

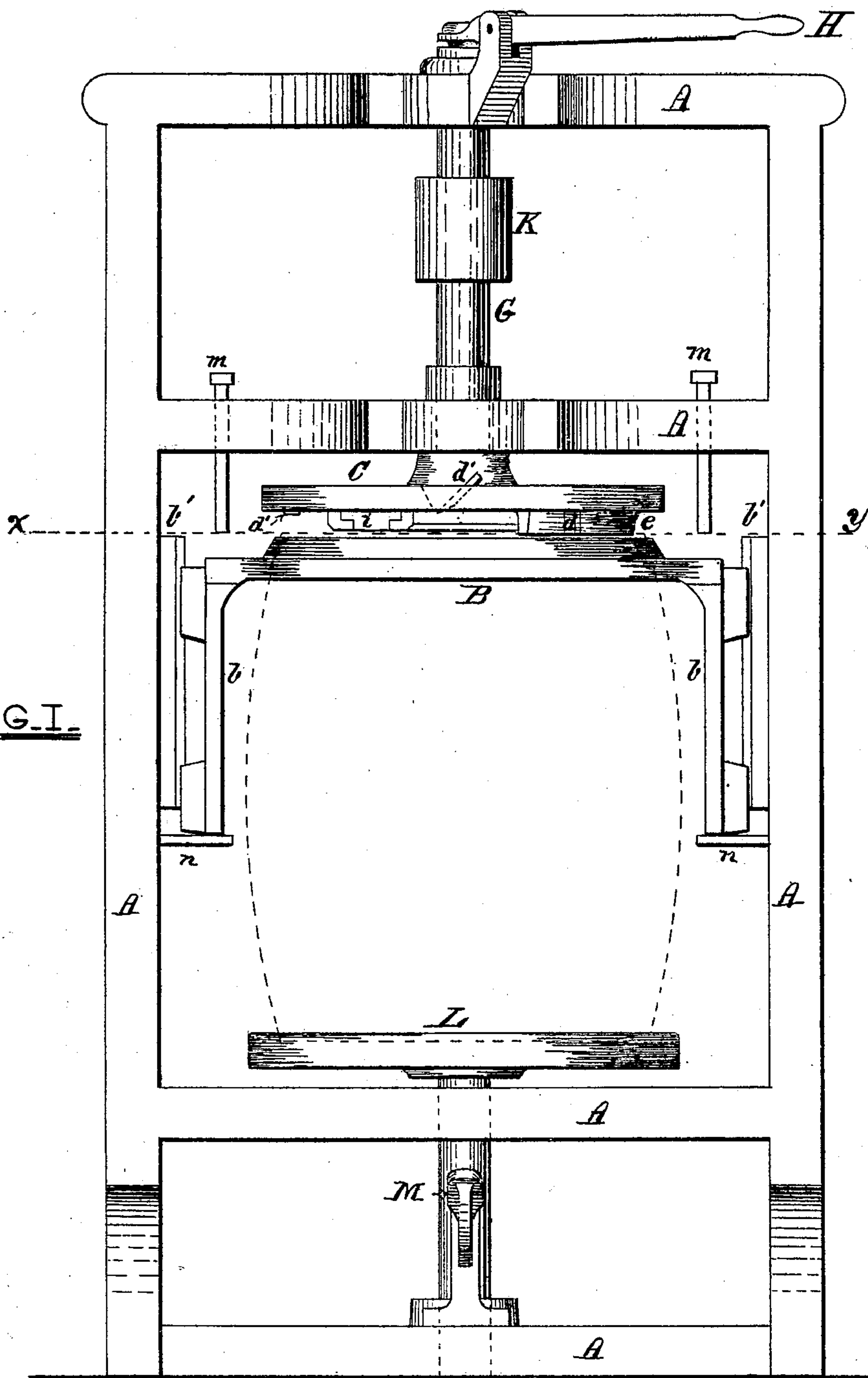
J. SOLTER.

Improvement in Machines for Crozing Barrels.

No. 132,377.

Patented Oct. 22, 1872.

FIG. I.



