

(No Model.)

H. E. FULLER.

BORING BIT.

No. 283,705.

Patented Aug. 21, 1883.

Fig. 3.

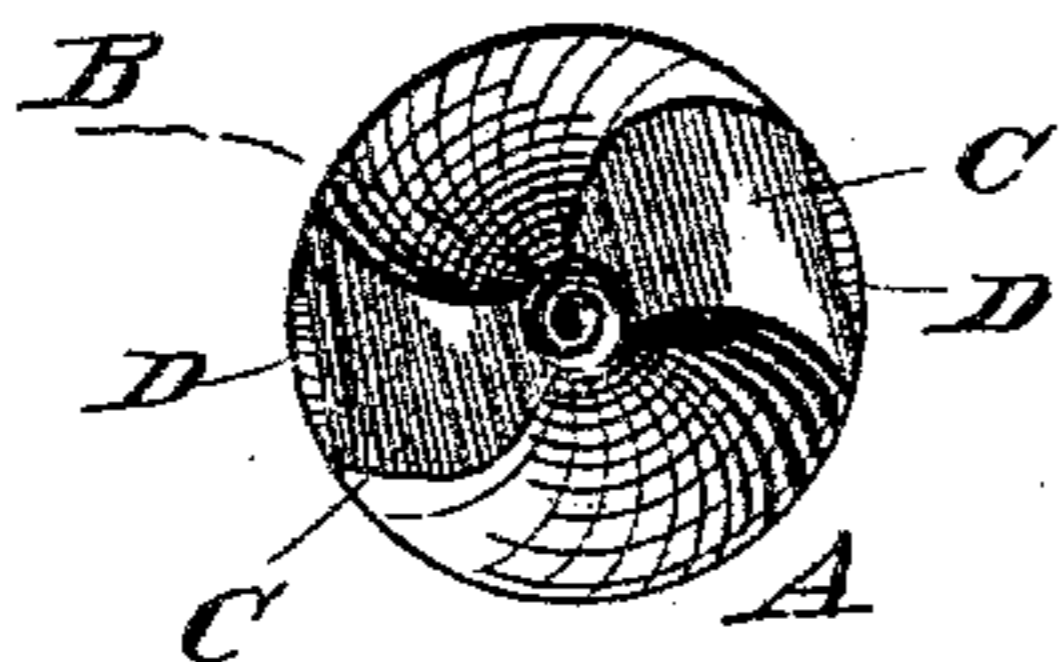


Fig. 2.

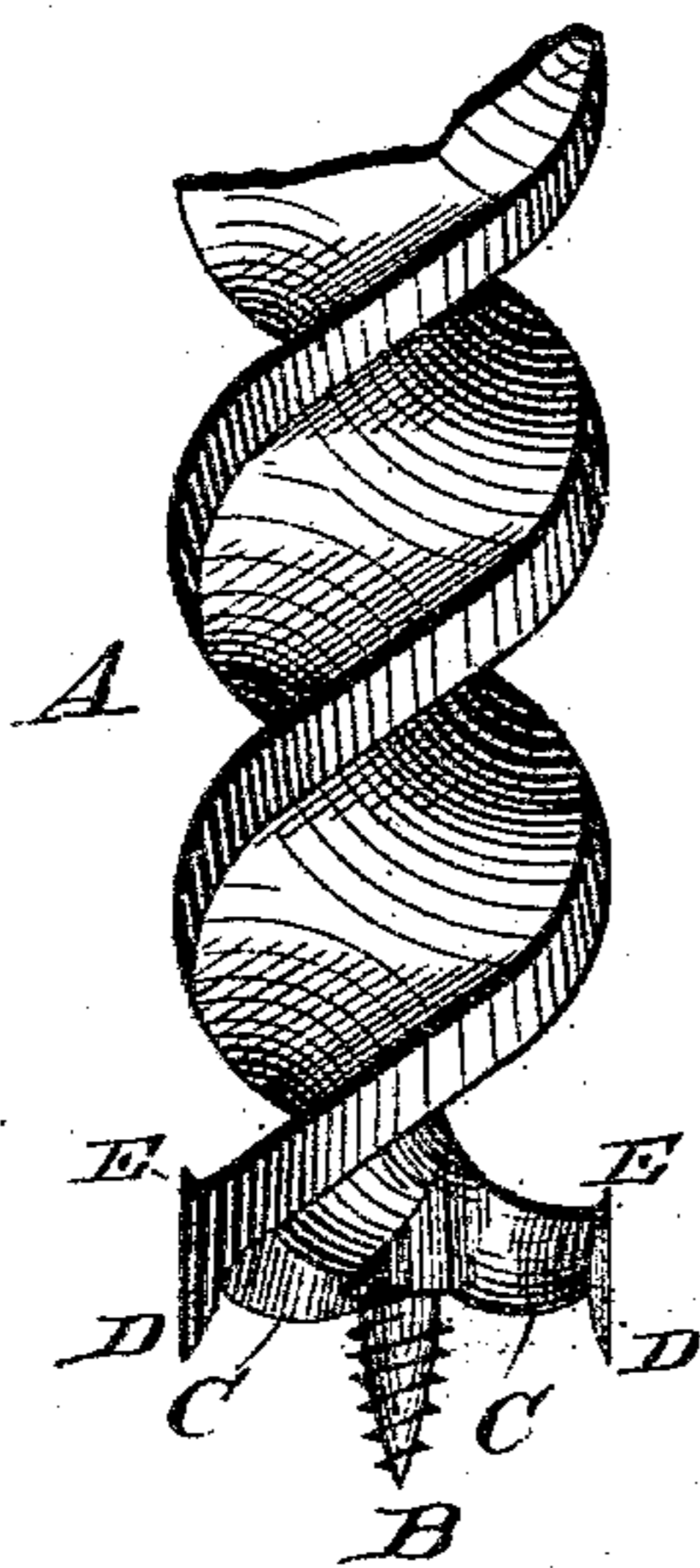
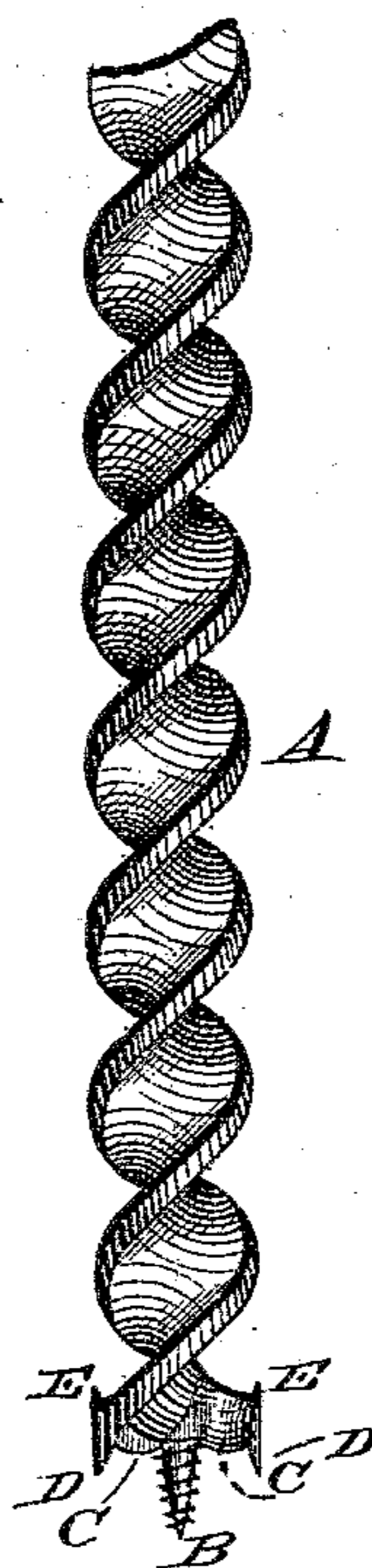


