

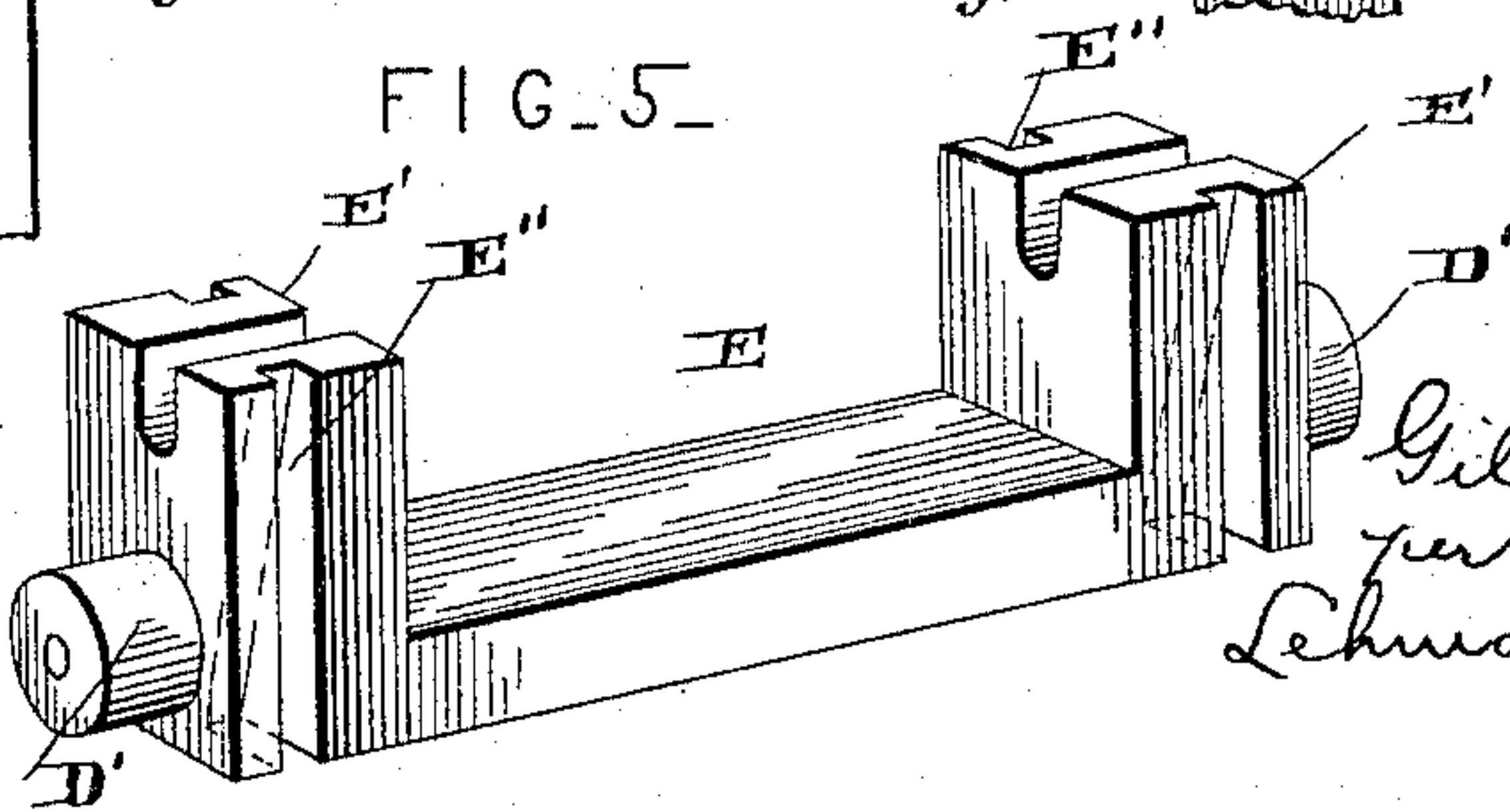
