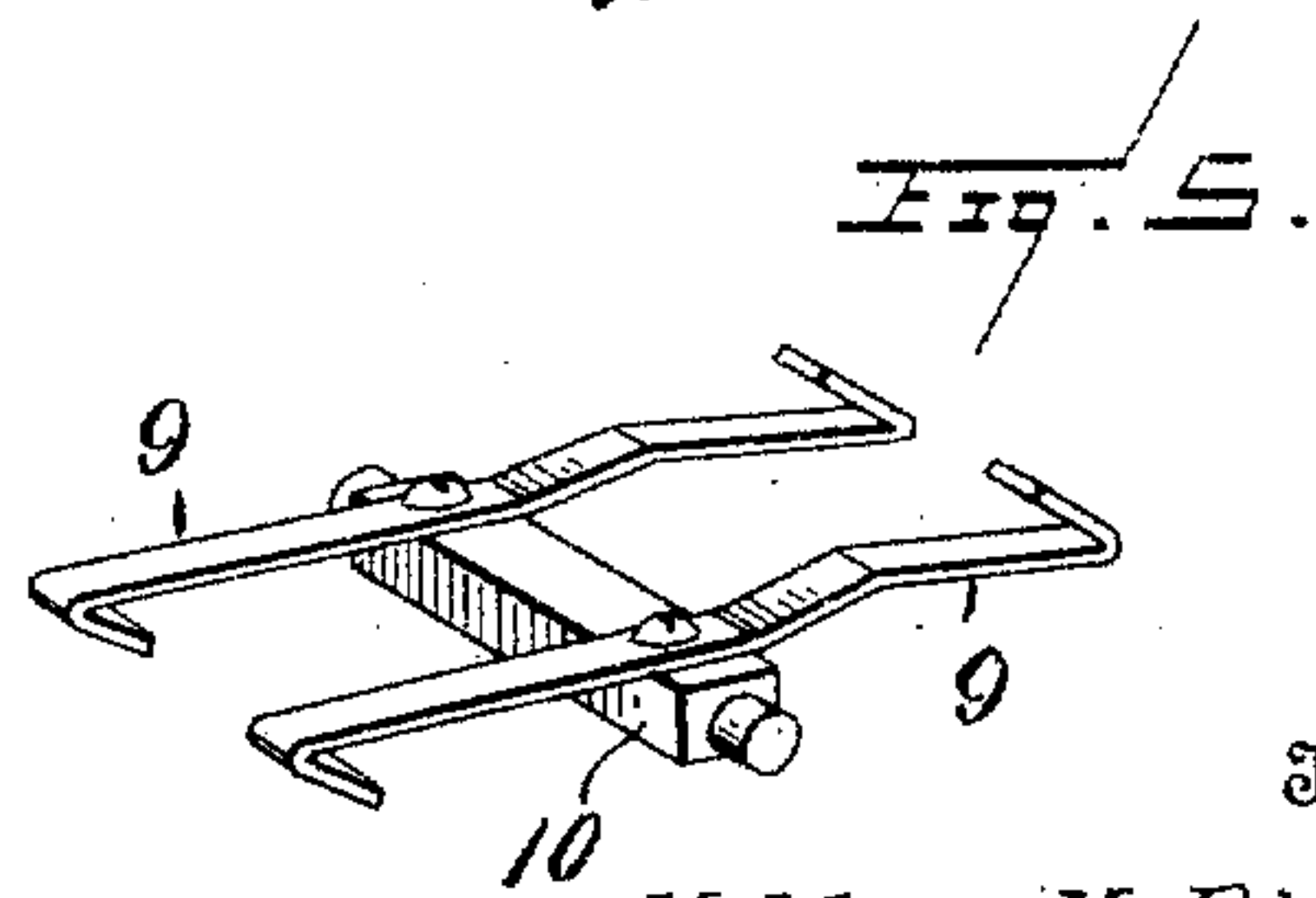
