L. THUSTON.
Wood-Bits.

No. 228,421. Patented June 1, 1880.

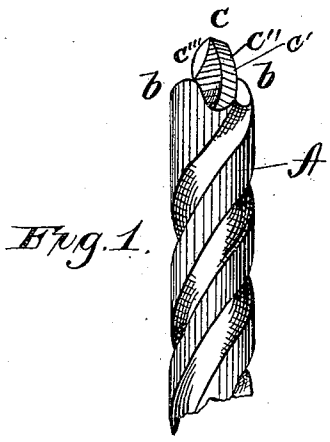


Fig. 1.

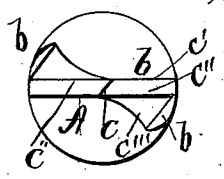


Fig. 4.

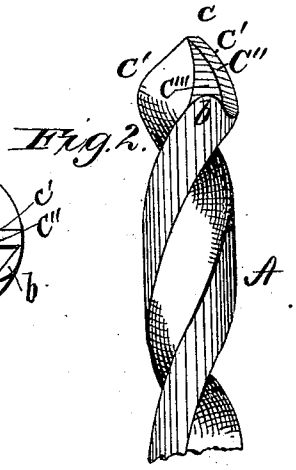


Fig. 2.

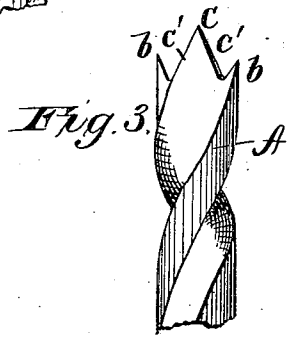


Fig. 3.

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UNITED STATES PATENT OFFICE.

LYCURGUS THUSTON, OF FINDLAY, OHIO, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO WILLIAM L. MILLER, OF SAME PLACE.

WOOD-BIT.

SPECIFICATION forming part of Letters Patent No. 228,421, dated June 1, 1880.

Application filed February 11, 1880.

To all whom it may concern:

Be it known that I, LYCURGUS THUSTON, a citizen of the United States, residing at Findlay, in the county of Hancock and State of Ohio, have invented certain new and useful Improvements in Wood Bits or Augers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a view, in perspective, enlarged, of the end of the bit. Fig. 2 is a side elevation. Fig. 3 is a detail, enlarged, to show the bevel on one of the cutting-edges. Fig. 4 is a top plan of the head or end of the bit.

This invention relates to improvements in bits or augers for cutting or boring wood; and the novelty consists in the peculiar way or manner in which the cutting-edges of the tool are made, all as will now be more fully set out and explained.

In the accompanying drawings, A denotes any ordinary bit or auger, and *b* the cutting lips or edges on the sides. At the end the center point, *c*, has on its two sloping sides a cutting-edge, *c'*; but this is made by means of the bevel *c''*, which is dressed down from the very tip of the point *c* to its ends, and in this way the usual slope by which the cutting-edge is made is so changed as to present the double bevel or incline *c''* and *c'''*. It will thus be found the edge *c'*, which is formed by the intersection of the inner twist and the bevel *c''*, will be very sharp and permanent. It will be desirable to make this point part *c* longer than the lips on the outer corner pieces.

The entire line of the face of the bit, including the lip *b* on the one side, and thence in the downward curve and in the rise to form *c'*, then across the point *c*, and so in like manner curving down the other side, up to and over lip *b* on the opposite side, is a continuous cutting-edge.

It will be noticed that the peculiar construction described gives a cutting-edge on the entire end of the V-shaped point *c*; and the present bit or auger can be easily made of a drill for iron or metal by merely dressing downward on each side, so as to form the side cutting parts or lips, *b*, and then dressing the bevel on the sides of the center point, as has been above described.

By my invention a tool is produced having a V-shaped center, so cut down as to form lips on the outer circumference of the barrel of the bit, the whole being so dressed as to constantly present new cutting-lips and center as long as any of the twisted part of the barrel of the bit is left. The V-shaped center, with said cutting-lips, is so arranged and combined as to compensate for the wear on this outer circumference of the corners of the cutters heretofore used, having only V-shaped center without the lips. This arrangement gives an increased wearing and enduring cutting surface and edge at the points of the greatest friction and wear, and practically prevents or greatly reduces the friction, wearing, heating, and choking of the tool, caused by and following the rapid wearing away or rounding of the edges and the scraping off the surface back of said edges in the ordinary bit.

This peculiar construction allows the use of a file in dressing the bit for use, and greatly decreases the labor and skill required to dress these bits.

The tool so formed can be run at a much higher speed than the old forms of bits, and will perform manifold more work in the same time than other forms of like tools or bits.

I am aware that it is not new to make bits with a V-point or with side cutting-lips; also, that a beveled edge has been made on bits and on other cutting-tools; but I do not know that a cutting-edge like the present has been heretofore made on a bit.

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

1. A wood bit or auger having its V-shaped point double beveled at *c''* and *c'''*, to produce,

by the intersection of the bevel c'' with the internal twist, a cutting-edge, c', substantially as described.

2. An auger provided with a spiral groove around its shank, the latter terminating in a V-shaped point, the sides of which are double beveled and have each a cutting-edge produced by the intersection of one of the bevels and the spiral groove, in combination with two projecting cutting-lips, substantially as and for the purposes set forth.

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

LYCURGUS THUSTON.

Witnesses:
WILLIAM H. HAVEN,
CHARLES G. BOUND.