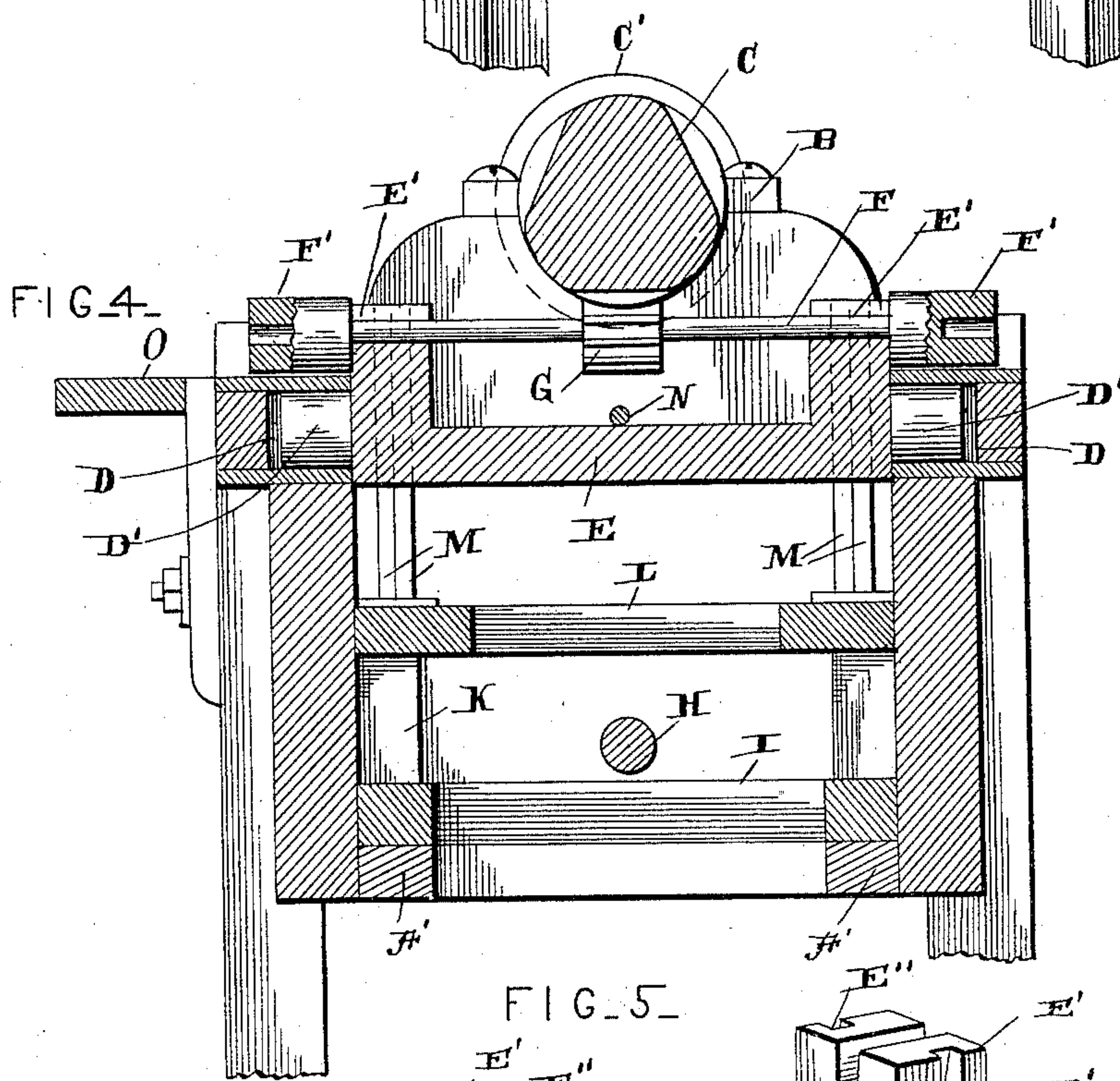
