

JAMES SWAN.

Improvement in Hollow Augers.

119,096.

Patented Sep. 19, 1871.

fig. 1

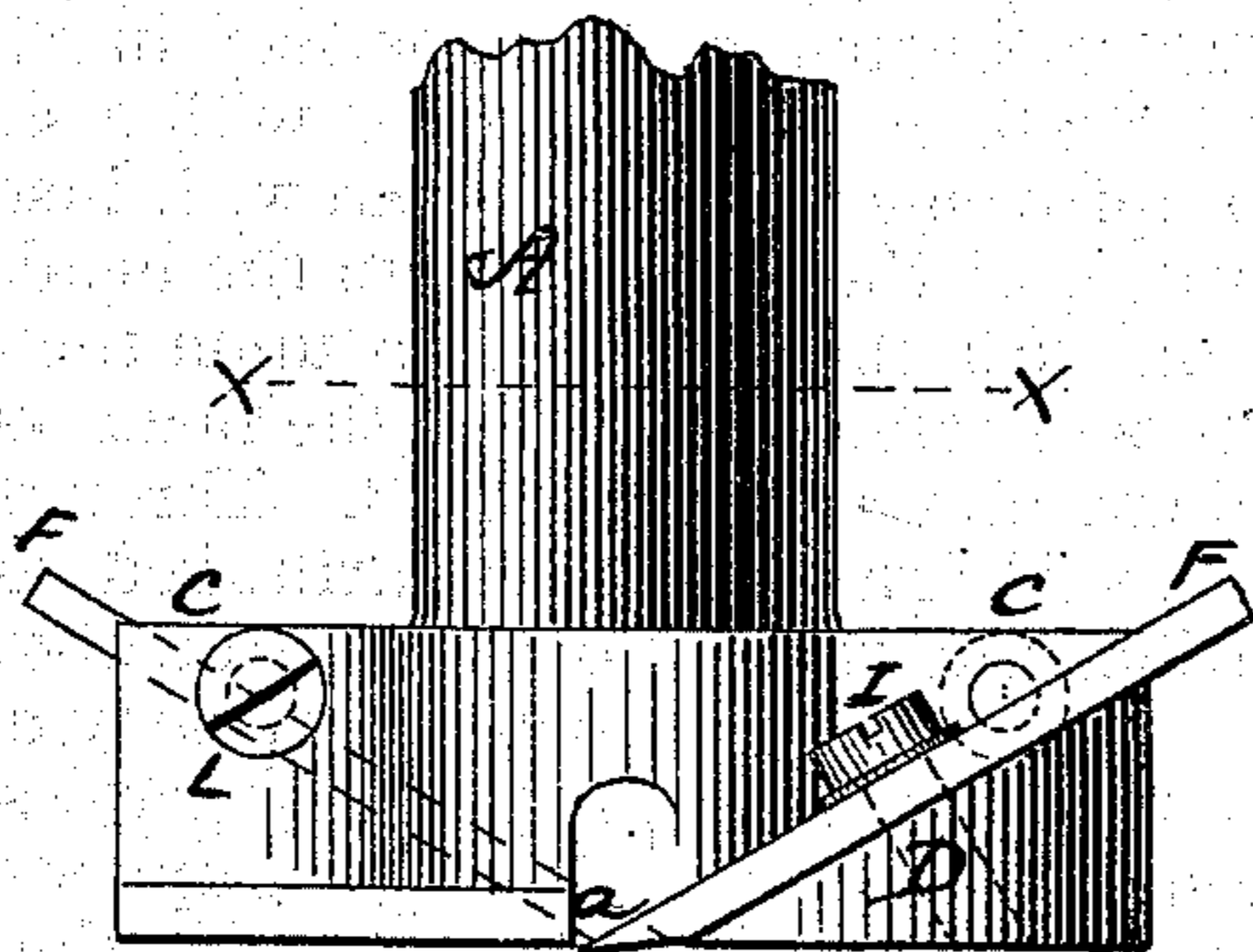


