J. R. ROSSIGNOL.

ELECTRIC SWITCH.

APPLICATION FILED MAR. 12, 1910.

988,821.

Patented Apr. 4, 1911.

Fig. 1.

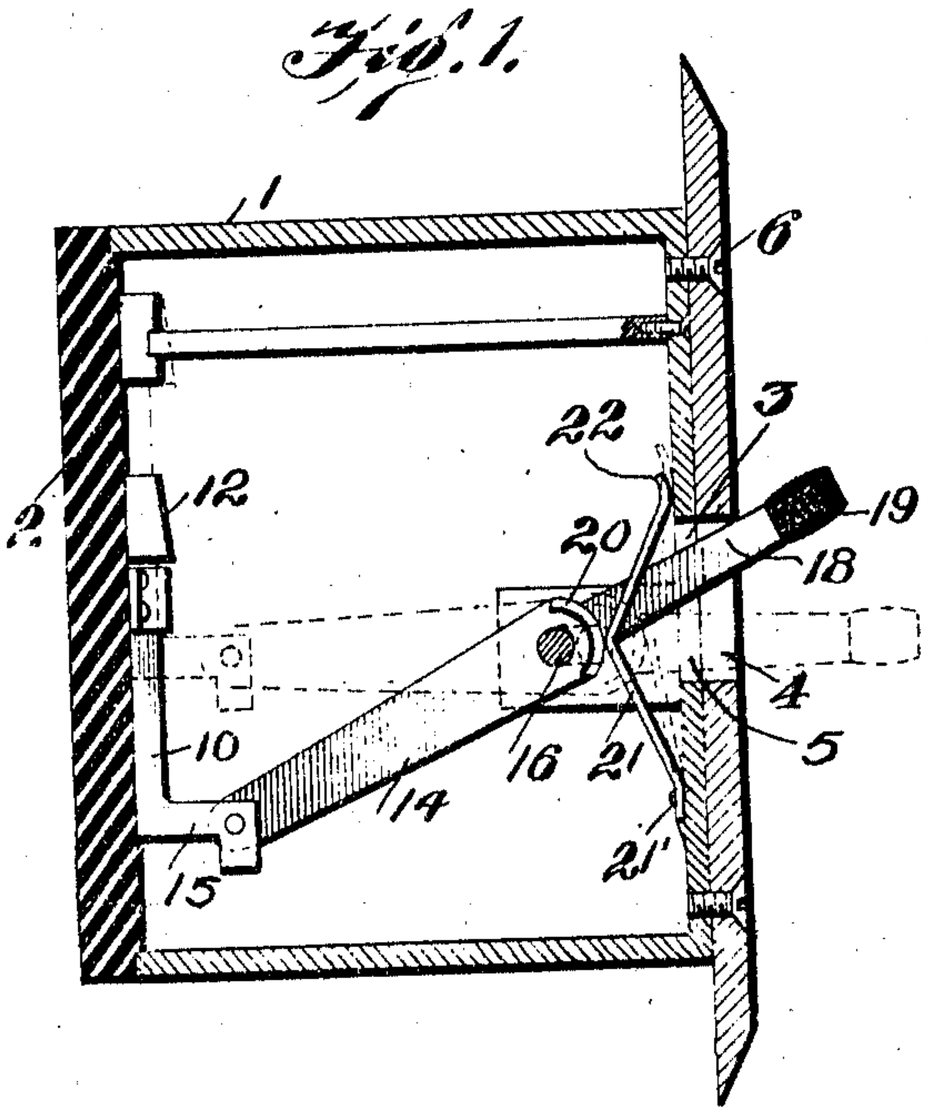


Fig. 2.

