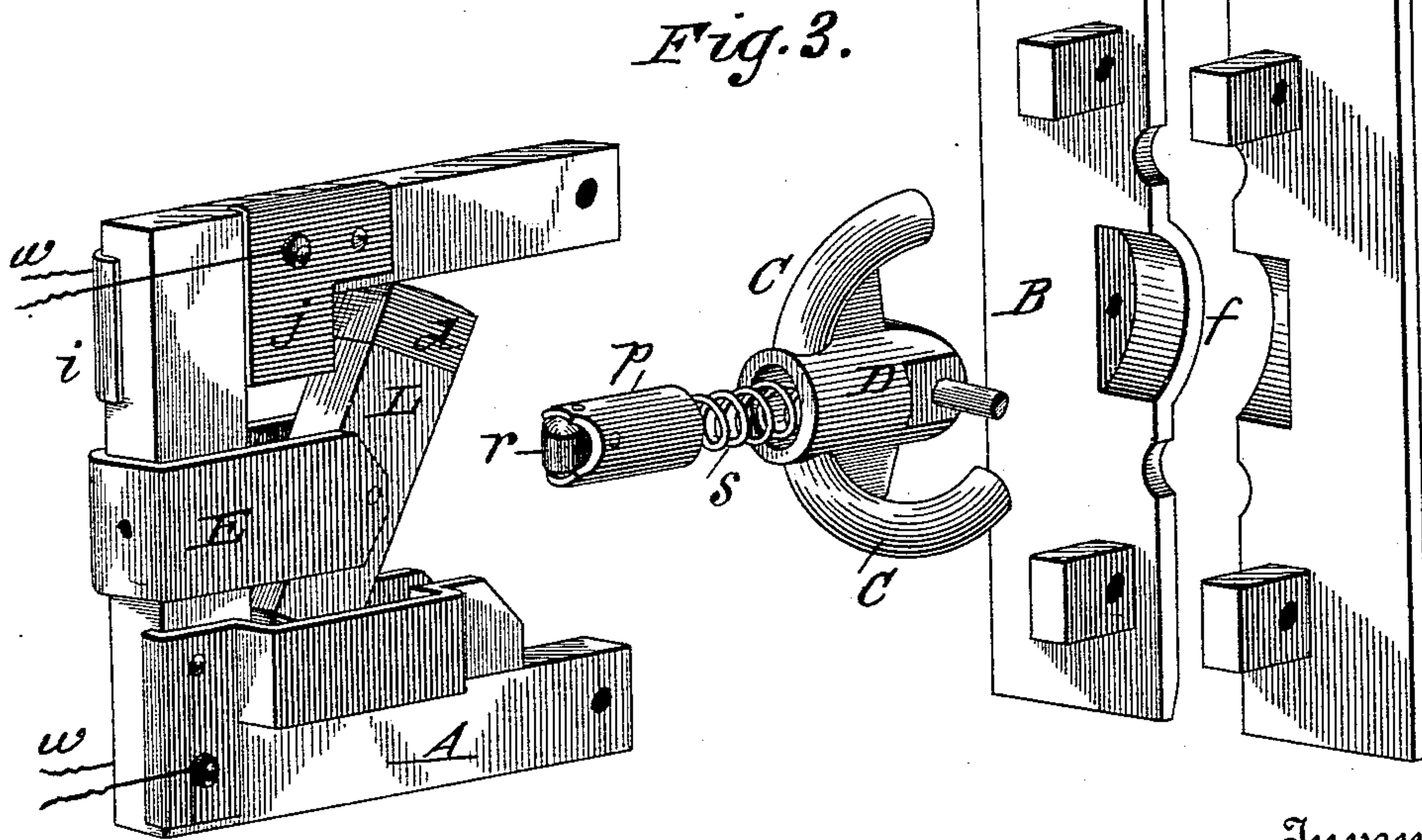
