

O. A. ESSIG.
Hollow Augers.

No. 138,623.

Patented May 6, 1873.

Fig 5

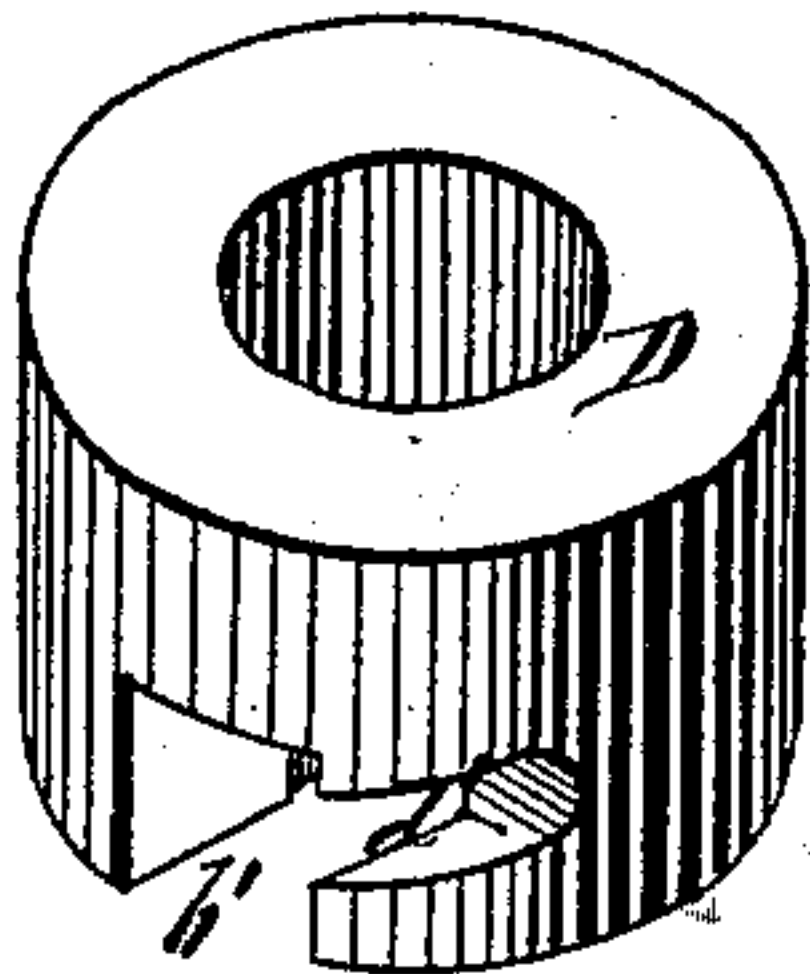


Fig 6

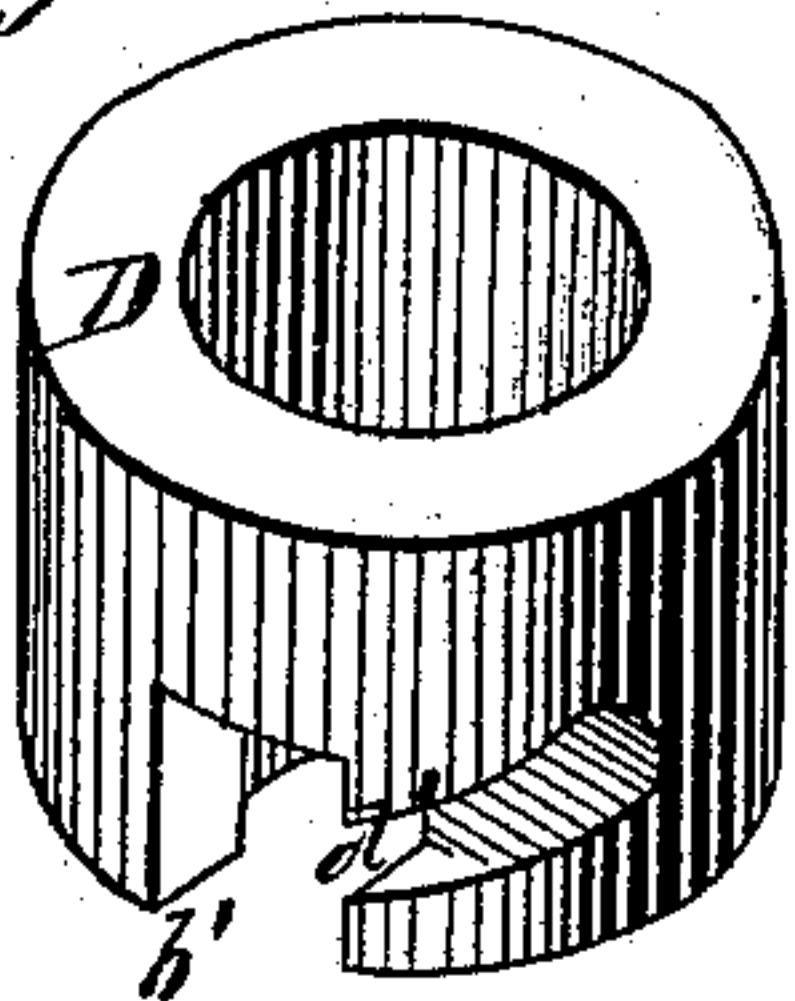


Fig 7

