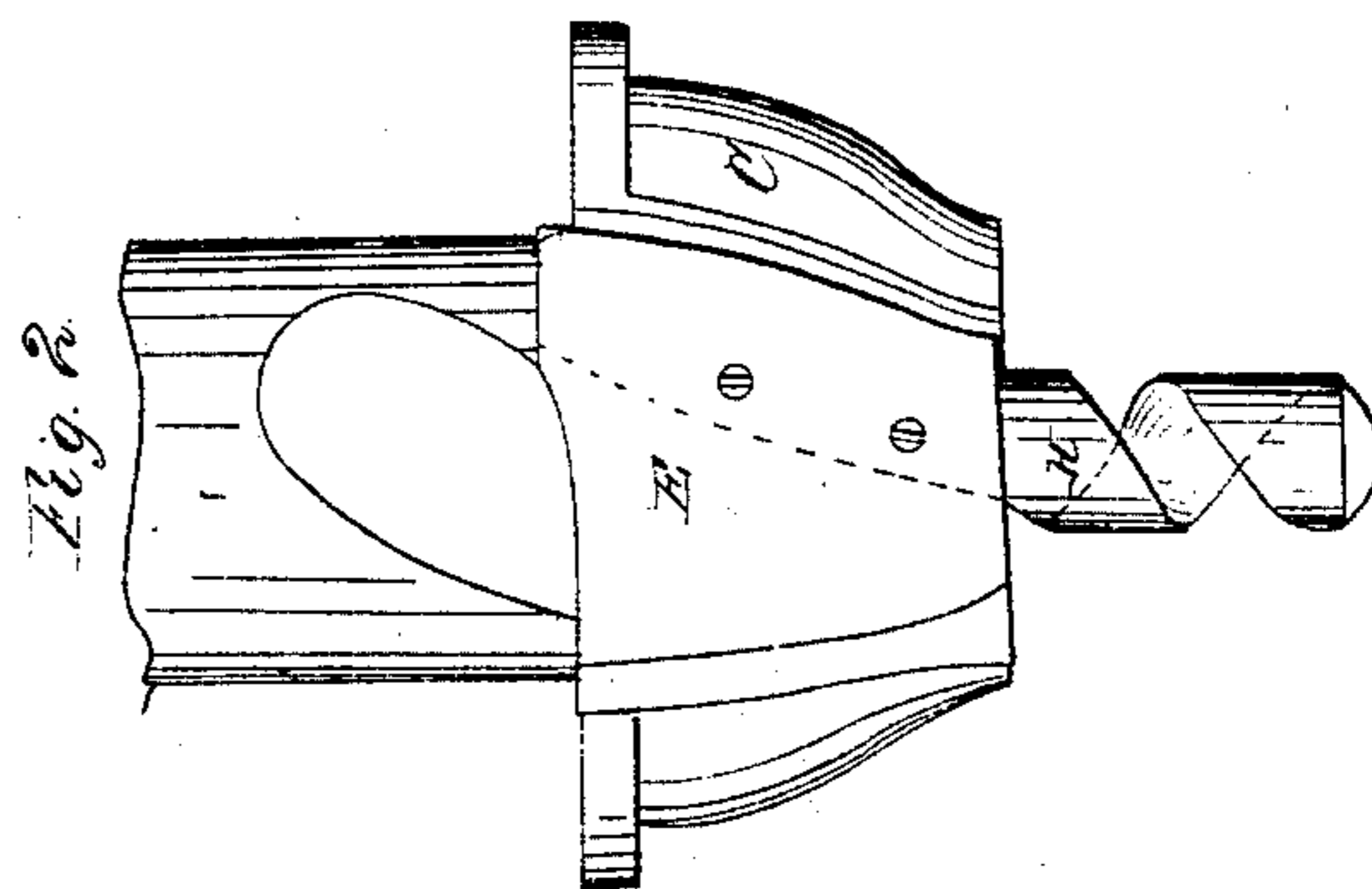
