

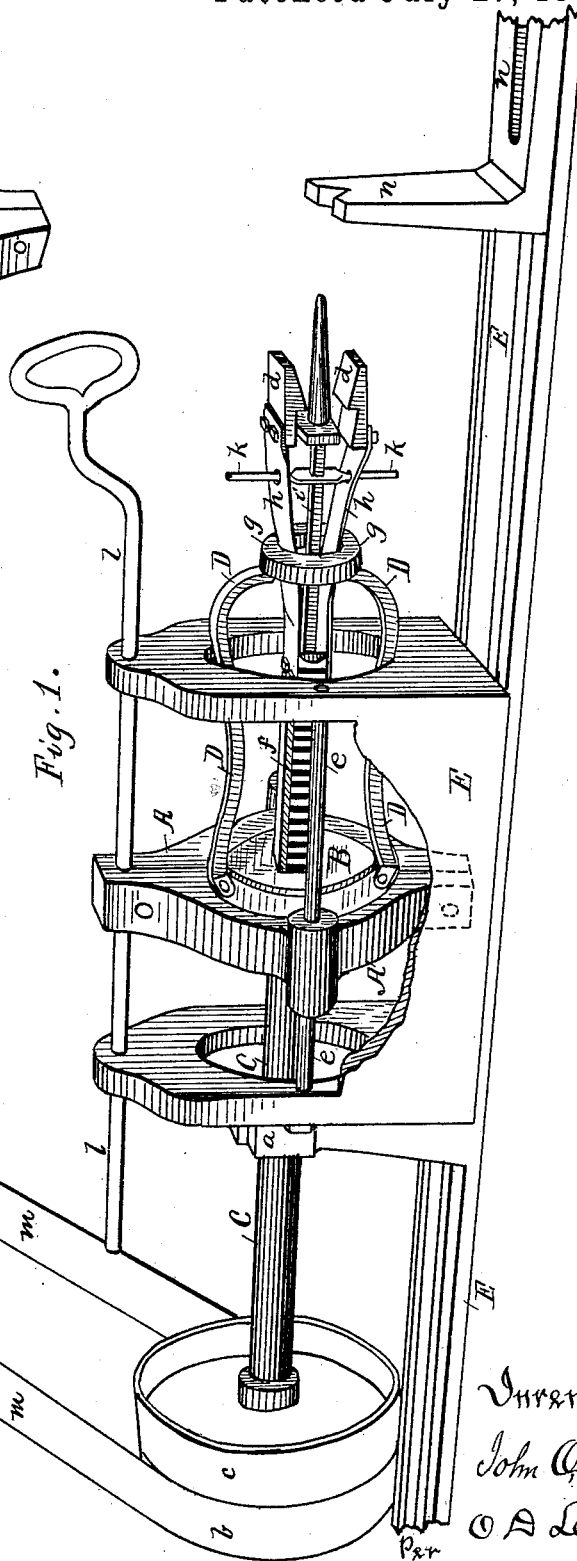
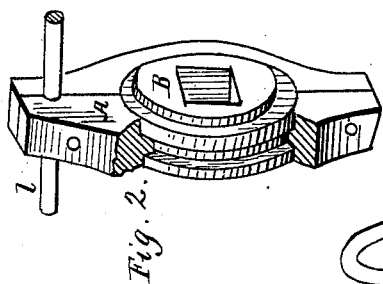
(No Model.)

J. O. MALLEY.

MACHINE FOR FINISHING THE NECKS OF BOTTLES.

No. 346,116.

Patented July 27, 1886.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

JOHN O. MALLEY, OF PITTSBURG, PENNSYLVANIA.

## MACHINE FOR FINISHING THE NECKS OF BOTTLES.

SPECIFICATION forming part of Letters Patent No. 346,116, dated July 27, 1886.

Application filed September 19, 1885. Serial No. 177,634. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN O. MALLEY, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improved Machine for Finishing the Necks of Bottles; 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 the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in machines for finishing the necks of bottles, the object being to provide a machine whereby the neck of a bottle may be finished in a simple and efficient manner; and it consists in certain details of construction and combination of parts, as will be more fully described hereinafter.

In the accompanying drawings, Figure 1 is a perspective view of my improved finishing-machine. Fig. 2 is a detailed perspective view of the rotary head.

To put my invention into practice, I construct a frame, E, of suitable size, shape, and form of construction. A horizontal shaft, C, is fixed in suitable bearings, *a*, to one end of which shaft are secured a fixed and loose pulley, *b* *c*, and to the other end spring-arms *h*, carrying the finishing-tools *d*. Near the center of the frame E are suspended on suitable guides, *e*, a sliding-head, A, in which is placed a revolving disk, B, which may be moved back and forth on the square portion *f* of the shaft C. Secured to this revolving disk B is a frame, D, having on the opposite end a circular ring, *g*, which, when moved up the inclined surfaces of the spring-arms *h*, compresses the same, and tightens the tools *d* on the neck of the bottle placed between. From the end of the shaft C projects another shaft, *i*, of less diameter, having at the end a tapering point, *j*, which is inserted into the neck of the bottle when in operation. A transverse rod, *k*, secured to the shaft *i* and passed through the arms *h*, serves to keep the same in place. The rod *l*, secured to the moving head A and belt *m*, operates both the moving head A and driving-belt *m* at the same

time. A vertical rest, *n*, is placed in front of the finishing-tools *d*, and may be adjusted to any distance. This rest *n* is used for holding the tool in which the bottle is secured.

The operation is as follows: The neck of the bottle is placed over the tapering point *j*, and between the tools *d*. The rod *l* is moved forward, which movement draws the driving-belt *m* onto the pulley *c*, which is fixed to the shaft C, and puts the same in motion, and also moves the sliding head A forward, which tightens or clamps the tools *d* on the neck of the bottle placed between, and these tools *d*, being revolved at a high speed, form the neck of the bottle to correspond to the shape of the tools.

I am aware of the mechanism for finishing the necks of bottles shown in the Patent No. 166,390, dated August 3, 1875. That mechanism, however, differs materially from mine, and nothing shown or described in said patent is sought to be covered in this application.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a machine for finishing the necks of bottles, the combination, with a revolving shaft mounted in suitable bearings, and provided at one end with spring-arms carrying finishing-tools, of a disk placed on said shaft to revolve therewith, a frame secured at one end to the disk, and provided at its other end with a ring for encircling the spring-arms and mechanism, substantially as described, for moving the disk and frame longitudinally of the shaft to tighten or loosen the hold of the tools upon the article placed between them, as set forth.

2. In a machine for finishing the necks of bottles, the combination, with a revolving shaft mounted in suitable bearings, and provided at one end with spring-arms carrying finishing-tools, and provided also at the same end with a smaller shaft having a tapering point, of a transverse rod secured to the small shaft and passing through the spring-arms, for limiting the inward movement of the tools, substantially as described.

3. In a machine for finishing the necks of bottles, the combination, with a suitably-mounted revolving shaft, as C, provided at

one end with a fast and loose pulley, and at its other end with spring-arms carrying finishing-tools, and also with a smaller shaft, as *i*, having a tapering point, and a transverse rod  
5 secured to the small shaft and extending through the spring-arms to limit the inward movement of the tools, of a sliding disk placed on shaft C to revolve therewith, a frame, as D, secured at one end to the disk and provided  
10 at its other end with a ring for encircling the spring-arms, a sliding head, as A, in which the disk is carried, and a rod, as *l*, secured to said head and engaging with the driving-belt of the machine for simultaneously applying power or throwing it off and operating the  
15 tools, as set forth.

JOHN O. MALLEY.

Witnesses:

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