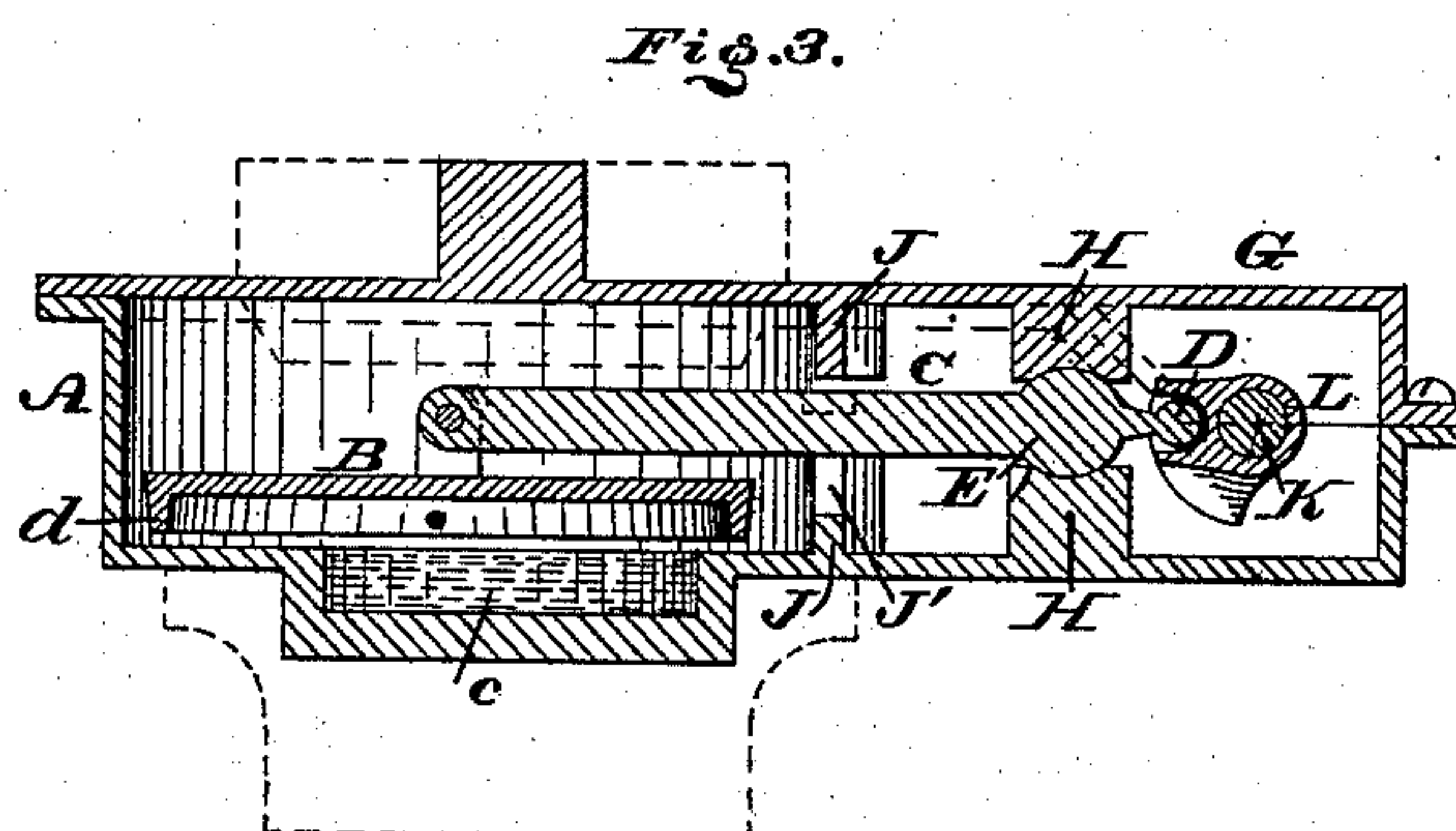
