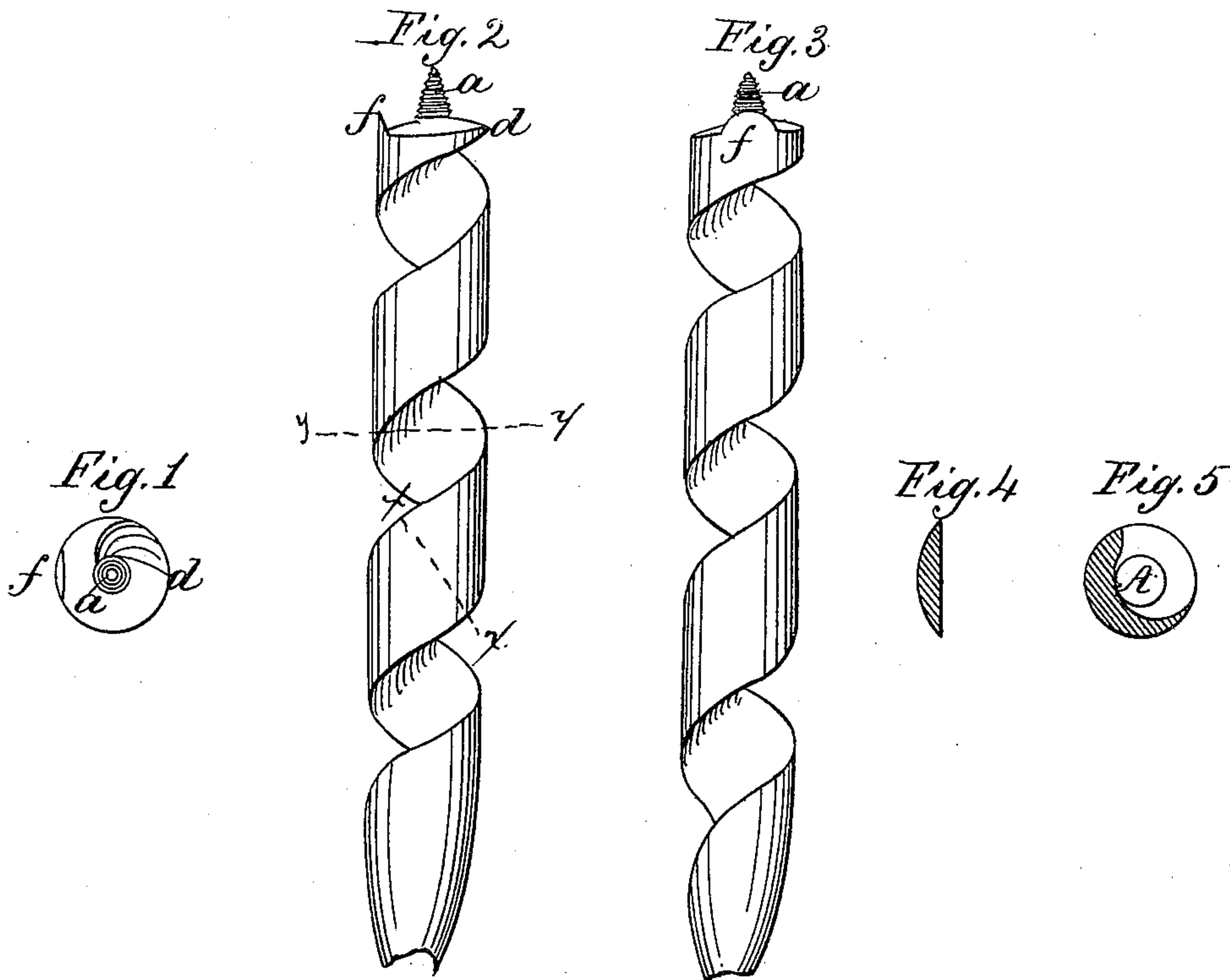


*H.C. Lewis,*

*Auger Bit.*

*No. 90,759.*

*Patented June 1, 1869.*



*Witnesses*

*John N. Shumway*  
*A. J. Tibbitts*

*Inventor*

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*By his Attorney*

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# United States Patent Office.

H. C. LEWIS, OF ESSEX, CONNECTICUT.

Letters Patent No. 90,759, dated June 1, 1869.

## IMPROVEMENT IN AUGER-BIT.

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, H. C. LEWIS, of Essex, in the county of Middlesex, and State of Connecticut, have invented a new Improvement in Auger-Bits; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent in—

Figure 1, an end view;

Figure 2, a side view;

Figure 3, a side view, turned one-fourth around;

Figure 4, a section on line *x x*; and in

Figure 5, a section on line *y y*.

This invention relates to an improvement in that class of boring-instruments known to the trade as "auger-bits."

Heretofore, this class of bits has been formed by fitting the spur in a separate piece, which often, by hard use, breaks out from the body of the bit, and thus ruins the instrument; and, further, these bits have been formed from a bar of metal, so thick that the chips are all forced outward, and compelled to travel upward in the groove formed by the twist, which not only creates great friction, but chokes the bit, so as to compel its frequent withdrawal to clear itself. By my invention these difficulties are entirely overcome; and

It consists—

First, in the peculiar manner of forming the spur upon the body of the bit; and

Second, in the formation of the twist, whereby a central opening is left entirely through the bit.

In order to the better understanding of my invention, as well as to enable others to construct the same, I will proceed to a description thereof, as illustrated in the accompanying drawings.

The bar from which the bit is to be formed is first

drawn flat upon the outside, and convex upon the inside, as seen in fig. 4, and so as to form a sharp edge both above and below; the thickness of this bar being only so much as, when twisted, will leave an opening, A, through the centre, as seen in fig. 5. This bar I form about twice the width of the usual bar, that is to say, about equal to the space in the twist. Thus, an opening is formed entirely through the centre of the bit.

At the lower end the bar is turned down, and upon its centre is formed a conical screw, *a*, and from the screw outward a cutter, *d*, is formed, from the cutter falling back upon a gradual incline to the opposite side, where the spur *f* is formed, and the incline continues beyond the spur until it dies out in the twist, as seen in figs. 1 and 3.

It is only necessary that the spur be little longer, or project a little below the cutting-edge; therefore, by inclining from the cutter to the spur, it requires but little more metal than is removed, in forming this inclination to make the spur.

Thus, I have formed a most perfect single-twist auger-bit; and having thus fully described my invention, I do not, broadly, claim placing the spur upon a single-twist bit, upon opposite sides to the cutter, as such position is common and well known; but, as before stated, when so arranged, the spur has been formed separate from and fitted into a seat, prepared at that point to receive it.

What I claim as new and useful, and desire to secure by Letters Patent, is—

A single-twist auger-bit, having the spur forged solidly thereon, and in the relative position to the cutter, shown and described, and in the manner and for the purpose specified.

H. C. LEWIS.

Witnesses:

HENRY L. PRATT,  
ALBERT PRATT.