O. M. BRAILEY.

Hollow-Auger.

No. 226,968. Patented April 27, 1880.

Fig. 1.

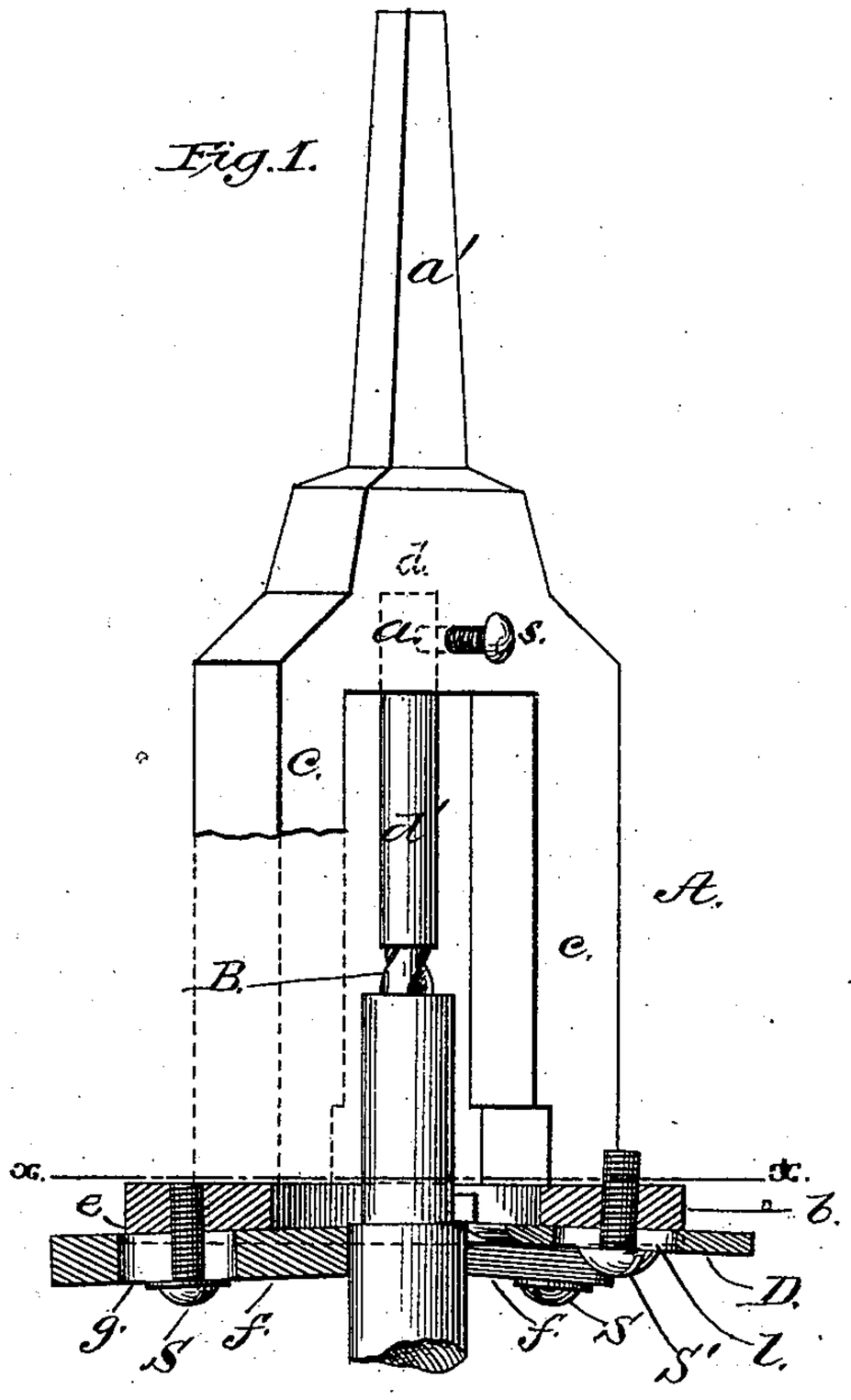
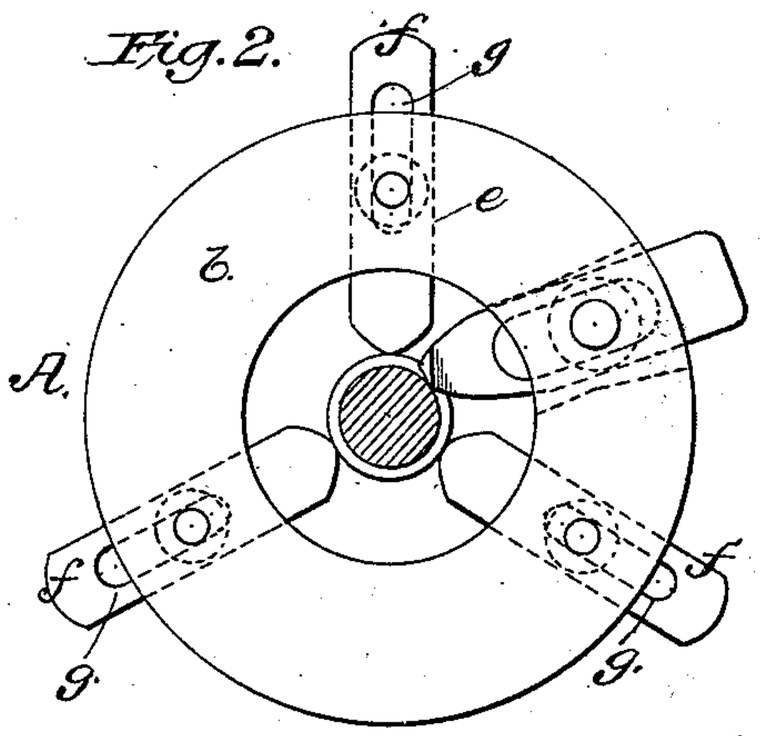