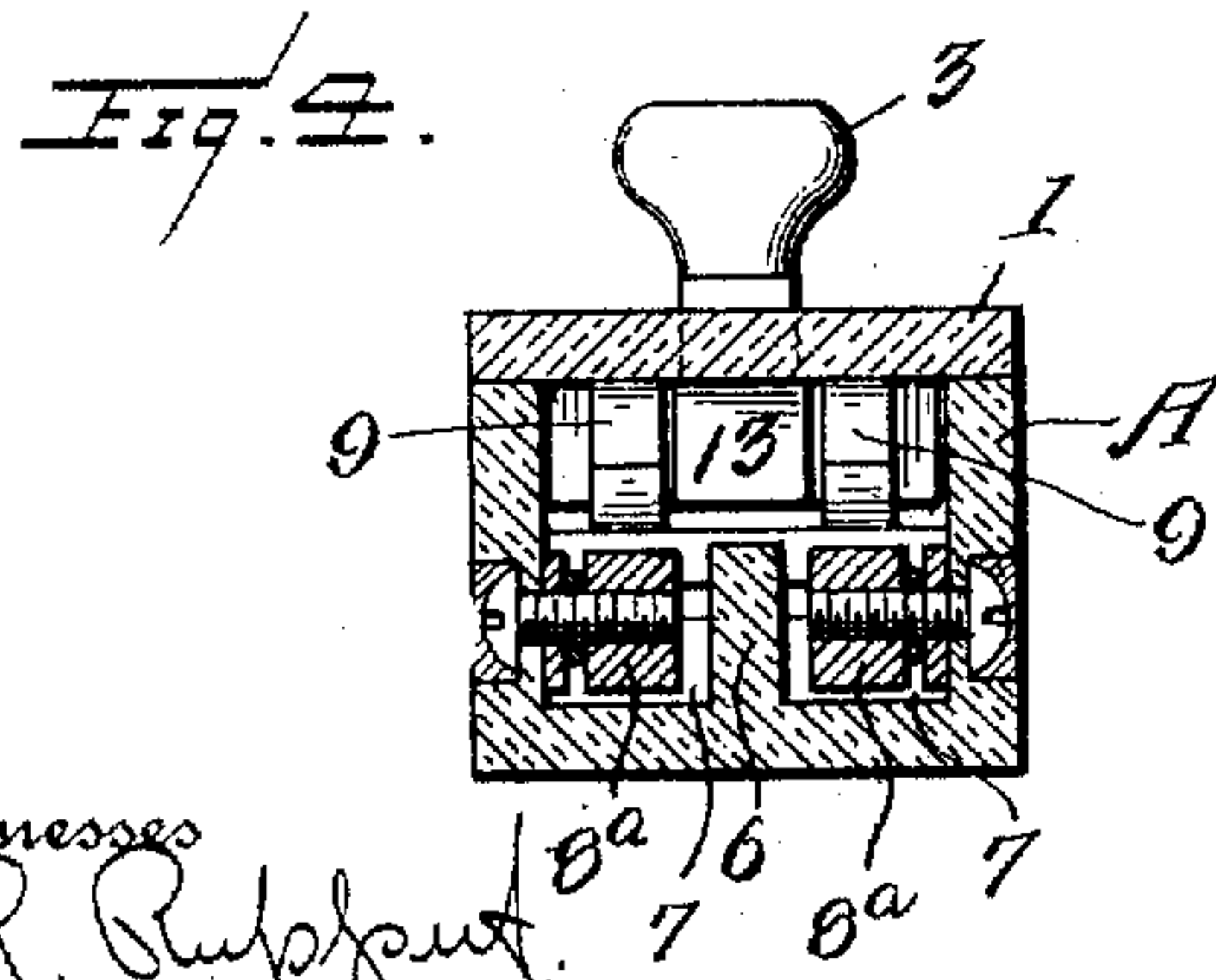
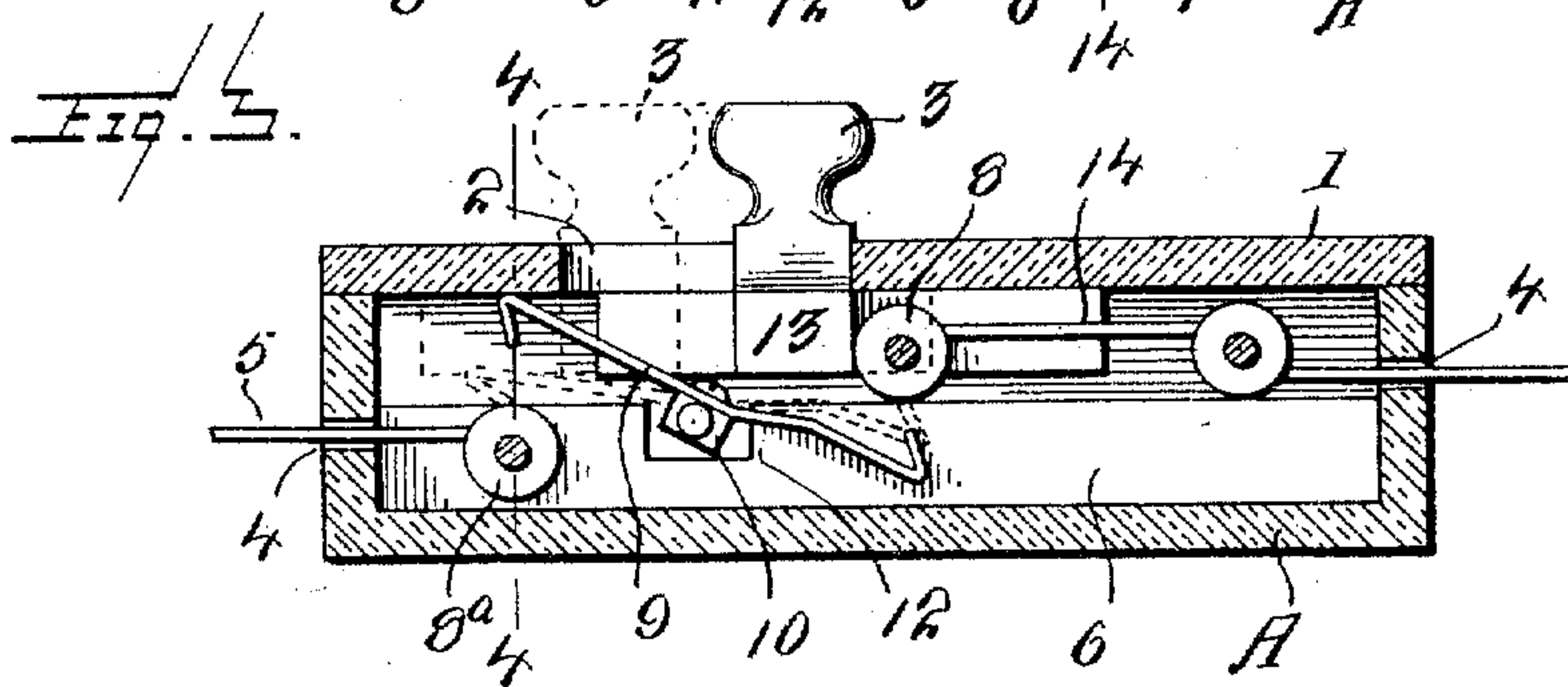