WITNESSES

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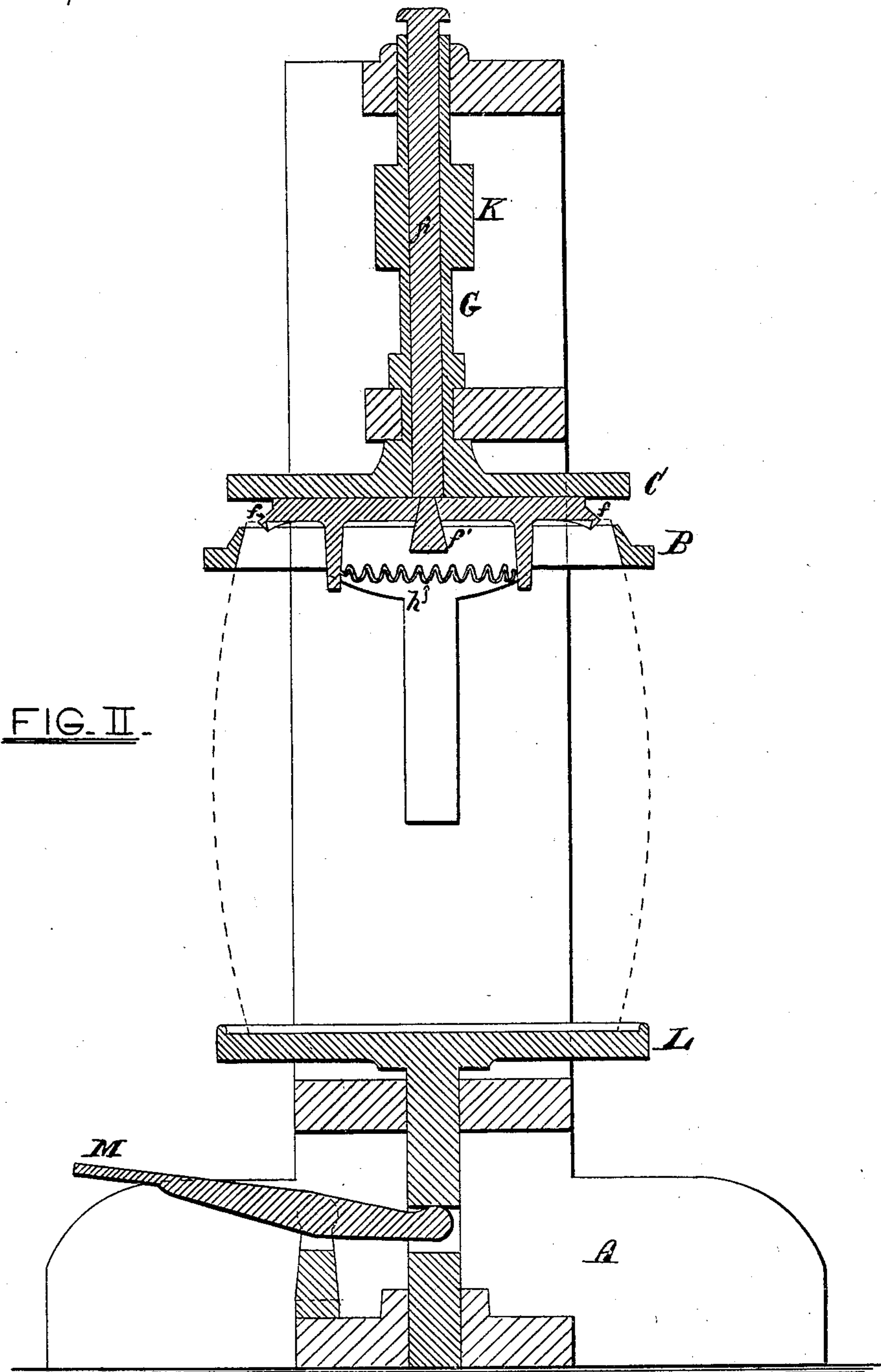


FIG. II.

