

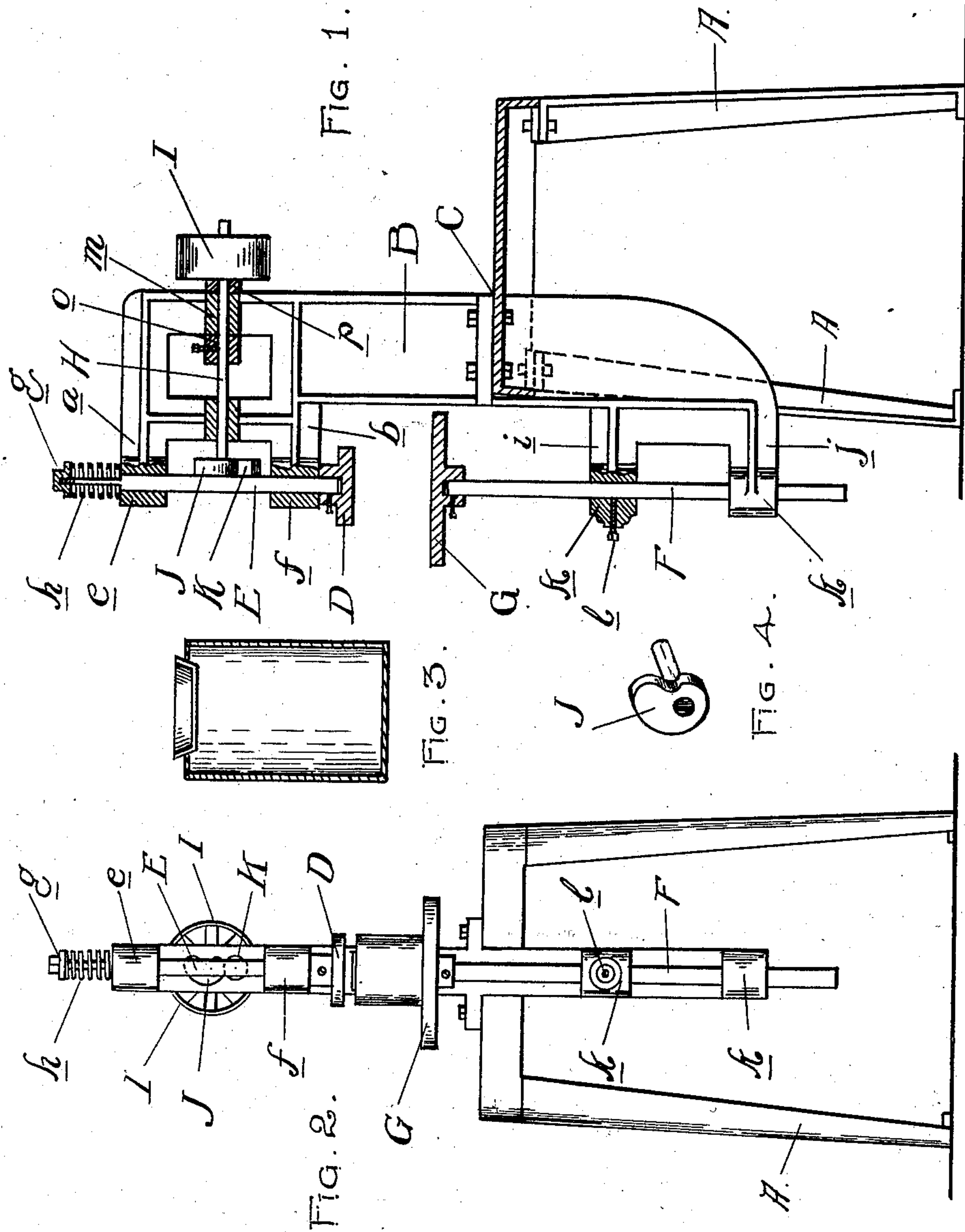
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F. NEAL.  
CAPPING MACHINE FOR FRICTION TOP CANS.

APPLICATION FILED APR. 25, 1903.

NO MODEL.



WITNESSES.  
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# UNITED STATES PATENT OFFICE.

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## CAPPING-MACHINE FOR FRICTION-TOP CANS.

**SPECIFICATION** forming part of Letters Patent No. 746,564, dated December 8, 1903.

Application filed April 25, 1903. Serial No. 154,254. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK NEAL, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Capping-Machines for Friction-Top Cans, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to a power closing-machine especially designed in use for applying the covers or tops to friction-top cans; and it consists in the novel and simple construction of the machine and in the peculiar arrangement and combination of its various parts, as will be fully hereinafter set forth, and shown in the drawings, in which—

Figure 1 is a vertical central section through the machine. Fig. 2 is a front elevation thereof. Fig. 3 is a section through a friction-top can, and Fig. 4 is a detached perspective view of the operating-cam.

