

No. 633,169.

Patented Sept. 19, 1899.

F. G. STUART.  
BOTTLE STOPPER.

(Application filed June 17, 1899.)

(No Model.)

Fig. 1.

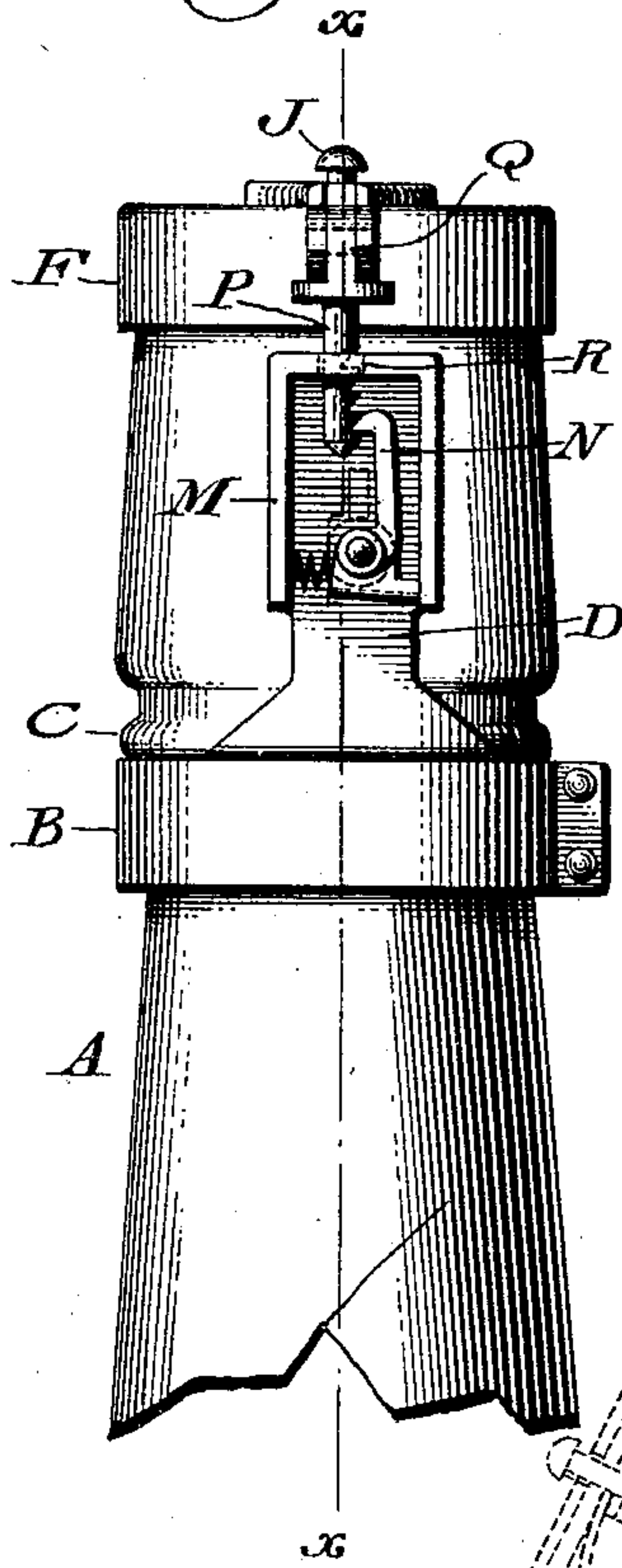


Fig. 2.

