

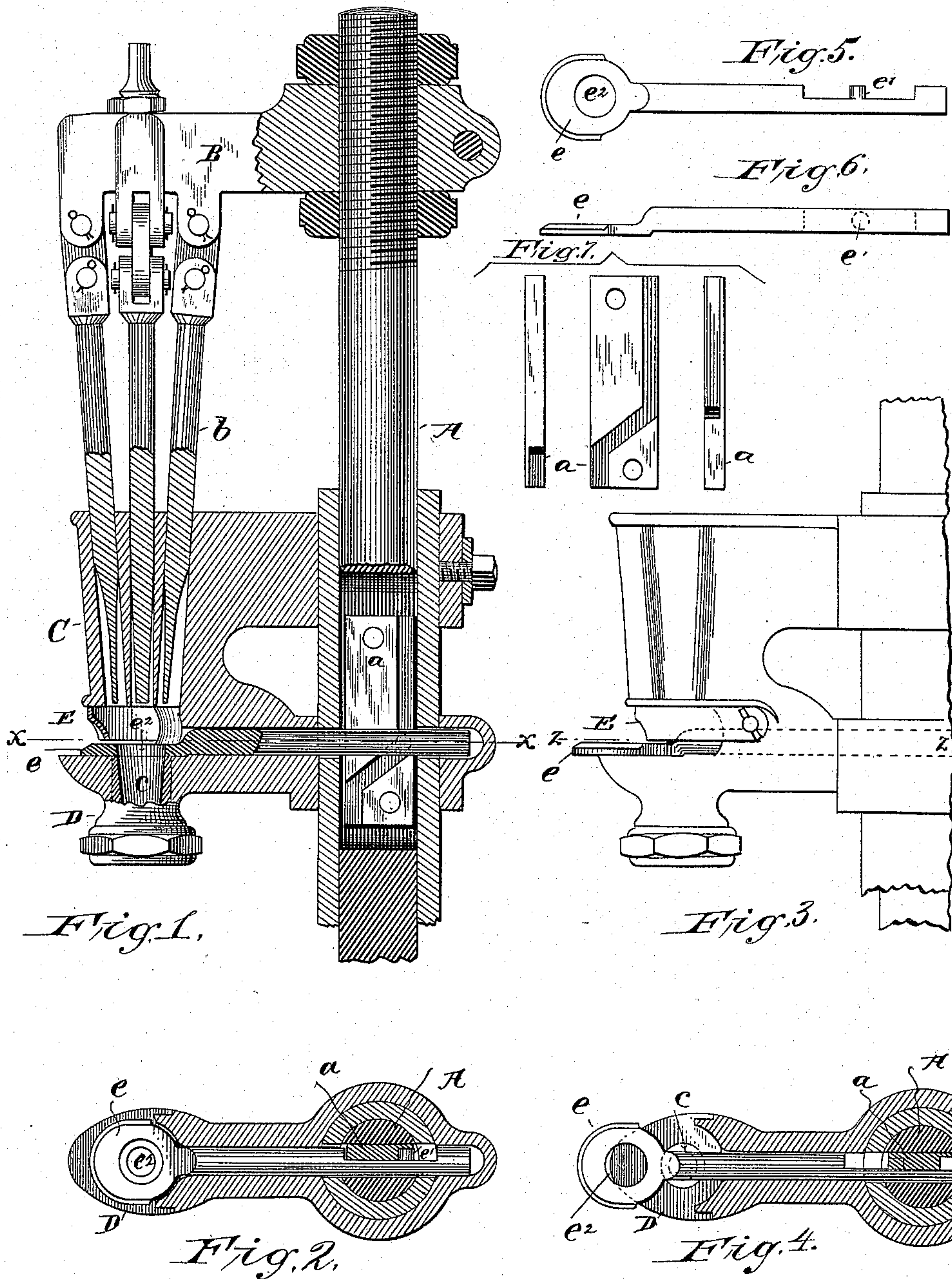
(No Model.)

2 Sheets—Sheet 1.

E. V. CLEMENS.  
BOTTLE SEALING MACHINE.

No. 533,115.

