

No. 861,705.

PATENTED JULY 30, 1907.

H. S. BREWINGTON.  
BOTTLE CAPPING MACHINE.  
APPLICATION FILED AUG. 7, 1906.

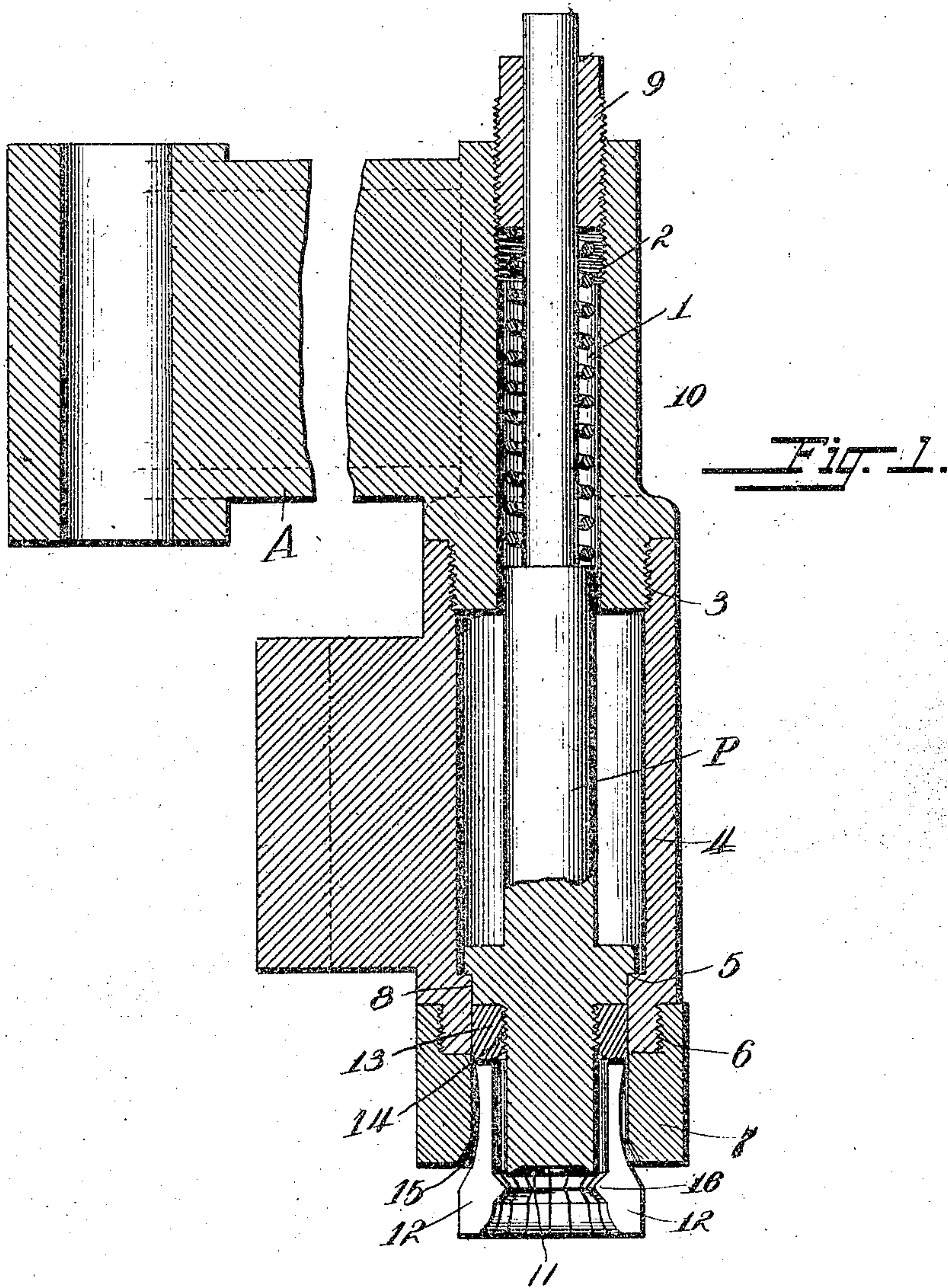
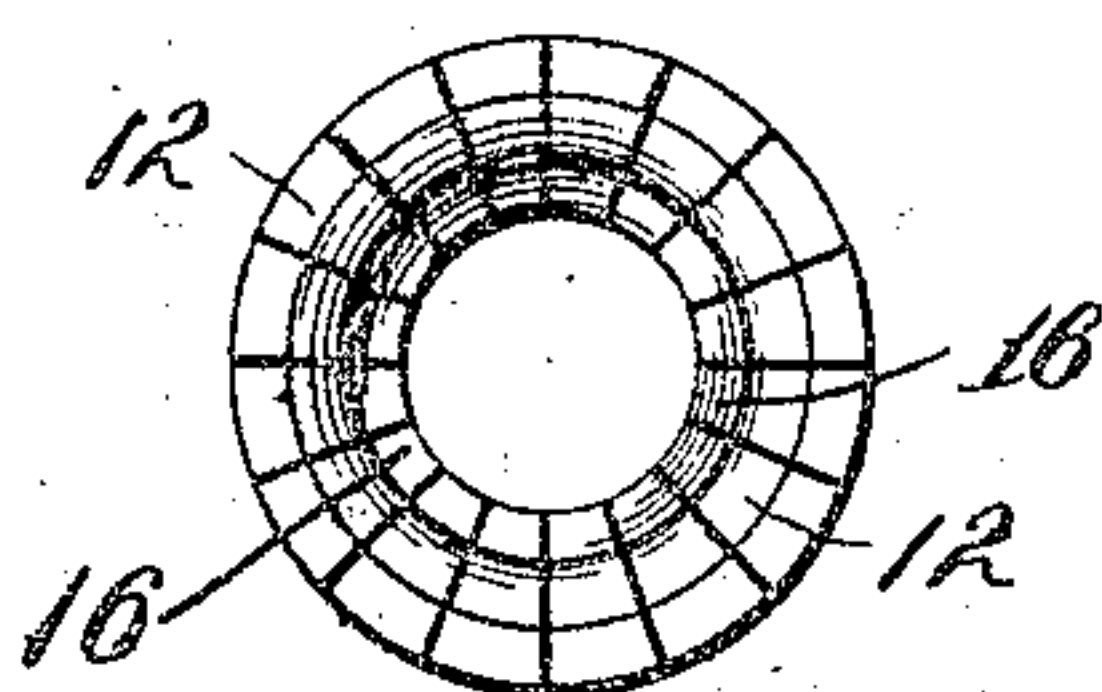


