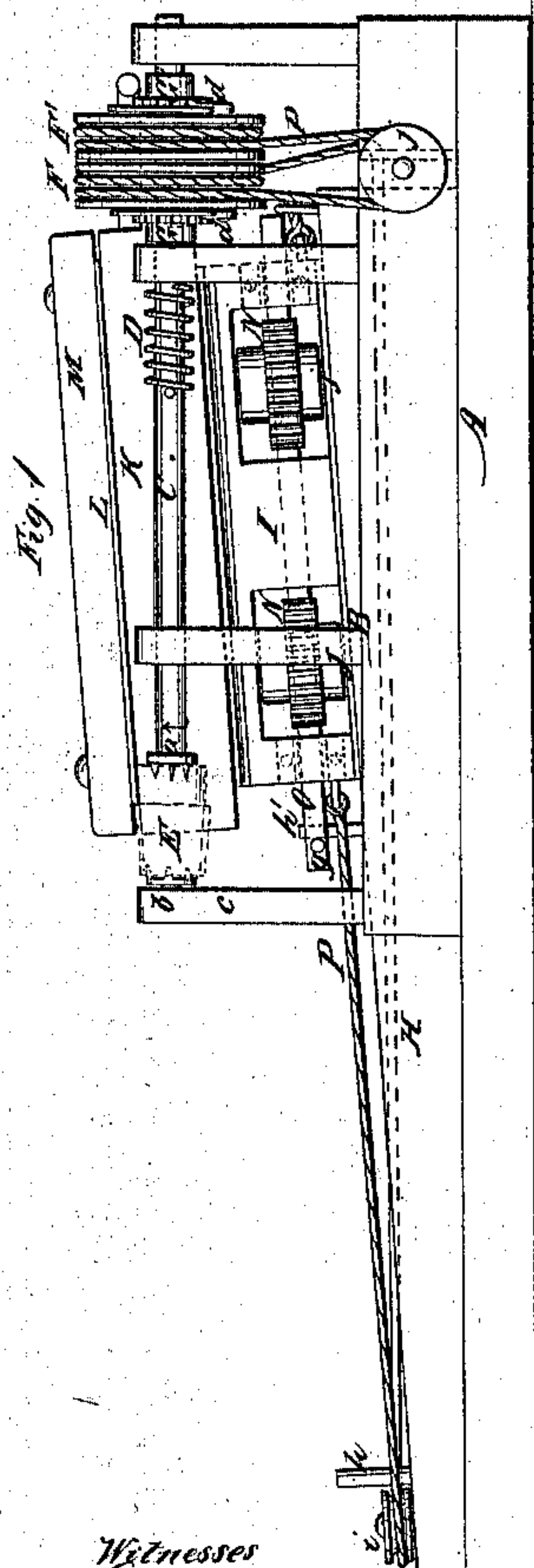
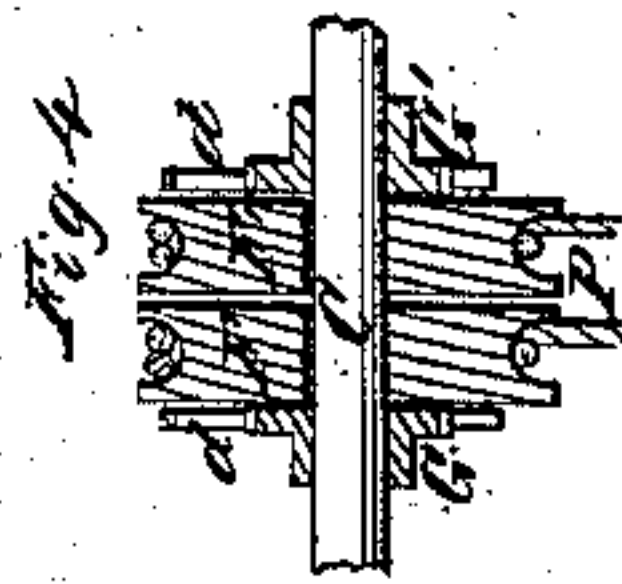
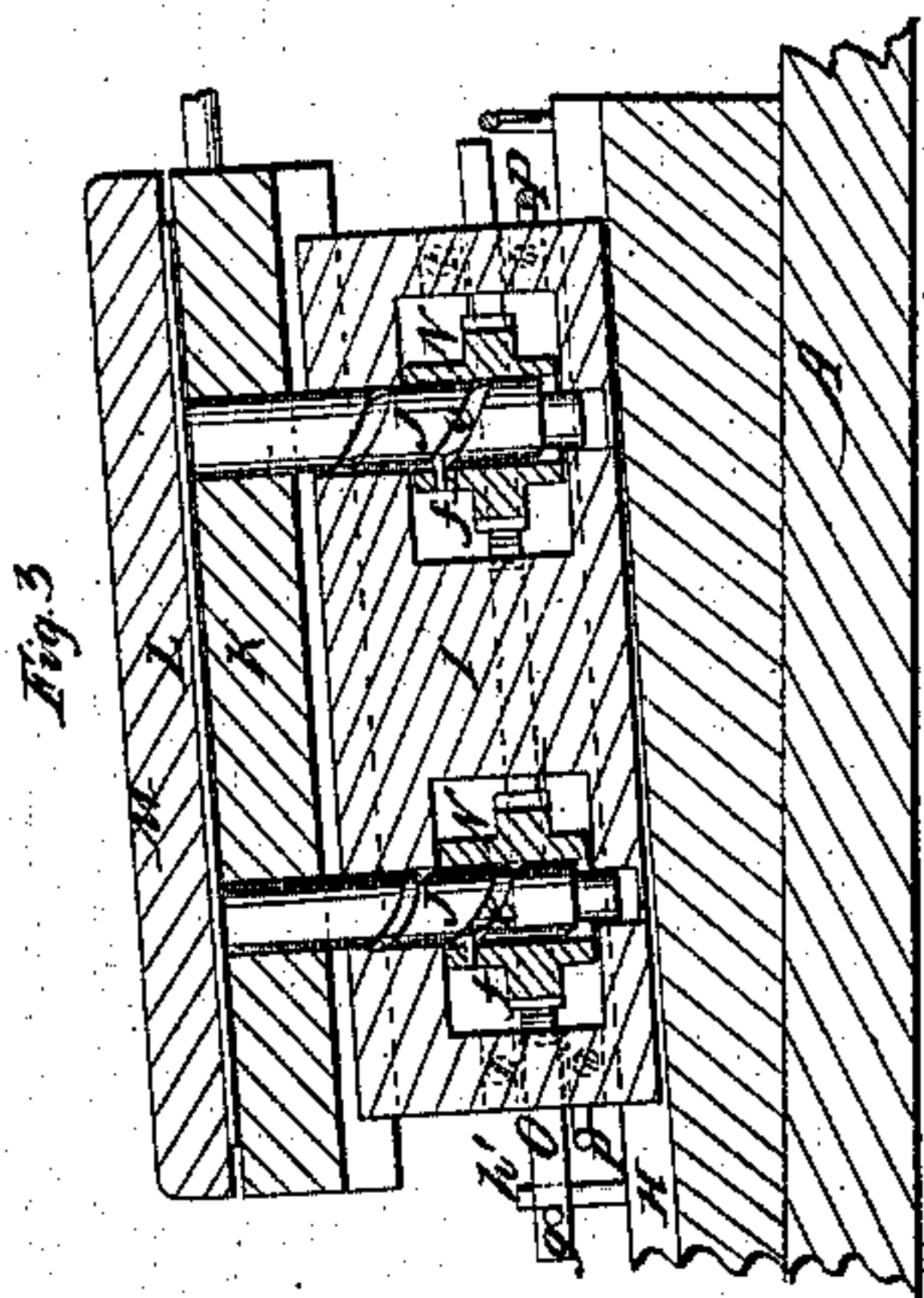