Patented Jan. 29, 1895.



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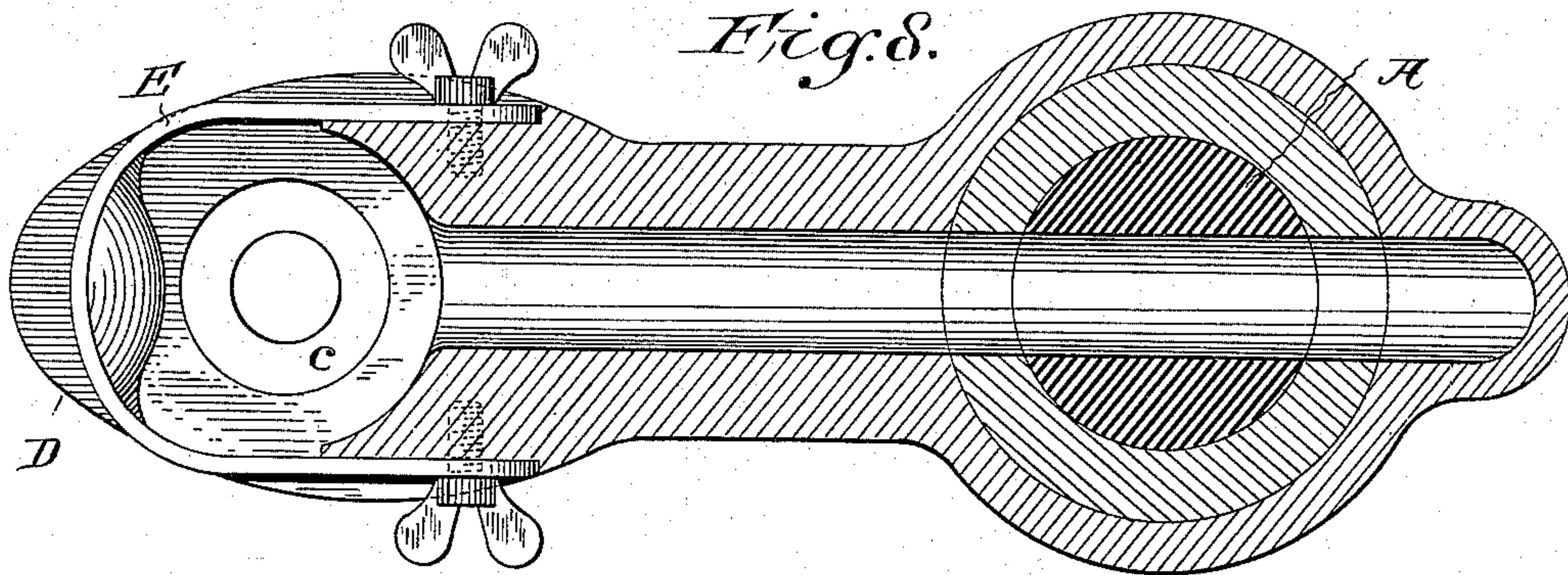
