar of rectangular steel, having a thickness just equal to the width of the slot C, and has its inner or shank end fitted to or within the same, with its outer edge just flush with the face of the cutter-head. A notch, *e*, corresponding in size, shape, and position to the like features of the bolt-head *d*, provided within the cutter-shank, receives and contains said head, so that when the nut D' is screwed inward said head will be drawn down upon the bottom of the notch *e* and press said cutter against the bottom of the slot C with sufficient firmness to insure its lateral position when in operation, while the longitudinal position of said cutter is insured by the presence of said head *d* within its notch. From the end *a* of the cutter-head the cutter E extends inward, and has its edge beveled rearward, so as to give a free cut, while the back of said cutter is also beveled from near its longitudinal center to its outer end, so as to produce at the latter point a cutting-edge. The cutting-edge of the cutter E has, preferably, a line corresponding to and parallel with the face of the head A, and the end of said cutter an inclination of about sixty degrees from the line of said cutter-head face; but either of said cutting-edges may be varied to suit the inclination or wishes of the operator.

The special advantages obtained by this construction and combination of parts, are—First, the cutters are more readily attached to or detached from their head than are those of ordinary construction. Second, owing to the peculiar manner of their attachment to or within the cutter-head, the cutters cannot become accidentally detached therefrom, whereby the operation of the machine is attended with far less danger than would otherwise be the case. Third, from the shape of the cutters great ease and perfection of operation are secured, while the labor of keeping the same in order is but

slight. Fourth, the peculiar shape of the head and cutters insure their perfect clearance from shavings, and thereby removes a source of considerable annoyance to the operator.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The relative arrangement of the cutters E and head A, when constructed as and for the purpose specified.

2. In combination with the cutter-head A provided with the slot C and groove c, and

with the cutter E provided with the notch e, the bolt D provided with the head d and with the nut D', substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of January, 1872.

EDWIN A. ROWLEY

Witnesses:

M. L. LIGGETT,

W. E. CRANFORD.