No. 803,827. PATENTED NOV. 7, 1905.

W. J. HUGHES.

RAILWAY SWITCH STAND CONTACT BOX.

APPLICATION FILED MAY 5, 1905.

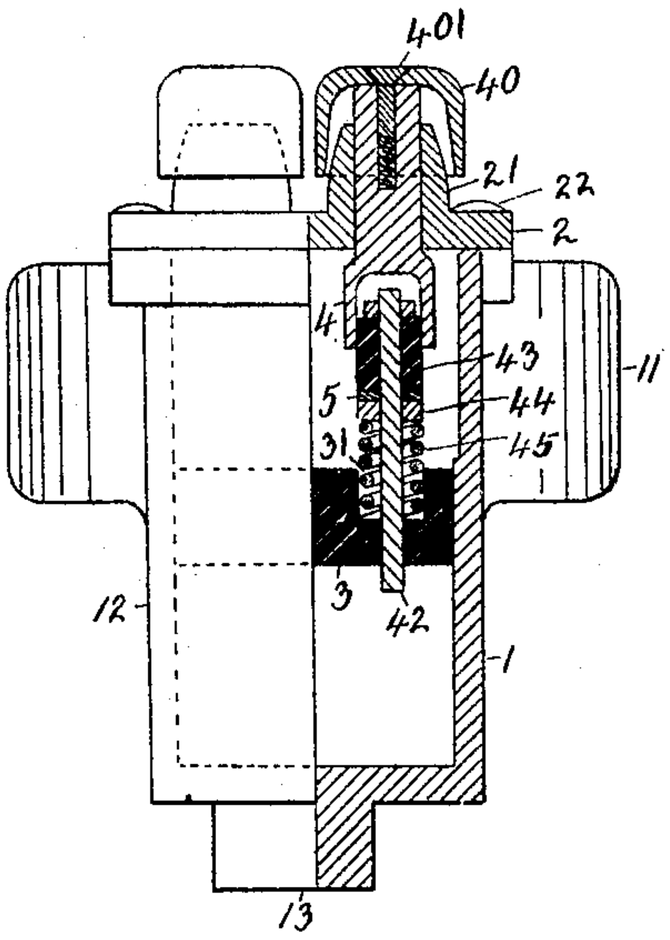

Fig. 1.

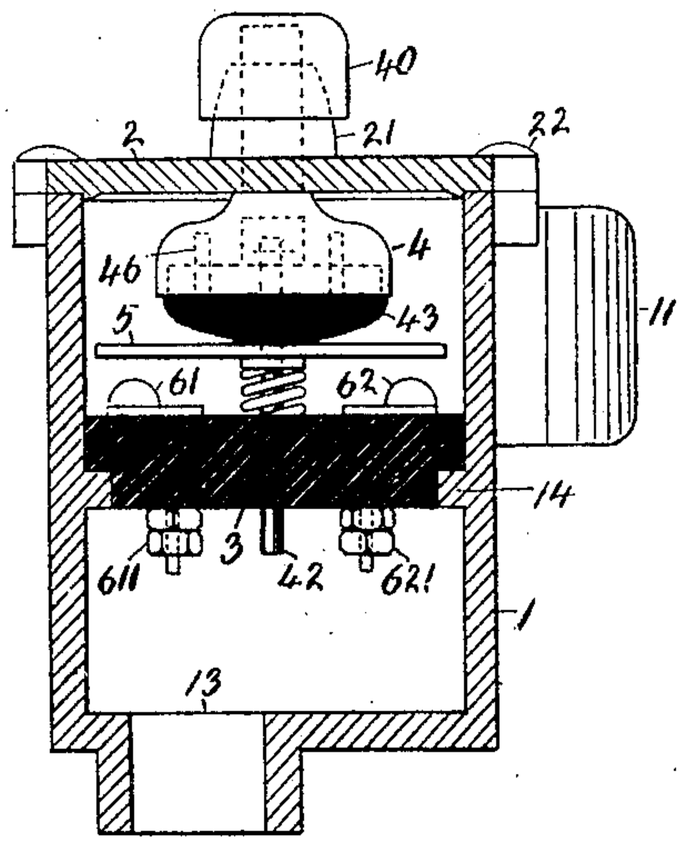

Fig. 2.