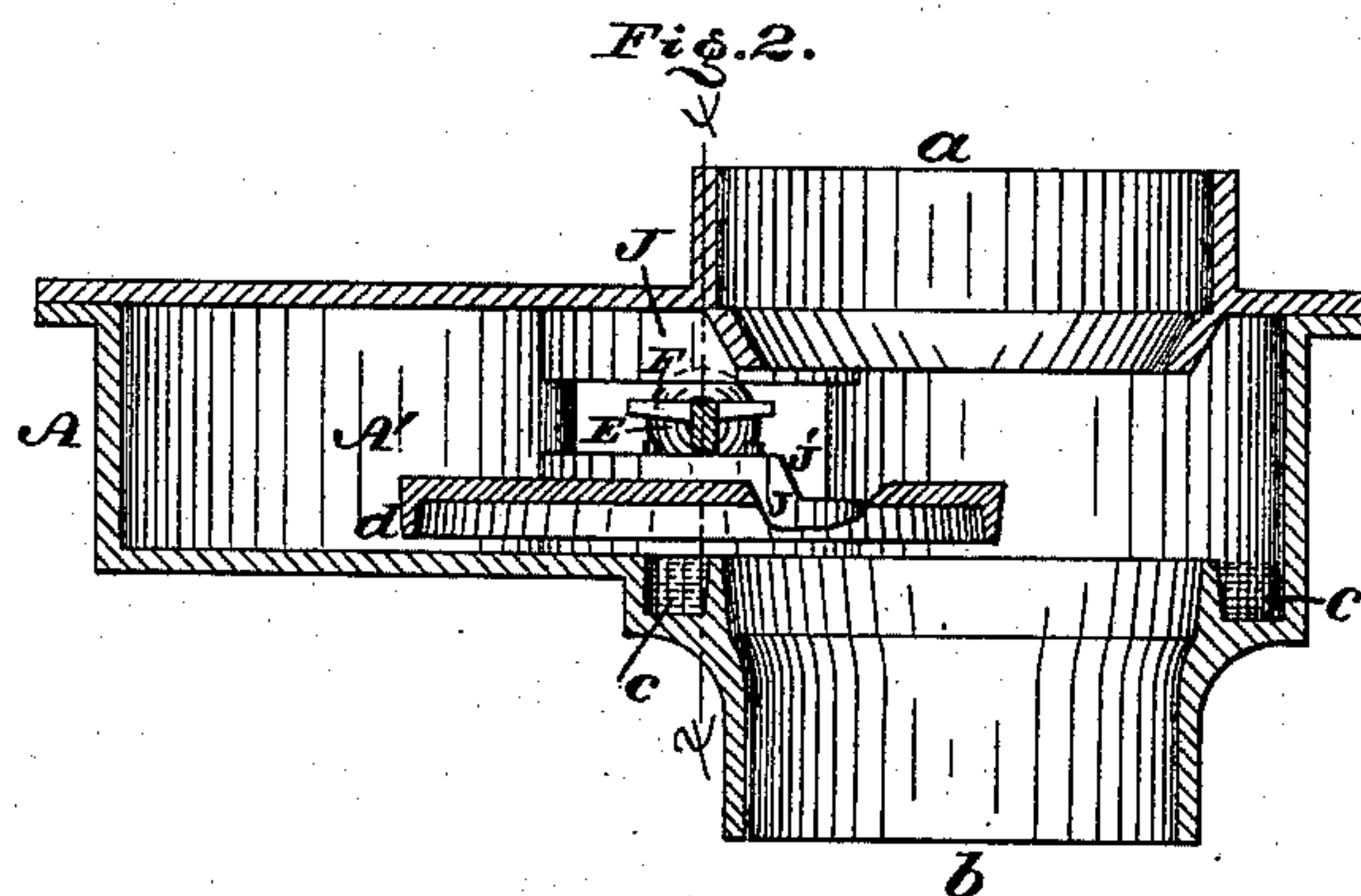
