J. C. HERMAN & G. S. LEWIS.

MACHINES FOR CROZING AND CHAMFERING BARRELS.

No. 173,952. Patented Feb. 22, 1876.

Fig. 1.

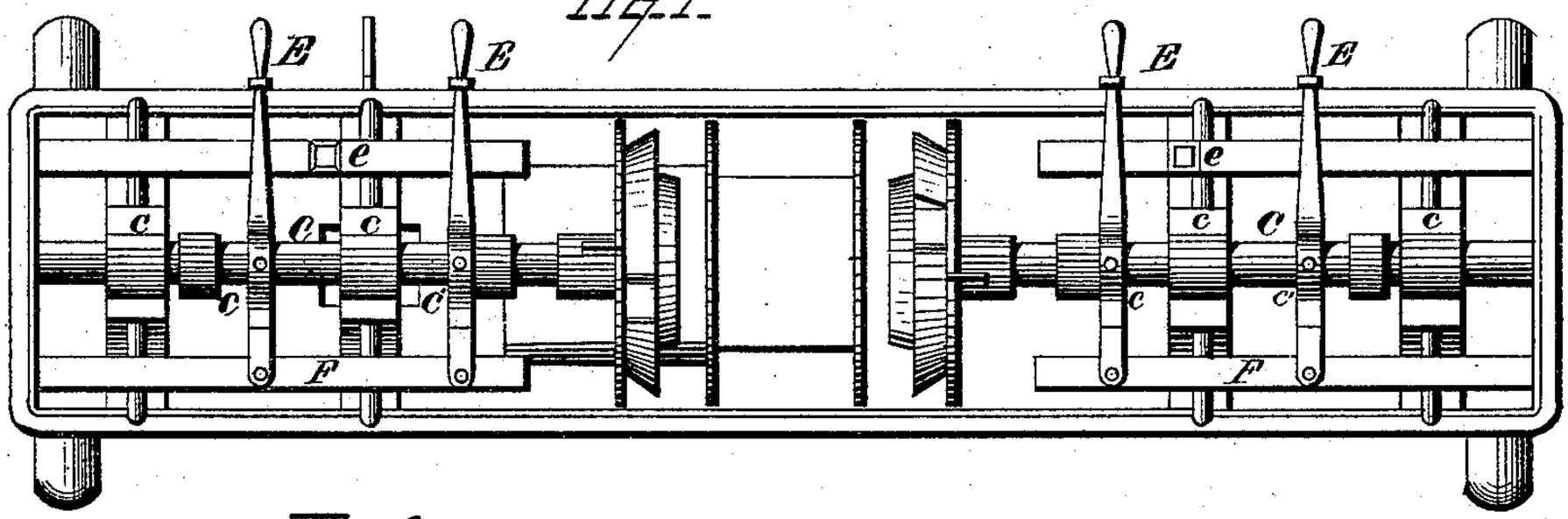


Fig. 2.