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

ORVILLE M. BRAILEY, OF AMHERST, MASSACHUSETTS.

HOLLOW AUGER.

SPECIFICATION forming part of Letters Patent No. 226,968, dated April 27, 1880.

Application filed January 31, 1880.

To all whom it may concern:

Be it known that I, ORVILLE M. BRAILEY, of Amherst, in the county of Hampshire and State of Massachusetts, have invented a new and valuable Improvement in Hollow Augers; 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 perspective view of my invention, partly in section, and Fig. 2 is a view of the head.

This invention has relation to improvements in machines for boring and forming the tenons on the end of fishing-rods, ram-rods, and the like; and the nature of the invention consists in the arrangement and novel construction of the various devices used, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates the body of my improved boring and tenoning machine, consisting of a fork, *a*, and a squared tang, *a'*, and presenting the appearance of a two-pronged fork. The tines *c* of this fork are parallel, and carry on their ends, at right angles to their plane, a strong annular head, *b*. In the crotch of this fork, in line with the center of the annular head *b*, is formed a socket, *d*, for the reception of the shank *d'* of a boring bit or tool, B, the longitudinal axis of which is also in line with the center of the annular head aforesaid. The tool is adjustably and removably secured in the socket by means of a screw, *s*, passing through the side of the fork and bearing against the shank of the tool.

In the face of the annular head are formed radial grooves *e*, usually three in number, in which are seated the centering-clutches *f*, which clutches are longitudinally slotted, as shown at *g*, and are each endwise movable in radial lines upon an adjusting-screw, S, extending through the slot *g* into the head, and serving, when forcibly set up, to hold the said clutches stationary. By loosening these screws the clutches may be adjusted to or from the center, according to the size of the rod to be bored and tenoned.

The clutches at their inner ends are round-pointed and bear upon the rod without injury thereto, and hold it firmly in position against axial rotation or wabbling, but not so as to prevent its being fed endwise to the borer and cutter D. This cutter is seated in a groove, *i*, in the outer face of the head, which groove widens slightly from the middle of its length to either end, and permits the cutter to be more or less inclined, according to the cut to be made. It is provided with a longitudinal slot, *l*, and adjustably secured to the head by means of a clamp-screw, S'.

In forming cylindrical tenons the cutter is provided with two cutting-edges at right angles to each other, one making a smooth square shoulder and the other shaving the shaft of the tenon.

This device, being adjustable both as to its clutches and cutter, can form any size tenon upon any size of rod, and the boring-tool being removable, the tenons may be hollowed out to suit.

The operations of tenoning and boring are performed simultaneously, thus saving both time and labor.

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

The boring and tenoning machine consisting of the fork *a*, having a boring-tool socket, *d*, in its crotch, the annular head *b* at right angles to said fork, the adjustable centering-clutches *f*, and the adjustable bit D on said head, the axis of the tool-socket and the center of the head being in line with each other, substantially as specified.

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

ORVILLE MANLY BRAILEY.

Witnesses:
E. A. THOMAS,
GEORGE L. HENRY.