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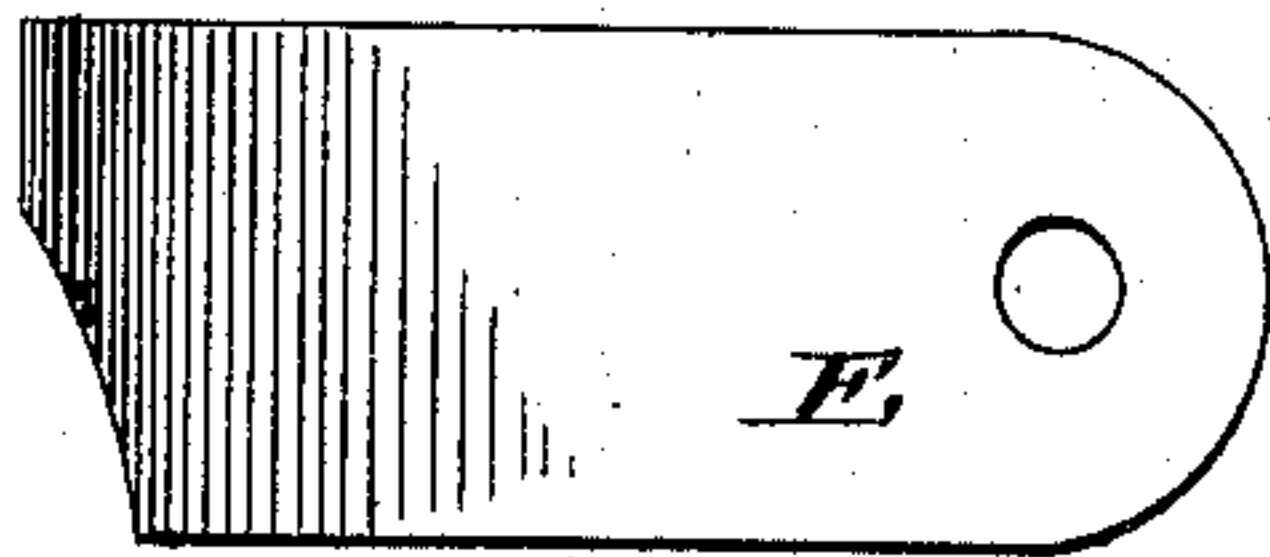
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