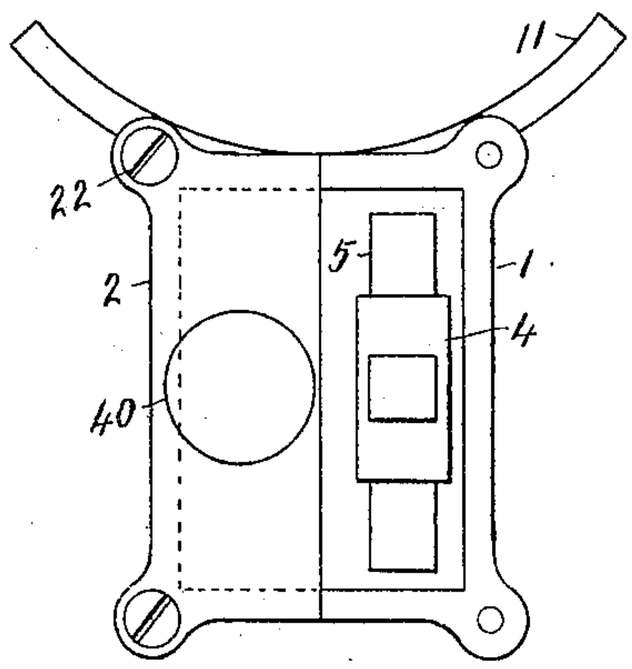

Fig. 3.

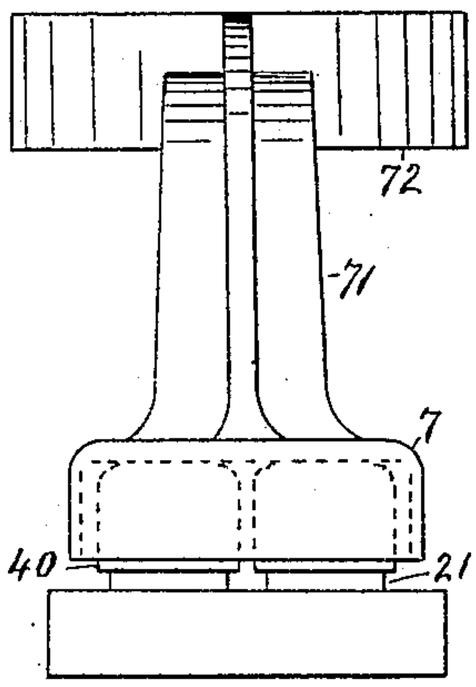

Fig. 4.

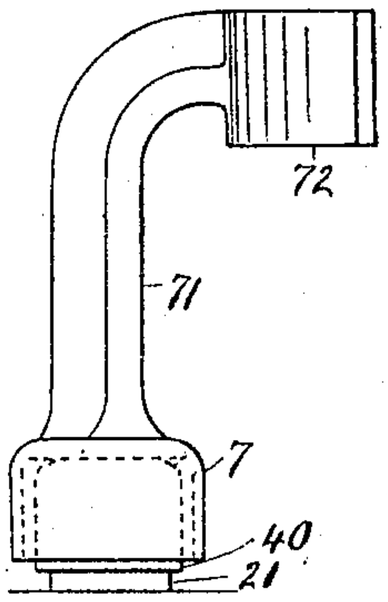

Fig. 5.

Witnesses
H. J. Budd
C. Webster.

Inventor
William John Hughes.
By Stanbury & Budd
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM JOHN HUGHES, OF LEVIS, CANADA.

RAILWAY-SWITCH-STAND CONTACT-BOX.

No. 803,827. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed May 5, 1905. Serial No. 258,955.

To all whom it may concern:

Be it known that I, WILLIAM JOHN HUGHES, a subject of the King of Great Britain, residing at Levis, in the Province of Quebec, Dominion of Canada, have invented new and useful Improvements in Railway-Switch-Stand Contact-Boxes, of which the following is a specification.