Fig. 1.



Witnesses:

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by

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UNITED STATES PATENT OFFICE.

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BORING-BIT.

SPECIFICATION forming part of Letters Patent No. 283,705, dated August 21, 1883.

Application filed February 15, 1883. (No model.)

To all whom it may concern:

Be it known that I, HIRAM E. FULLER, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Bits and 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 pertains to make and use the same.

My invention relates to augers and bits, the object being to provide a bit adapted to be operated with the minimum pressure and to bore a smooth clean-cut hole.

Heretofore various arrangements of cutters and spurs or depending guide-lips have been employed; but the same are defective in that a straight cutting-edge is presented to the wood or other material operated upon.

My invention consists, broadly, in the combination, with curved or downwardly-arched cutters, of depending guide spurs or cutters, as hereinafter fully described.

The invention further consists in the details of construction hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 represents an elevation of a bit constructed in accordance with my invention. Figs. 2 and 3 represent enlarged views of a portion of a bit embodying my improvement.

A represents a double-twist bit provided with the usual screw or gimlet point, B.

C C represent the cutters or lower ends of the spirals of the bit. These cutters are each downwardly curved or arched from the screw B to the outer edge of the spirals, thus forming gouge-shaped floor-lips.

D D represent spurs or cutters depending from the ends of the spirals adjacent to the outer edges of the curved cutters C C, and preferably just in the rear of the upwardly-curved outer edge of the floor-lip.

If desired, the bit may be provided with upwardly-projecting lips E E, arranged upon the upper edge of the spirals, opposite the spurs D D.

It will be apparent, from the construction thus shown and described, that in the use of the bit, instead of presenting a straight cutting-edge to the material to be bored, a curved

edge is presented whose central portion will first come in contact with the wood, thus giving the advantage of a gradual or shaving action, which materially lessens the pressure required to operate the bit. This advantage is particularly valuable when the boring is to be done through the end of a piece of wood, as it is very difficult to cut through the grain with a straight cutting-edge.

The depending spurs serve to guide the bit and cut and finish the bore.

As illustrated in the drawings, the edges of the cutters C C may be curved horizontally as well as vertically, if desired; but such horizontal curving must be gradual, it being desirable to leave sufficient room to cut the thread upon the point B.

It will be apparent that my invention comprehends the use of the depending cutters and curved cutting-edges without the upwardly-projecting lips E E, and I therefore do not limit myself to the precise construction shown, but reserve to myself the right to make such changes and modifications as may properly fall within the scope of my invention.

It will also be obvious that my improvement is adapted to augers and bits of all kinds and sizes, and that the same is inexpensive in construction and durable in use.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a bit, the combination, with a screw or gimlet point, of downwardly-curved cutters, depending spurs or cutters arranged at the outer edges of said cutters, and upwardly-projecting lips arranged opposite to said spurs, substantially as set forth.

2. In a bit, the combination, with a screw or gimlet point, of cutting-edges curved both downwardly and horizontally, and depending spurs and upwardly-projecting lips, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HIRAM E. FULLER.

Witnesses:

F. O. McCLEARY,
G. B. HARRIS.