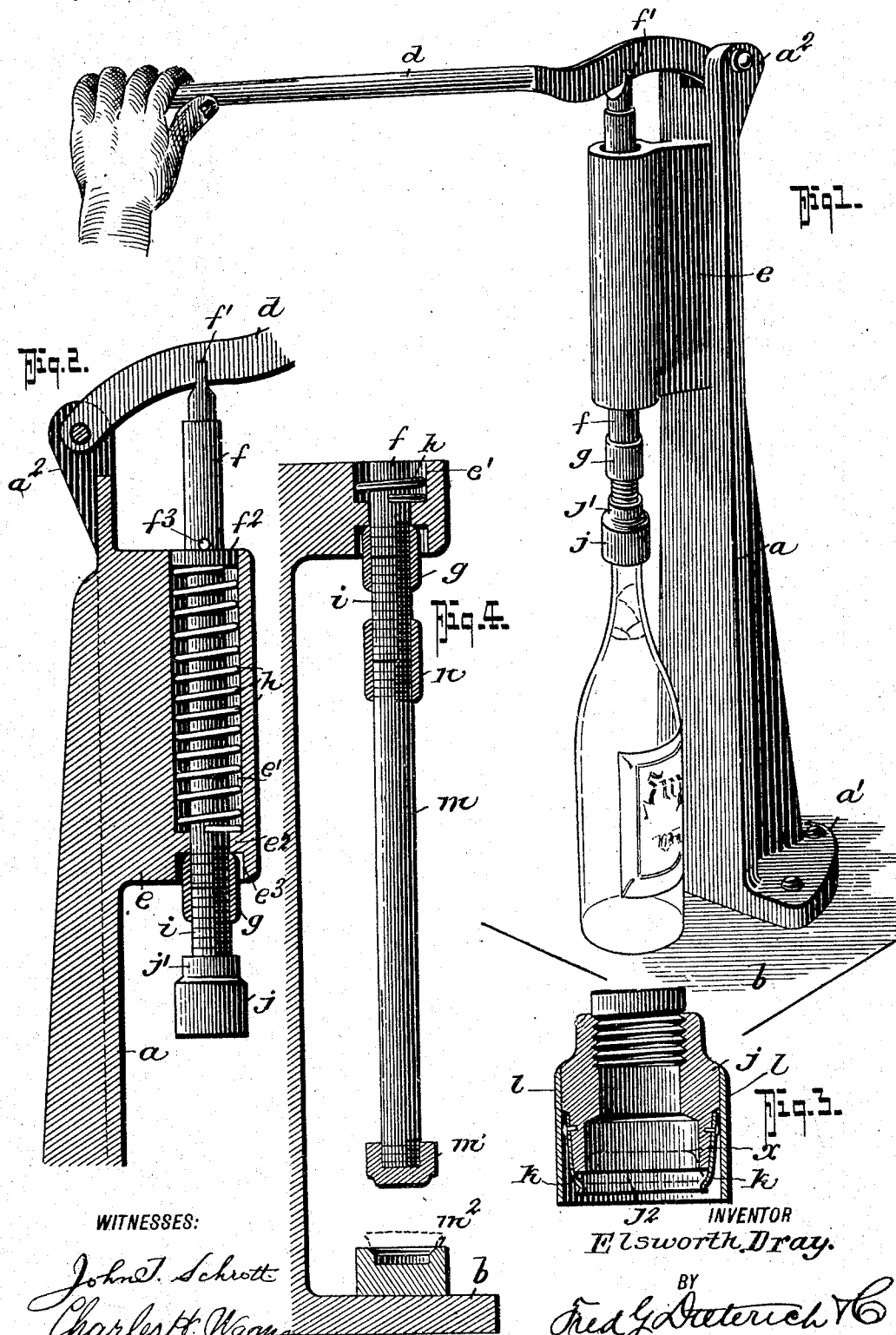


E. DRAY.
BOTTLE CAPPING MACHINE.
APPLICATION FILED JUNE 22, 1908.

949,417.

Patented Feb. 15, 1910.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ELSWORTH DRAY, OF STEUBENVILLE, OHIO.

BOTTLE-CAPPING MACHINE.

949,417.

Specification of Letters Patent.

Patented Feb. 15, 1910.

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To all whom it may concern:

Be it known that I, ELSWORTH DRAY, residing at Steubenville, in the county of Jefferson and State of Ohio, have invented a new and Improved Bottle-Capping Machine, of which the following is a specification.