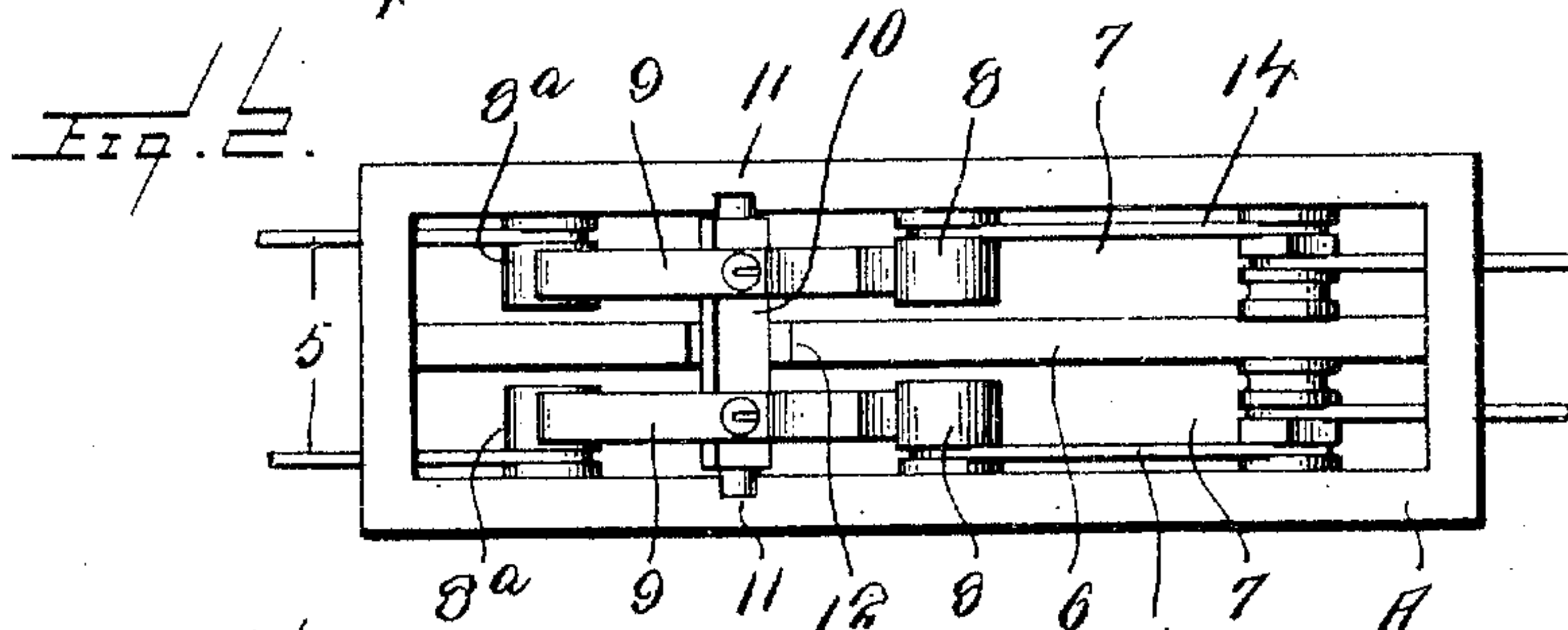