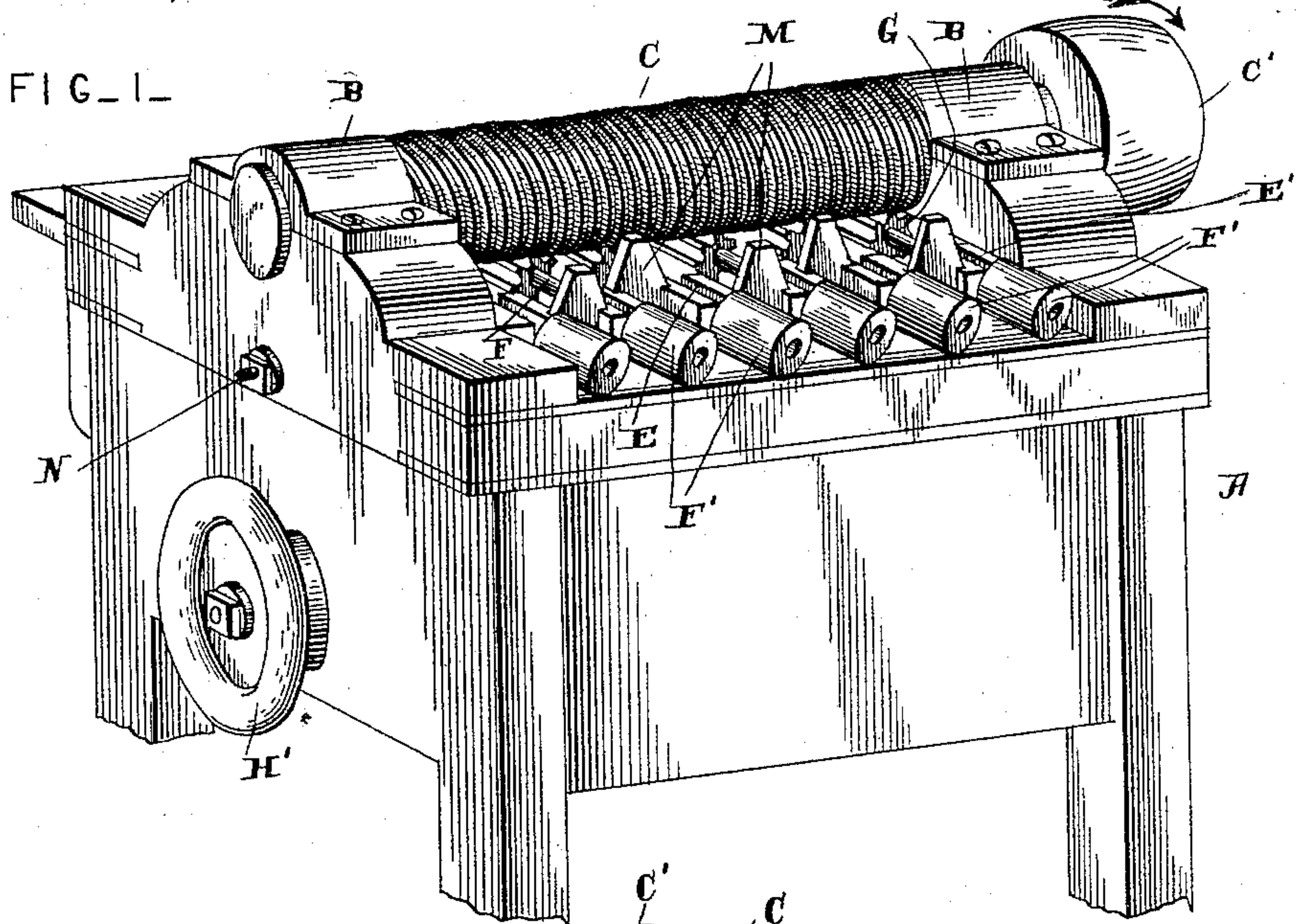
(No Model.)