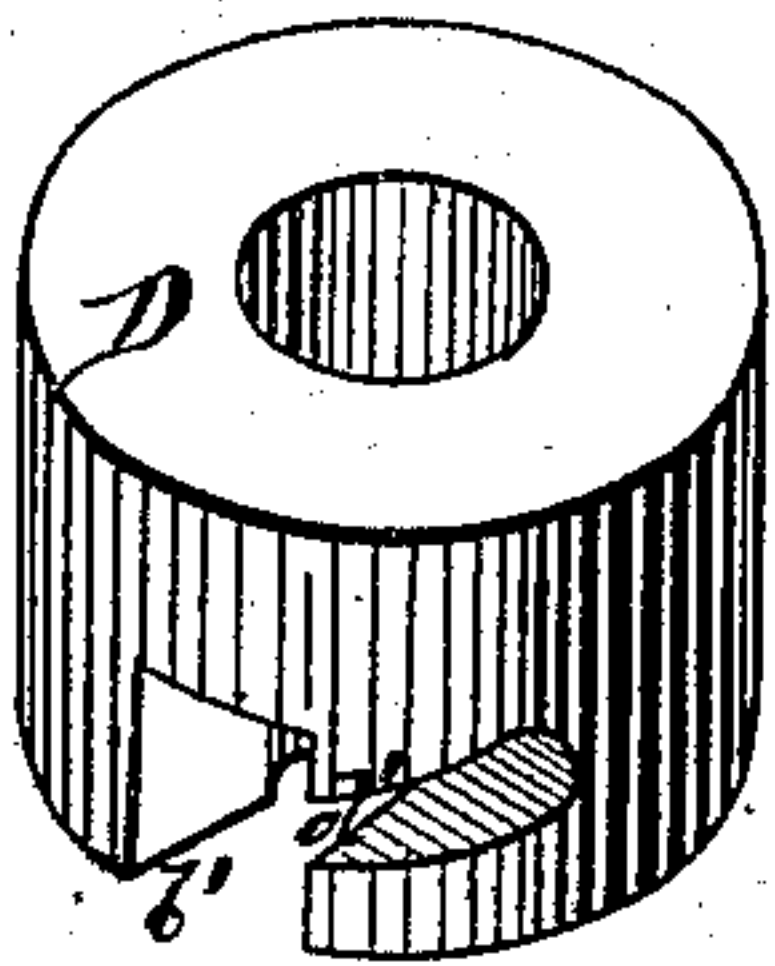


Fig 8

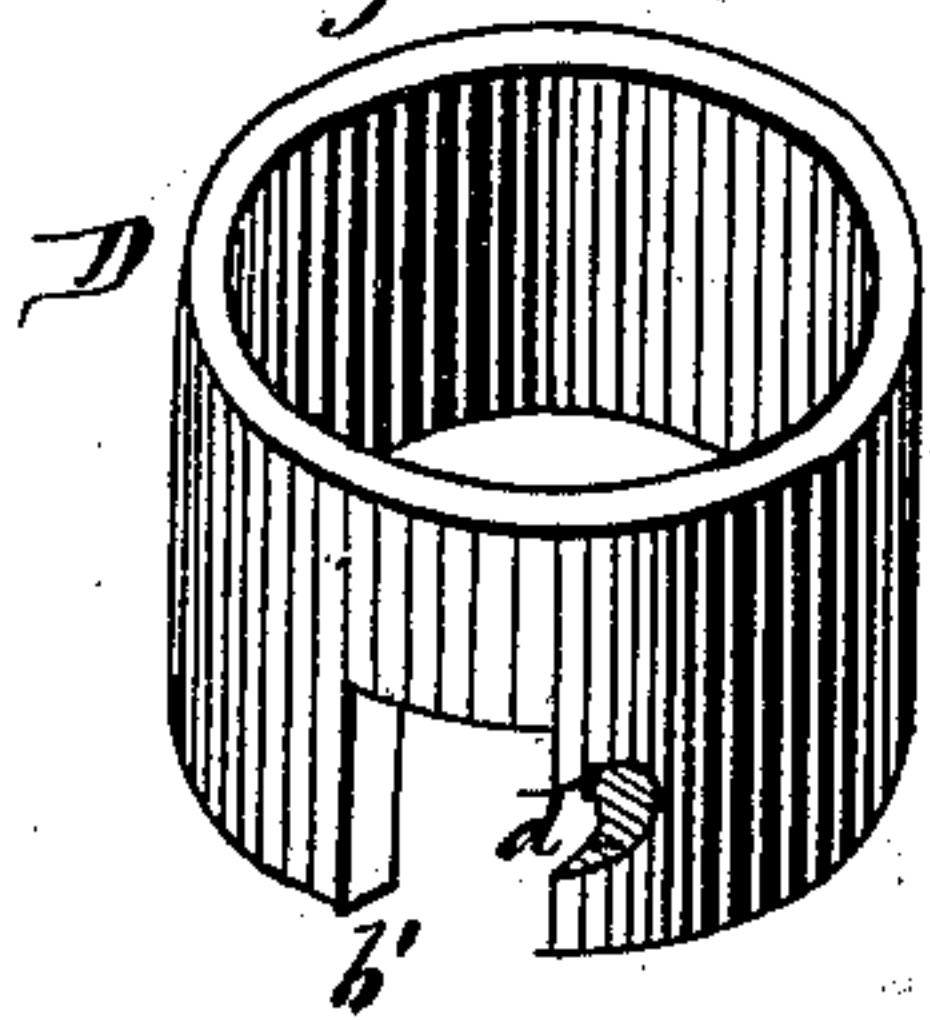


Fig 1