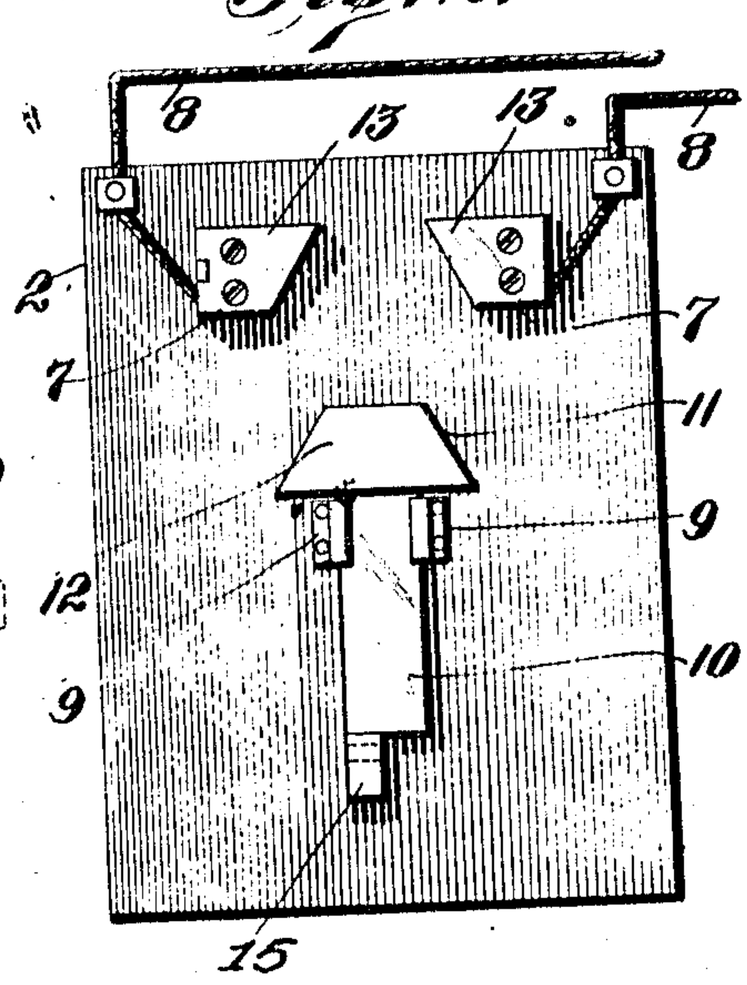
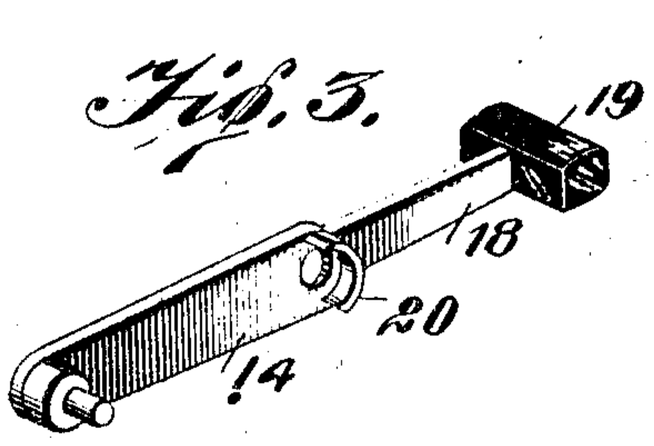


Fig. 4.



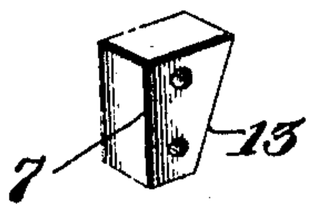


Fig. 6.

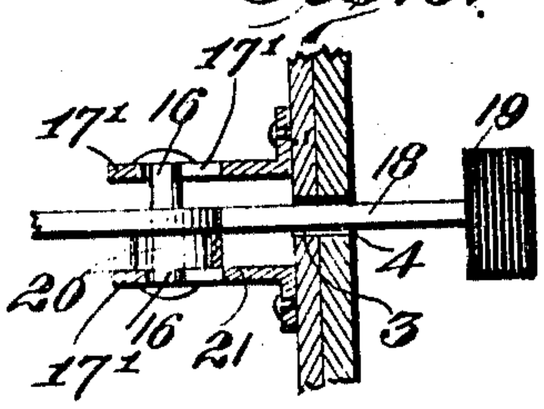
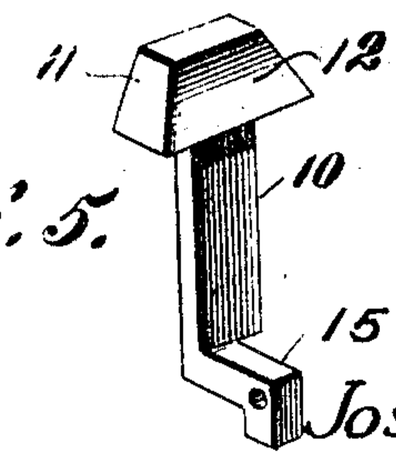


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOSEPH RICE ROSSIGNOL, OF SAVANNAH, GEORGIA.

ELECTRIC SWITCH.

988,821. Specification of Letters Patent. Patented Apr. 4, 1911.

Application filed March 12, 1910. Serial No. 549,056.

To all whom it may concern:

Be it known that I, JOSEPH R. ROSSIGNOL, a citizen of the United States of America, residing at Savannah, in the county of Chatham and State of Georgia, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to electric switches, and has especial reference to cut-out switches for opening and closing an electric circuit.

The object of the invention is to provide an improved electric switch by means of which the circuit may be instantaneously closed and broken. These and other objects of the invention will appear in the course of the following specification.

