

GEORGE PICKERING.

Improvement in Machines for Turning Wood.

No. 120,532.

Patented Oct. 31, 1871.

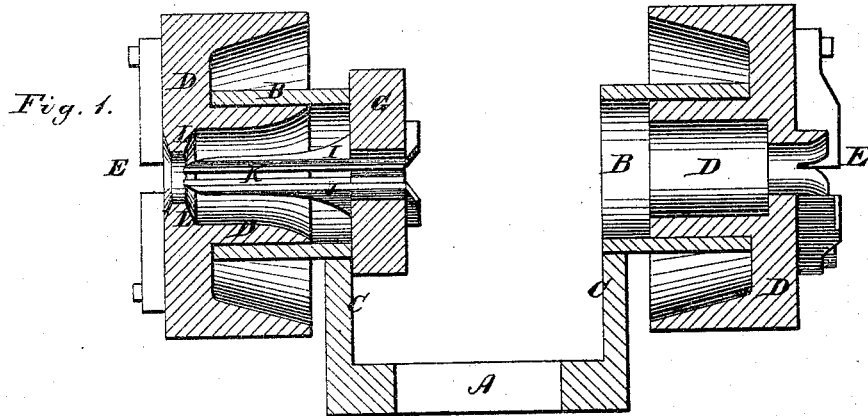


Fig. 2.

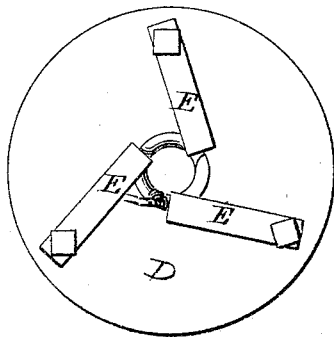


Fig. 3.

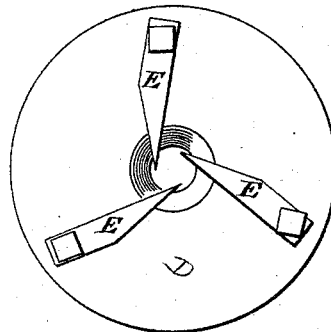
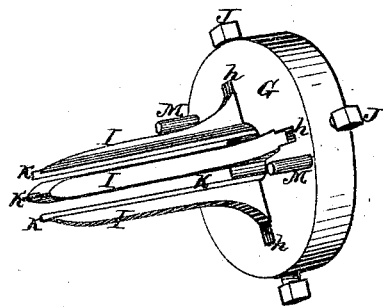


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE PICKERING, OF JANESVILLE, WISCONSIN.

IMPROVEMENT IN MACHINES FOR TURNING WOOD.

Specification forming part of Letters Patent No. 120,532, dated October 31, 1871.

To all whom it may concern:

Be it known that I, GEORGE PICKERING, of Janesville, in the county of Rock and State of Wisconsin, have invented an Improvement in Wood-Turning Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to accompanying drawing forming part of this specification, in which—

Figure 1 is a longitudinal section of the mandrels and cutter-heads of a wood-turning machine, showing my improvements. Figs. 2 and 3 are end elevations of the cutter-heads; and Fig. 4 is a perspective view of the eccentric chuck.

Similar letters of reference in the accompanying drawing denote the same parts.

My invention has for its object to improve the construction of wood-turning machines, whereby they are better adapted to the performance of their work and rendered more efficient in their operation. To this end the invention consists: First, in the combination of an eccentric chuck with the hollow revolving mandrel, for the purpose of holding the article to be operated upon from twisting or turning with the cutter-head. It also consists in the combination of knives with the sliding blocks of the chuck, which, when the blocks are adjusted, are forced into the stick to be cut to prevent it from rotating within the sliding blocks.

In the accompanying drawing, A is a rectangular frame, to be applied to the bed or ways of a turning-lathe or machine, and B are hollow journals supported by uprights C upon opposite sides of the frame. D are the hollow mandrels, having their bearings within the journals B. They are so constructed that their outer faces form cutter-heads for the cutters E, and their peripheries form band-wheels by which the cutters and mandrels are rotated. The mandrels are lubricated through the journals or their supports in any suitable manner. G is an eccentric chuck, provided with a central opening, from which the slots *h* radiate to receive the sliding blocks I. These blocks are wedge-shaped and extend from one side of the chuck to enter the hollow man-

drels D, tapering from the chuck to the central openings in the cutter-head, and having their approximate edges parallel to each other. J are set-screws, which pass through the chuck, and bear upon the widened ends of the blocks within the slots *h*. By means of these screws the sliding blocks are adjusted to and from the center of the chuck to increase or diminish the space between them. K are knives or strips of metal let into the inner edges of the blocks longitudinally of the same, or secured thereto in any convenient manner. The chucks and sliding blocks are held in the proper position with respect to the mandrel and cutters by any suitable arrangement of devices, the essential requisites being that the chuck shall not turn within the mandrel, and that the points of the sliding blocks shall bear against the beveled shoulders L, around the inner edges of the opening in the cutter-head.

In this example of my invention I have shown the chuck held in position by means of pins M projecting from its face to enter openings formed in one of the uprights C upon opposite sides of the hollow mandrel.

The operation is as follows: The stick to be turned is first inserted between the sliding blocks, passing through the chuck. The blocks are then adjusted to force the knives into the stick, such knives being held parallel to the axis of the stick by the set-screws and the shoulders L upon the cutter-head. The cutter-head is now set in motion and the stick forced longitudinally through the opening therein to receive the action of the cutters, and is held securely by the knives against the possibility of turning or twisting.

It will be readily understood that while the sharp edges of the knives prevent the stick from turning they do not prevent its passage longitudinally between them.

In Fig. 1 of the drawing I have shown two cutter-heads; but I design to apply the eccentric chuck to only one of them. Both, however, may be used with the chuck, the right-hand one as a roughening and the left as a finishing-

cutter, the chuck holding the stick firmly for both.

Having thus described my invention, what I claim as new therein is—

1. The adjustable chuck, in combination with the hollow revolving mandrel and cutter-head, substantially as described, for the purposes specified.

2. In combination with the sliding blocks I, the knives K, substantially as described, for the purposes specified.

3. The adjustable blocks I, adapted to hold the knives K parallel to the axis of the stick to be turned by means of the set-screws J and the shoulder L around the inner edge of the opening in the cutter-head, substantially as herein shown and described.

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Witnesses:

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