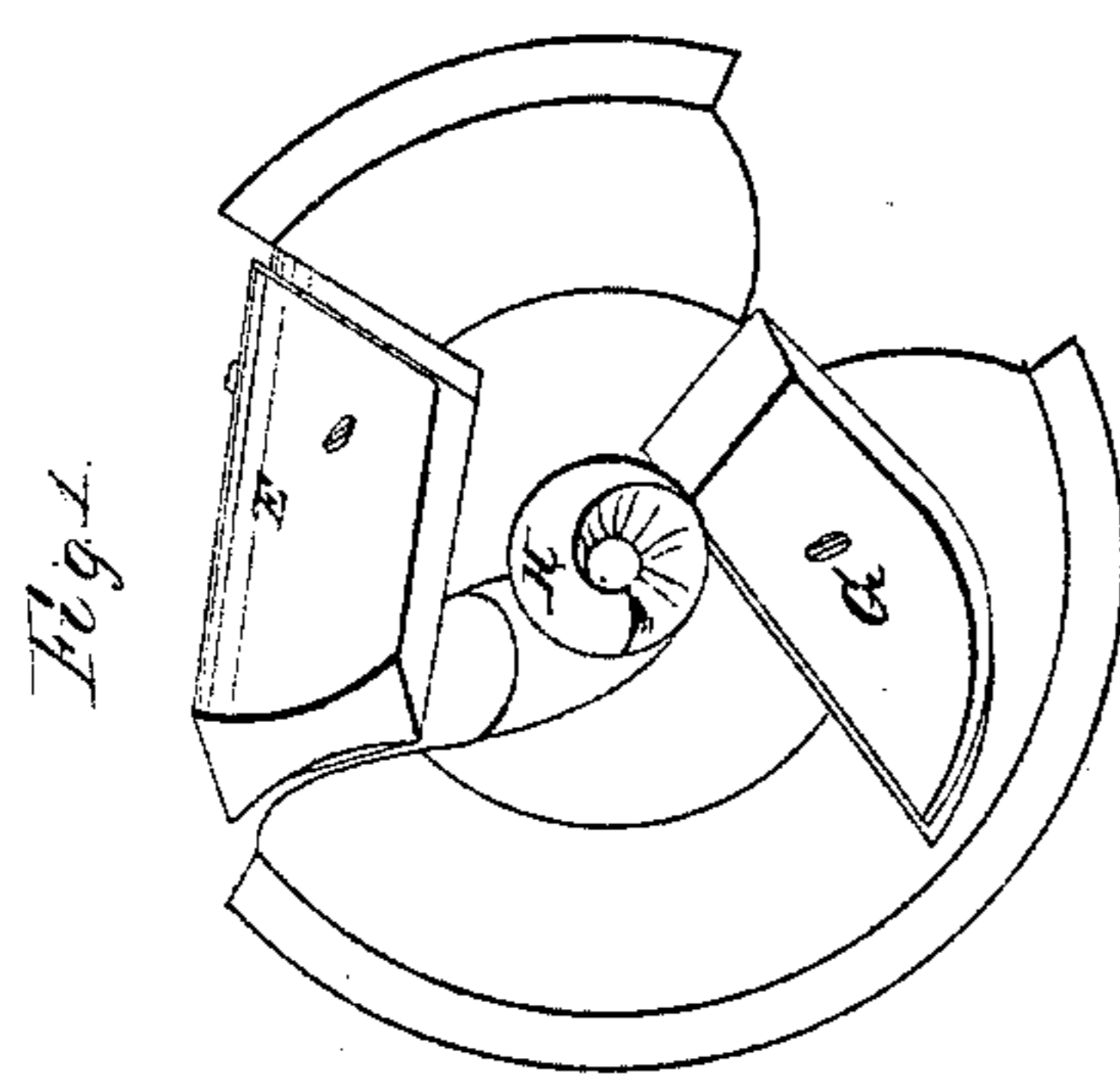