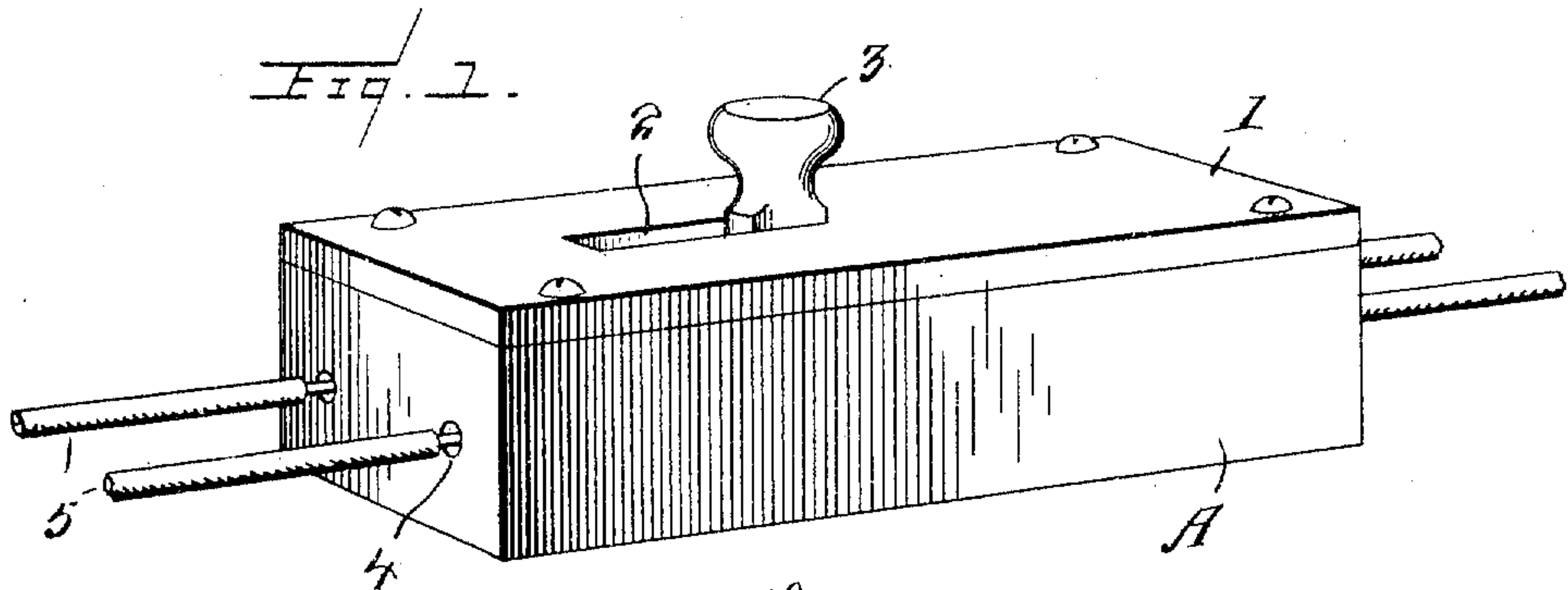