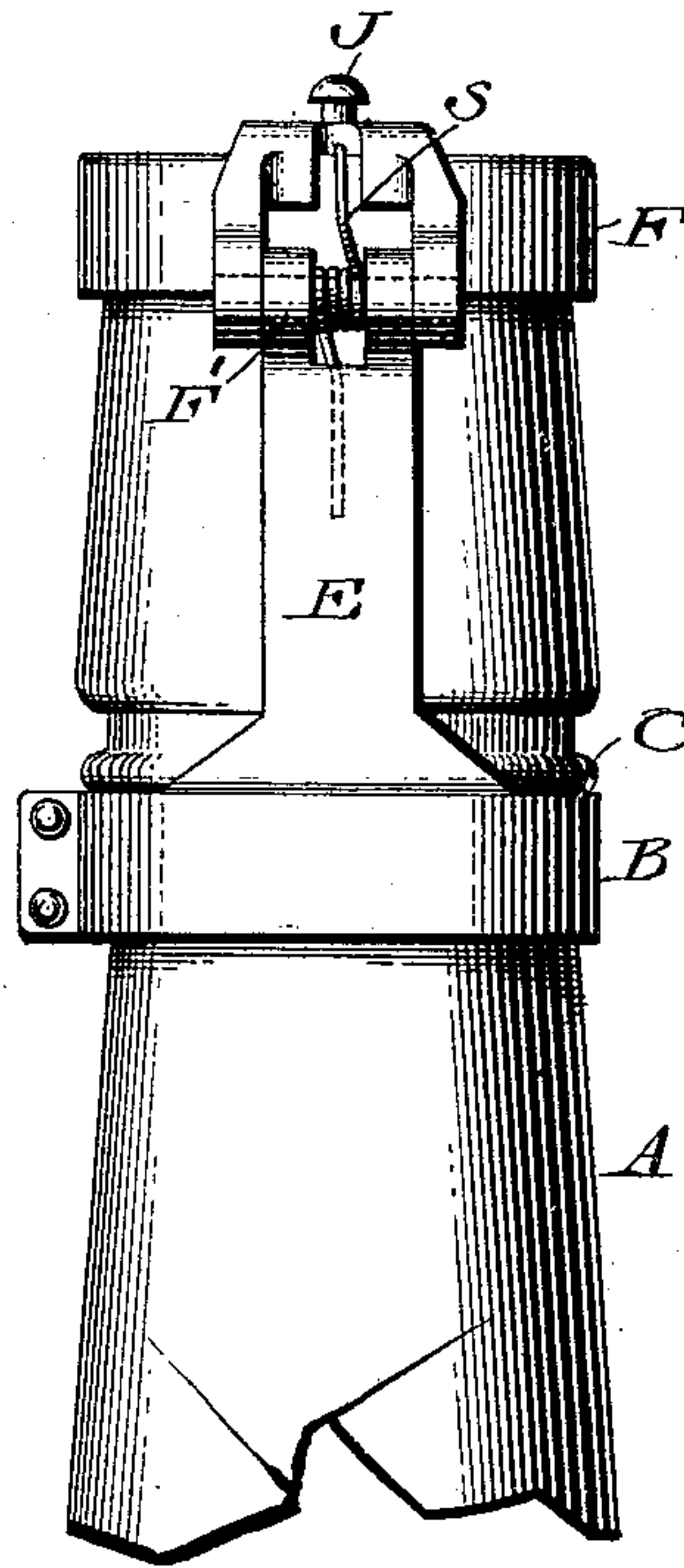