Referring to the accompanying drawing, Figure 1 is a side view, in elevation and partly in vertical section, of a casing and an electric cut-out switch constructed in accordance with this invention mounted therein. Fig. 2 is a detail face view of the insulated back of the casing, showing a portion of the switch mounted thereon. Fig. 3 is a detail view in perspective of the switch operating lever detached from the switch. Fig. 4 is a detail view in perspective of one of the contact plates. Fig. 5 is a detail view in perspective of the movable contact portion of the switch. Fig. 6 is a detail plan view, partly in horizontal section and broken away, showing a portion of the casing and the pivotal support for the operating lever.

In carrying out the invention, the switch is preferably mounted in a suitable casing 1 having one of its sides 2 formed of insulating material, and its other side secured to a wall or other support 3 formed with an aperture 4 which is in alinement with an aperture 5 in the wall of the casing. Said casing is secured to the partition 3 by means of screws 6, or other suitable fastening means.

Mounted on the insulating back 2 are a couple of contact plates 7 which are connected with circuit wires 8. Slidable in guides 9 on the insulating back 2 is a reciprocating contact bar 10 formed with a head 11 preferably of an angular shape, and, as here shown, with inclined sides 12 which are adapted to contact, as the bar 10 is moved forward, with the inclined sides 13 of the contact plates 7. The contact bar 10 is operated by suitable means, and, as here shown, preferably by means of a lever 14 pivoted at one end to an arm 15 projecting from the lower end of the contact bar 10. The operating lever 14 is provided with a pivot pin 16 which is mounted in a longitudinal slot 17 formed in arms 17′ on the side of the casing, thereby permitting a sliding throw of the pivotal portion of the lever 14 when the latter is operated. The lever 14 has an extended portion or arm 18 projecting through the openings 5 and 4 and having at its outer end an insulating handle 19. Mounted on the lever 14 adjacent to its pivotal point and concentric therewith is a curved strip 20 which bears against an angular spring strip 21 secured at one end, as at 21′, to the side of the casing, and having its other end 22 loosely mounted upon the side of the casing and adapted to slide thereon.

The operation of the switch is as follows: The switch being in the position shown in Figs. 1 and 2, in order to close the circuit the handle portion 18 is pulled downward to the position shown in dotted lines in Fig. 1, thereby raising the contact bar 10 and its head 11 into closed position with the contact plates 13, thereby closing the circuit. As the switch lever 14 is operated, the curved projection 20 thereon bears against the angular portion of the spring 21 and compresses the latter, as shown in dotted lines in Fig. 1, thereby holding the spring 21 under tension when the switch is closed. When it is desired to break the circuit, the switch handle portion 18 is raised from the position shown in dotted lines in Fig. 1, and as it is raised the curved projection 20 of the switch lever 14 passing away from the angular point of the spring 21 permits the latter to react and throw the switch lever 14 downward with a snap action, thereby instantaneously snapping the contact head 11 out of engagment with the contact plates 13.

It will be seen that by means of this device the contact head 11 will be instantaneously moved into and out of closed position with the contact plates 13, owing to the angular shape of the head and of the plates 13, the contact surfaces of said plates being instantly engaged or released as the contact bar 10 is moved into and out of position with the contact plates 13.

What I claim as my invention is:—

1. An electric switch comprising a pair of contact plates spaced apart from each other, a slidable contact bar having a contact head,

an operating lever pivoted at one end to said contact bar and having its fulcrum pivot pin mounted in a longitudinal slot on a support, a curved projection on said lever adjacent to its pivotal point, and an angular spring fixed at one end and free at the other end and bearing against said curved projection on the operating lever.

2. An electric switch comprising a pair of contact plates spaced apart from each other and each having an opposite angular contact surface, a reciprocating contact bar having a contact head with inclined sides adapted to engage said contact plates, a lever pivoted at one end to said contact bar and longitudinally movable at its pivotal point, a curved projection concentric with the pivotal point of said lever, and an angular spring fastened at one end and slidable at the other and having its angular portion bearing against said curved projection.

3. An electric switch comprising a casing having a back of insulating material, and its opposite side provided with an opening, a pair of contact plates spaced apart from each other and each having an opposite angular contact surface and mounted on said insulating back, a reciprocating contact bar mounted on said insulating back and having a contact head with inclined contact sides adapted to engage said contact plates and having an angular arm at its other end, an operating lever pivotally mounted on a support in said casing and having its pivot pin loosely mounted in a longitudinal slot in said support, said lever being pivoted at one end to said arm on the contact bar and having a curved projection concentric with its pivotal point, a lever extension projecting through the opening in the casing and having an insulating handle, and a V-shaped spring fastened at one end to the side of the casing and having its other end adapted to slide upon the side of the casing, the angular portion of said spring bearing against the curved projection on the lever.

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

JOSEPH RICE ROSSIGNOL.

Witnesses:
H. W. JANIOR,
J. W. DEDGE.