M. M. DISLER.  
ELECTRIC SWITCH BOX.  
APPLICATION FILED MAY 25, 1910.

990,120.

Patented Apr. 18, 1911.



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# UNITED STATES PATENT OFFICE.

MAHLON M. DISLER, OF CANTON, OHIO.

## ELECTRIC SWITCH-BOX.

990,120.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed May 25, 1910. Serial No. 563,330.

*To all whom it may concern:*

Be it known that I, MAHLON M. DISLER, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented new and useful Improvements in Electric Switch-Boxes, of which the following is a specification.

This invention relates to an electric switch which has all the current-conducting parts housed within a porcelain or other insulating box or casing so that danger of shocks will be entirely overcome.

The invention has for one of its objects to provide an extremely simple, durable and practical switch of this character which may be used on lighting or power circuits in buildings to take the place of those switches now commonly in use, in which the current-conducting parts are not protected, and it can be used also in place of push button switches for lighting circuits.

Another object of the invention is the provision of a novel arrangement of movable contacts and actuating means therefor whereby the circuit can be opened and closed positively, the wires of the circuit and the contacts for each wire being separated from each other so that danger of short-circuiting is avoided.

With these objects in view and others, as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawing, which illustrates one embodiment of the invention, Figure 1 is a perspective view of the switch box. Fig. 2 is a plan view of the switch box with the cover removed. Fig. 3 is a longitudinal section thereof showing the movable contacts in open and closed-circuit position by full and dotted lines, respectively. Fig. 4 is a transverse section on the line 4-4, Fig. 2. Fig. 5 is a perspective view of the movable contacts of the switch.

Similar reference characters are employed to designate corresponding parts throughout the views.

Referring to the drawing, A designates a box made of porcelain or other suitable material that is open at its top and provided with a cover plate 1 which has a longitudinal slot 2 through which passes the knob 3 of the switch-actuating means which is mov-

ably mounted on the cover plate. The box is provided with apertures 4 at its ends for permitting the circuit wires 5 to enter. The switch box shown is used in connection with the two-wire or metallic return circuit and each wire is adapted to be broken when the switch is opened.

