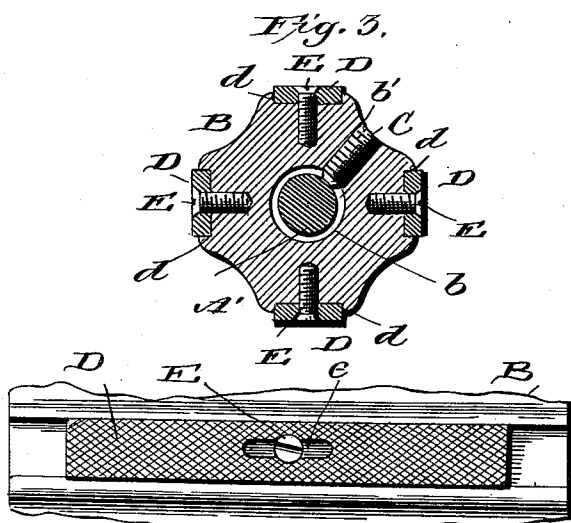
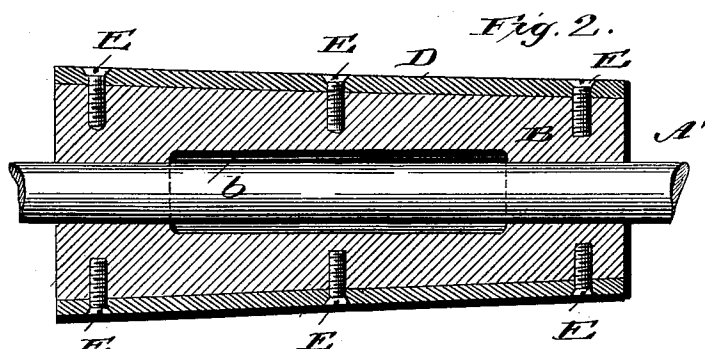
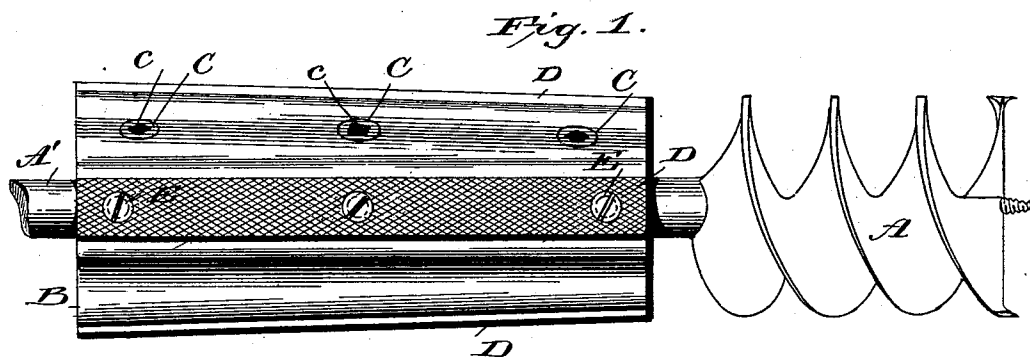


(No Model.)

L. S. CRITTENDEN.
WOODWORKING TOOL.

No. 508,412.

Patented Nov. 14, 1893.



Witnesses:
L. C. Hills.
E. A. Bond

B Fig. 4.

Inventor
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UNITED STATES PATENT OFFICE.

LOUIS S. CRITTENDEN, OF HORNELLSVILLE, NEW YORK, ASSIGNOR OF ONE-HALF TO CHARLES W. STEVENS, OF SAME PLACE.

WOODWORKING-TOOL.

SPECIFICATION forming part of Letters Patent No. 508,412, dated November 14, 1893.

Application filed March 16, 1893. Serial No. 466,829. (No model.)

