

(No Model.)

M. MURPHEY.

CUTTER HEAD.

No. 303,179.

Patented Aug. 5, 1884.

Fig. 1.

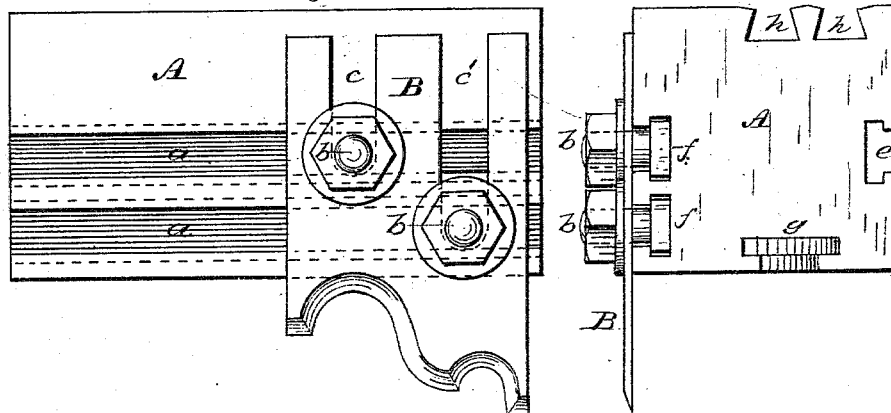


Fig. 3.

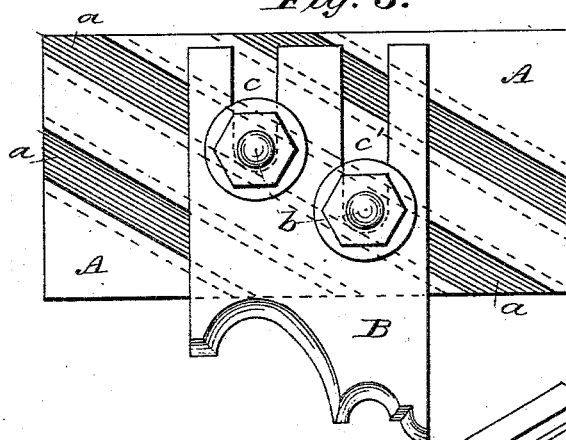


Fig. 5.

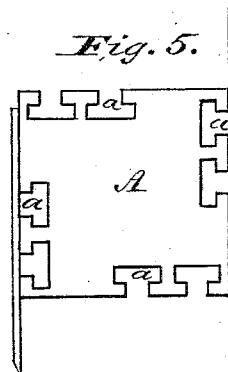
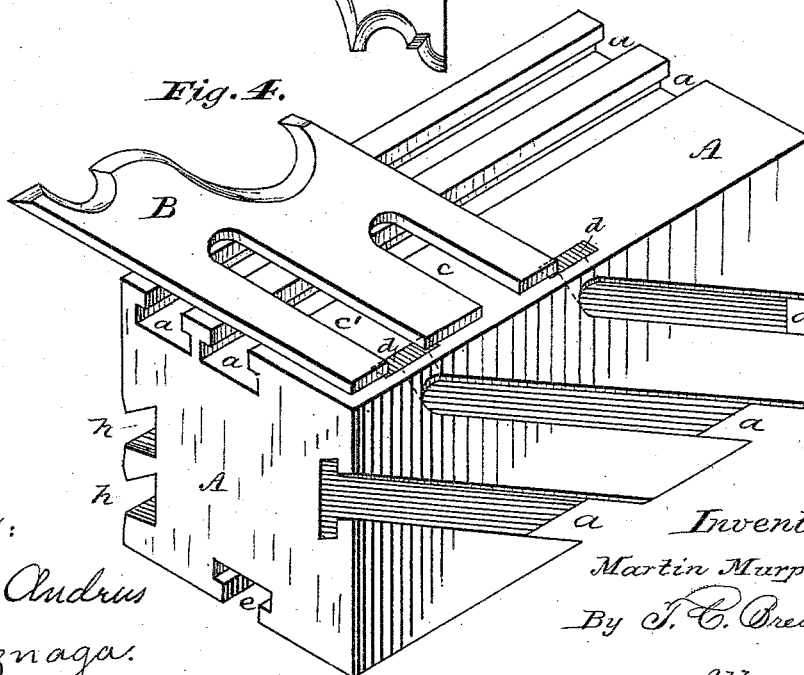


Fig. 4.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## CUTTER-HEAD.

