

A. Wheeler,

Auger.

No. 101796.

Patented Apr. 12. 1870.

Fig. 1

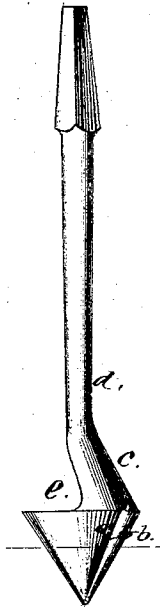
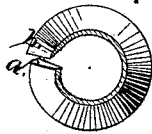


Fig. 2



Witnesses:
John Decker.
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ASA WHEELER, OF BRATTLEBOROUGH, VERMONT, ASSIGNOR TO GEORGE B. WHEELER, OF SAME PLACE.

Letters Patent No. 101,796, dated April 12, 1870.

IMPROVED COUNTERSINK.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, ASA WHEELER, of Brattleborough, in the county of Windham and State of Vermont, have invented a new and useful Improvement in Countersinks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in countersinks, and in the mode of making them.

Figure 1 represents an elevation of my improved countersink.

Figure 2 represents a section on the line *x x* of fig. 1.

Similar letters of reference indicate corresponding parts.

The bit is formed in the shape of a hollow eccentric cone, with an angular slot at the line from the point to the base of the cone, where the sides of the parts with the greater and lesser radii meet, represented by *a*, forming the projecting cutting-lip *b*.

The base of the bit is united to the handle *d* by a section representing about half or little more than half a cone, *c*, having its base connected to the inverted base of the bit.

This section may be divided, or have a part removed at its center, if preferred. The slot forming the lip is arranged opposite the opening *e*, formed by the removal of the part of the cone *c*, whereby the chips

taken in through the slot in cutting are more readily crowded out or discharged than when the lips are arranged opposite the parts *c*, and clogging prevented.

Similar tools have been heretofore made by forging the bits out into their triangular shape from a rod of metal, and bending them up into the required form, and then suitably finishing them. This method is slow and expensive, and I propose to make them by casting, malleablizing, and steelifying them, the latter being accomplished by the process of cementation or otherwise, as preferred.

When made by forging, as in the common way, the bits are connected to the shanks by a bent part thereof, which does not have sufficient stock to sustain the resistance of the cutting, and is very liable to bend and twist, whereas, when formed by casting, any required amount of stock may be placed at this point to make it perfectly rigid, especially when made broad and divided, so that the two parts assume the form of braces.

Having thus described my invention,

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

The countersink *a b c d e* formed of metal, cast, malleablized and steelified, as and for the purpose specified.

ASA WHEELER.

Witnesses:

WILLIAM S. NEWTON,
JERRY HAGER.