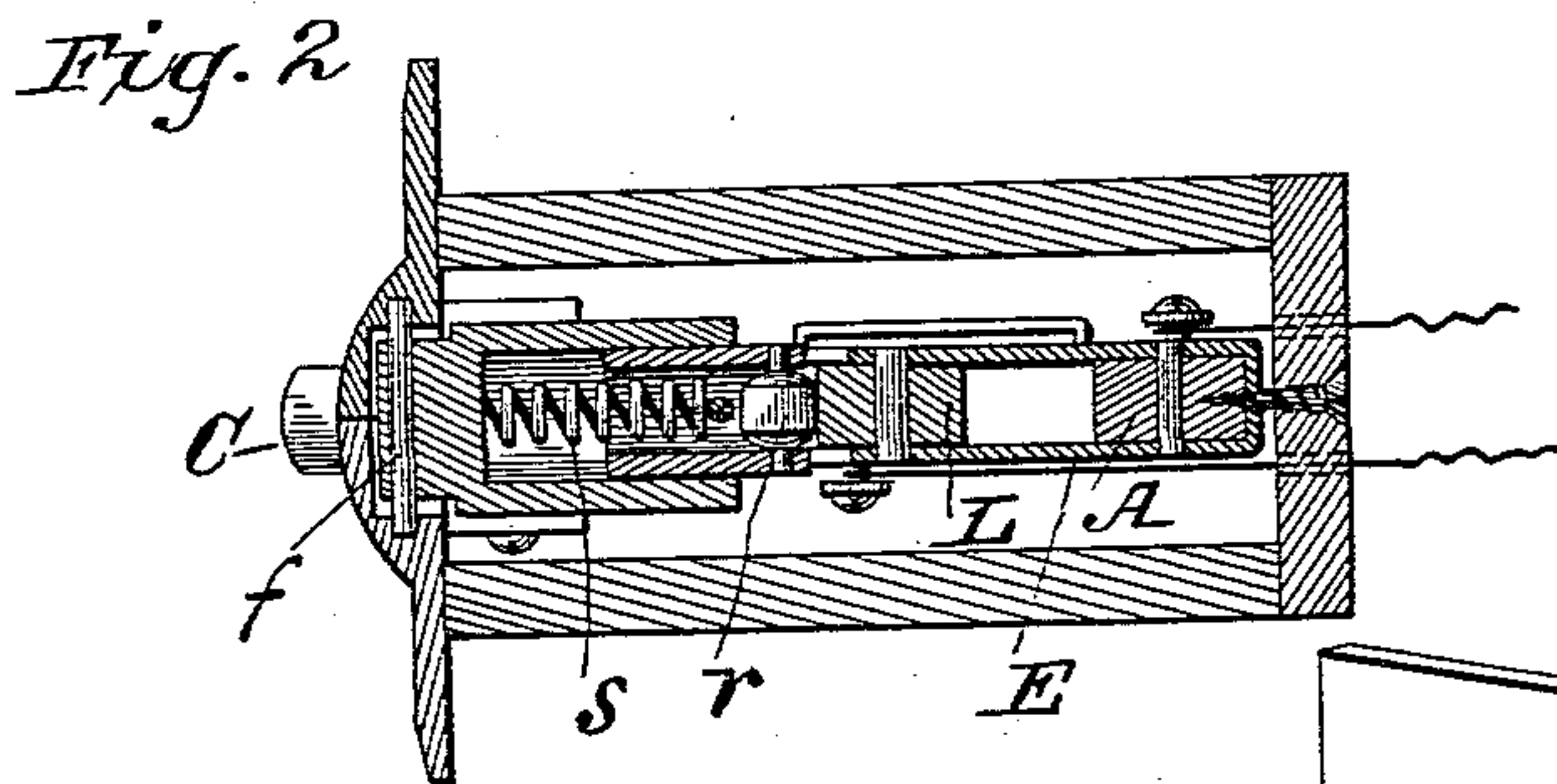