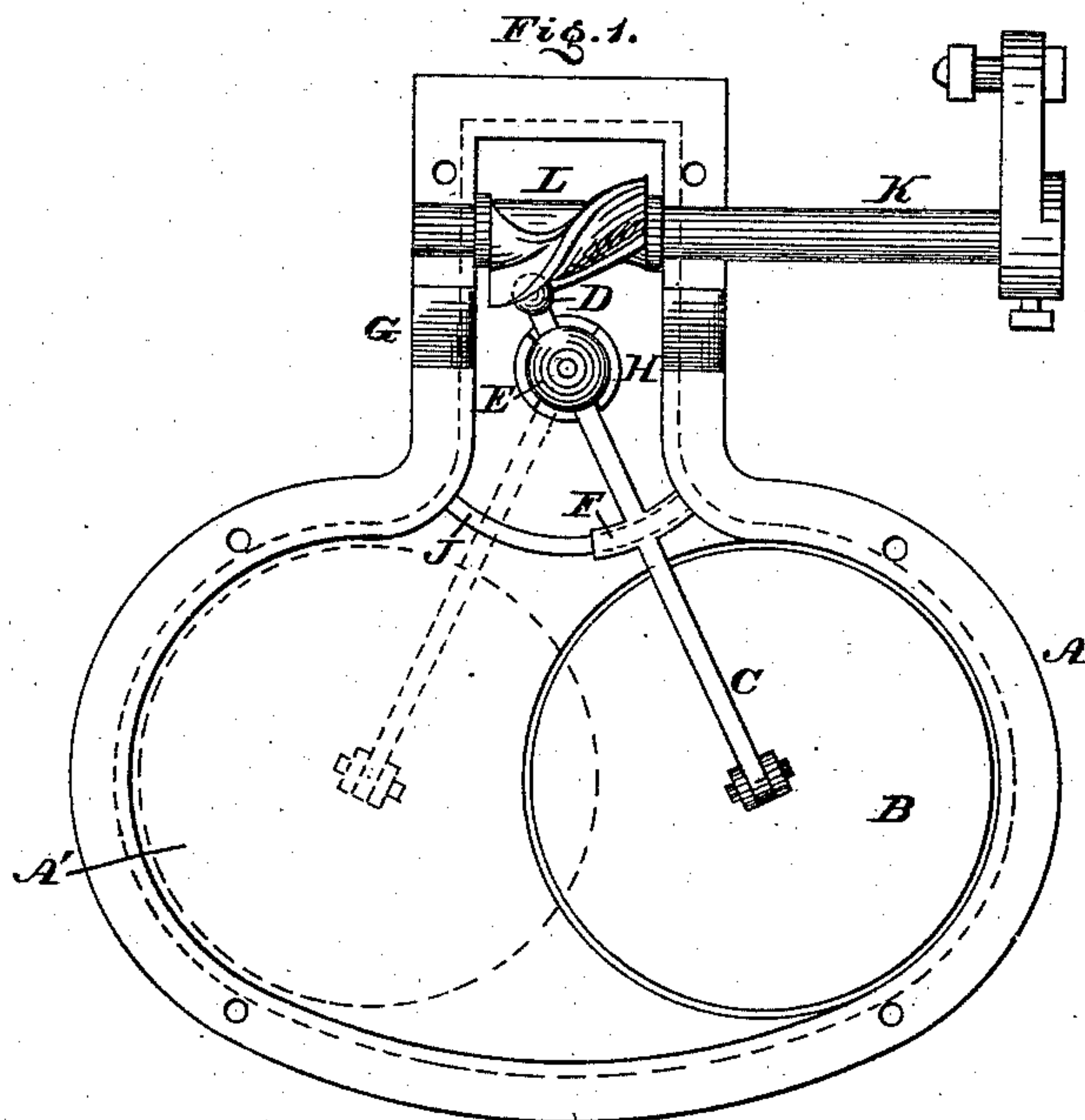


