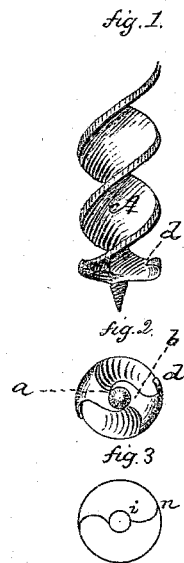


JAMES SWAN.  
Improvement in Augers.

No. 115,541.

Patented May 30, 1871.



Witnesses  
John W. Shumway  
A. J. Tibbitts

James Swan  
Inventor  
By his Attorney  
John E. Earle

## UNITED STATES PATENT OFFICE.

JAMES SWAN, OF SEYMOUR, CONNECTICUT.

## IMPROVEMENT IN AUGERS.

Specification forming part of Letters Patent No. 115,541, dated May 30, 1871.

*To all whom it may concern:*

Be it known that I, JAMES SWAN, of Seymour, in the county of New Haven and State of Connecticut, have invented a new Improvement in Auger-Bit; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents, in—

Figure 1, a side view; Fig. 2, an end view; and in Fig. 3, an end view of the Cooke bit of the same size.

This invention relates to an improvement in what is known as the Cooke bit, patented June 17, 1851. In that bit the cutting-edge, commencing at the screw, falls back, so that the most advanced cutting-point is at the extreme edge. The object of my invention is to cause the cut to commence at the center and act as a shave from that point to the extreme edge, whereby the "tearing" often experienced in the use of the Cooke bit is avoided; and it consists in starting the cut of the floor-lip at nearly the opposite side of the screw-point to that in which the floor-lip terminates, and making the edge of a spiral form around the point to the opposite side; then reversing the curve, carrying it forward up to the termination of the gouge-lip, as more fully hereafter described.

The twist A of the bit is formed in the usual

manner as for the Cooke bit. In the Cooke bit the floor-lip commences at the point *i*, on the same side and nearly in the same radial line as its termination *n*, whereby the cut is practically a square cut, the extreme being, if anything, a little in advance; whereas in my improvement I commence the floor-lip at the point *a*. From this point the cutter curves around to about the point *b*, or half way from the center to the edge, and which last-named point is nearly opposite to the point of starting. From the point *b* the curve is reversed and made concave up to the completion of the gouge-lip *d*; hence the cut acts as a shave to gradually cut from the point *a* toward the extreme edge, the center being always in advance.

I do not broadly claim a gouge-lip, as such, I am aware is the well-known Cooke patent; but

I do claim as my invention, and as an improvement on the Ransom Cooke patent bit—

The floor-lip constructed as herein described, commencing at a point *a* or nearly upon the opposite side of the center from its termination, and curved around the center up to the extreme edge of the cut, in the manner as herein set forth.

JAMES SWAN.

Witnesses:

JOHN H. SHUMWAY,  
A. J. TIBBITS.