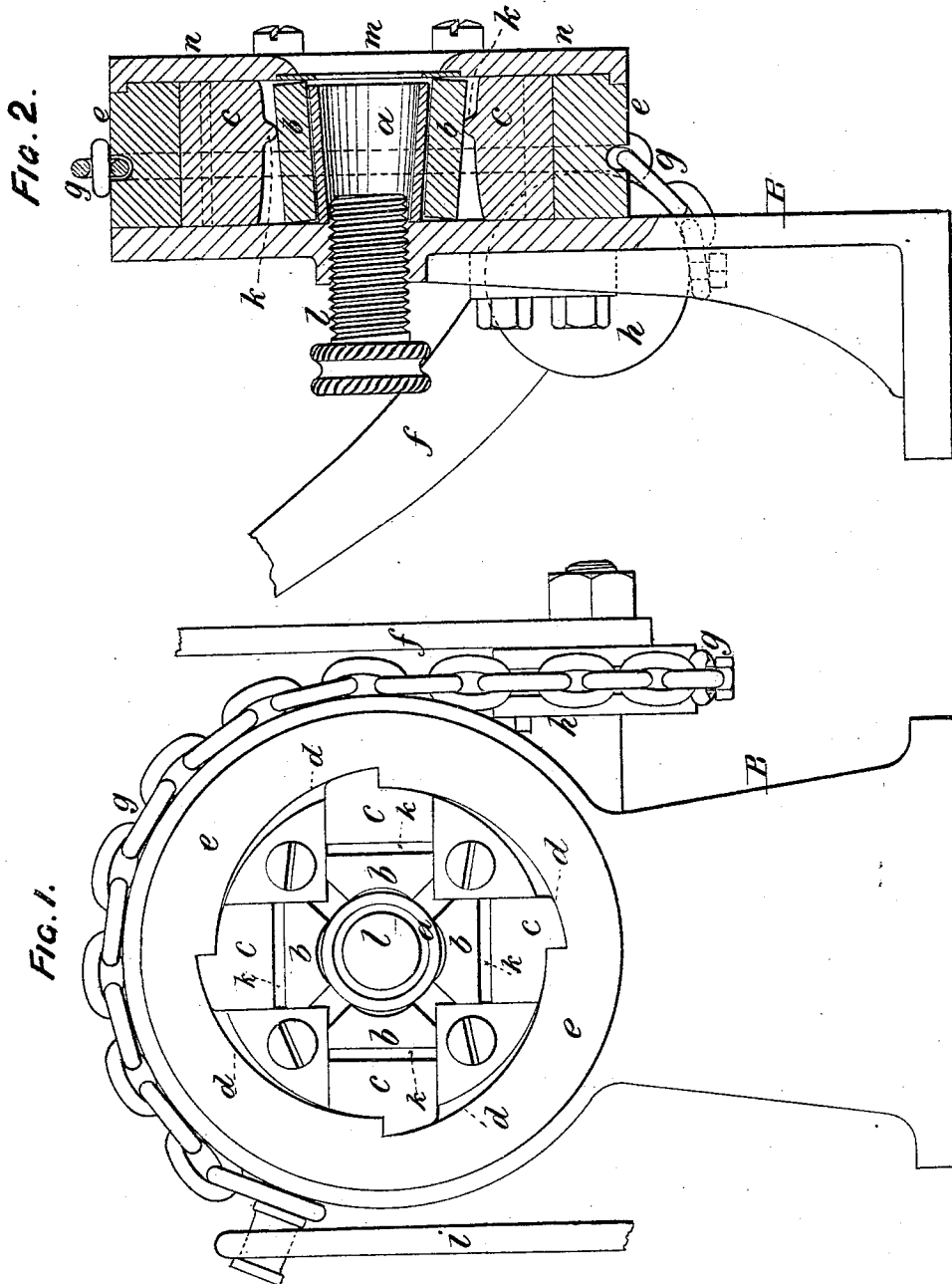


J. PATERSON.

Apparatus for Capsuling Bottles.

No. 148,977.

Patented March 24, 1874.



Witnesses, Harry Smith
Thomas M. Evans

James Paterson
by his attys.
Howson and Son.

UNITED STATES PATENT OFFICE.

JAMES PATERSON, OF LEYTONSTONE, ENGLAND.

IMPROVEMENT IN APPARATUS FOR CAPSULING BOTTLES, &c.

Specification forming part of Letters Patent No. 148,977, dated March 24, 1874; application filed March 9, 1874.

CASE B.

To all whom it may concern:

Be it known that I, JAMES PATERSON, of Leytonstone, in the county of Essex, England, have invented certain Improvements in Machines for Capsuling Bottles and other Vessels, of which the following is a specification:

My invention relates to improvements in the mode of applying metallic capsules to bottles for which Letters Patent No. 121,407 were granted to William Betts, as my assignee, on the 28th day of November, 1871; and the object of my invention is to fix the capsules more expeditiously and effectually than heretofore, by operating the elastic diaphragm described in the said patent by simple mechanical appliances, instead of by the pressure of a surrounding fluid.

In the accompanying drawing, Figure 1 is a front elevation of my improved capsuling apparatus with the cover-plate removed, and Fig. 2 is a sectional elevation of the same.

The elastic tubular diaphragm or collar *a* is situated at the intersection of four or other suitable number of radial grooves formed in the upper circular portion of the standard *B* of the apparatus, and is surrounded, held in place, and pressed upon by pressing-pieces *b*, each adapted to one of the radial grooves in the standard. Each pressing-piece *b* is acted on by a sliding dog, *c*, also adapted to the grooved portion of the standard; and the whole of said dogs can be forced inward simultaneously by the action of cam-like inclines *d* on the interior of a ring, *e*, which will cause the pieces *b* to compress the collar *a* around the neck of a bottle or other vessel, in order to fix a metallic capsule to the same. The ring *e* is adapted to the exterior of the circular portion of the standard, and can be partially turned in one direction by a lever, *f*, segment *h*, and chain *g*, attached to the said segment and ring, the reverse movement of the ring being effected when the lever is released by the action of a rubber or other spring, *i*.

The elastic collar *a* may be made more or less conical, as shown in Fig. 2, so that it may adapt itself to a tapered bottle-neck; and, in order to prevent the breaking of the latter by any inequality of pressure, and to permit an equal and uniform adjustment of the elastic collar, I make each of the pressing-pieces *b* self-accommodating to the angle of the bottle-neck or other vessel against which it is pressed, by forming a transverse rib, *k*, on the face of each of the dogs *c*, upon which the said pressing-pieces can oscillate freely.

The same result might be attained by forming the rib or bearing-point on the back of the pressing-piece, instead of upon the dog, but this is immaterial.

The position of the bottle-neck within the elastic collar is determined by an adjustable screw-stop, *l*, with which the cork or end of the bottle-neck is brought in contact when the latter is inserted into the said elastic collar through the aperture *m* in the center of the front plate *n*.

I claim as my invention—

1. In a machine for applying capsules to bottles or other vessels, the combination, substantially as described, of the elastic collar or diaphragm *a*, the oscillating pressing-pieces *b*, and the sliding dogs *c*, by which the said pressing-pieces are operated.

2. The combination of the elastic collar or diaphragm *a*, the pressing-pieces *b*, the sliding dogs *c*, and the cam-ring *e*, all substantially as and for the purpose specified.

In witness whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES PATERSON.

Witnesses:

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