Extending longitudinally of the casing is a central partition 6 that rises from the bottom of the casing or box and extends from one wall to the other, thereby dividing the casing into separate compartments 7, one for each wire and its switch element.

Secured to the side walls of the casing are binding posts 8 and 8<sup>a</sup> arranged respectively near the top and bottom of the box and spaced longitudinally apart, and the wires leading into the box are connected with these posts.

Arranged to engage with each set of binding posts 8 and 8<sup>a</sup> is a bridging contact 9 which engages under the contact 8 and over the contact 8<sup>a</sup>. The bridging contacts are both mounted on a rock shaft 10 of insulation which has its ends journaled in bearings 11 in the sides of the box, the partition 6 having the recess 12 for accommodating the rock shaft. The contacts 9 are so arranged that they will gravitate to open-circuit position as shown by full lines in Fig. 2, this being accomplished by making the ends of the bridging contacts 9 that engage the fixed contacts 8 heavier than the opposite ends or by positioning the contacts 9 on the shafts 10 in such a manner that the opposite ends of the contacts will be of unequal weight, and they are moved to and held in closed circuit position by a slide 13 disposed under the cover and secured to the knob 3. This slide moves back and forth on the partition 6 and engages the contacts 9 and forces the upper ends thereof downwardly against the binding posts or fixed contacts 8<sup>a</sup> and at the same time causes the opposite ends of the bridging contacts to engage under the binding posts or fixed contacts 8, thereby completing the circuit through each wire. This takes place when the knob is moved to the left, and when the knob is moved to the right, the bridging contacts will spring away from the fixed contacts and gravitate to open-circuit position.

If desired, the switch-box may contain fuse wires 14 which will be disposed in the compartments 7 and connected with the wires therein, thus forming a combined



switch and fuse box with the parts completely housed and protected.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described the invention, what I claim is:—

1. A switch comprising fixed spaced contacts, a bridging contact arranged to engage over one and under the other of the fixed contacts, means for pivotally mounting the bridging contact at a point intermediate its ends, and a member movable into and out of engagement with the bridging contact to move the latter to closed and open-circuit position.

2. A switch comprising fixed contacts spaced apart, a bridging contact arranged to engage the fixed contacts, means located between the ends of the bridging contact for pivotally mounting the same, and a device separate from and movable into and out of engagement with the bridging contact to engage and disengage the same with and from the fixed contact.

3. A switch comprising spaced contacts, a resilient bridging contact, a rock shaft on which the bridging contact is mounted, and a slidable device movable transversely to the

rock shaft to engage the bridging contact at a point one side of the shaft for moving the same to closed-circuit position.

4. A switch comprising a casing, fixed contacts mounted therein, a rock shaft disposed between the contacts, a bridging contact carried by the rock shaft and projecting from opposite sides thereof, one projecting portion being heavier than the other for causing the bridging contact to gravitate to open circuit position, and an actuating means movable into and out of engagement with the bridging contact for closing the circuit.

5. A switch comprising a casing, a partition dividing the casing into compartments, fixed contacts in each compartment, a rock shaft extending across the compartments, bridging contacts mounted on the rock shaft and insulated from each other and forming with the shaft an oscillatory structure, and means for tilting the structure to engage the bridging contacts with the fixed contacts.

6. A switch comprising a casing, a partition dividing the casing into compartments, fixed contacts in each compartment, a rock shaft extending across the compartments, bridging contacts mounted on the rock shaft and insulated from each other and forming with the shaft an oscillatory structure, a cover plate for the casing, and means mounted on the cover plate to slidably engage the bridging contacts to move the latter into engagement with the fixed contacts.

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

MAHLON M. DISLER.

Witnesses:

WM. SIMPSON,  
A. R. SIMPSON.