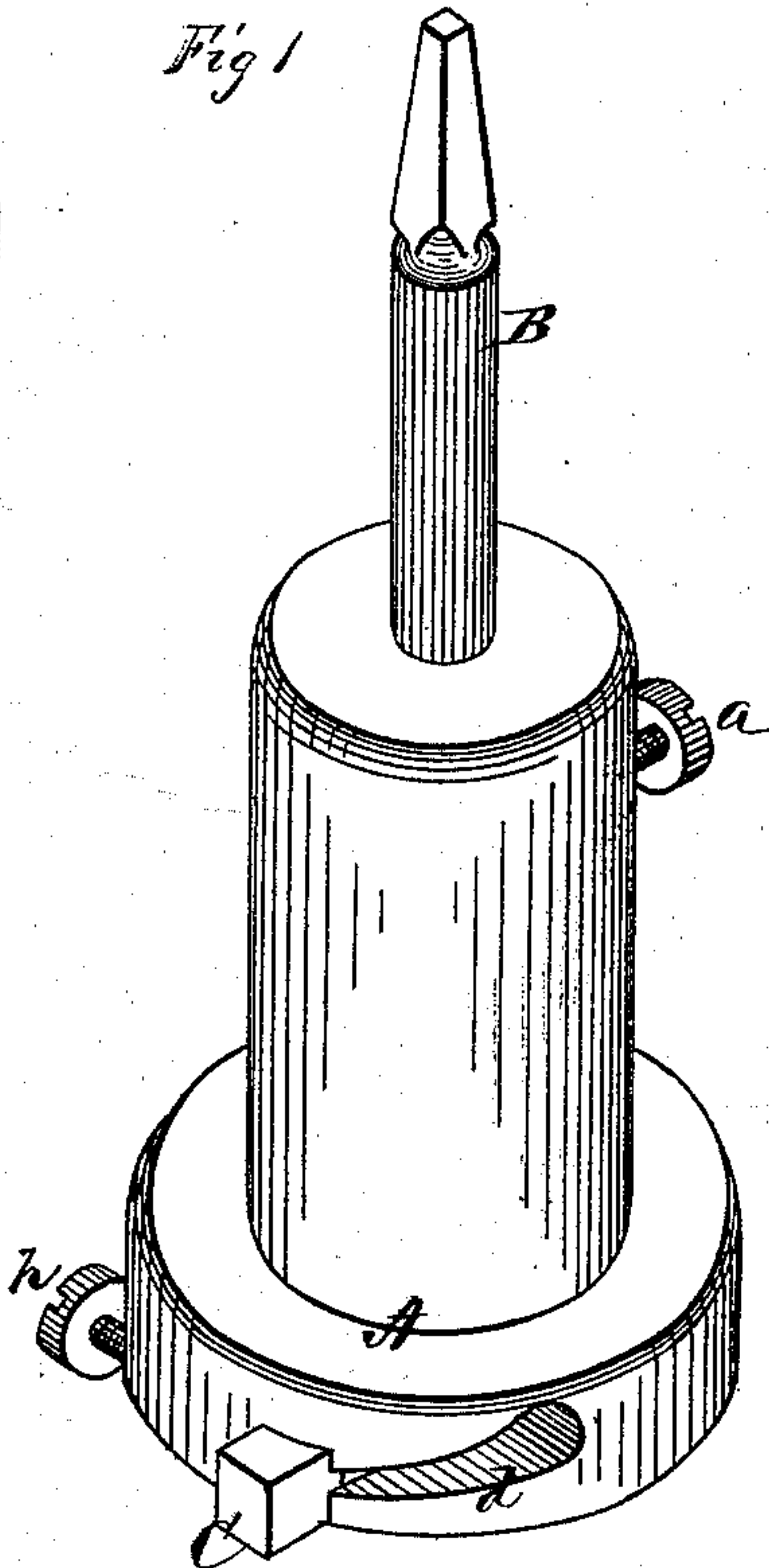


Fig 2

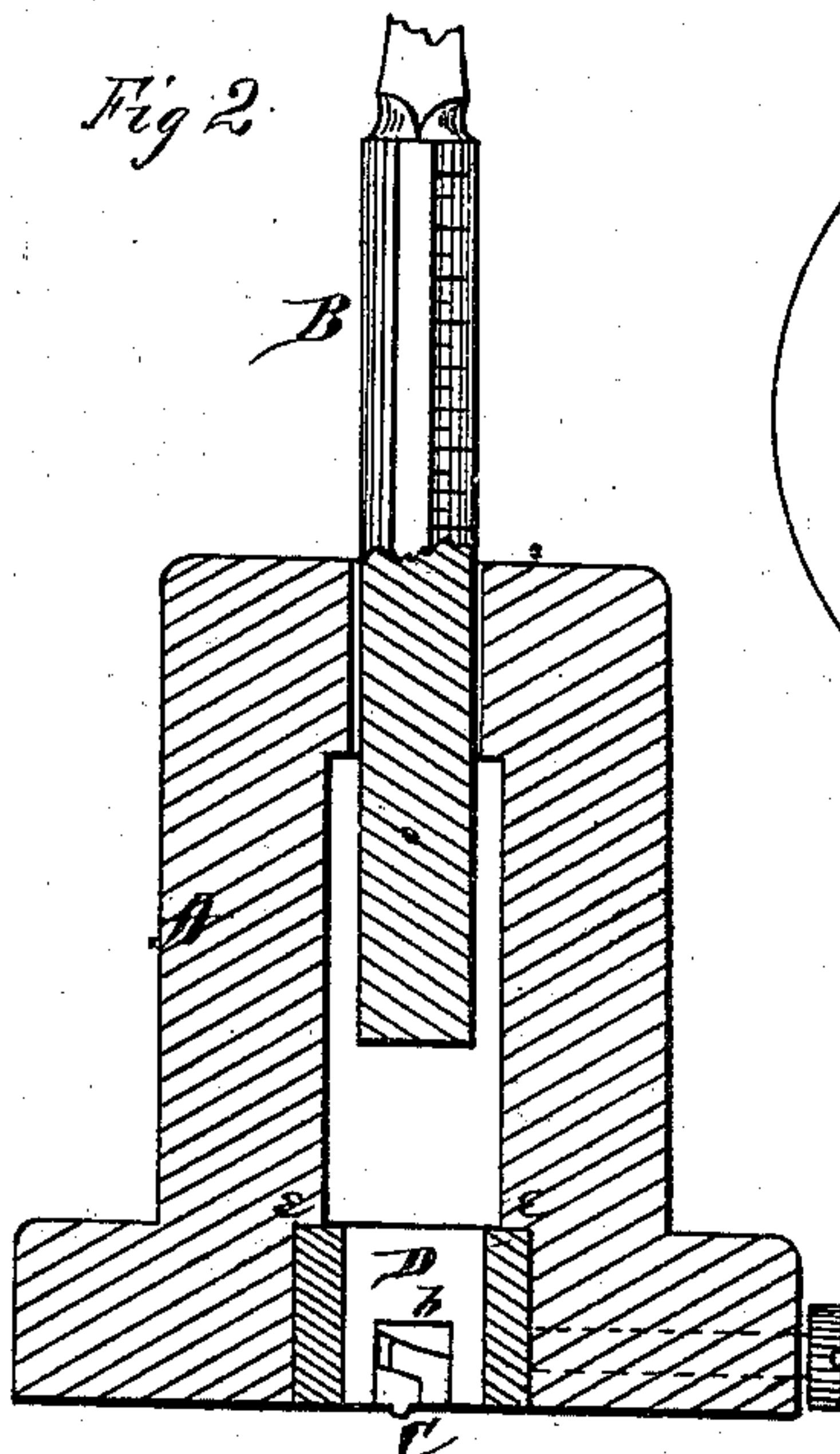