2 Sheets—Sheet 1.

G. CURTIS.  
BLIND STILE BORING MACHINE.

No. 474,222.

Patented May 3, 1892.



WITNESSES.

*Geo. E. French*  
*A. Fitzgerald*

INVENTOR.

*Gilbert Curtis*  
*per*  
*Lehmann & Patterson*  
*attys.*



(No Model.)

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FIG. 2.

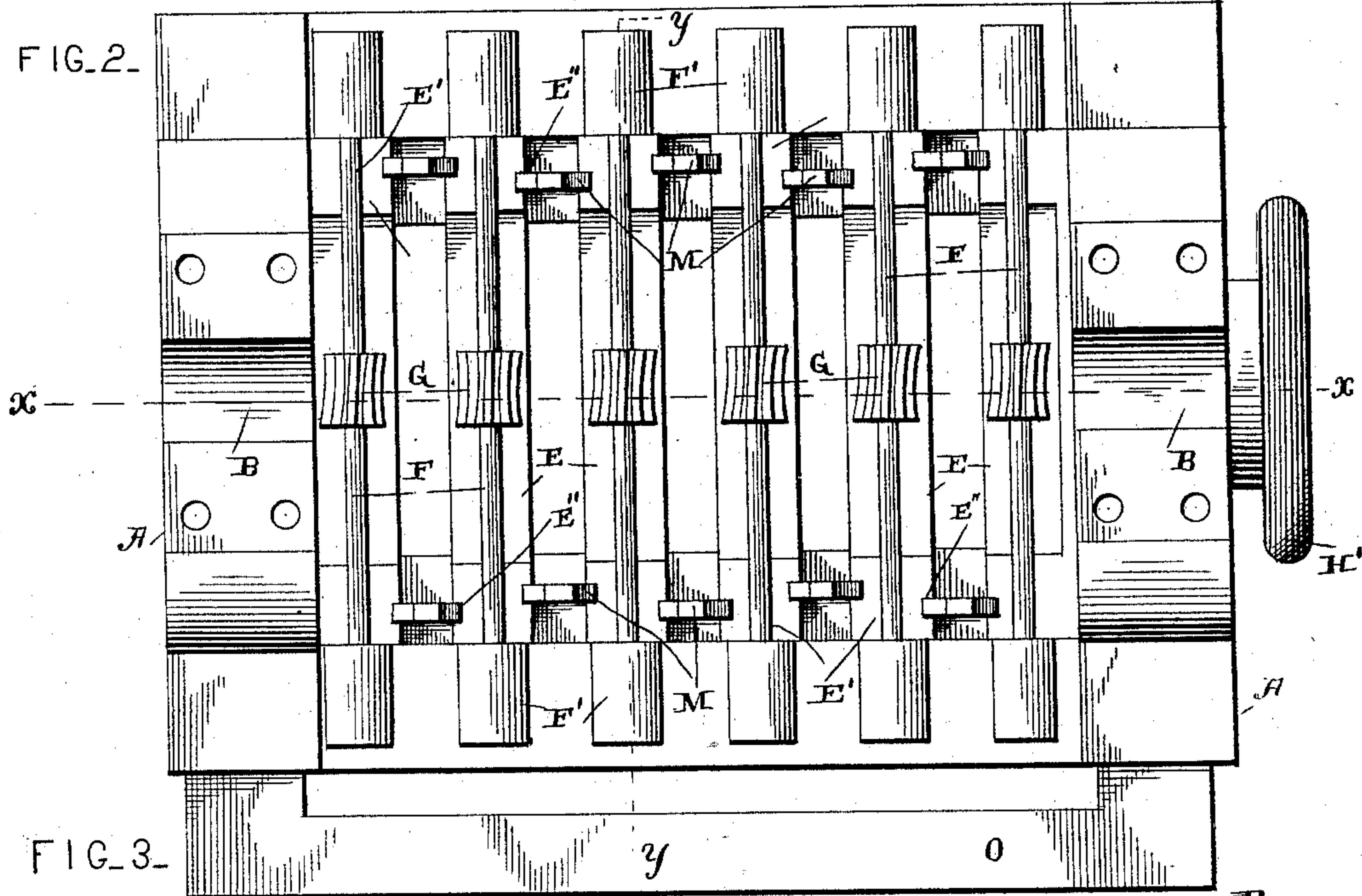
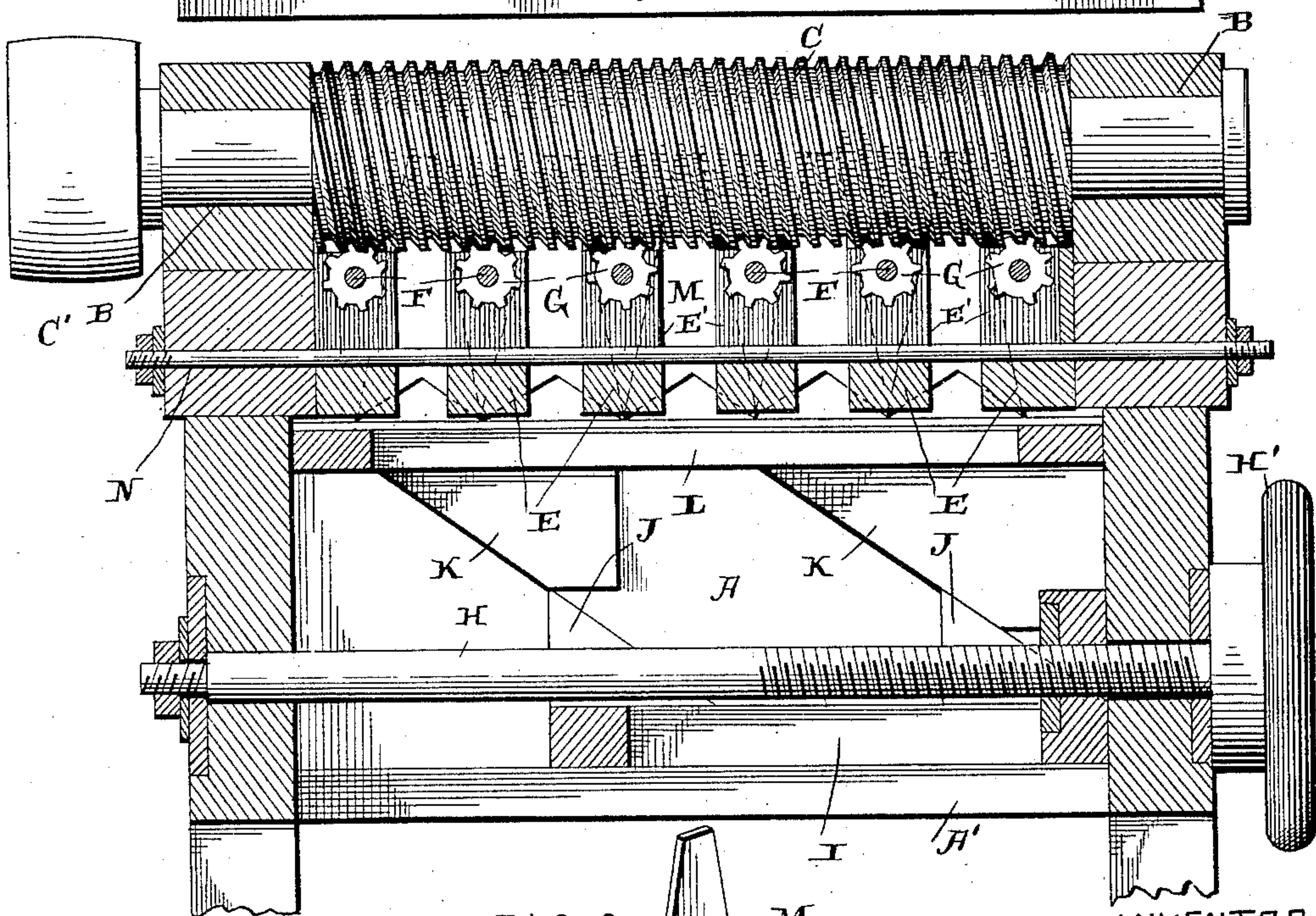


