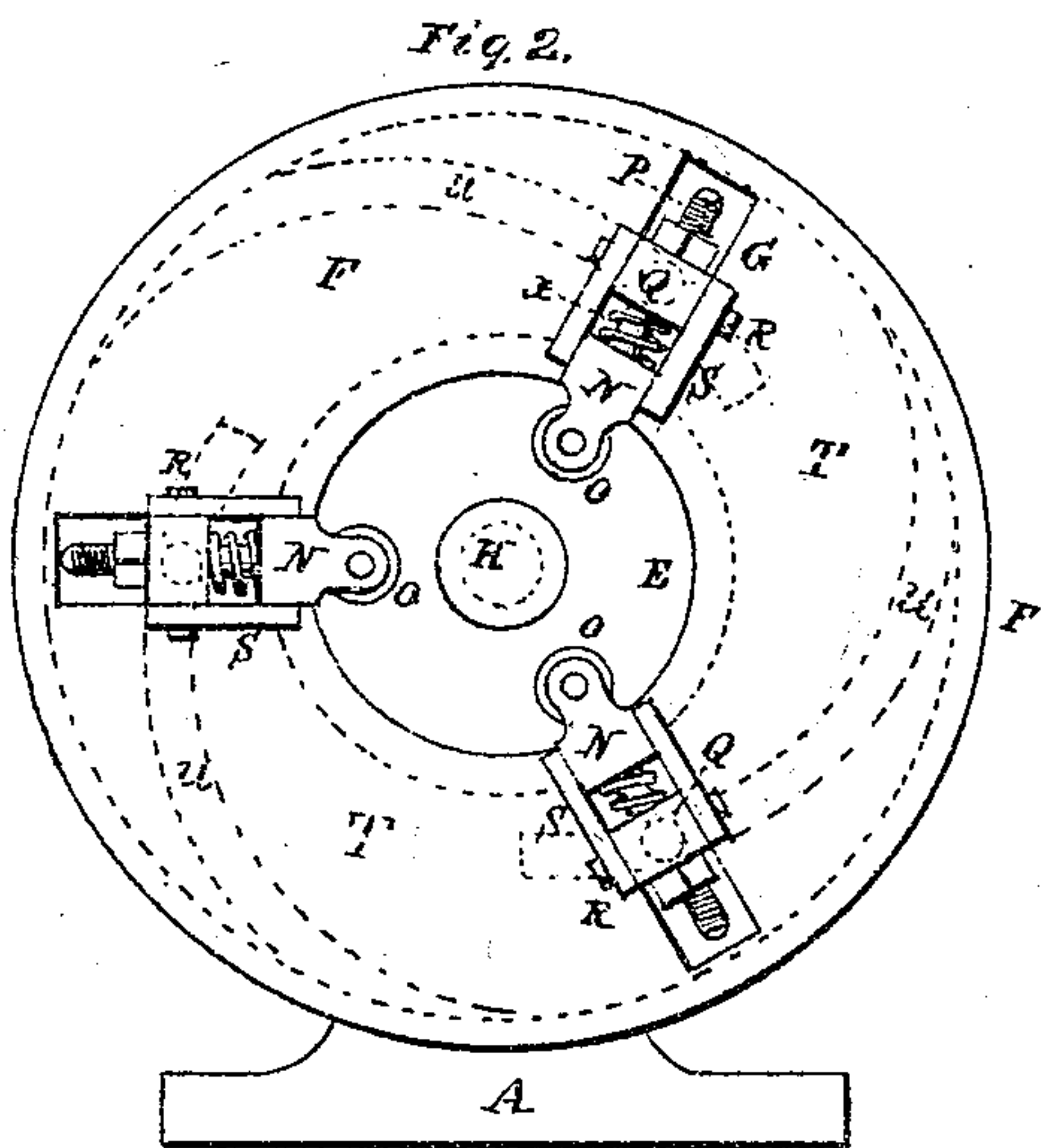