This invention, which relates to bottle capping machines in which the cap is held in a head piece and is brought under plunger pressure against the bottle head and crimped thereon, has for its object to provide an improved machine of this type, of a simple, stable and economical construction and it comprehends a certain arrangement and coöperative combination of parts hereinafter explained, and capable of adjustment whereby the same can be readily adapted for resetting old or used crown seals for putting them in shape for seal capping bottles.

In its subordinate features my invention consists in certain details of construction and novel arrangement of parts, all of which will be hereinafter specifically described and claimed, and illustrated in the accompanying drawing, in which:—

Figure 1, is a perspective view of my invention showing the same arranged as a bottle capping machine, the plunger being down in the act of capping. Fig. 2, is a vertical longitudinal section of the plunger up. Fig. 3, is a vertical section of the cap carrying head with the spring devices for holding the cap thereon. Fig. 4, is a vertical section of a part of the standard and the plunger rod, and also shows the supplemental plunger rod, the connection that joins it with the main plunger and the resetting die and anvil hereinafter specifically referred to.

In carrying out my invention, I provide a suitable standard a that has a foot portion a' for bolting to a base b and whose upper end is bifurcated and formed with a pair of apertured ears a^2 to receive the stud pin on which is hinged one end of the operating lever d , see Fig. 1.

Cast or otherwise fixedly connected to the standard a is a housing or bracket e that has a vertical bore e' that extends down to near the lower end of the bracket e , the bottom forming an annular stop shoulder e^2 for the reason presently explained. The lower end of the bracket e has a shallow bore or socket e^3 through which plays the lower end of the main plunger rod f the upper end of

which extends a suitable distance above bracket e and is bifurcated as at f' to form a suitable seat for the lever d as clearly shown in Fig. 1. The lower end of the plunger rod f is threaded to receive a union coupling g that limits the upward thrust of the rod f since it engages the shoulder e^2 . Rod f is normally forced upwardly by the coiled spring h that takes around the said rod, abuts the shoulder e^2 at one end and a collar f^2 held on the rod f by the cross pin f^3 , see Fig. 2.

By arranging the several parts so far as described, the plunger, the spring and the coupling can be conveniently assembled and held for use without the aid of nuts or special formation of the bore of the bracket, and the parts can be quickly disconnected by screwing off the union coupling and removing the lock or cross pin f^3 .

When used as a capper the threaded shank member i is screwed into a coupling g and to the said member i is attached a capping head j as will be clearly understood by referring to Fig. 2. The capping head j has the usual seat or socket portion j^2 for receiving the crown portion of the cap x , see dotted lines on Fig. 3, and it has a plurality of spring clips or fingers $k-k$ secured to the sides thereof and whose tension is such that they extend inwardly and grip under the cap x , and to prevent the spring clips from being bent back too far or snapped off during a quick operation of capping, a shield in the nature of a metal ring l is shrunk or otherwise made fast to the head j , as clearly shown in Fig. 3. By providing the union coupling connection before stated, the cap j can be readily removed from the shank piece i and a supplemental plunger rod m can be substituted therefor, and connected with the said shank piece i by another union coupling member n , as clearly shown in Fig. 4, by reference to which it will be also noticed that the lower end of the supplemental plunger rod m carries a die m' for coöperating with an anvil m^2 , the latter and the die m' being relatively so shaped that a used crown cap can be placed on the anvil and re-shaped for use by bringing the plunger die down against the cap and anvil.

From the foregoing description, taken in connection with the accompanying drawing, the complete construction, the advantages and the manner in which my invention operates will be readily apparent.

By reason of the construction and arrangement of the parts as shown, a simple and economical capping means is provided that can be quickly worked by the operator
5 slipping the caps in place in the header with one hand as he works the lever with the other hand.

Having thus described my invention, what I claim is:

10 In a machine of the character described, the combination with a standard and a base, the standard having a laterally projected bracket formed with a vertical bore extending its length, said bore having a centrally
15 apertured web near the lower end; of a plunger that extends through the bore on the bracket and is guided through the aperture

to the web therein, a collar for snugly fitting the bracket bore mounted on the plunger, a collar a spring within the bore that
20 rests on the bore web and has its upper edge engaged by the aforesaid collar, means on the standard for holding the collar down against the spring, a coupling member detachably held on the lower end of the plunger
25 and having means for holding the capper device, the said collar and the coupling being relatively so disposed upon the plunger that the collar is contained within the bearing bore at all times.

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Witnesses:

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