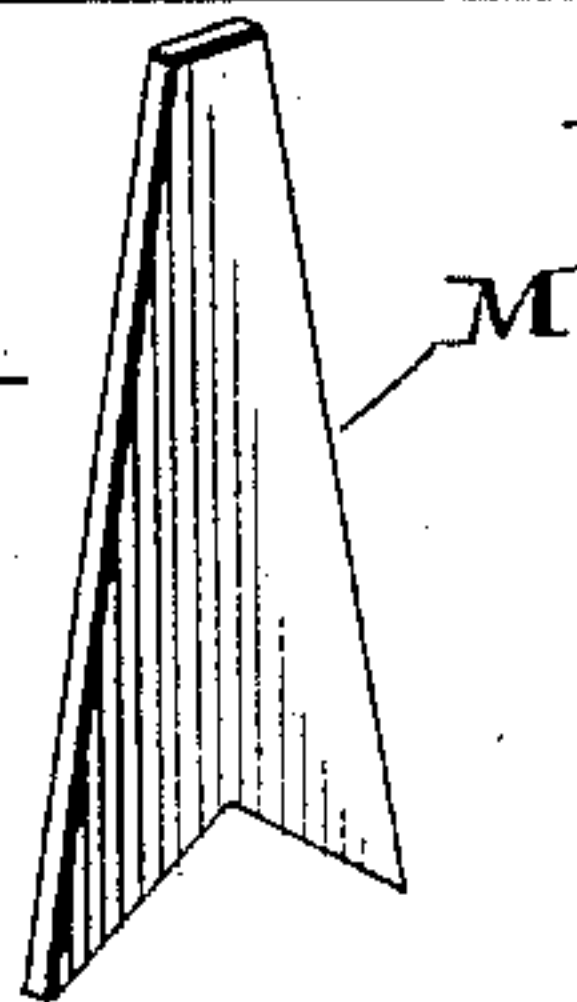
FIG. 3.



WITNESSES—

*Geo. E. Frick.*  
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FIG. 6.



INVENTOR—

*Gilbert Curtis*  
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# UNITED STATES PATENT OFFICE.

GILBERT CURTIS, OF CROWN POINT, NEW YORK.

## BLIND-STILE-BORING MACHINE.

SPECIFICATION forming part of Letters Patent No. 474,222, dated May 3, 1892.

Application filed September 26, 1891. Serial No. 406,924. (No model.)

*To all whom it may concern:*

Be it known that I, GILBERT CURTIS, of Crown Point, in the county of Essex and State of New York, have invented certain new and useful Improvements in Blind-Stile-Boring Machines; 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 it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in blind-stile-boring machines; and it consists in certain novel features of construction and in the combination and arrangement of parts which will be fully described hereinafter, and more particularly referred to in the annexed claims.

The object of my invention is to construct a machine which will bore either one or two blind stiles at the same time and in which the bits may be adjusted laterally while the machine is in motion, thus regulating the distance of the holes being bored in the stiles without stopping the machine.

In the accompanying drawings, Figure 1 is perspective view of my improved machine. Fig. 2 is a plan view of the same, the operating screw-shaft being removed. Fig. 3 is a vertical sectional view on the line X X of Fig. 2. Fig. 4 is a similar view on the line Y Y of Fig. 2. Fig. 5 is a detached view of one of the bit-supporting frames. Fig. 6 is a detached view of one of the wedges.

A represents the outer supporting-frame, which is provided with bearing B on its upper end, in which is journaled the screw-shaft C, having a pulley C' on one of its ends.