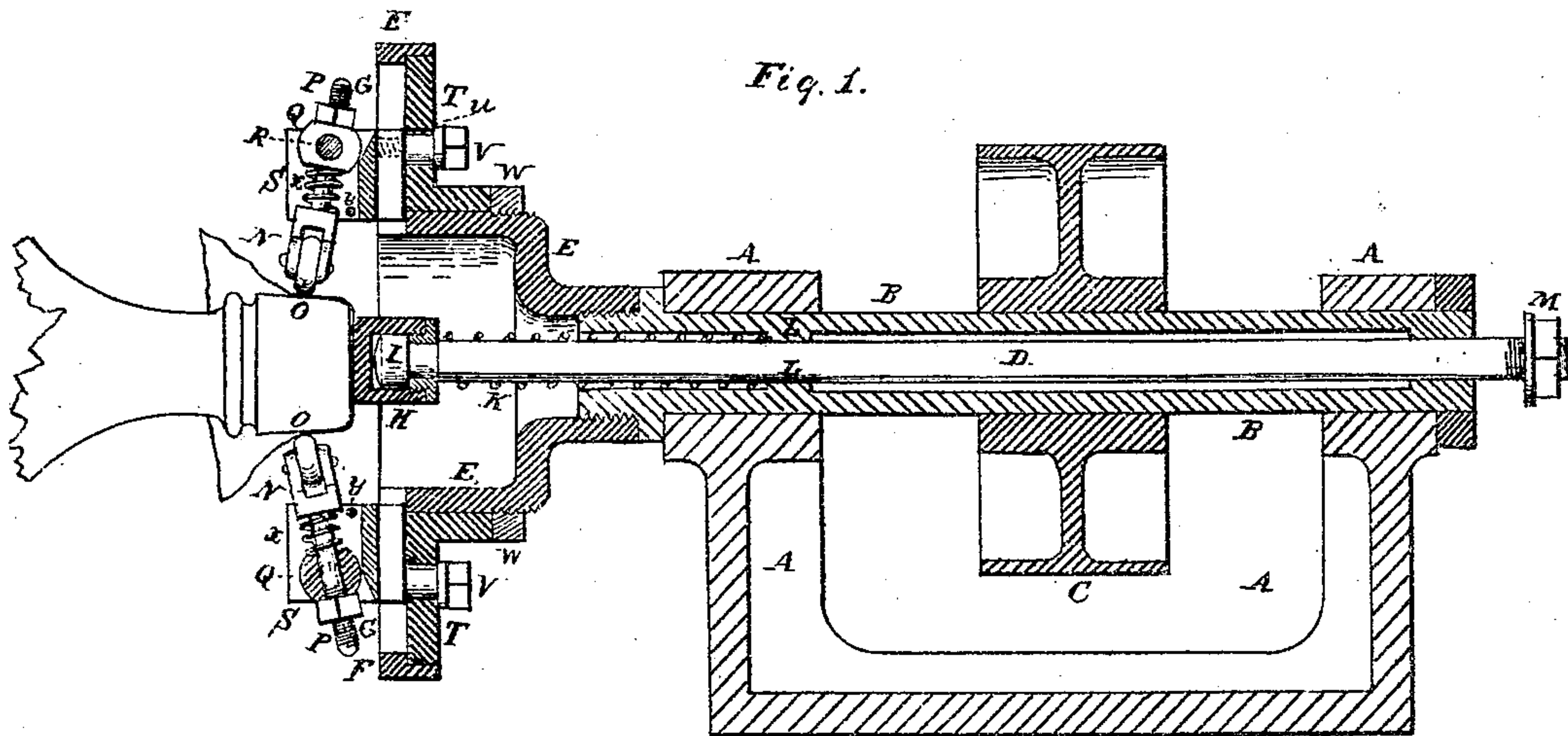