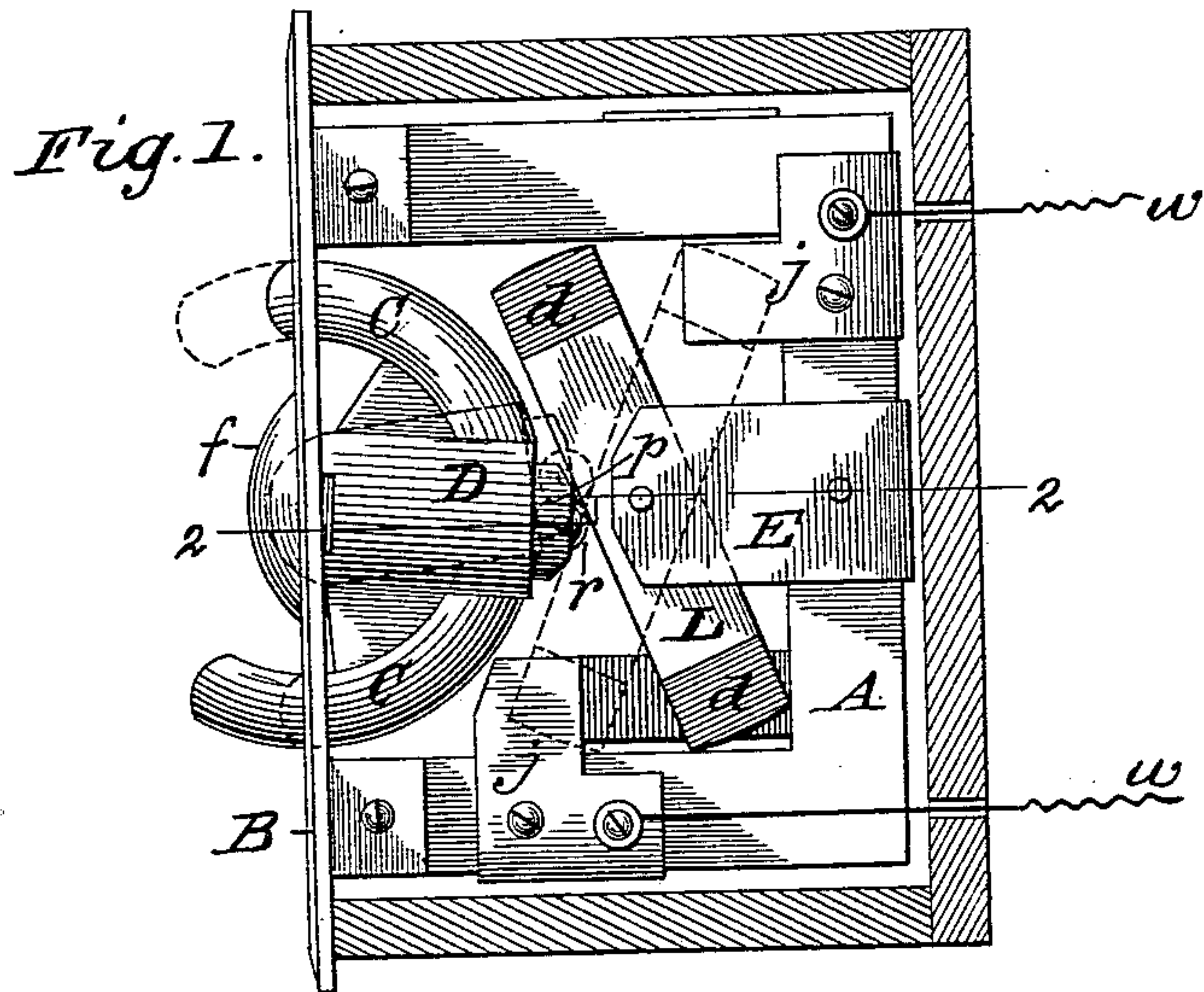