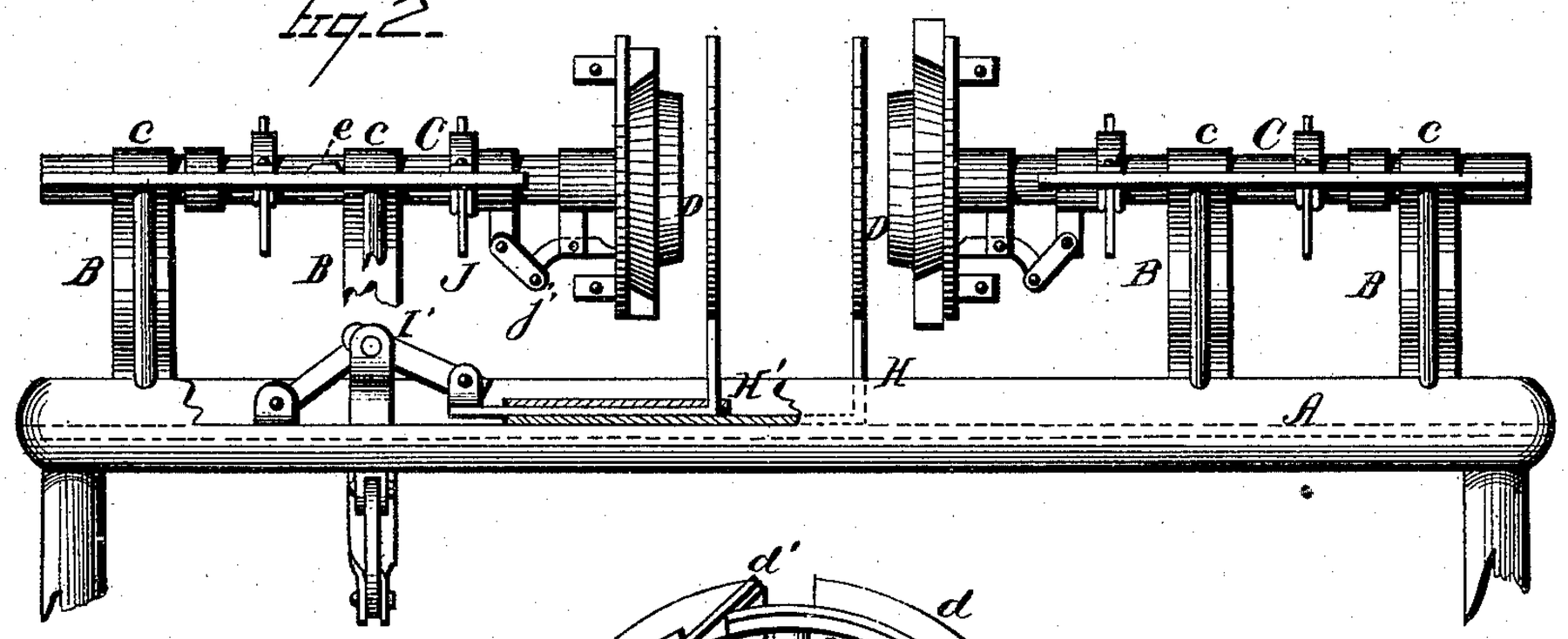
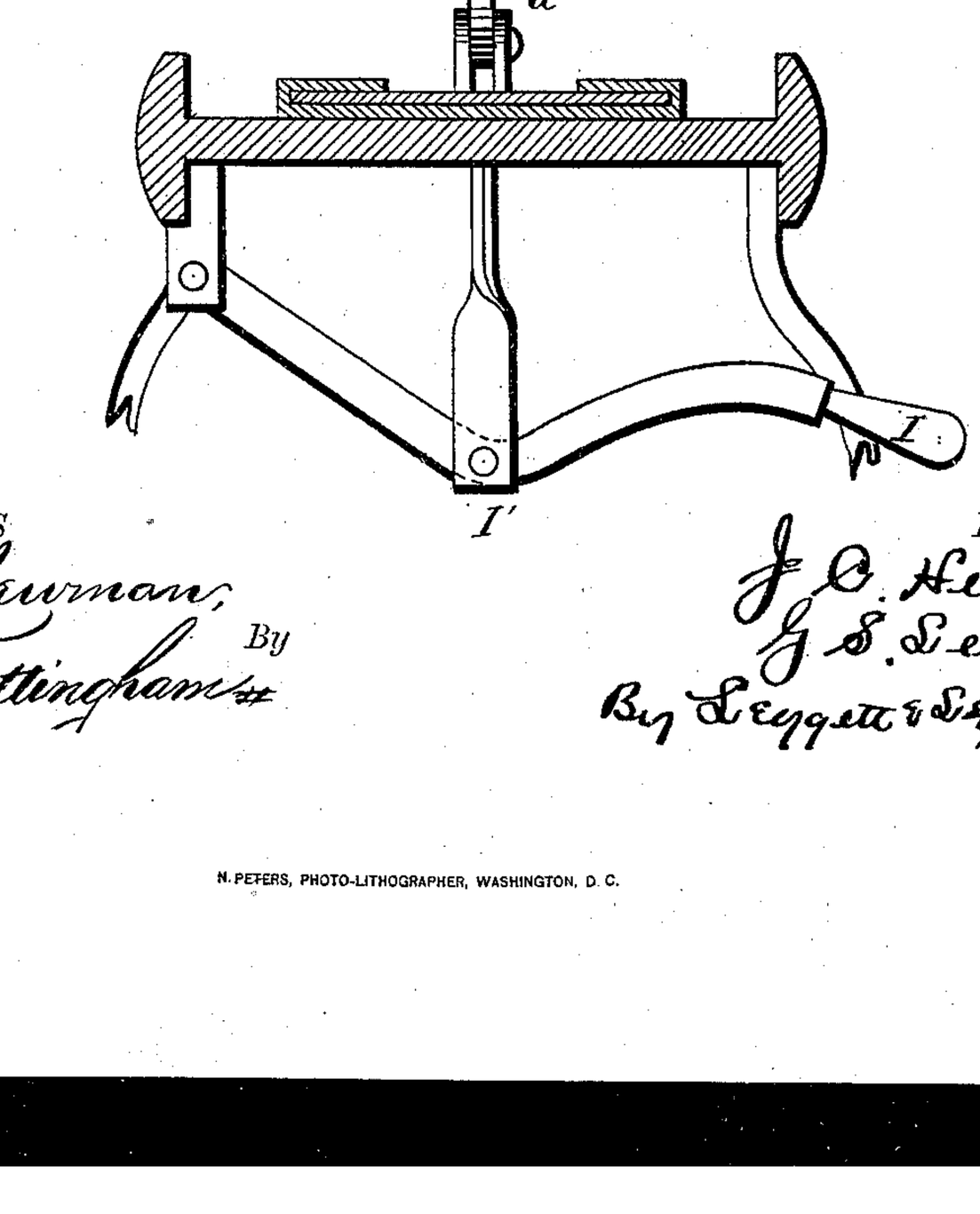


Fig. 3.