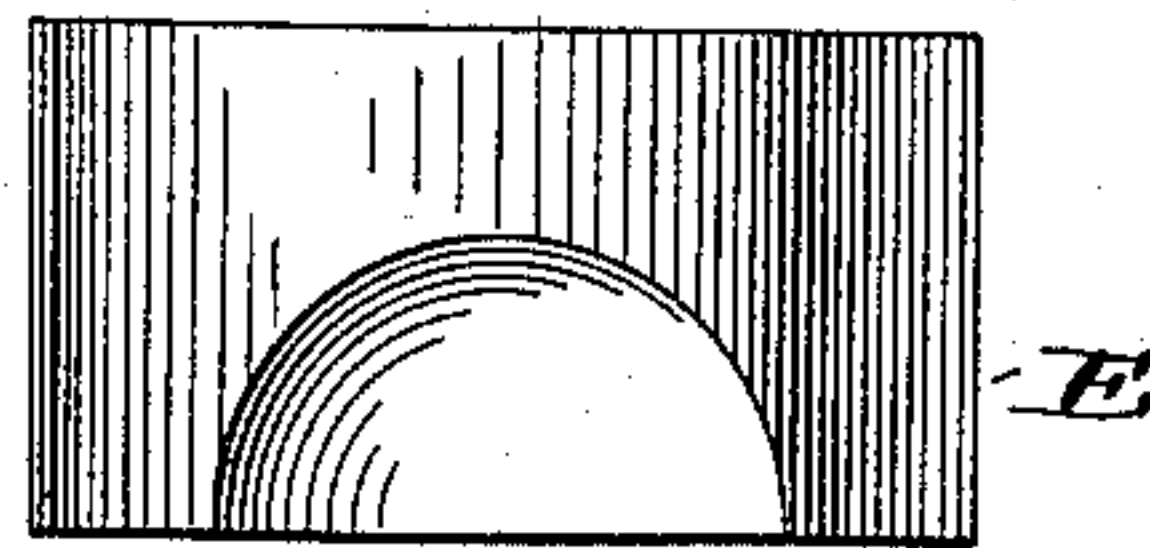
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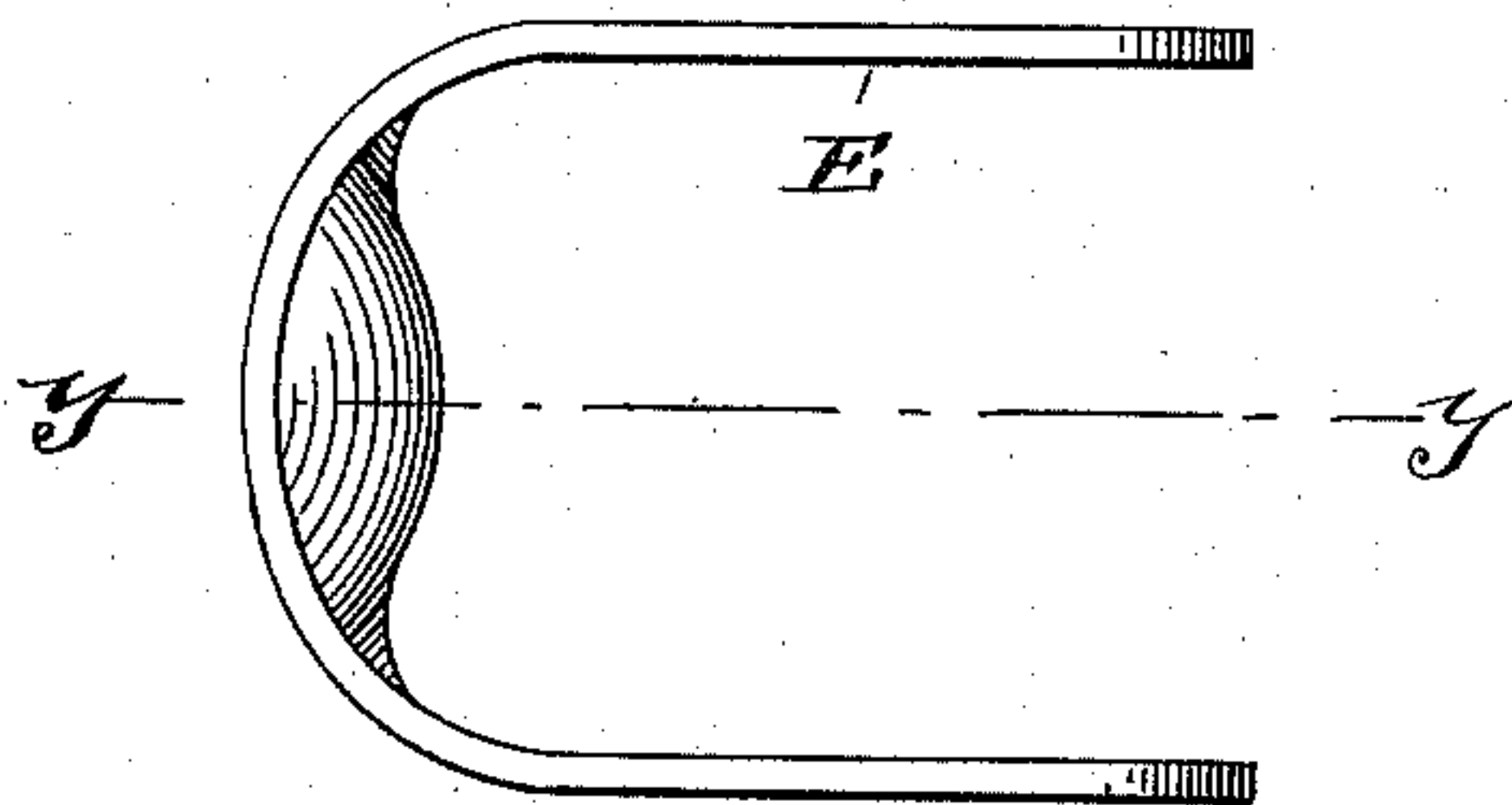
*Fig. 9.*