Fig 4

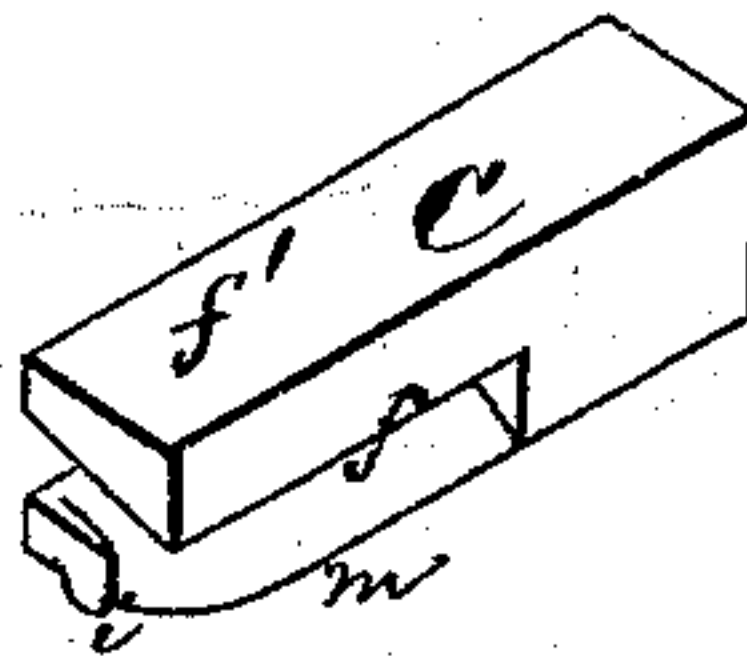
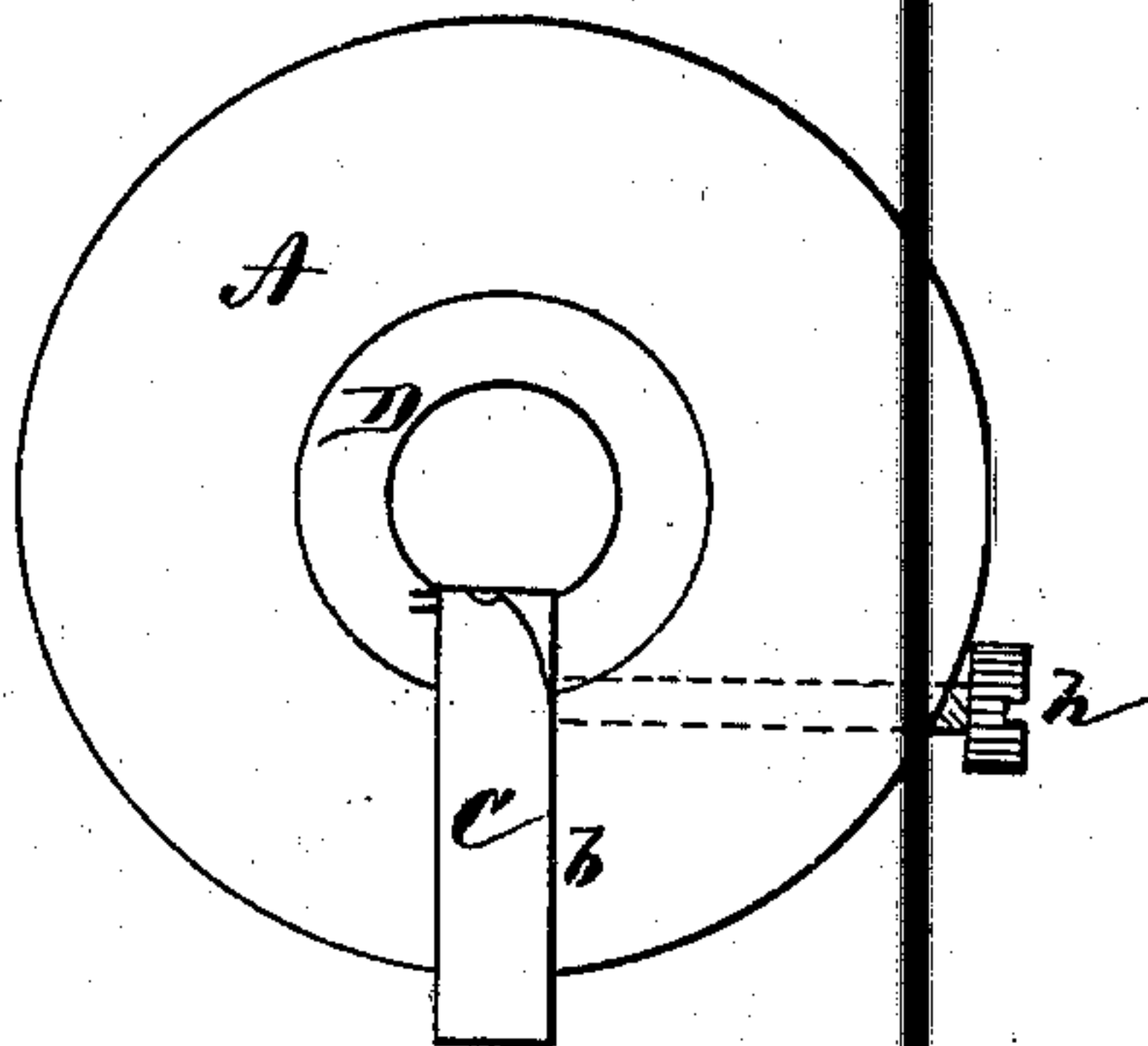