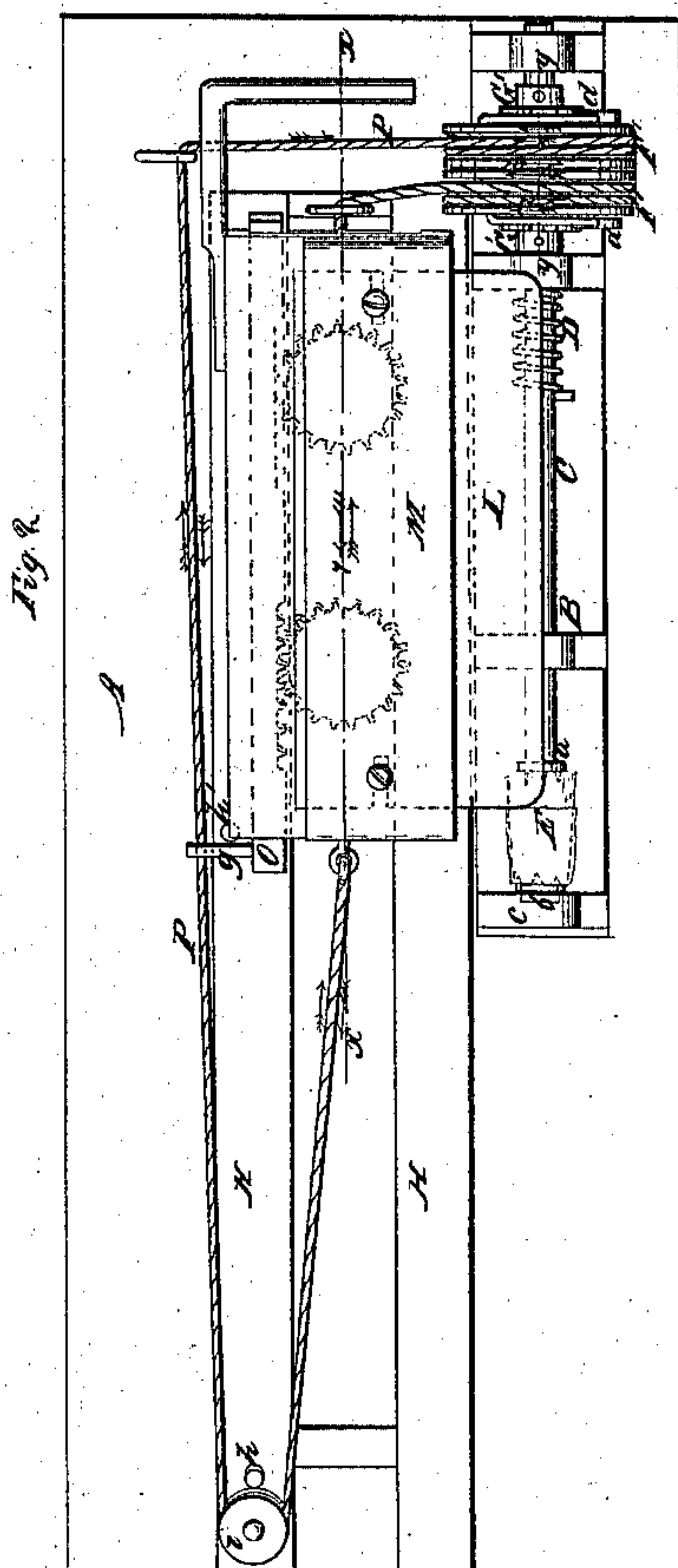
# Power & Bailey, Cork Machine.