SPECIFICATION forming part of Letters Patent No. 303,179, dated August 5, 1884.

Application filed February 22, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, MARTIN MURPHEY, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Cutter-Heads for Molding and Planing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in cutter-heads for molding and planing machines; and to improve their construction and operation is the object of my invention in such manner that the cutters or knives are held more securely and firmly than has been done heretofore. As is well known to those skilled in the art, cutter-heads for molding and planing machines as now in use have been provided with one slot in the faces of the head, in which the cutters are held. This causes the outer end of the cutters to chatter and make imperfect molding, as the distance from the point where they are held to the cutting-edge of the cutter is too great. It was then proposed to make transverse slots joined to the longitudinal slots at certain intervals, and in connection therewith to produce a cutter with two slots of different lengths, so that two bolts could be employed with the holding or securing points at different planes. The objection to this arrangement is that the cutters cannot be secured wherever desired, while by my improvement they can be secured along the entire length of the cutter-head to the smallest fraction of an inch, and the chattering is effectually prevented. The cutters may be also used up much shorter, and thereby material saved.

The invention consists in producing a cutter-head having in its faces two or more longitudinal or oblique slots of T or V shape, in which the cutters having two slots of different lengths can be secured at different horizontal or longitudinal planes along the entire length of the cutter-head at any point.

It also consists in the construction and arrangement of certain details, as will be more

fully described hereinafter, and more specifically pointed out in the claims, reference being had to the accompanying drawings and the letters of reference marked thereon.

Like letters indicate like parts in the different figures of the drawings, in which—

Figure 1 represents a side view of my improved cutter-head with a cutter attached. Fig. 2 is an end view of the same, showing different slots at each side. Fig. 3 is a modification showing oblique slots instead of longitudinal ones. Fig. 4 is a perspective view of Fig. 2. Fig. 5 is an end view showing a cutter-head as usually constructed.

In the accompanying drawings, A is the cutter-head, having in its faces the longitudinal slots *a*, which in this instance are T-shaped. These slots are arranged in opposite faces, so as to balance each other, and are placed as near as possible to one side of the cutter-head. In these slots the bolt-heads of the bolts *b* fit and securely hold the cutters or knives B in place. These cutters are provided with two slots, *c c'*, of different lengths and open at one end, so that said cutters are secured at different inclines or planes and much closer to the work to be performed than has been heretofore done.

In the modification represented in Fig. 3 the slots are made oblique, and to prevent shavings from clogging the slots I prefer to make them in this instance so that the outside part of the slot remains closed, while the lower part is cut through the side for the bolt-head, as shown at *d* in Fig. 4.

In Figs. 2 and 4 the ordinary slot now employed in the faces of the cutter-head is represented at *e*, while the slots as used in my improved cutter-head are represented at *f g h*. The slots *h* are made of dovetail or V shape, and their faces are slightly beveled off, so as to prevent the edges of the slots from being burred up when dovetail-headed bolts are employed.

It will readily be seen that the bearing-points of the cutters are much closer to the material to be operated upon, and that the chattering so often occurring in molding and planing machines is entirely overcome; that

the steel cutters or knives, which are expensive, can be used up much shorter than with cutter-heads now in general use, and that they can be adjusted to the smallest fraction of an inch along the entire length of the cutter-head.

I am aware that cutter-heads having a single longitudinal slot of T shape in their faces are old; also, that longitudinal slots with transverse slots at intervals are old; and, also, that cutters having two slots of different lengths have been used, and I disclaim all such constructions; but,

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

1. A cutter-head having two or more longitudinal slots in its opposite faces, one of which slots is arranged centrally and the other one near the edges and parallel to the center slot, to furnish a firm support for the cutters having two slots of different lengths, in which the bolts securing said cutters are placed at different horizontal planes, as shown and specified.

2. The combination, in a cutter-head, of a pair of cutters having open-ended slots, with the cutter-head provided with two or more longitudinal slots, arranged parallel to each other, one placed centrally and the other near the edge of each side, to form a firm support and afford means to secure the cutters in different parallel planes, by which displacement is prevented, all arranged substantially as specified.

3. In a cutter-head for molding and planing machines, two or more oblique slots having one end closed at their faces, as shown, in combination with cutters provided with open-ended slots of different lengths, for securing them at different planes, as specified, and for the purpose set forth.

In testimony whereof I hereby affix my signature in presence of two witnesses.

MARTIN MURPHEY.

Witnesses:

J. M. YZNAGA,  
WILLIAM ANDRUS.