R. BOEKLEN & F. PFAENDER.  
Machines for Covering the Heads of Bottles with  
Tinfoil Caps.

No. 152,325.

Patented June 23, 1874.



Witnesses.

Fried. W. Malsch  
J. G. Merrill

Inventors.

R. Boeklen.  
F. Pfander



# UNITED STATES PATENT OFFICE.

REINHOLD BOEKLEN, OF BROOKLYN, AND FRIEDERICH PFAENDER, OF NEW YORK, N. Y.; SAID BOEKLEN ASSIGNOR TO SAID PFAENDER.

## IMPROVEMENT IN MACHINES FOR COVERING THE HEADS OF BOTTLES WITH TIN-FOIL CAPS.

Specification forming part of Letters Patent No. **152,325**, dated June 23, 1874; application filed January 10, 1874.

*To all whom it may concern:*

Be it known that we, REINHOLD BOEKLEN, of the city of Brooklyn, in the county of Kings and State of New York, and FRIEDERICH PFAENDER, of the city, county, and State of New York, have invented certain Improvements in Machines for Covering the Heads of Bottles with Tin-Foil Caps, of which the following is a specification:

This invention relates, first, to the arrangement of spring-roller pressers, which serve to spin and lay the tin-foil cap over the head of the bottle, and which are provided with mechanism for adjusting them together in a ready manner to the dimension of any of the usual heads of bottles desired to be covered, and so as to revolve concentrically around, and without vibrating inconveniently, the bottle. By these means the machine is readily adjustable for all ordinary variations of bottles without patterns for them, and the pressers yield properly to the inequalities of the head of the bottle, and the bottle can be easily held steady during the operation of covering its head. The invention relates, secondly, to the arrangement of said pressers relative to the motion and position of the head of the bottle, and providing said pressers with fulcrums, so that said pressers close and tightly lay the tin-foil cap over the head of the bottle while entering, and that the pressers are caused to open and release the tin-foil cap in withdrawing the bottle. By these means the pressers of the machine are not liable to loosen the tin-foil cap in withdrawing the bottle from them, and a comparatively less thick and less expensive tin-foil can be used than by the use of the ordinary machine.

In the annexed drawings, Figure 1 represents a vertical central longitudinal section of the machine with our improvements. Fig. 2 is a face view of the same.

A represents the spindle-head or bearings and bed of the machine. B is the spindle, which works freely in the bearings, and has a pulley, C, secured upon it, by which it is rotated. The spindle B is hollow, as shown, and has in its central opening a sliding rod, D.

Upon the forward end of the spindle B is secured a hollow head, E, with a face-plate, F, which has equal-distributed radial slots G G G. The rod D has a loose collar, H, on its forward end, which is fitted to revolve over said end; and to prevent said collar from being detached from the rod, the rod is made with a small head, I, and the collar has a screw-nipple, J, beyond said head. By means of a spring, K, employed upon the forward part of the rod D, between the collar H and a shoulder, L, in the central opening of the spindle, the rod D is pressed forward, and to stop it from passing forward more than desired, we employ a screw-nut, M, upon the rear end of said rod. N N N represent the pressers of the machine. They are provided with rollers O O O in their working ends to prevent them from cutting the tin-foil in passing over it. Each presser has a rod, P, or tail end, which passes through a cross-piece, Q, and the cross-piece has trunnions R R to allow it to turn in a dog, S, in which it is mounted. Each dog S is properly fitted to slide in one of the radial slots G of the face-plate F. By means of a rear plate, T, which has spiral slots U U U and a set-screw, V, on each dog, passing through one of the slots U, the dogs are moved together, and are readily adjusted from and to the center of the spindle B, and the pressers, being attached to the dogs, are consequently readily adjusted to the dimension of the head of the bottle operated upon. The rear plate T is fitted to turn freely upon the head E, and the head E has a circular screw-nut, W, for tightening said rear plate against the face-plate F after the dogs S have been adjusted. The fore parts of the dogs are properly slotted to guide the cross-pieces Q, as well as the forked ends of the pressers, which are provided with the rollers O, for which purpose the said ends are shaped with an enlargement, as shown. Each presser is provided with a small spiral spring, X X, upon its rods, between its forked end and the cross-piece Q, to allow the presser to yield to the irregularities of the bottle-head; and the ends of the rods P have screw-threads and nuts to hold the pressers in their places and

to adjust them and their springs relatively. Y Y Y represent stopping-pins in the dogs S, to provide the pressers against yielding too far inwardly.

When the bottle is required to be covered with the tin-foil cap the tin-foil blank is placed centrally against the face of the collar H, and the bottle's head is pressed upon it. The spring K is caused to yield, and the said head is caused to pass between the pressers N N, which rotate and cause the tin-foil to lie tightly upon and cover the head of the bottle until closing upon the neck of the bottle. The bottle is thereafter withdrawn, by which motion the pressers have yielded outwardly and allowed the head of the bottle to withdraw without loosening or disturbing the tin-foil cap.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The adjustable dogs S and pressers N, in combination with the spindle B, rod D, face-plate F, and rear plate T, substantially as and for the purpose herein set forth.

2. The pressers N, arranged to yield outwardly, in combination with the dogs S, substantially as and for the purpose shown and described.

R. BOEKLEN.  
FR. PFAENDER.

Witnesses:

GEO. A. STAUF,  
F. W. WALSCH.