Fig. 2.



Witnesses  
Milton Denoir  
Vernon E. Hodges

Inventor.  
Henry S. Brewington



# UNITED STATES PATENT OFFICE.

HENRY S. BREWINGTON, OF BALTIMORE, MARYLAND, ASSIGNOR TO NATIONAL CORK AND SEAL COMPANY, A CORPORATION OF MAINE.

## BOTTLE-CAPPING MACHINE.

No. 861,705.

Specification of Letters Patent.

Patented July 30, 1907.

Application filed August 7, 1905. Serial No. 273,100.

*To all whom it may concern:*

Be it known that I, HENRY S. BREWINGTON, a citizen of the United States, residing at Baltimore city, and State of Maryland, have invented certain new and useful Improvements in Bottle-Capping Machines, of which the following is a specification.

My invention relates to an improvement in bottle capping machines and the object is to provide a simple construction for automatically crimping the edge of the bottle stopper around the head at the mouth of the bottle and it consists in certain novel features of construction and combinations of parts which will be hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a section through the machine and Fig. 2 is a bottom plan view looking into the spring capping jaws.

A, represents an arm broken out through the center, and arranged to slide up and down upon a frame (not shown) of the machine. The outer end of the frame is bored as at 1, the upper end of which bore is internally screw-threaded as at 2 and the lower end externally screw-threaded as at 3, a sleeve 4 being screwed to these threads 3. The sleeve 4 is provided with an annular shoulder 5 in the lower end of this bore and the external screw-thread 6 to which is screwed the cam ring 7.