(Model.)

O. W. SPRATT.

Seal Trap for Water Closets, Sewers, &c.  
No. 241,568. Patented May 17 1906.

**Patented May 17, 1881.**



**Witnesses:**

A. P. Grant,

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# UNITED STATES PATENT OFFICE.

ORLANDO W. SPRATT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF FIFTEEN-SIXTEENTHS TO OTHNIEL B. EVANS, OF SAME PLACE.

## SEAL-TRAP FOR WATER-CLOSETS, SEWERS, &c.

SPECIFICATION forming part of Letters Patent No. 241,568, dated May 17, 1881.

Application filed December 21, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, ORLANDO W. SPRATT, a citizen of the United States, residing in the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Seal-Traps for Water-Closets, Sewers, &c., which improvement is fully set forth in the following specification and accompanying drawings, in which.

Figure 1 is a top or plan view of the interior of the trap embodying my invention. Fig. 2 is a vertical section thereof, partly open. Fig. 3 is a vertical section thereof in line *xx*, Fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists in imparting vertical and lateral motions to the flanged cap or valve of a seal-trap for water-closets, &c., provided with a guttered seat for said cap or valve, whereby the cap may be quickly opened and removed to permit the uninterrupted passage of matters through the trap, and likewise quickly closed and sealed, so that the escape of noxious vapors is reliably prevented, the opening and closing motions being each accomplished by the single operation of a shaft or rod.

Referring to the drawings, A represents a chamber adapted to be located beneath a water-closet bowl, sink, sewer-inlet, &c., or other place requiring a seal-trap, said chamber having an inlet, *a*, and a discharge or outlet, *b*, which leads to the cesspool, sewer, &c. The portion of the base which surrounds the top of the wall of the opening *a* is sunken, forming a groove or gutter, *c*, for the reception of mercury or other sealing medium.

B represents a cap or valve, which is formed with a downwardly-projecting rim, *d*, which, when the trap is closed, dips into the mercury in the gutter *c* as the seat of the valve. To said valve is pivoted a lever, C, which, at the opposite end, is formed with a spherical head, D, adjacent thereto, a ball, E, and between the ball and pivot a bearing part, F.

The chamber A has a lateral extension or offset, G, and on the upper and lower walls thereof are projections H with concave faces for the reception of the ball E, forming to-

gether a ball-and-socket joint, and likewise projecting ribs J, between which the bearing part F is guided, and on which it moves.

K represents a transversely-extending rod or shaft mounted on the extension G, and having on the portion within the same a spirally-grooved collar or piece, L, the groove thereof receiving the spherical head D of the lever C. The shaft K is provided with a crank or other mechanism operated by hand, or connected to the lid of the water-closet, &c., so that the opening and closing of said lid will rotate the shaft in opposite directions.

In Fig. 1 the trap is closed and the parts are in their normal position.

When service is required of the water-closet, &c., the shaft K is rotated. The action of the spiral collar L on the head D of the lever C imparts downward and lateral motions to the end of the lever having said head, whereby the valve B is lifted from the gutter *c* and moved to the unoccupied portion A' of the chamber A, whereby the discharge-opening *b* is uncovered, and the inlet *a* and said opening *b* are in communication, so that matters from the water-closet, sewer-inlet, &c., may pass out without interruption. The rotation of the shaft K in reverse direction returns the valve B over the discharge-opening *b* and lowers it to its full extent, so that the rim *d* dips into the mercury, &c., of the gutter *c*, the lever C dropping into the notch J' of the bottom projection, J, and thus the trap is reliably and serviceably sealed.

I am aware that it is not new to operate a waste-pipe valve so that it receives vertical and lateral motions to open and close the same; but this is accomplished first by a rotary motion of a shaft and next by a lifting motion thereof, two distinct motions, wherefore I disclaim such features.

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

1. A seal-trap for water-closets, &c., having a flanged valve and a guttered seat, a longitudinally-extending lever connected to the valve, and a transversely-extending shaft provided with a lifting and shifting device, substantially as described, whereby by a single motion of the shaft the flange of the valve is

raised clear of the guttered seat and the valve is moved laterally, and on the opposite single motion of the shaft the valve is returned and dipped into the guttered seat, for the purpose  
5 set forth.

2. The valve B, in combination with the lever C, ball-and-socket joint E H, spiral collar

L, and rotary shaft K, substantially as and for the purpose set forth.

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Witnesses:

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