(No Model.)

P. G. TISMER.  
ELECTRIC SWITCH.

No. 559,916.

Patented May 12, 1896.



Witnesses  
*Fred G. Dietrich*  
*J. E. Ross*

Inventor  
*Paul Gerhard Tismer*



# UNITED STATES PATENT OFFICE.

PAUL GERHARDT TISMER, OF NEW YORK, N. Y.

## ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 559,916, dated May 12, 1896.

Application filed March 29, 1895. Serial No. 543,675. (No model.)

*To all whom it may concern:*

Be it known that I, PAUL GERHARDT TISMER, a subject of the German Emperor, residing in the city, county, and State of New York, have invented Improvements in Electric Switches termed "Snap-Switches," of which the following is a specification.

My invention consists, primarily, in the combination, with an insulated frame for supporting the parts, of a rotating arm carrying metallic plates, contact-plates secured to the said frame, and a roller-bearing lever for suddenly moving the rotating arm, the whole arranged and operating substantially as hereinafter set forth.

My invention further consists in certain combinations and subcombinations to be hereinafter described.

In the accompanying drawings, Figure 1 is a plan view, Fig. 2 is a view in cross-section, and Fig. 3 a view in perspective, of a switch embodying my invention, the same letters referring to corresponding parts in each.

A is the frame of insulating material; B, the top plate of metal; C, the push-button portion of the roller-bearing lever D.

E is the support for the oscillating arm L, upon which is mounted the metallic plates  $d d$ , that in their normal operation close between the contact-plates  $j j$ , to which the leading-in wires  $w w$  are attached.

The top plate B is provided with an arched portion  $f$ , in the under side of which the roller-bearing lever D finds its support. The top plate is shown in two pieces for convenience in assembling the parts and is provided with two holes, through which the push-button portion of the lever D passes.

The roller-bearing lever D is composed of a body into which the part  $p$  is normally entered and bears a roller  $r$ , that is held with pressure against the oscillating arm L by the spring S, which is under pressure when the part  $p$  is in the body portion of lever D.

The contact-plates  $j j$  are shown folding over the edge of the frame A at  $i$  to more firmly hold them from becoming displaced and admitting of the employment of simple means for securing the contact-plates to the frame.

The rotary arm L is of insulating material and bears upon its extremities the metal

plates  $d d$ , and can be simply pivoted in the supporting-strip E, which affords advantages in construction and use over any form of switch heretofore known.

By the placing of the lever D in an arched portion of a top plate, as shown, there are advantages over the ordinary method of simply pivoting the lever, as it is less liable to be displaced, and the structure is made more firm and compact in this manner.

The operation of the device is as follows: The switch thus formed being placed in a wall, so that the plate B is flush with the surface or slightly above the surface of the wall, one of the branches of the lever D (marked C) will be protruding, as shown in Fig. 1. If now the lamps in a circuit controlled by such a switch are not in circuit, by pushing the part C, that is protruding down and level with the surface of the plate B, the roller  $r$  on the lever D will run up on the oscillating arm L until it passes the center, when the arm L will be suddenly thrown into the position shown in dotted lines and the piece  $d d$  will be forced between the contact-plates at  $j j$ , closing the circuit. The closing of the circuit will bring the other branch of C into the position shown in dotted lines, and when it is desired to cut out the lights it can be done by pushing the now-protruding branch C in like manner, as previously described. The value of the sudden operation of the circuit is when a circuit is to be opened and when the branch C is pushed to open the circuit the rotary arm L is very suddenly forced into the position shown in Fig. 1 when the roller  $r$  has passed by the center of said arm. The advantages for this construction over the attempts that have heretofore been made, in which a rotating arm has been used to carry a circuit-controlling arm upon a rotatable shaft that is common to both the said arms, are greater reliability of action and less number of parts in construction. This results in a more durable device and one that occupies less space and can be more easily inspected.

What I claim is—

1. In an electric switch the combination of the following elements; an insulating-frame, a top plate that is composed of separable pieces forming an arched portion on said frame, a movable lever pivoted in said top plate, an

oscillating arm supported in said frame and made operative by the movable lever for making and breaking contact between the contact-plates secured to the said frame.

5 2. A roller-bearing lever with a body enclosing a movable portion, a spring between the two parts, a top plate in separable pieces for holding the lever in position, and a push-button part comprising two branches that are  
10 secured to the said lever, substantially as described.

3. In an electric switch; an insulating supporting-frame, a top plate composed of sepa-

rable pieces forming an arched portion, a roller-bearing lever comprising a body and a  
15 movable portion with a spring between the two parts, the said lever being pivoted in the said top plate, contact-plates secured to the said frame, and an oscillating arm supported in said frame and made operative by the said  
20 lever for making and breaking contact between the said contact-plates.

PAUL GERHARDT TISMER.

Witnesses:

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