WITNESSES

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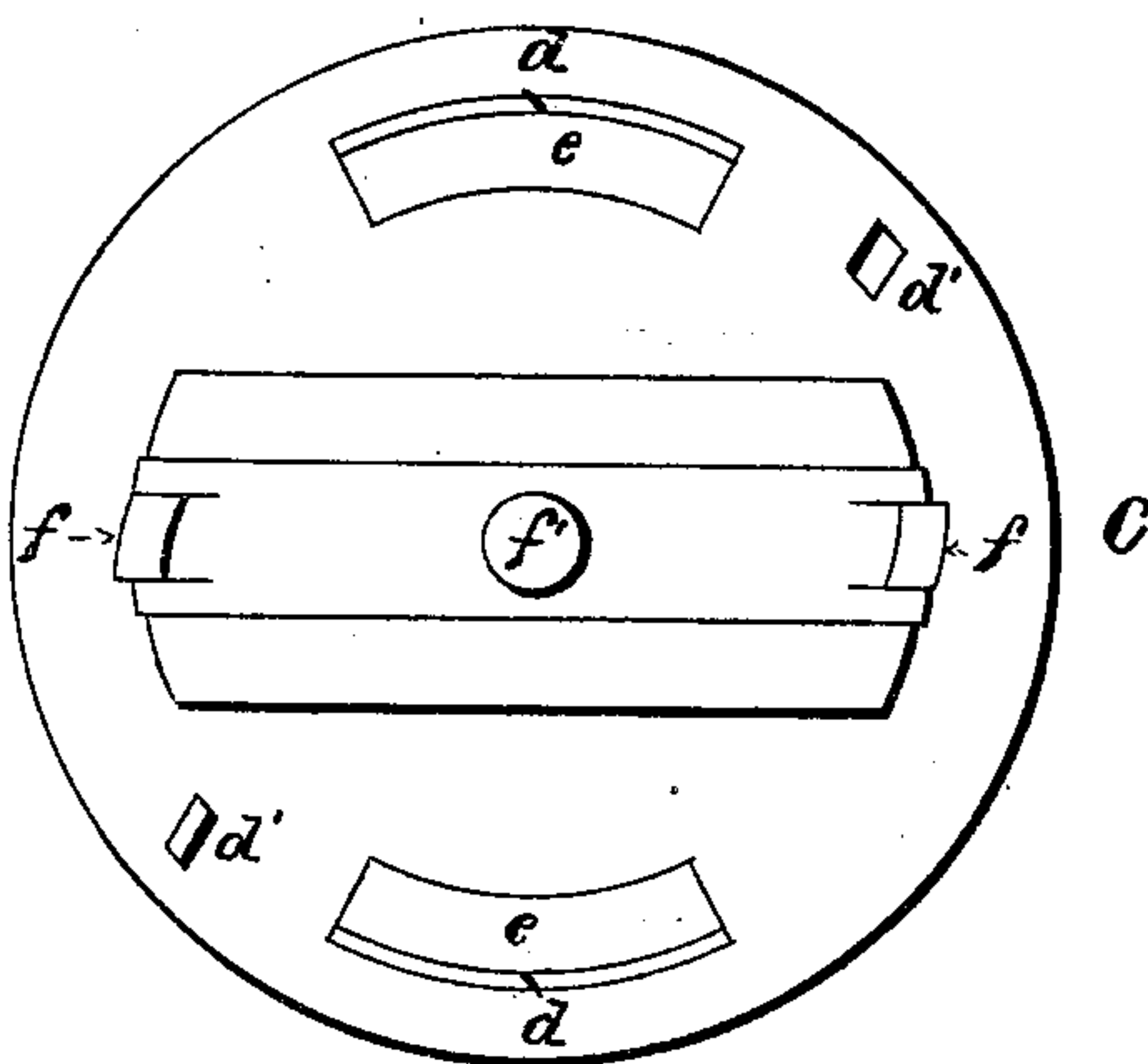
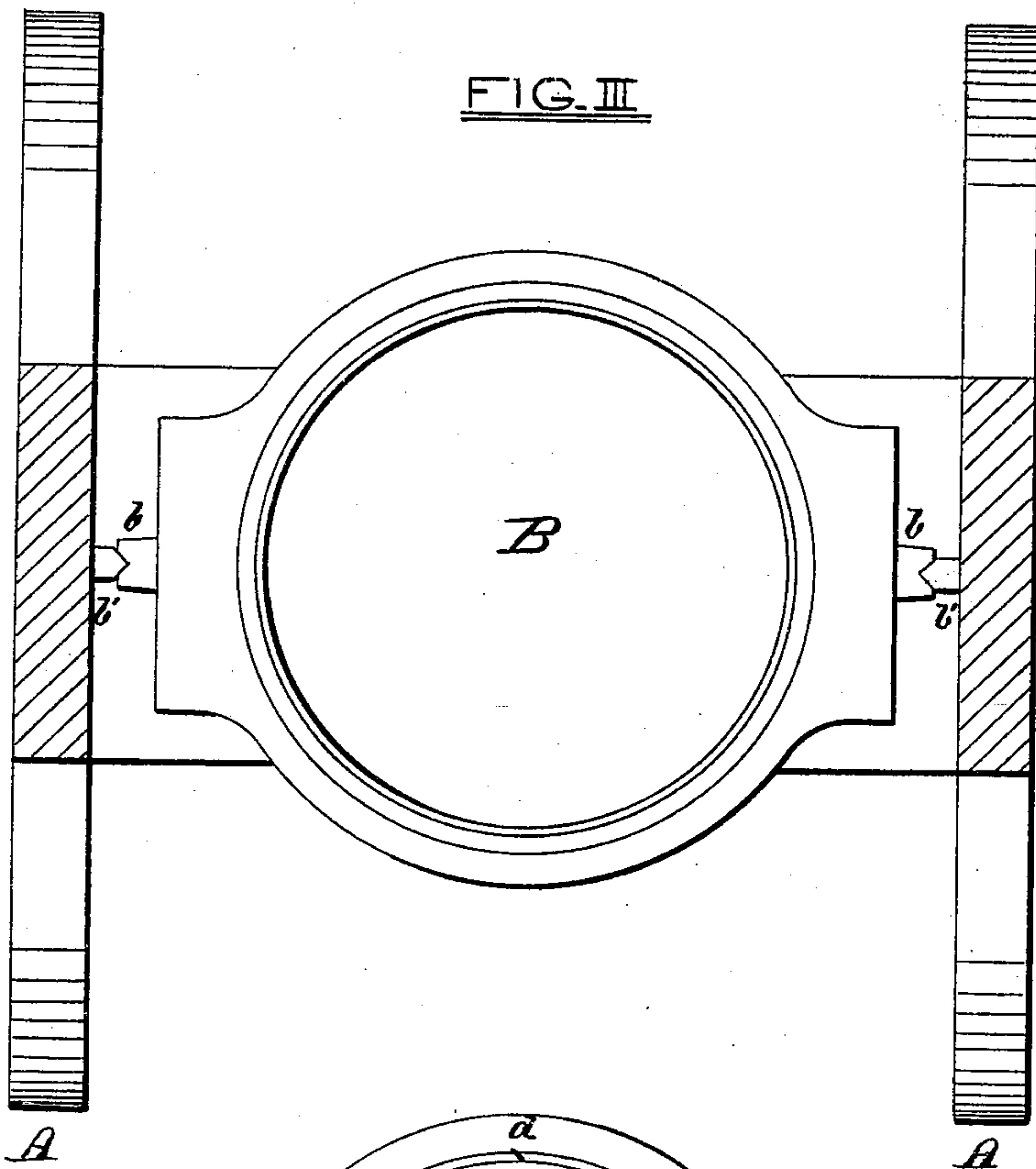


