G. L. HOLT.

Bit for Boring Wood.

No. 164,999. Patented June 29, 1875.

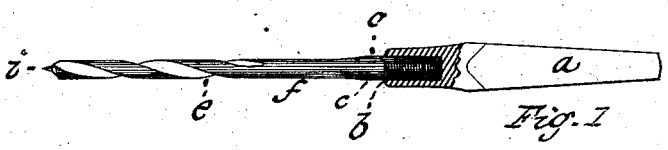

Fig. 1

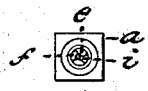

Fig. 2

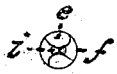

Fig. 3

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UNITED STATES PATENT OFFICE.

GARDNER L. HOLT, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN BITS FOR BORING WOOD.

Specification forming part of Letters Patent No. **164,999**, dated June 29, 1875; application filed July 30, 1874.

To all whom it may concern:

Be it known that I, GARDNER L. HOLT, of Springfield, in the State of Massachusetts, have invented a new and useful Improvement in Bits for Boring Wood; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side and sectional view of my invention. Fig. 2 is an end view of the same, with the head attached; and Fig. 3 is an end view of the bit, enlarged, without the head, and showing the form of the point.

My invention relates to a twist or gimlet bit; and it consists of the combination of a rod provided with a sharp reamer-point at one end, and with sharp-edged grooves extending from the said point along a portion of the length of said rod, and which rod is enlarged at the other end, with a screw-thread made upon said enlarged part, with a threaded head or socket-piece, into which the said pointed grooved rod is screwed.

In the drawings, *f* represents a rod, having the spiral groove *e* extending from one end along a portion of its length. I prefer, in practice, to make two such grooves, one opposite the other; and one of the edges of each groove extends out a little farther from the axis of the rod than the other, and has a sharp cutting-edge, the object of which is that the bit may clear itself of the chips, cut faster, and run easier; and upon the extreme end of the rod is made the reamer-point *i*. This small reamer-point *i* is designed to hold the bit at any desired point on a smooth surface of wood just before commencing to bore into the wood, but is not designed to screw itself into the wood, as it is not provided with a screw for that purpose. If it were so provided it would draw the bit too fast into the wood, and thin pieces, in being bored, would be split. Its only object is, in first starting to bore a hole, to place the sharp point *i* at the desired point to be bored, and the bit will make the hole exactly at that point.

The other end of the rod is somewhat enlarged at *c*, with a screw-thread, *b*, made thereon, which turns into a threaded hole made in the head *a*, the latter being prismatic in form, to pass into and be held by the jaws of the bit-stock.

The object of making the bit larger at *c* is to render the bit less liable to be broken at any point inside the head. Otherwise, if broken, it would be difficult to remove the broken stub from the head; but if the main part of the bit is made smaller than the part *c*, which enters the head, it is more liable to be broken in its smallest part, and there will be sufficient length of the broken part left in the head to unscrew it easily.

As thus constructed, the grooved rods or parts *f* may be made and sold in the market, and the heads *a*, also, separate from the rods, so that a person using them may buy a set of bits, *f*, and also a set of heads, *a*, and when one bit *f* becomes broken the remaining broken part may be unscrewed from the head, and a new one inserted; and the bits may be replaced, after the first set is bought, much cheaper than if the head and bit were made solid or in one piece.

I am aware that diamond-pointed drills for dental purposes have heretofore been made and used, as shown in patent to J. P. Gillespie, of April 1, 1873; and I am also aware that various devices of bit-holders have also been made and used, as shown in patents to W. S. Patti, June 20, 1871, and to Charles Manson, of May 2, 1871, and I do not claim the same, nor any part thereof.

Having thus described my invention, what I claim as new is—

The combination of the rod *f*, provided with the sharp-edged grooves *e*, the sharp reamer-point *i*, and the enlarged threaded part *c*, and the threaded head or socket-piece *a*, all constructed and arranged as herein set forth.

GARDNER L. HOLT.

Witnesses:

T. C. CURTIS,

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