WITNESSES

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IMPROVEMENT IN MACHINES FOR CROZING AND CHAMFERING BARRELS.

Specification forming part of Letters Patent No. **173,952**, dated February 22, 1876; application filed January 28, 1876.

To all whom it may concern:

Be it known that we, JOHN C. HERMAN and GEORGE S. LEWIS, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Barrel Machinery; and we 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 a part of this specification:

Our invention relates to certain new and useful improvements in machines for crozing and chamfering barrels.

In the drawings, Figure 1 is a plan view; Fig. 2, a side elevation, partly in section, of our invention complete; Fig. 3, a vertical transverse section, showing a face view of one of the cutter-heads or chucks.

Our invention has for its object the construction of a simple and effective machine for dressing, howeling, crozing, and chamfering barrels, kegs, and buckets in one and the same operation, both ends being done simultaneously.

A is a frame, of any desired or appropriate construction, upon which the operative parts of the machine are mounted. B B are stands or journal-bearings for the shafts C C. Upon the ends of these shafts C C are the cutter-heads D D. The shafts C C move loosely in their bearings *c c*, and are allowed a limited movement horizontally therein. E E are levers secured at one end to a frame, F, and pivoted at C′ C′ to the shafts C C. These levers are for operating or moving the shafts C C forward or backward. *e e* are stops on the frame F, to limit the movement of the levers E E. H is a stationary and H′ a movable band or ring, placed just before the cutter-heads D D. I is a lever connected to and operating the movable ring H′, through the knuckle-joint I′, which is secured at one end to the ring H′ and at the other to the frame A. The cutter-heads D D are constructed as follows: *d* is a projecting flaring ring or rim provided with knives or cutting tools d^1, placed at the same inclination as the flange *d*, and projecting through the rim toward the center. d^2 is another flaring or beveled projecting rim, the inclination or angle of this rim being in an opposite direction from the ring *d*. This ring d^2 is also provided with knives or howeling-bits d^3, which project from the inside or center through toward the outside, in an opposite direction from the knives d^1. Sliding in suitable recesses or guides in the face *f* of the heads D is a knife or crozing-bit, *f′*, which projects through the flange d^2. This tool *f′* is reciprocated, or operated across the head by the lever J and knuckle-joint *j* sliding on the shaft C. Between the space *a*, between the flaring rings *d* d^2, projecting from the rear, outside of the head, are placed cutters or chamfering-bits *b*.

The operation is as follows: The barrel, keg, or bucket is placed in position in the rings H H′ and the movable ring H′ brought up tight in position by the lever I′, clamping and holding the barrel in place between the two rings. Rotary motion is given to the shafts C C and cutter-heads D D by any suitable means. The heads are then brought up toward each other and against the ends of the barrel by the levers E E. The end of the barrel entering the space *a*, as the heads are carried against and over the ends of the barrel, the tools d^3 come in contact with the inside edge of the barrel, and the howeling is commenced. As the heads are advanced farther the tools d^1 commence to come in play, and the outside edge of the barrel is dressed. On a still further movement of the heads the tools or bits *b* commence to cut the ends of the barrel, and it is chamfered. As the heads now revolve the tools or bits *f′* are brought up toward the inside edge of the barrel by the lever J, and the barrel is crozed. Thus the operation of howeling, dressing, chamfering, and crozing both ends of the barrel or keg is accomplished or performed in one and the same operation, and simultaneously.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The heads D D, constructed substantially as described, with suitable cutting tools or bits for howeling, dressing, chamfering, and crozing both ends of barrels, kegs, and buckets simultaneously, in one and the same operation and machine.

2. The heads D D, constructed with the flaring or bevel rings d d^2 and intermediate space a, substantially as and for the purposes described.

3. In combination with the heads D D, constructed with the bevel-flaring rings d d^2, the bits or cutting tools d^1, d^3, b, and f', for howeling, dressing, chamfering, and crozing both ends of barrels, buckets, &c., similtaneously, in one and the same operation.

4. The tool or crozing-bit f', sliding in guides in the face of the heads D, in combination with an operating or reciprocating lever, J, and knuckle-joint j, as and for the purposes described.

5. In combination with the heads D D, constructed as described, the stationary ring or holding-band H, adjustable ring H′, knuckle-joint I′, and lever I, for holding and securing the barrel in place, before the cutting-heads, as described.

6. In a barrel-machine, the combination, with two independent adjustable cutter-heads, D D, of the intermediate barrel-supporting rings H H′, whereby the axis of the barrel is brought in line with the cutter-shafts, and the operation of howeling, dressing, chamfering, and crozing both ends of a barrel is accomplished at a single operation.

In testimony that we claim the foregoing, we have hereunto set our hands this 14th day of April, 1875.

JOHN C. HERMAN.
GEO. S. LEWIS.

Witnesses:
JOHN GATH,
C. V. BECHMANN.