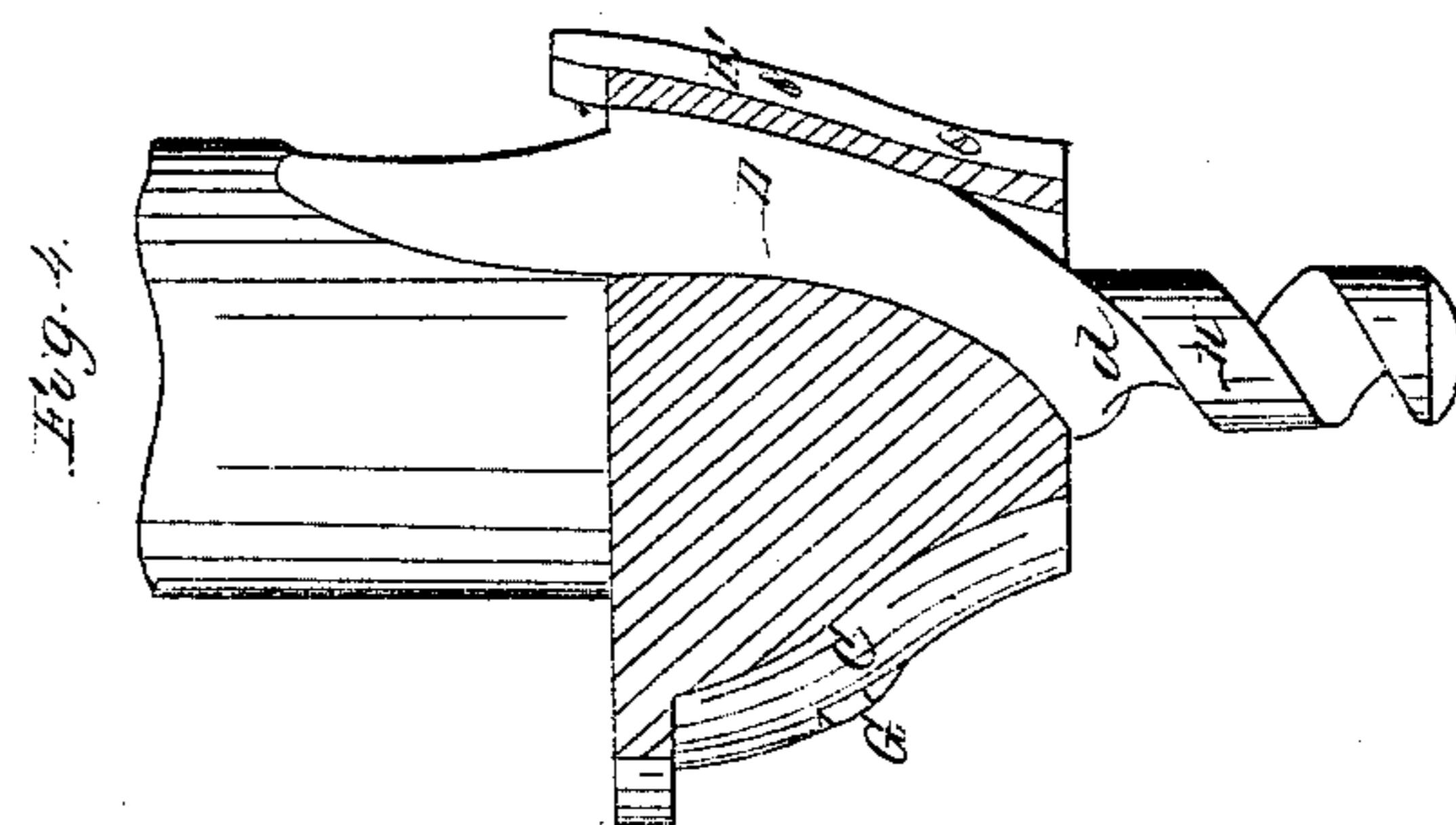
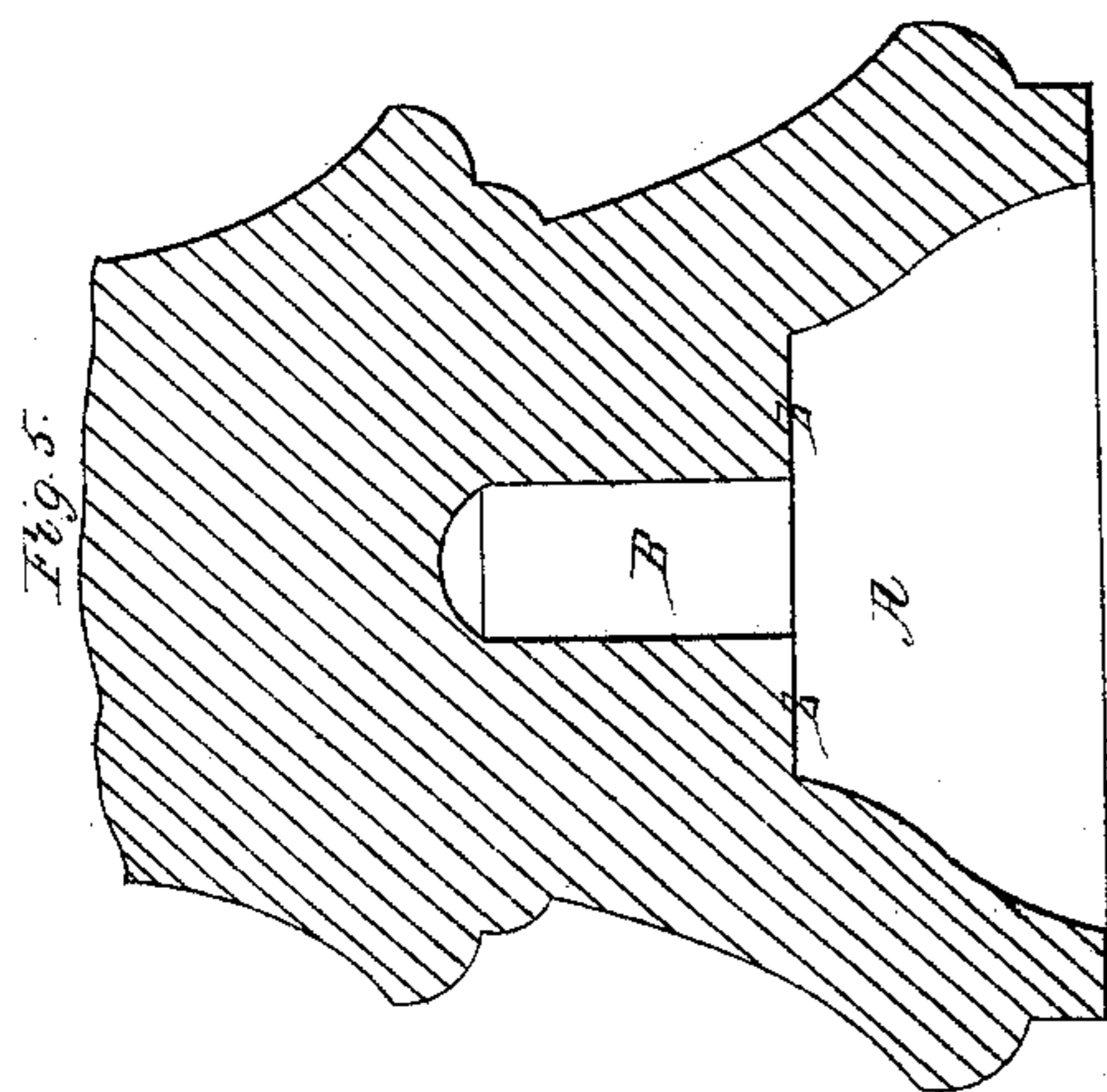
