J. W. C. McCURDY.

CUTTER-HEADS.

No. 193,769. Patented July 31, 1877.

Fig. 1.

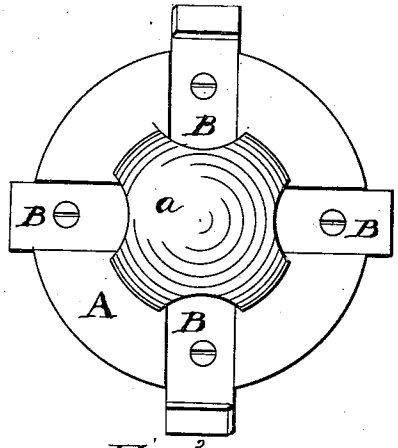


Fig. 2.

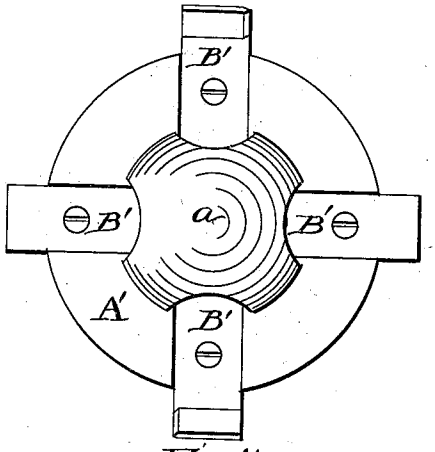


Fig. 3.

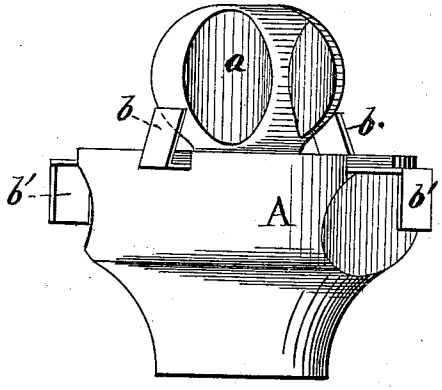


Fig. 4.

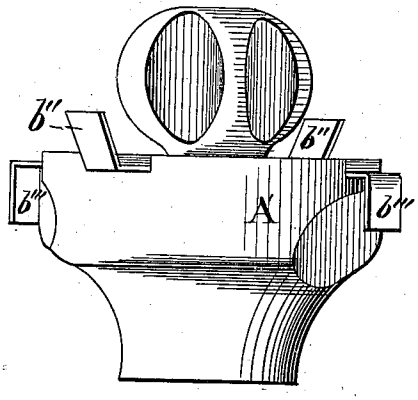
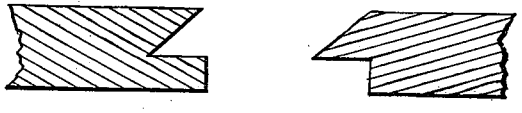


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN W. C. McCURDY, OF ATWOOD, PENNSYLVANIA.

IMPROVEMENT IN CUTTER-HEADS.

Specification forming part of Letters Patent No. 193,765, dated July 31, 1877; application filed June 26, 1877.

To all whom it may concern:

Be it known that I, JOHN W. C. McCURDY, of Atwood, in the county of Armstrong and State of Pennsylvania, have invented certain new and useful Improvements in Cutter-Heads, of which the following is a specification:

Figure 1 is a plan view of the groover. Fig. 2 is a plan view of the tonguer; Figs. 3 and 4, respectively, side elevations of the groover and tonguer; Fig. 5, detail, showing, in section, the groove and tongue as made in boards and adapted to form a joint.

The design of the present invention is to produce a set or pair of combined bits, one of which shall be adapted to cut an acute-angled groove in the edge of a board or plank, and the other a tongue of corresponding shape in the opposite edge; and to this end the said invention consists more particularly in the novel shape and construction of each set or pairs of bits, and in their peculiar adaptation and arrangement in their respective cutter-heads, all as will now be more in detail set out and explained.

In the accompanying drawings, A and A′ denote, respectively, the cutter-head for the groover and tonguer, as I denominate the head that carries the one or the other set or pairs of bits. These heads are each adapted in the usual manner upon shafts and held in place by nut *a*. To and upon the cutter-head A are secured in any usual or ordinary way the bits B, two of these, *b*, so arranged as to be on opposite sides the one from the other, are bent upward near the end so as to form an acute angle at this point, and on one side of said bent-up portion is a cutting-edge. Alternately with these, and likewise opposite each other, are arranged the bits *b′*, their ends turned down parallel to the sides of the cutter-head, the point of bending being not so far away from said head as in the case of the bits *b*. Each of said bits *b′* has, also, a cutting-edge on one side of said bent portion. All of the said cutting-edges on the bits *b* and *b′* are arranged so as to come on the same side.

On the tonguer A′ the bits *b″* and *b‴* are adapted in very similar manner to that just now explained, and in construction and arrangement differ from the bits *b b′* chiefly in that the upward-bent bits *b″* have an obtuse angle relative to the head, and are the closer of the set to the head, while the downwardly-bent and parallel ones *b‴* extend out the farthest; also, the cutting-edges are made on the faces reverse to those on the groover.

It will be thus perceived that the bits on the groover are generally made and arranged about the reverse of those on the tonguer.

In usual adaptation the tonguer operates on a movable head, while the groover is made to work in one position; but the reverse of this can be used, if desired. The bits can be kept in order very easily. It is intended that the outer side or face of each bit shall be somewhat curved. This shape or configuration will assist materially in sharpening them, and there is no need of dressing on the outside; nor will it be necessary to use a file in dressing the bits, for they can be sharpened or dressed upon any of the common grindstones used for this purpose without the least difficulty.

The joint shown in Fig. 5 has peculiar value, in that it can be easily made, the tongue and groove being readily adapted, and it is very durable because it cannot be broken till the boards are well-nigh worn out.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The cutter-head A, having bits B, *b*, and *b′*, combined therewith in the manner and for the purposes substantially as set forth.

2. The cutter-head A′, having bits B′, *b″*, and *b‴*, combined therewith, substantially in the manner and for the purposes set forth.

In testimony that I claim the foregoing as my own, I do affix hereto my signature in presence of two witnesses.

JOHN WM. C. McCURDY.

Witnesses:
M. F. CRISSMAN,
ALBERT EARHART.