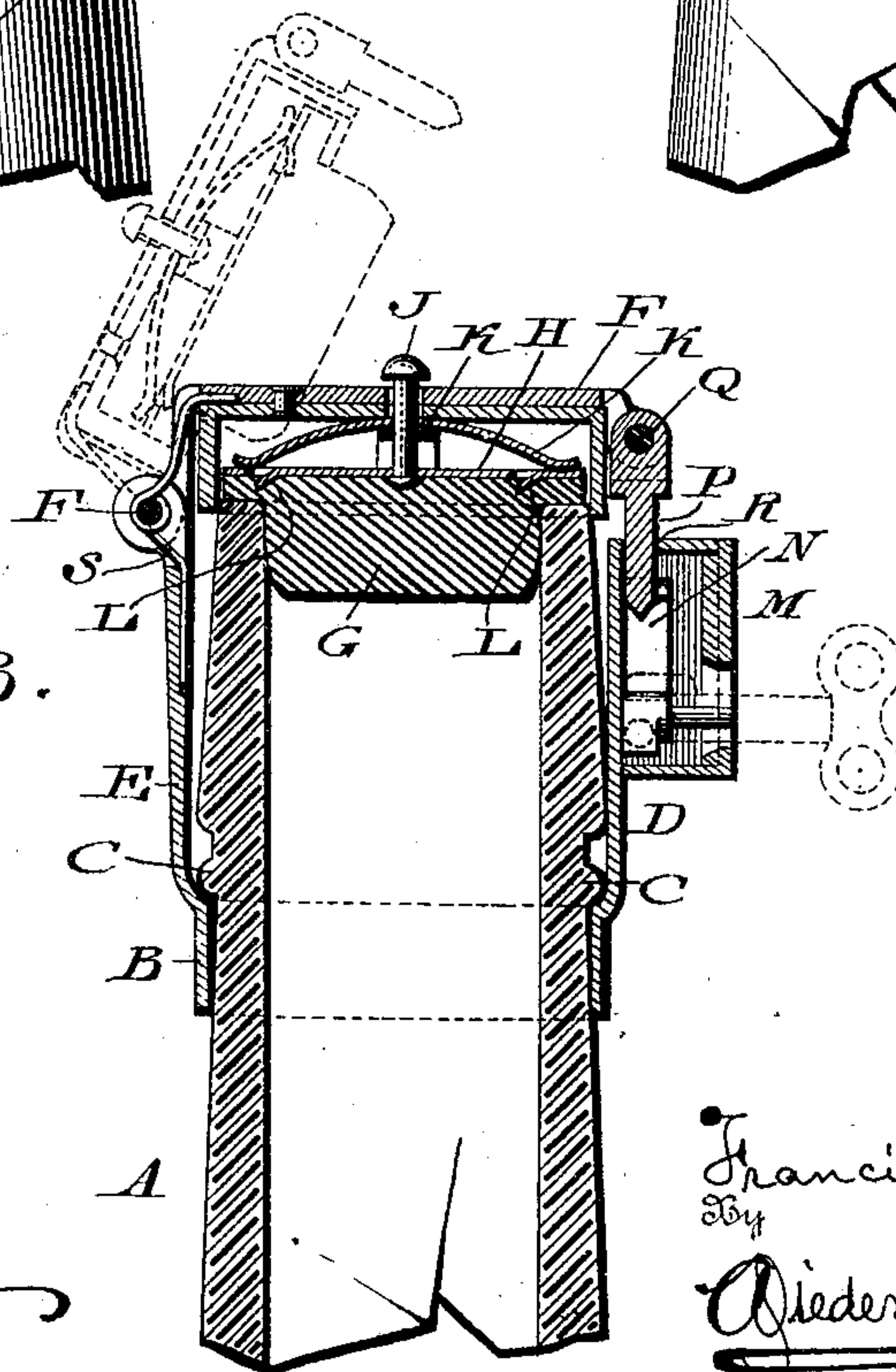