FIG. IV

—WITNESSES—

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UNITED STATES PATENT OFFICE.

JOHN SOLTER, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN MACHINES FOR CROZING BARRELS.

Specification forming part of Letters Patent No. 132,377, dated October 22, 1872.

To all whom it may concern:

Be it known that I, JOHN SOLTER, of Baltimore, State of Maryland, have invented certain Improvements in Machines for Crozing Barrels or Casks, and otherwise preparing them for the reception of the barrel or cask head, of which improvements the following is a specification; and I do hereby declare that the same is a full, clear, and exact description of my said invention, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to an upper and lower movable chuck, and to the use of the chucks in connection with a cutter-head provided with certain fixed and adjustable knives designed to effect the leveling of the barrel and the cutting of the chime and croze. The cutter-head and its attachments constitute, however, in themselves, no part of my invention.

In the accompanying drawing forming a part of this specification, Figure 1 is a front elevation of a machine having my improvements thereupon as elemental parts; Fig. 2 is a sectional elevation of the same; Fig. 3 is a transverse section of the same upon line X Y; and Fig. 4 is an inverted plan of the cutter-head and attachments.

Similar letters of reference indicate similar parts of the invention in all the figures.

A is the frame of the machine. B is the movable chuck, having upon opposite sides the guide-blocks *b*, adapted to slide, to a limited extent, upon the guides *b'*. C is the cutter-head, centered upon the tubular shaft G. The knives designed to cut the chime are represented by *d*, and are securely fixed, although capable of being removed for purposes of sharpening or repair, that no variation can occur in the diameter of the circular cut designed for the reception of the head. These fixed knives are inclosed within blocks *c* at the under side of the cutter-head, which blocks bear the same relation to the knives as a plane-block bears to its bit or chisel.

In order that the proper relations may be understood existing between the parts of the machine constituting my invention, and the parts intimately associated with them in the cutting, shaping, and leveling, I will briefly describe the means whereby the adjustable

knives, hereinbefore alluded to, not forming a part of my invention, are operated.

The adjustable knives are represented by *f*, and are arranged to move laterally from the center of the cutter-head by the action of the conical end of the spindle *f'*, passing through the tubular shaft G when elevated by the depression of the hand-lever H. A counter movement of the adjustable knives toward the center of the cutter-head is caused by the resiliency of the spiral spring *h* when allowed to operate by the lowering of the conical end of the spindle. The tool rests or guides, within which the adjustable knives slide, are represented in diagonal position by *i*. The fixed knives for leveling the top of the barrel are shown by *d'*. Supposing the machine to be in motion, and the tubular shaft and cutter-head revolving by means of a belt applied to the pulley K, the barrel to be operated upon is placed upon the table L, and, by the action of the foot upon the treadle M, the barrel is forced up into the movable chuck, which also is raised until the upper edge of the barrel is brought into contact with the fixed cutters *d* and leveling cutters *d'*. By the action of the cutters *d*, the chime is at once cut and shaped, when the lever is depressed, and, by the means hereinbefore described, the adjustable knives are separated so as to cut the croze, and the barrel is prepared for the head. The movable chuck is restricted to a certain upward movement by the interposition of the stops *m*, made variable with reference to the height to which they allow the chuck to move. Stops to effect an opposite result are shown by *n*. When the chime and croze are cut the table L is allowed to fall of its own weight, and the barrel is removed in a condition prepared for the reception of the head.

This machine is particularly adapted to be used upon what are technically known to the trade as "slack" barrels, but is equally applicable to all barrels or casks to be similarly treated. Its advantages are that it does, by means simple, cheap, and not liable to become disarranged, cut and shape the ends of all barrels, when the movable chuck is gaged, in a manner which must be alike in diameter, depth, and all points necessary to the indiscriminate fitting to them of barrel-heads of a gaged di-

ameter and shape; and, in consequence of the barrel's being perfectly centered within the chuck, the croze must necessarily be of equal depth in its entire circumference, and cannot be cut nearly through the thicknesses of the staves at certain points, as might occur under other circumstances.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

The combination of the movable chucks B

and L, and cutter-heads C, with the cutters and apparatus for operating them, substantially as herein shown and described.

In testimony that I claim the foregoing as my invention I have hereto set my hand this 16th day of May, A. D. 1872, in the presence of two subscribing witnesses.

JOHN SOLTER.

Witnesses:

GEORGE H. HOWARD,
O. GEO. DEEVER.