fig. 2

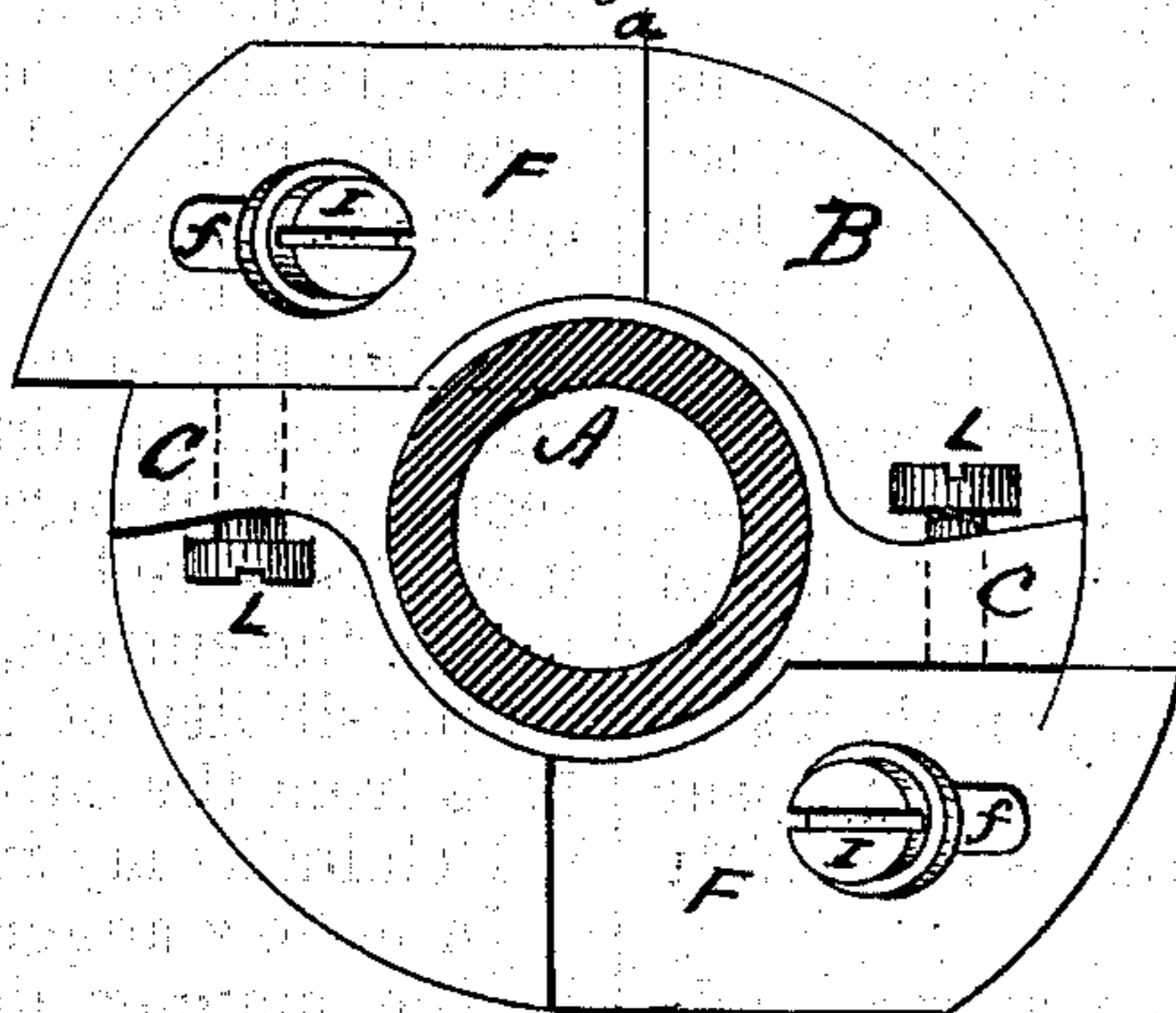
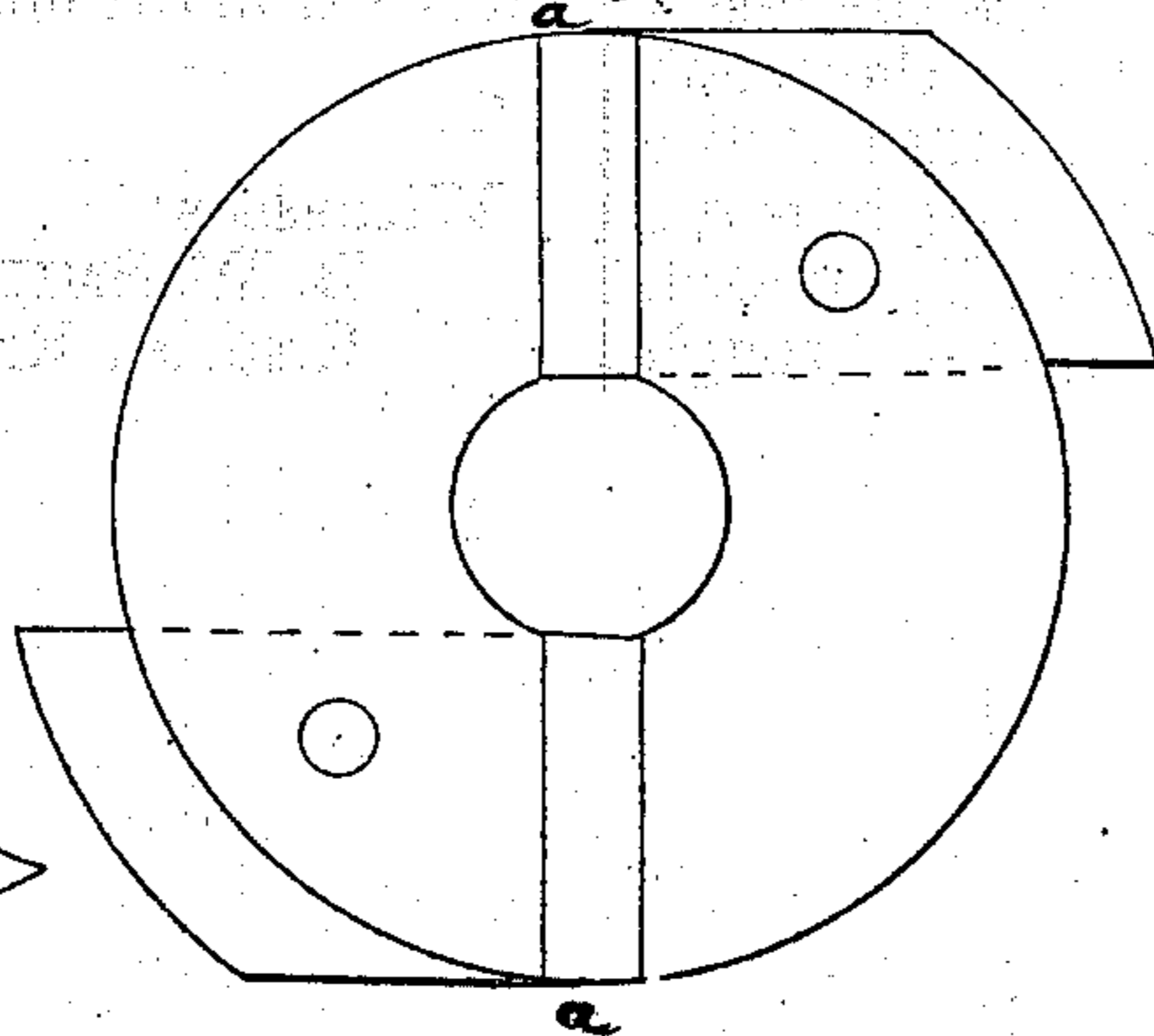