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

FRANCIS G. STUART, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO ALEXANDER HAZARD, OF SAME PLACE.

## BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 633,169, dated September 19, 1899.

Application filed June 17, 1899. Serial No. 720,922. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS G. STUART, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Bottle-Stoppers, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a bottle-stopper provided with means for causing the plug or stopper proper to seat itself firmly and uniformly on the mouth of a bottle regardless of inequalities in the latter.

It also consists in providing the stopper with a lock of novel construction, as will be hereinafter described.

Figures 1 and 2 represent views of opposite sides of a bottle-stopper embodying my invention. Fig. 3 represents a vertical section on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a neck of a bottle of ordinary construction. B designates a band which encircles said neck below the shoulder C thereof and has rising therefrom the arms D and E.

F designates the cap of the stopper, the same being connected with the arm E by the knuckle F', whereby said cap is hinged to said arm.

G designates a plug or stopper proper, formed of cork or other suitable material, which is connected with the plate H, the latter being attached to the cap F by means of the headed pin J, whose lower end is secured to said plate H and whose upper end is secured to said cap, the opening in the latter being sufficiently large to permit said pin to roll therein.

K designates springs through whose crowns or centers passes the pin J, the ends of said springs bearing against the plate H, it now being seen that the plug G is permitted to oscillate on the cap F and so conform to any inequality or irregularity in the mouth of the bottle, whereby it will be firmly or properly seated on said mouth, forming a tight joint, it being noticed that as the pin J is movable in its connection with the cap F the plug is

permitted to oscillate and so adjust itself to said mouth. As a convenient means of connecting the plug G with the plate H, I employ the spurs L, which are punched out downwardly from said plate and driven in said plug, as most clearly shown in Fig. 3.

Connecting with the upper end of the arm D is the casing of a lock M, the bolt N of whose lockwork is adapted to be thrown back by the action of a suitable key, as shown in dotted lines in Fig. 3.

P designates a dog having serrations on its sides for engagement with the nose of the bolt N, said dog being pivotally connected with the cap F, as at Q, and depends therefrom, it being noticed that the upper wall of the lock-casing has an opening R therein, whereby said dog may enter said casing.

In order to cause the automatic opening of the stopper, I employ the spring S, which is connected with the axis of the hinge of the cap and bears against the adjacent portions or leaves of the same, so as to elevate said cap when released, as shown in Fig. 3.

The operation is as follows: In order to close and lock the bottle, the cap is depressed to full extent and the dog D enters the lock-casing and its nose engages with the bolt N, as shown in Fig. 1, it being evident that the bottle is now closed and cannot be opened unless by the employment of the key. When, however, it is desired to open the bottle, the key is applied, whereby the bolt is withdrawn from the dog, and as the cap is no longer controlled by the lock, but is subjected to the action of the spring S, it immediately flies open and the contents of the bottle may be poured out, as usual. When the cap is restored to its normal position, it is again locked by the action of the bolt N and the dog D, as in the previous case.

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

1. A bottle-stopper consisting of a cap, a plug and means for connecting said plug with said cap to permit oscillation of said plug, said means consisting of a plate to which said plug is attached, a pin secured to said plate and freely connected with said cap, and a



spring interposed between said cap and plate and pressing downwardly on the latter.

2. In a bottle-stopper, a cap, and an oscillating plug thereon, the latter being connected with the former by a rolling pin which is attached to said plug and cap and a spring which is interposed between said cap and plug and mounted on said pin and adapted to exert a downward pressure on the latter.

3. In a bottle-stopper consisting of a stopper member proper and a member for connecting the same with a bottle, a lockwork attachable to one member, means on the other member adapted to be engaged by said work and a spring bearing against said stopper member for throwing up the same when said lockwork is operated to release said means.

4. A band connectible with a bottle, arms rising therefrom, a cap pivoted to one arm, a lock having its case secured to the other arm, and a plug and a dog pendent from said cap, said case having an opening adapted to receive said dog and also a keyhole.

5. A band connectible with a bottle, arms rising therefrom, a cap pivoted to one arm, a lock having its case secured to the other arm, and a stopper and a dog pendent from said cap, said case having an opening adapted to receive said dog and also a keyhole, and a

spring bearing against said cap for throwing up the same when said dog is unlocked.

6. In a bottle-stopper, a cap, an oscillating plug connected therewith, a spring interposed between said cap and plug and bearing downwardly on the latter, a band connectible with the bottle, arms rising from said band, a lock having its case secured to one of said arms, the other arm having said cap hinged to it, and a dog pendent from said cap, the case of said lock having an opening therein to receive said dog and also a keyhole.

7. In a bottle-stopper, a cap, an oscillating plug connected therewith, a spring interposed between said cap and plug and bearing downwardly on the latter, a band connectible with the bottle, arms rising from said band, a lock having its case secured to one of said arms, the other arm having said cap hinged to it, a dog pendent from said cap, the case of said lock having an opening therein to receive said dog and also a keyhole, and a spring connected with said cap bearing upwardly to elevate the same and said plug when said dog is unlocked.

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Witnesses:

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