N<sup>o</sup> 35,351.

Patented May 20, 1862.



Witnesses  
G. W. Reed  
J. P. Buckley



Inventor  
John Power  
A. J. Bailey per Munn & Co.



# UNITED STATES PATENT OFFICE.

JOHN POWER, OF BOSTON, AND ANDREW J. BAILEY, OF CHARLESTOWN,  
ASSIGNORS TO PETER HOLMES, OF CHARLESTOWN, MASSACHUSETTS.

IMPROVED MACHINE FOR CUTTING CORK STOPPERS FOR BOTTLES AND OTHER VESSELS.

Specification forming part of Letters Patent No. 35,351, dated May 20, 1862.

## *To all whom it may concern:*

Be it known that we, JOHN POWER, of Boston, in the county of Suffolk and State of Massachusetts, and ANDREW J. BAILEY, of Charlestown, in the county of Middlesex, in the same State, have invented a new and Improved Machine for Cutting Cork Stoppers for Bottles and other Vessels; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of our invention; Fig. 2, a plan or top view of the same; Fig. 3, a vertical longitudinal section of the same, taken in the line *x x*, Fig. 2; Fig. 4, a section of a portion of the same, taken in the line *y y*, Fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain a machine by which cork stoppers for bottles and other vessels may be cut with a single knife at one operation.

To this end the invention consists in the employment or use of a reciprocating knife in connection with a rotary mandrel arranged in such a manner that the mandrel will have a continuous rotary motion in one and the same direction imparted to it by the reciprocating movement of the knife, and the latter during its movement be automatically adjusted, so as to rough off the cork during its movement in one direction and give the finishing cut during the other movement in the opposite direction.