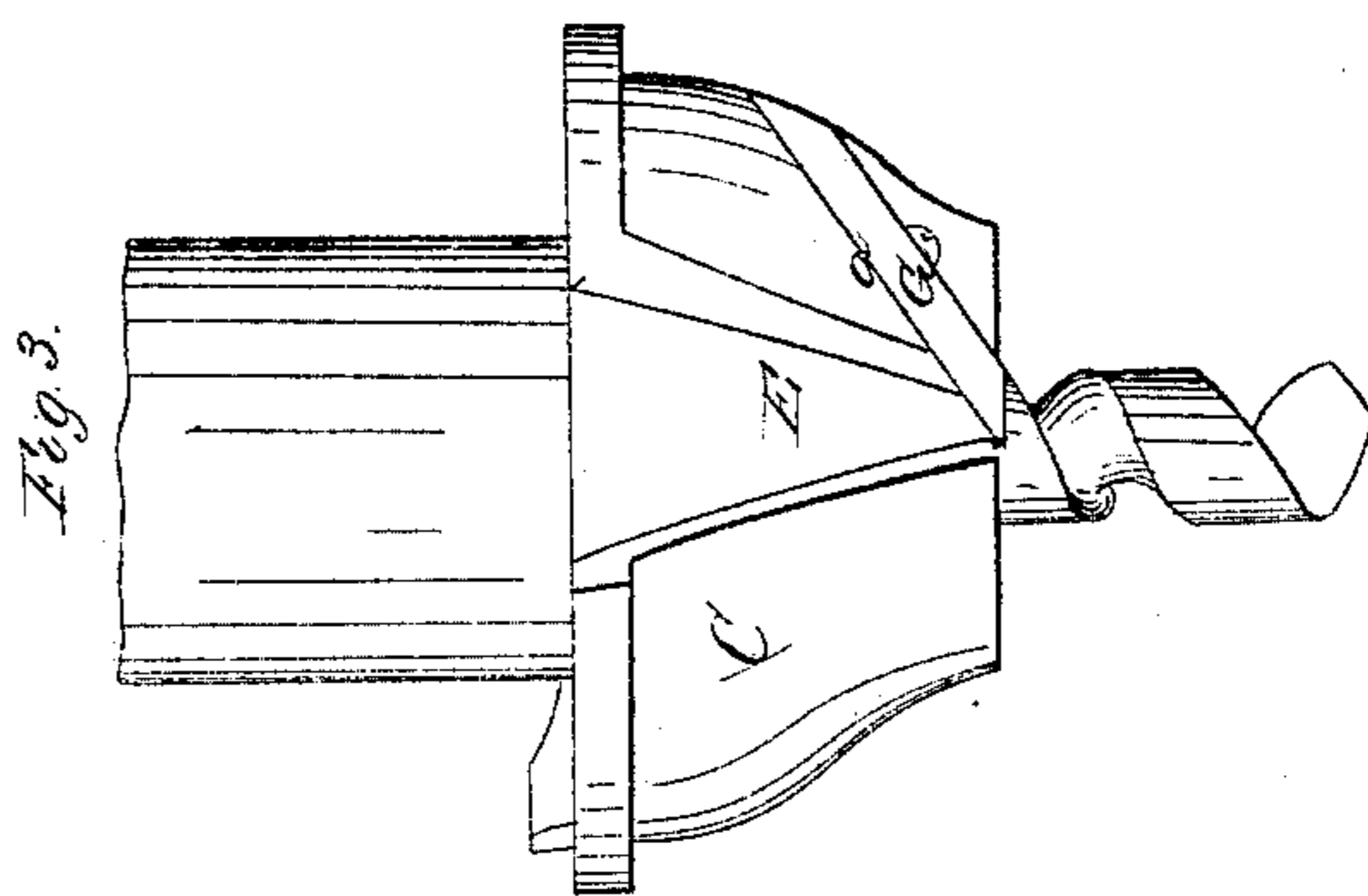