The inner walls of the frame A are constructed with the parallel grooves D, in which move laterally the rollers D', which support the frames E. The latter are provided with bearings E', in which are journaled the bit-carrying shafts F. The opposite ends of the shafts F are provided with the recessed heads F', in which the bits are secured. Mounted on the shafts F between their ends are the pinions G, which are engaged and revolved by the screw-shaft C. By having the power communicated to these shafts at their centers

it will be seen that I am enabled to secure bits to each of their ends, thus boring two blind stiles at the same time.

Journaled in a horizontal position within the frame A is a screw-shaft H, which is provided with an operating-wheel H' on its extended end. Adapted to be moved horizontally by this screw-shaft is the frame I, which slides on the cleats A' on the inner side of the frame A. The sides of the frame I are provided with the wedge-shaped projections J, which are engaged by the oppositely-slanting wedge-shaped projections K on the under side of the vertically-moving table L. It will be understood that by moving the frame I laterally the table L may be vertically adjusted at will.

Supported on the top of the table L are the wedges M, which extend upward between the opposite ends of the frames E and enter the slanting grooves E'' of the projections E'. The alternate wedges on each of the sides are placed in a line, as shown in Fig. 2, thus allowing the lower portion of the adjacent wedges to overlap when desired. The adjacent wedges being out of line, it is evident that they may be made any length and size desired, whereas were all of the wedges on one side of the machine in line it is evident that the length of their combined widths at their widest ends could not be greater than the interior length of the frame. If the width of the wedges were thus limited, it is evident that the adjustment of the frames E would be correspondingly restricted; but being out of line they may be any width and length desired, being free to lap without interfering with each other. Thus the relative positions of the bit-shafts may be varied at will and to any desired extent. Extending horizontally through the frame A is a rod N, which rests upon the frames E, holding them in a horizontal position and preventing them from turning upon their bearings D'.

Adjustably secured to the sides of the frame A are the rests O, which form supports for the blind stiles while being operated upon.

In operation the shaft C is revolved in the direction indicated by the arrow in Fig. 1, and being in engagement with the pinions G the shafts F are revolved all in the same direc-



tion. The shaft C being rotated, as indicated above, the tendency of the screw-thread is to force the pinions G to the left-hand end of the machine. The only way the pinions G and shafts F can yield to this tendency is by the lateral movement of the frames E, between which the wedges M are interposed. By lowering the table L, upon which the wedges rest, the frames E are allowed to move closer together, thus accommodating the pinions G to that extent to the action of the screw C and drawing the bits closer together. The wedges being the same size and being moved in unison, the distance between the frames E is kept uniform in any position to which they may be adjusted.

When it is desired to widen the distance between the bits, the wedges and the table are raised in the manner above described, which will force the frames apart uniformly against the tendency of the screw to hold them together.

The screw-shaft C should be revolving while the table L is being adjusted vertically, so as to insure an even adjustment of the shaft-carrying frames E, as the action of the screw-shafts keeps the bit-frames together and the distances between them relatively the same.

Having thus described my invention, I claim—

1. A boring-machine comprising a main frame, laterally-movable bearings mounted therein, tool-carrying shafts journaled in said bearings, a means for revolving the shafts, and wedges adapted to be adjusted between said bearings. 35

2. A boring-machine comprising a main frame, laterally-movable bearings mounted therein, provided with slanting grooves, wedges adapted to be adjusted in said grooves, tool-carrying shafts journaled in the bearings, and a means for revolving the shafts. 40

3. A boring-machine comprising a main frame, laterally-movable tool-carrying bearings mounted therein, and wedges interposed between the said movable bearings, each wedge being out of line with the next adjacent wedges, for the purpose described. 45

4. A boring-machine comprising a main frame, laterally-movable bearings mounted therein, shafts journaled in said bearings, a means for revolving the shafts, a vertical movable support, and wedges carried by said support, which extend between the said bearings. 50

In testimony whereof I affix my signature in presence of two witnesses. 55

GILBERT CURTIS.

Witnesses:

GARRISON W. FOOTE,  
FREEMAN C. POND.