To enable those skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A represents a bed or platform, on which a head, B, is placed, containing a mandrel, C. This mandrel is allowed to work longitudinally in its head B, and it has a spiral spring, D, upon it, which has a tendency to keep the cork E to be cut between a spur-head, *a*, at the inner end of the mandrel, and a spur-head, *b*, which is allowed to rotate freely in an upright, *c*, of head B, the spur-head *a* connecting the cork E with the mandrel C and causing it to rotate with it.

On the mandrel C there are placed two loose

pulleys, F F', side by side, each pulley being provided with a pawl, *d*, which catch into ratchets G G', permanently secured on the mandrel. (See Figs. 1, 2, and 4.)

H H are two parallel inclined ways, which are placed on the bed or platform A parallel with the mandrel C. Between these ways H H there is placed a slide, I, in which there are two shafts, J J, parallel with each other and at right angles with the upper surfaces of the ways H H, as shown clearly in Fig. 3. The shafts J J project up through the slide I and fit in a cap, K, which is placed on the top of the slide I, and to which a knife, L, is secured by a clamp, M. The knife L projects out from the slide I, so that its cutting-edge will be directly over the center of the mandrel C. The cap K, and consequently the knife L, has an inclined position corresponding with that of the ways H H.

Each shaft J has a spiral groove, *e*, made in it, and on each shaft a loose pinion, N, is placed. These pinions are connected with the shafts J J by pins *f*, which project from the inner surfaces of the hubs of the pinions and fit in spiral grooves *e e* of the shafts J J, as shown in Fig. 3. The pinions N N both gear into a sliding rack, O, which is fitted in guides attached to the slide I, said rack having a pin, *g*, projecting at right angles from its lower end, as shown in Fig. 2. To one of the ways H there are attached two upright pins, *h h'*, one, *h*, being at the lower end of the way, and the other, *h'*, at about its center.

P is a cord or chain, the ends of which are attached to the slide I. This cord passes around a pulley, *i*, at the lower end of one of the ways H, and also around the loose pulleys F F' on the mandrel C and around a pulley, *j*, attached to the bed or platform A, as shown in Fig. 1.

The operation is as follows: The cork E, previously cut of the proper size, is adjusted between the spur-head *a* of the mandrel C and the spur-head *b* of the upright *c*, and the operator shoves the slide I forward in the direction of arrow 1, and by this movement of the slide the cork E is rotated through the medium of the cord or chain P and the pulley F, the cord or chain and the pulleys F F' moving in the direction indicated by the black ar-



rows. During this movement the knife L roughs off the cork, and when the slide I nearly reaches the termination of this forward movement the pin *g* at the lower or front end of the rack O strikes the upright pin *h* on the way H and causes said rack O to be moved, so that the pinions N N will be rotated and the shafts J J and cap K lowered and the knife L consequently depressed. This lowering of the shafts J J is effected in consequence of the pins *f f* fitting in the spiral grooves *e e*. The operator now draws the slide I backward or toward him and the knife L finishes the cork, the knife taking off a fine shaving. The red arrows in Fig. 2 indicate this movement of the cutter L, cord or chain P, and pulleys F F', the pulley F' turning the mandrel C during the latter movement. When the slide I nearly reaches the termination of its backward movement, the pin *g* of rack O strikes the pin *h'* of the way H, and the rack O is moved and the pinions N N turned so as to raise the shafts J J and cap K and elevate the knife L for a succeeding roughing-off cut. The inclination of the ways H H give the taper form to the cork, and the taper may be varied as desired by regulating the position or inclination of said ways, and corks of cylindrical form may be cut by adjusting the ways in a horizontal position. Instead of this arrangement, however, the ways H H may have a permanent horizontal position and the mandrel C be in-

clined, in order to give the taper form to the corks. Thus it will be seen that the two different cuts may be given the corks—to wit, the roughing-off and the finishing cut—with one and the same knife and at one operation, the cork having a continuous rotary motion in one direction imparted to it by the reciprocating movement of the knife.

The machine as a whole is extremely simple and efficient and may be operated with the greatest facility.

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

1. The combination of the reciprocating cutter L and rotating mandrel C when arranged, substantially as shown, so that the latter will have a continuous rotary motion imparted to it in one and the same direction by the reciprocating movement of the cutter, for the purpose herein set forth.

2. The cap K of slide I, with the knife L and spirally-grooved shafts J J attached, in combination with the sliding rack O, pinions N N, and pins *h h'*, arranged, substantially as shown, for elevating and depressing the knife L, for the purpose specified.

JOHN POWER.

ANDREW J. BAILEY.

Witnesses:

STEPHEN C. HOLMES,  
FRED E. HOLMES.