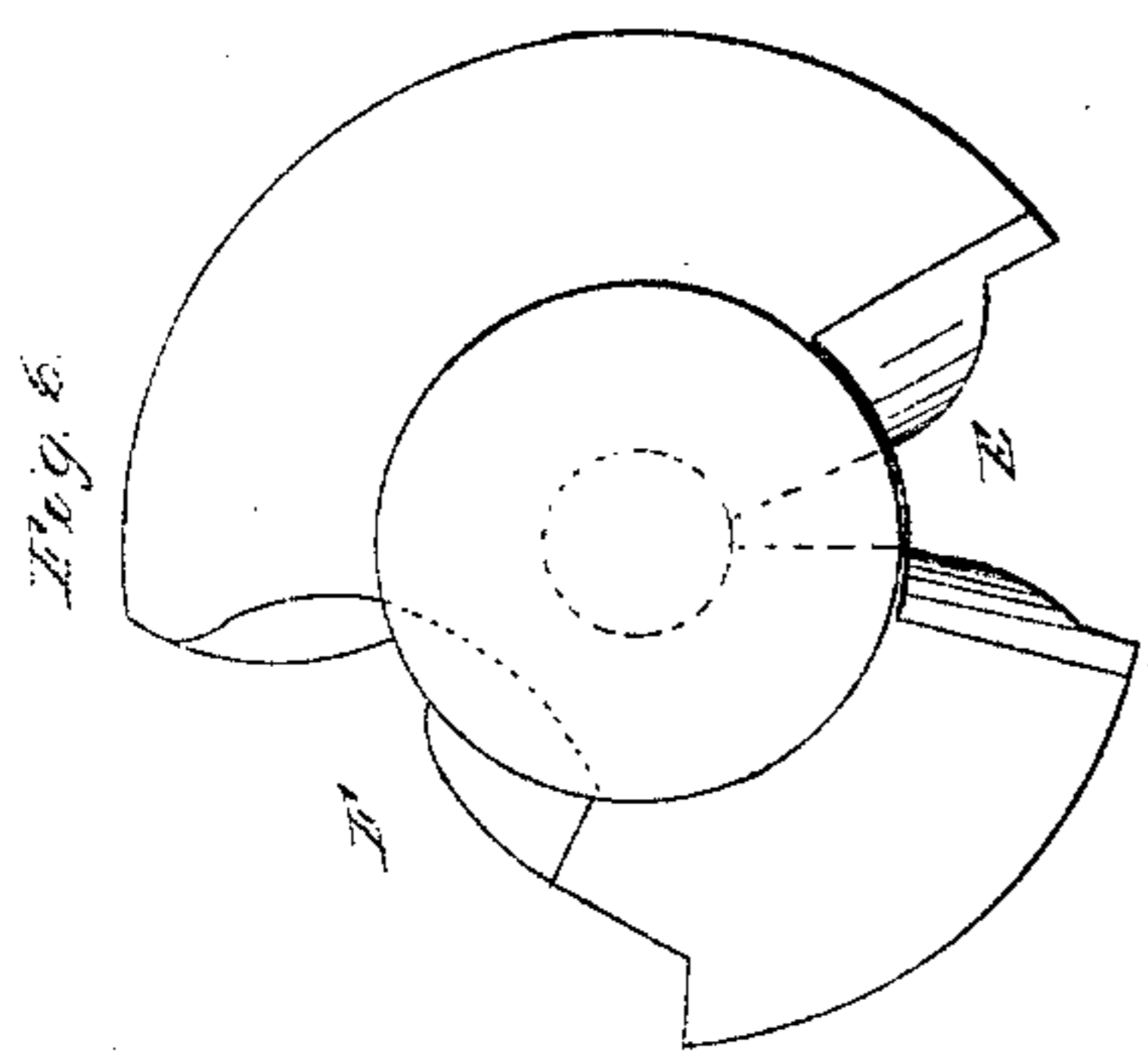