To all whom it may concern:

Be it known that I, LOUIS S. CRITTENDEN, a citizen of the United States, residing at Hornellsville, in the county of Steuben, State of New York, have invented certain new and useful Improvements in Woodworking-Tools, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in wood working tools of that class which are designed for boring, and it has for its objects among others to provide a simple and cheap tool embodying an auger and a reamer whereby the hole may be bored and then by a continued use of the same tool the said hole may be reamed out as may be desired. I mount upon the shank of the auger a tapered block or casting which may be adjustable thereon and which is provided with a plurality of rasps which are preferably adjustably supported thereon. The block or casting may assume any desired shape in cross section and is formed with a cavity or chamber through which the shank of the auger passes, this being provided so as to avoid the necessity of shaping more than the bearing at each end thereof for the shank. The rasps may extend partially or wholly the length of the block or casting and may be held thereto in any suitable manner. The block or casting with its rasps may be removed from the shank when desired.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification and in which—

Figure 1 is a side view of a portion of my improved combined auger and reamer. Fig. 2 is a longitudinal section through the reamer portion with the shank in place therein. Fig. 3 is a cross section through the reamer portion. Fig. 4 is a modification.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings

by letter, A designates an auger which may be of any well known or approved form of construction, and A' is its shank.

B is a block or casting tapered with its smaller end of substantially the same diameter as that of the auger, and this block or casting is designed to be adjustably and removably secured to the shank of the auger with the smaller end thereof in proximity to the lower end of the shank near the auger. It is preferably formed with a central chamber or cavity *b* extending lengthwise thereof, as seen in Figs. 2 and 3, and at opposite ends of this chamber or cavity it is bored for the passage of the shank of the auger. The formation of this chamber lightens the casting, avoids the necessity of truing more than the end bearings for the shank, and the chamber may be used as a lubricant receptacle in which may be placed a little lubricant to prevent rusting or sticking of the casting upon the shank. This block or casting is secured to the shank preferably by means of screws C which are designed to be screwed through the casting as seen in Fig. 3 and bear upon the shank, the screws being formed with polygonal sockets *c* for the reception of a suitable implement for turning the same, the screw holes being formed in a longitudinally hollowed portion *b'* of the casting as seen in Fig. 3 so as to permit of the heads of the screws being sunk below the periphery of the casting.

Around the periphery of the block or casting I arrange a plurality of longitudinally disposed rasps D which are arranged in longitudinal grooves *d* in the casting as seen best in Fig. 3, the said rasps being held therein as by the screws E taking into holes in the casting as seen in Figs. 2 and 3. These rasps may extend the entire length of the casting as shown in Figs. 1 and 2 or they may be of less length than the casting as indicated in Fig. 4, and when thus of less length they may be adjustable lengthwise on the casting by forming the rasp with a longitudinal slot as shown at *e* in said Fig. 4, the screw passing through said slot as indicated in said view.

In operation the hole is bored by the auger and then the continued revolution thereof

brings the reamer into action. The reamer may be moved along on the shank of the auger any required distance to permit of the boring of the hole of the required depth. Any suitable form of rasp may be employed.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What I claim as new is—

1. The combination with an auger, of a reamer adjustably mounted on the shank thereof and provided with independent rasps, extending lengthwise thereof, as set forth.

2. The combination with an auger, of a reamer adjustably and removably mounted on the shank thereof and provided with adjustable rasps, as set forth.

3. The combination with an auger and its shank, of a tapered casting adjustably mount-

ed on said shank and having an interior chamber and exterior rasps, as set forth.

4. The combination with the tapered casting having interior longitudinal chamber and shaft bearings at opposite ends thereof, of rasps seated detachably in longitudinal channels on the casting, substantially as specified.

5. The tapered casting having longitudinal channels and a longitudinal bore enlarged near its center, and a longitudinal exterior groove, combined with rasps seated in the channels, and securing means located in the said groove, as and for the purpose specified.

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

LOUIS S. CRITTENDEN.

Witnesses:

S. J. BAILY,

CYRON A. BAILY.