In the drawings thus briefly described the reference-letter A represents a suitable bench or other support, preferably of metal, upon which is mounted a vertical supporting-frame B. The frame, as shown, is arranged within an opening C within the table, is bolted to the latter, and extends above and below the same. At its upper end the supporting-frame carries bracket-arms *a* and *b*, provided with the tubular bearings *e* and *f*. Within these bearings is journaled for vertical reciprocating movement a plunger D. A plunger-rod E extends above the bearing *e* and carries a flanged cap *g* at its upper end. Interposed between this cap and the tubular bearing adjacent thereto is a coil-spring *h*, encircling the plunger-rod.

*i* and *j* represent brackets at the lower end of the supporting-frame carrying the tubular bearings *k*. Mounted within these bearings for vertical adjustment is a rod F, carrying at its upper end a work-support G in the form of a table. A set-screw *l* in the bearing *k* serves to hold the work-support in different positions of adjustment.

Journaled in bearings *m*, within the upper portion of the supporting-frame, is a transverse shaft H, carrying the band-pulley I at

its outer end and a cam J at its opposite or inner end.

K is a roller upon the plunger-rod E in operative relation to the cam J. Endwise movement of the driven shaft is prevented by suitable collars *o* and *p* thereon, which bear against the supporting-frame.

In the operation of the machine the can to which the cover is to be applied is placed upon the work-support G, the latter having been first properly adjusted beneath the plunger. Motion being imparted to the plunger through the agency of the band-pulley I, the plunger-head is forced into contact with the can-cover through the agency of the cam, and the sealing of the can is effected. The plunger is then returned to its initial position by the coil-spring, and the operation previously described is repeated.

Any means may be employed—as, for instance, a belt—for continuously rotating the shaft H and intermittently reciprocating the plunger, the period between reciprocations being properly timed, whereby the work may be placed upon the table and removed therefrom.

What I claim as my invention is—

1. In a capping-machine for friction-top cans, the combination with a frame-support, of a frame extending within an opening in said support and projecting above and below the latter, a plunger journaled in the section of the frame above the support for vertical reciprocation, means for intermittently reciprocating the plunger, and a work-support in operative relation to the plunger.

2. In a capping-machine for friction-top cans, the combination with a vertical supporting-frame, of a stationary support for the work comprising a vertically-adjustable rod arranged in bearings on said frame and carrying a work-support at its upper end, a plunger mounted in the frame in operative relation to the work-support for reciprocating movement thereabove, a driven shaft journaled in the supporting-frame, a drive connection between said shaft and the plunger for operating the latter in one direction, and a spring for moving the plunger in the opposite direction.



3. In a capping-machine for friction-top cans, the combination with a vertical supporting-frame having a pair of laterally-projecting bracket-arms at the upper and lower ends thereof, of a vertically-adjustable rod 5 fixedly held in the lower arms and carrying a work-support at its upper end, a plunger mounted in the upper pair of brackets for vertical reciprocation above the work-support, a drive-shaft journaled within the frame, 10 a drive connection between said shaft and the plunger for forcing the latter in a downward direction, and a spring for retracting said plunger.

15 4. In a capping-machine for friction-top cans, the combination with a vertical supporting-frame having a pair of laterally-projecting bracket-arms at the upper and lower ends thereof, of a vertically-adjustable rod 20 fixedly held in the lower arms and carrying a work-support at its upper end, a plunger mounted in the upper pair of brackets for vertical reciprocation above the work-support, and means for intermittently reciprocating the plunger.

25 5. In a capping-machine for friction-top cans, the combination with a vertical supporting-frame, having a pair of laterally-pro-

jecting bracket-arms at the upper and the lower ends thereof, of a vertically-adjustable 30 rod engaging the lower arms and carrying a work-support at its upper end, a plunger mounted in the upper pair of brackets for vertical reciprocation, a driven shaft journaled transversely within the supporting- 35 frame, a cam upon said shaft, a roller upon the plunger in operative relation to the cam, and a spring for returning said plunger to its initial position after its actuation by said cam.

6. In a capping-machine for friction-top 40 cans, the combination with a frame-support, of a frame extending within an opening in said support and projecting above and below the latter, a plunger journaled in the section 45 of the frame above the support for vertical reciprocation, means for intermittently reciprocating the plunger, and a work-support in operative relation to the plunger adjustably supported in the lower portion of the 50 frame below the work-support.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK NEAL.

Witnesses:

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G. B. PULFER.