*B. F. Graves,*

*Wood Auger.*

*N<sup>o</sup> 11,587.*

*Patented Aug. 22, 1854.*



# UNITED STATES PATENT OFFICE.

BENJ. F. GRAVES, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO WM. C. KNOWLTON.

TOOL FOR BORING RECESSES FOR CASTERS, &c.

Specification of Letters Patent No. 11,587, dated August 22, 1854.

*To all whom it may concern:*

Be it known that I, BENJAMIN FRANKLIN GRAVES, of Boston, in the county of Suffolk and State of Massachusetts, have invented  
5 a new and useful or Improved Tool for recessing or boring the legs of Pianos or other Articles for the Reception of Casters or Such Like Articles; and I do hereby declare, that the same is fully described and  
10 represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1 denotes an end view of my said tool. Fig. 2, a view  
15 of one side of it. Fig. 3 is a view of it taken on the opposite side of it. Fig. 4 is a cross section of it. Fig. 5 is a section of the orifice or recess made by it.

The recess formed by the said tool, is  
20 composed not only of a dome shaped chamber, which terminates at top in a plane circular surface *b, b*, but of a cylindrical bore or passage extending out of the chamber A as seen in the drawing. The bearing of the  
25 shank of a caster is inserted in the part B, and has its flanch fastened or screwed to the surface *b, b*, the chamber A being large enough to allow of the rotary movements of the caster, while its roller or wheel is resting on a floor.  
30

The tool consists of a block or frame C, made somewhat in shape of the chamber, and formed with two discharging throats or passages D, E, down its sides as seen in  
35 Fig. 6, which is an end view of the block. To one of these throats viz, D a side cutter or chisel F is adapted as seen in the drawings. To the other throat and on the flat surface, *a*, of the block another cutter or  
40 chisel G is applied.

Rising up from the middle of the block

is a twist auger H, whose discharging chip groove *d*, I make to open directly into and communicate with the throat D of the side chisel F. By this connection the chips made  
45 by the auger, are led off through the throat D.

The block C is provided with a screw shank by which it may be screwed on or affixed to a revoluble shaft, or lathe arbor.  
50

When put in revolution, and a piece of wood is presented to its action it will form in it a chamber of the kind above specified.

I do not claim as my invention, the combining the throat of a chisel with the dis-  
55 charging chip groove, of the twist auger, or making the latter to enter directly into the former, whereby its chips are not only discharged through the said throat, but by the pressure exerted on them, by the spiral form  
60 of the groove of the auger, they are made to aid in the discharge of the other chips from the throat, and thereby prevent the choking of the chips in the throat; but

I claim—  
65

The combination and arrangement of the twist auger, the two cutters or chisels F and G, and their throats, on the block C, so as to operate together and simultaneously and make a chamber or recess in a piece of wood,  
70 of the form substantially as above specified, not meaning to claim a single cutter G and a twist auger H as applied to a shaft, so as to merely bore two cylindrical recesses.

In testimony whereof, I have hereto set  
75 my signature this eighteenth day of March A. D. 1853.

BENJN. F. GRAVES.

Witnesses:

R. H. EDDY,  
FRANCIS GOULD.