A plunger P is yieldingly supported within the bores of the arm A and the sleeve 4, it being guided and centered at the lower end by the smaller diameter 8 of the sleeve 4, and at the upper end by the bore of the nut 9 which latter screws into the threads 2 of the bore 1. The stiff spiral spring 10 bears down upon the plunger, it being held at its upper end by the nut 9 and its tension being regulated thereby. The plunger has a die 11 at its lower end which is adapted to engage and press down upon the top of the cap, to hold it in position on the bottle. A plurality of spring jaws 12, 12 depending from a collar 13 screw upon the threads 14 on the plunger which is adapted to receive, bend and secure the edge of the cap around and to a bead at the mouth of the bottle. These jaws are sufficiently yielding to permit the plunger to receive the cap and while so doing they crimp and bend the edge of the cap downwardly after which a further downward motion of the arm A forces the cam ring 7 against the outer edges of the spring jaws 12, 12, the cam surface 15 riding down upon the outer edge of the jaws thereby compressing them together toward a common center, their inwardly projecting V-shaped teeth 16 serving to indent and secure the edge of the cap to the bead. The spring 10 is sufficiently yielding to allow additional play or movement of the arm A, sleeve 4 and cam ring 7 after the plunger has reached the cap and the jaws have bent themselves about the edge of the cap and given the latter its initial downward bend, to permit the cam surface 15 to

compress the jaws and force them inwardly to fasten the cap to the bottle neck bead.

The foregoing perfectly explains the operation and utility of the invention. It will be observed that the collar which carries the jaws and the cam ring, which are the parts which receive the most punishment may be easily removed and replaced, and in fact that the entire mechanism may be easily and quickly taken apart and put together.

Slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth, but:—

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

1. In a bottle capping machine, the combination with a supporting arm bored at one end, a sleeve secured to the arm and forming a continuation of the bored portion of the arm, of a plunger, and a plurality of spring jaws carried thereby, the inner free ends of the jaws forming a cone, and provided inwardly with V shaped teeth, the V shaped teeth giving the initial bend to the edges of the cap as the latter passes thereto, and a cam ring connected with the sleeve, embracing the spring jaws forcing them inwardly toward a common center, securing the cap on to the head on the mouth of the bottle.

2. In a bottle capping machine, the combination with a supporting arm bored at one end, a sleeve secured to the arm and forming a continuation of the bored portion of the arm, of a plunger, and a plurality of spring jaws carried thereby, the inner free ends of the jaws forming a cone which gives the initial bend to the edges of the cap as the latter passes thereto into a cam ring forming a continuation of the outer end of the sleeve embracing the spring jaws forcing them inwardly toward a common center, the spring jaws provided at the inner end of the cone-shaped mouth with inwardly projecting teeth which serve to indent and secure the edge of the cap to the bead at the mouth of the bottle.

3. In a bottle capping machine, the combination with a supporting arm bored at one end, a sleeve secured to the arm and forming a continuation of the bored portion of the arm, of a plunger, and a plurality of spring jaws carried thereby, the internal free ends of the jaws forming a cone, and inwardly provided with V shaped teeth, the said V shaped teeth giving the initial bend to the edges of the cap as the latter passes thereto, and a cam ring forming a continuation of the outer edge of the sleeve and embracing the spring jaws and adapted to force them toward a common center when the ring and jaws are forced together.

4. The combination with a bored supporting arm, the bored portion internally screw threaded at one end and externally threaded at the other end, a nut screwed into the internal threads and adjustable therein, a sleeve screwed to the external threads, said sleeve threaded at its outer end, and a cam ring screwed to said threaded portion, of a spring actuated plunger guided and centered by the nut and sleeve, the plunger having a threaded portion at or near its lower end and a die at its extreme lower end, a collar screwed to the threaded portion of the plunger, and spring jaws extending outwardly from the collar beyond the die with their ends in the path of the cam ring.

5 The combination with a bored supporting arm, the  
bored portion internally screw threaded at one end and ex-  
ternally threaded at the other end, a nut screwed into the  
internal threads, said sleeve threaded at its outer end, and  
5 a cam ring screwed to said threaded portion, of a spring  
actuated plunger guided and centered by the nut and  
sleeve, the plunger having a threaded portion at or near  
its lower end and a die at its extreme lower end, a collar  
screwed to the threaded portion of the plunger, and spring  
10 jaws extending outwardly from the collar beyond the die  
with their ends in the path of the cam ring, said spring  
jaws together forming a cone-shaped mouth at their outer

ends and provided with inwardly projecting teeth at the  
inner end of the cone-shaped mouth and in proximity to  
the die, said jaws performing the entire operation of bend- 15  
ing and securing the cap to the head at the mouth of the  
bottle.

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

HENRY S. BREWINGTON.

Witnesses:

BENJAMIN STERNHEIMER,  
MARY M. MAGRAW.