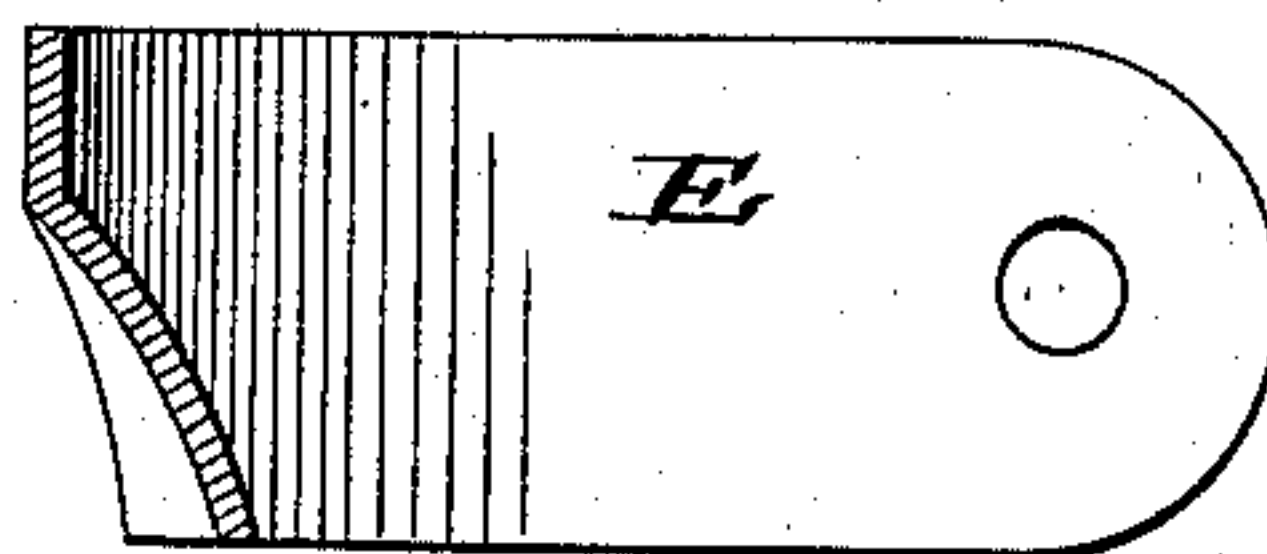
*Fig. 10.*



*Fig. 11.*



*Fig. 12.*



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# UNITED STATES PATENT OFFICE.

ERNEST V. CLEMENS, OF NEW YORK, N. Y., ASSIGNOR TO THE DE LA VERGNE  
BOTTLE AND SEAL COMPANY, OF NEW JERSEY.

## BOTTLE-SEALING MACHINE.

SPECIFICATION forming part of Letters Patent No. 533,115, dated January 29, 1895.

Application filed June 13, 1892. Serial No. 436,626. (No model.)

*To all whom it may concern:*

Be it known that I, ERNEST V. CLEMENS, a citizen of the United States, and a resident of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Bottle-Sealing Machines, of which the following is such a full, clear, concise, and exact description as will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The invention relates more especially to those corking machines which are designed for inserting seal-stoppers. Such machines consist of a standard, an operating-shaft, a plunger-head, and one or more plungers with suitable actuating mechanism. In addition to these parts there is also the head-piece having a throat through which the stopper is forced and compressed into the bottle. Where the machines are operated by steam-power the work of sealing or corking the bottles is performed with great rapidity, but there is more or less liability of injury to the operator while feeding the seals into the throat beneath the plungers.

The principal object of the present improvements is to obviate the objections heretofore existing in machines of this character, and the invention consists in the construction of the feed attachment and finger-guard mechanism, as hereinafter more fully described and pointed out in the claims.

In the accompanying drawings Figure 1 is an elevation partly in section of the upper part of the standard showing the operating-shaft, the plunger-head, the plunger-guides and throat-piece. As shown in this figure the parts are in position for a down stroke of the plungers. Fig. 2 is a sectional view taken on the line  $x, x$ , of Fig. 1, showing by a partial sectional plan, the feed-slide and finger-guard attachments. Fig. 3 is a side elevation of the plunger-guide and head-piece, and of the feed-slide, the latter being in position to receive a seal. Fig. 4 is a sectional plan view on the line  $z, z$ , of Fig. 3. Figs. 5 and 6 are plan and side views of the feed-slide. Fig. 7 embraces

a front, side and rear view of the actuating-cam for the feed-slide. Fig. 8 is an enlarged plan and partial section on the line  $z', z'$ , of Fig. 3, with the feed-slide removed. Fig. 9 is a side view of the finger-guard; Fig. 10, a front view thereof; Fig. 11, a plan view of the same, and Fig. 12 a section on the line  $y, y$ , of Fig. 11.

