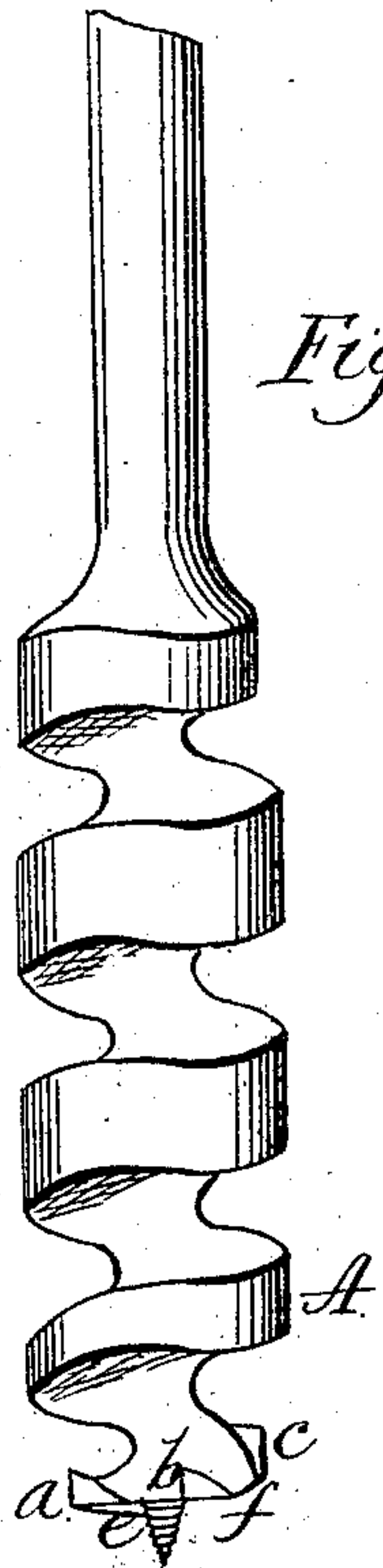


*W. C. Sanford,*

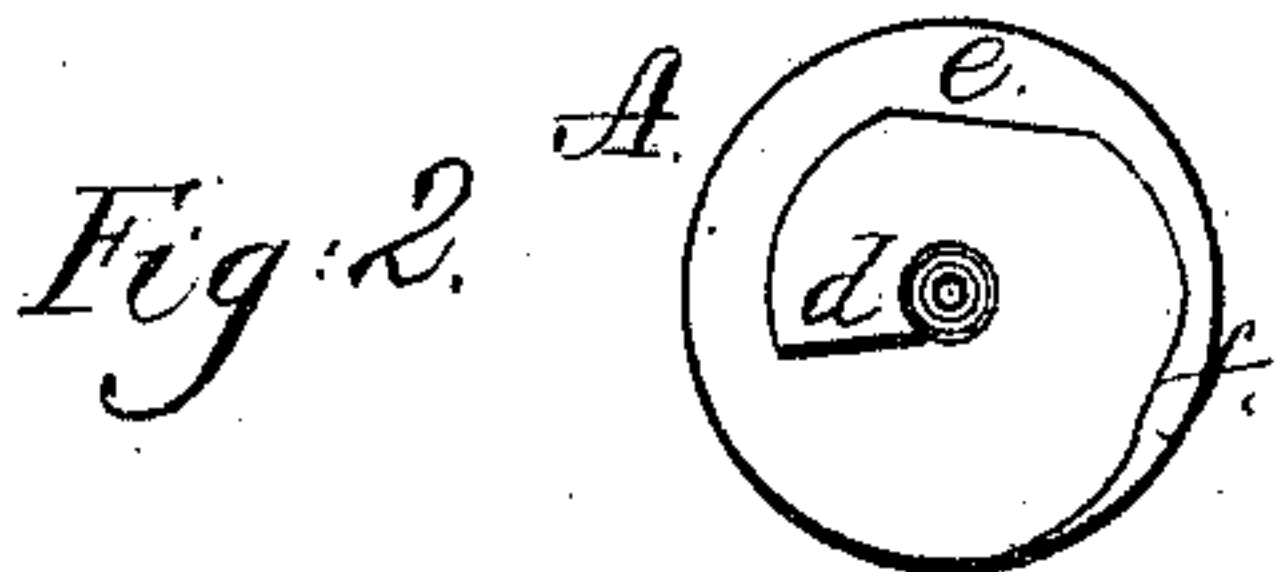
*Wood Auger.*

*No 79,012.*

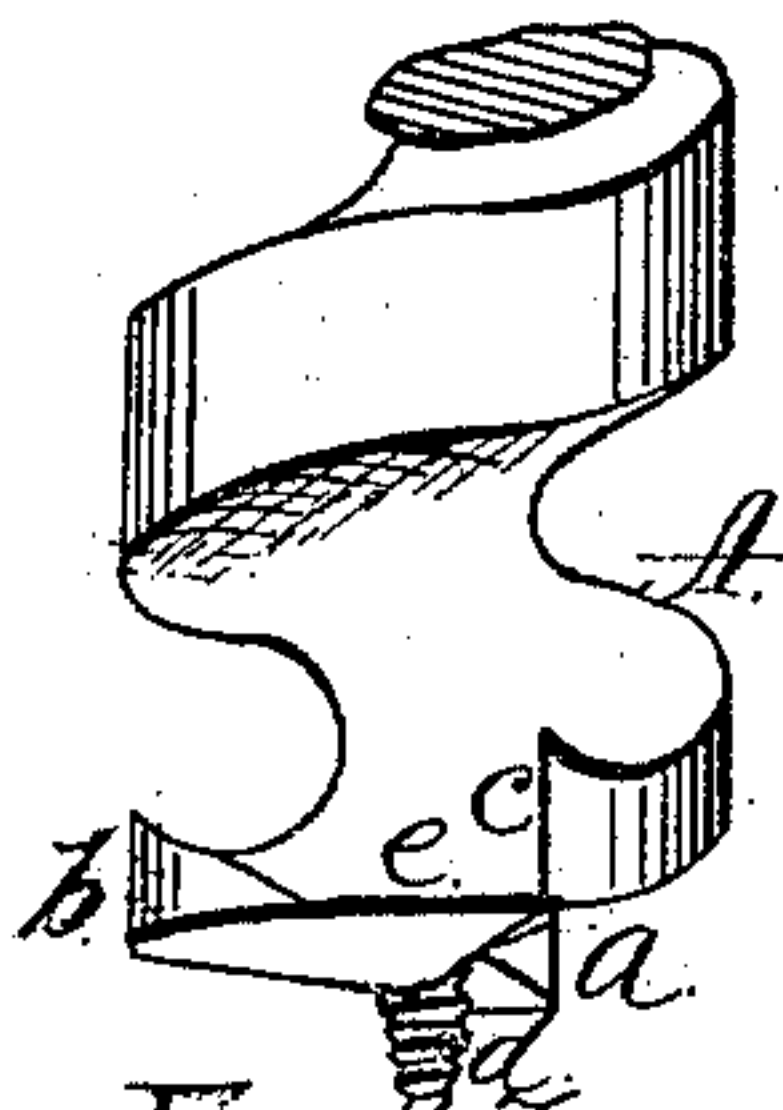
*Patented June 16, 1868.*



*Fig: 1*



*Fig: 2.*



*Fig: 3.*

*Witnesses:*

*W. C. Ashkettle  
Jm A. Morgan*

*Inventor:*

*W. C. Sanford  
Munroe  
attorneys.*

# United States Patent Office.

N. C. SANFORD, OF MERIDEN, CONNECTICUT.

*Letters Patent No. 79,012, dated June 16, 1868.*

## IMPROVEMENT IN AUGERS.

*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, N. C. SANFORD, of Meriden, in the county of New Haven, and State of Connecticut, have invented a new and improved Auger; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of my improved auger.

Figure 2 is a bottom view of the same.

Figure 3 is an enlarged detail side view, showing the formation of the cutting-lips in a different position from that of fig. 1.

Similar letters of reference indicate corresponding parts.

This invention consists in forming an auger with two or more cutting-lips, commencing from the first or usual cutting-lip, and passing around the last turn or twist of the helical part of the auger, and each successive lip being at a greater distance from the axial centre of the auger than the preceding, and in a different horizontal plane, whereby the paths of the several lips are different and distinct, and the auger may be operated more easily.

The lips are formed with a vertical cutting-edge, as shown at *a b c*, springing from the lower edge of the twist, *A*, and being a vertical continuation of the sharpened horizontal edges *d e f*, as shown.

These latter edges are rectilinear, or they may be slightly concave or convex, without materially affecting the boring-qualities of the tool.

My invention may be applied to double-twist augers, as will be obvious.

The twist *A* is formed in the usual way, and the several lips are formed by the process known as "swaging."

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

Two or more cutting-lips, *a b c*, of different radial distance from the axial centre of the auger, and in different horizontal planes, all constructed to operate substantially in the manner and for the purpose as set forth.

N. C. SANFORD.

Witnesses:

JOHN IVES,

AND W. G. LOWEREE.