fig. 3



Witnesses.

J. W. Shumway
A. J. Tibbitts

James Swan
Inventor

By his Atty.

Thos. E. Earle

UNITED STATES PATENT OFFICE.

JAMES SWAN, OF SEYMOUR, CONNECTICUT.

IMPROVEMENT IN HOLLOW AUGERS.

Specification forming part of Letters Patent No. 119,096, dated September 19, 1871.

To all whom it may concern:

Be it known that I, JAMES SWAN, of Seymour, in the county of New Haven and State of Connecticut, have invented a new Improvement in Hollow Augers; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents, in—

Figure 1, a side view; Fig. 2, a top view; and in Fig. 3, a view from the under side.

This invention relates to an improvement in the article commonly called hollow augers, such as are used for cutting round tenons.

Heretofore a great difficulty has existed in the use of these tools from the fact that the cutter is not easily readjusted to the same position when once removed for sharpening or for other purposes, it being essential that this should be done in order that the tenons cut be of the same diameter. In my invention these difficulties are overcome; and it consists in the construction of the cutter-head so that the cutters may be secured by a screw bearing directly upon their surface, combined with a transverse screw to bear against the inner edge of the cutter, as more fully hereafter described.

A is the shaft or barrel of the auger, made hollow, as seen in Fig. 2, so that the tenon as fast as cut may pass into the cavity. B is the head, of a diameter equal to the diameter of the tenon to be produced and the combined width of the cutters, and this head is cut away so as to leave a projection, C, and an inclined seat, D, for each of the cutters, the seat being flat, and through

the head at *a* a throat is cut for each of the cutters, as seen in Fig. 1. F F are the cutters, constructed with a slot, *f*, and secured to the plate by a screw, I, inserted directly through the said slot into the head, and so that the head will bear directly upon the cutters or upon the washer between the head and cutters, as denoted in Figs. 1 and 2. Through the projections C set-screws L are arranged so as to bear against the edge of the cutter above the screws I. The cutters being set nearly up to their proper position, and secured by screws I, the screws L are turned in, forcing the upper end of the cutters outward, and, consequently, the lower edge inward until the cutters are brought hard against the bearing surface of the head at the edge, which completes the adjustment of the cutters. When the cutters are removed for sharpening, which is frequently necessary, the set-screw remains unchanged, and the bearing at the lower edge remaining the same it is only necessary to set the cutter hard up against the set-screws, and there secure it to insure the exact position from which it was removed. The head being cut away from before the cutters, as in Figs. 1 and 2, prevents all possibility of choking, allowing the chips to pass from the cutters with the greatest freedom.

I claim as my invention—

In hollow augers, the arrangement of cutters in the manner described, secured by screws I upon their face, and provided with the adjusting-screws L, in the manner substantially as set forth.

JAMES SWAN.

Witnesses:

B. W. SMITH,
GEO. A. ROGERS.

(122.)