Fig 3



Witness:

Frank L. Ourand
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Inventor.

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per
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UNITED STATES PATENT OFFICE.

OZIA ALVIN ESSIG, OF CANTON, OHIO.

IMPROVEMENT IN HOLLOW AUGERS.

Specification forming part of Letters Patent No. **138,623**, dated May 6, 1873; application filed February 19, 1873.

To all whom it may concern:

Be it known that I, OZIA A. ESSIG, of Canton, in the county of Stark and in the State of Ohio, have invented certain new and useful Improvements in Hollow Augers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a tool for cutting round tenons of any desired length and diameter, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view; Fig. 2, a longitudinal section; and Fig. 3, a bottom view of the tool. Fig. 4 is a perspective view of the cutting-knife; and Figs. 5 to 8 represent various washers used to cut tenons of different diameter.

A represents the head of my auger or tool, which is made hollow, and provided in its inner end with a stem, B, secured by means of a set-screw, *a*. The stem B is graduated, as shown in Fig. 2, and by loosening the set-screw *a*, and moving the stem out or in, the tool may be set to cut tenons of any desired length. In the face of the head A is cut a square groove, *b*, extending radially from the inner to the outer circumference of the head, and from one side of this groove extends a

curved slot, *d*, as shown in Fig. 1. In the groove *b* of the head A is inserted the cutting tool or bit, C, the inner end of which passes through a similar groove, *b'*, made in the face of a washer, D, inserted in the head A and resting against a shoulder, *e*, in the same. The bit is then secured by a set-screw, *h*, which also holds the washer in place. The bit C is constructed, as shown in Fig. 4, with a slot, *f*, an upper bar, *f'*, and the cutting-edge *m* being below said slot. The outer end of the cutting-edge is rounded, and at the end is a lip, *i*, extending both above and below the cutting-edge to cut the surface of the tenon smooth. The washer D is, in addition to the groove *b'*, provided with a curved slot, *d'*, corresponding with the slot *d* in the head, and through said slots the shavings pass out. Washers with the interior circumference of different diameters are to be provided, so as to cut one-half, five-eighths, three-fourths, seven-eighths, and one-inch tenons, or tenons of any diameter desired.

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

The combination of the bit C, formed with a cutter, *m*, and bar, *f'*, and the washer D in a hollow auger-head, A, all as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of January, 1873.

OZIA ALVIN ESSIG.

Witnesses:

A. PONTIUS,
M. ESSIG.