In the drawings A represents the operating-shaft for imparting motion to the plunger-head, B, carrying the plungers  $b$ , which pass through the plunger guide-piece C above the head-piece D, and a throat  $c$  for receiving the seals. The seals are fed to and forced by compression through the throat  $c$  into the bottles placed upon a suitable support not shown. The plunger guide-piece C and head-piece D are preferably made in one casting which for accessibility may be shaped to leave a space between that portion which guides the plungers and the throat into which the seals are fed. The finger-guard E is secured by screws (see Fig. 8) to the plunger-guide and practically closes the space between the same and the throat-piece. A feed-slide  $e$ , best shown by Figs. 5 and 6, extends directly above the throat and back through a groove in the head-piece. This feed-slide  $e$  is recessed or notched and provided with a pin or lug  $e'$ , projecting in the notched part. It is guided in a groove or race-way of an actuating-cam,  $a$ . This actuating-cam is secured within a slot in the operating-shaft A and the feed-slide,  $e$ , extends through and occupies a portion of the same slot, so that as its lug  $e'$ , moves within the cam-groove a reciprocating motion is imparted to it. The feed-slide  $e$  is provided with an aperture  $e^2$ , large enough to receive a stopper when its outer end is projected beyond the finger-guard E which prevents the operator from getting his fingers under the plunger.

A seal is placed in the aperture of the feed-slide when the plungers are in their upper position at which time the feed-slide projects beyond the throat and the finger-guard as shown by Figs. 3 and 4. If a bottle is then in place the machine is started, and, during the first part of the downward movement of the operating-shaft, the actuating-cam draws the feed-slide back to the position shown by



Figs. 1 and 2. The seal is thus brought directly over and in line with the throat, beneath the plungers before they have moved far enough down to come in contact with it.

5 A continuation of the downstroke of the plungers forces and compresses the seal through the throat and into the bottle beneath. The operating-shaft then moves upward, and, by the time the plungers have receded from the throat and aperture of the feed-slide, the actuating-cam *a* causes the lug *e'*, to pass through its groove or race-way thus projecting the feed-slide outward for receiving another seal. This movement is completed by

15 the time the operating-shaft and plungers have reached their upmost position. The stoppered bottle is then removed, another one placed beneath the throat and another seal fed into the aperture of the slide and the operation of corking or sealing continued.

In steam-power sealing machines the action of the plungers is generally intermittent, the operating-shaft usually being stopped at the end of each revolution or down and upstroke

25 of the plungers; but even with machines so constructed any inattention on the part of the operator or a failure of the clutch mechanism to work instantaneously renders the machine dangerous. It will be observed,

30 however, that by a construction and arrangement of the parts as described, feeding the machine becomes an expeditious matter while absolute protection is afforded against accident and injury to the operator. The improvements are alike applicable to steam-power and foot-power machines, and to corking machines of various construction, but

their greatest utility seems to be in connection with machines of the class shown.

Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is--

1. In a corking-machine the combination of an operating-shaft carrying one or more plungers, a feed-slide provided with a lug, an actuating-cam secured to the operating-shaft, and having a groove for receiving said lug and transmitting motion to said feed-slide.

2. In a corking machine the combination of an operating-shaft carrying one or more plungers, a head-piece provided with a throat for a stopper, a feed-slide adapted to move on or through the head-piece and having an aperture for a stopper and an actuating-cam having contact with said feed-slide, said cam being secured to the operating-shaft whereby a reciprocating motion may be imparted to said feed-slide.

3. In a corking machine the combination of an operating-shaft carrying one or more plungers, a plunger-guide, a head-piece having a throat for a stopper beneath the plunger-guide, a finger-guard below the plunger-guide, a feed-slide having an aperture for a stopper and adapted to move beneath the finger-guard and above the throat in the head-piece, and an actuating-cam secured to the operating-shaft and in contact with the feed-slide whereby a reciprocating motion may be imparted to the same.

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