My invention relates to safety-switch mechanism, and more particularly to a contact-breaker operated on the switch-stand. Its object is to provide a contact-breaker that will be reliable and will not be affected by climate or weather.

The improvements consist in a box and arm provided with lugs to secure them to the switch-stand and locking-block, respectively. The box has a removable cover and front plate. The cover has a flanged neck. The contact-spring and its connections are novel.

Reference is made to the annexed drawings, in which—

Figure 1 is a front view, one-half being in section; Fig. 2, a vertical cross-section of Fig. 1; Fig. 3, a top view, one-half shown with cover removed; Fig. 4, a front view of arm; Fig. 5, a side view of arm.

The box 1, secured by the flanges 11 to the switch-stand, has a top 2 with necks 21 rising therewith. The top 2 is secured to the box 1 by screws 22. A circular opening 13 at the bottom of the box 1, to which is connected a tube, admits the circuit-wires to the binding-posts. Flanges 14 support an insulating-plate 3, which is provided with contact-points 61 and 62, having binding-posts 611 and 621. A front plate 12 is removable. A sliding yoke 4 passes through the neck 21 and has a cap 40, secured by a screw 401, surrounding the neck 21. An insulating-block 43 is secured by screws 43 to the lower end of the yoke 4. A bolt 42 passes through the block 43 and extends through the plate 3. A coil-spring 45 surrounds the bolt 42 and rests in seat 31, cut in the plate 3. A nut 44 on the bolt 42 bears on the top of the coil-spring 45 and retains the contact-spring 5 in position, so that the ends project over the contact-points 61 and 62.

Secured to the locking-block of the switch is an arm 71 with flanges 72 and a cap 7, which fits over the caps 40 when the locking-block descends into a locked position.

I do not show the switch-stand and the switch in the specification, as they are fully described in my Patent No. 200,996, filed March 31, 1904, for electric switch-signal device.

The operation of the invention is as follows: The binding-posts 611 and 621 having been connected in circuit with an electric semaphore, which normally stands at "danger" when the circuit is open, the contact-spring 5 is normally held by the spring 45 away from the contact-points 61 and 62. When the switch-stand-locking mechanism brings the arm 71 and cap 7 over the cap 40 and descends, the contact-spring 5 is depressed and connects the contact-points 61 and 62, closing the circuit, whereby the semaphore is operated to indicate "safety," as described in the said patent.

The neck 21 and cap 40 prevent any moisture entering the box and keep the surface of the cover free from obstructions, such as ice. The bolt 42 being insulated from the yoke 4 prevents any leakage or short circuit.

By means of the front plate 12 the operating parts can be readily examined and the contacts cleaned.

Having now described my invention and how it is operated, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a contact-box having lugs, a cover thereto provided with a flanged neck, and an opening at the lower end to admit circuit-wires, an insulating-plate provided with contact-points and binding-posts, a spring-controlled contact-spring, an insulated yoke connected with the contact-spring, and passing through the flanged neck of the cover, and a cap thereto, as described.

2. The combination of a contact-box with a flanged neck on the upper end, a spring-controlled contact-spring having insulated connection with a yoke passing through the flanged neck, a cap on the top of the yoke surrounding the flanged neck and insulated contact-points with binding-posts beneath the ends of said contact-spring.

3. The combination of a contact-box with a flanged neck on its upper end, a yoke passing through the flanged neck having a cap on the top surrounding said neck, a spring-controlled contact-spring with an insulated connection to the said yoke and contact-points beneath the contact-spring set in an insulating-plate with binding-posts to said points, and an arm provided with a cap adapted to descend over the cap of the yoke and depress the contact-spring to close the circuit, as described.

4. In a contact-box a flanged opening in its

upper end combined with a reciprocating contact-spring-operating member provided with a cap surrounding said flanged opening.

5. In a contact-box, a cover having an opening with a flanged neck rising therefrom, combined with a contact-spring-depressing device provided with a cap surrounding the said neck.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM JOHN HUGHES.

Witnesses:

SADIE E. GREEN,

WILLIAM W. HENRY.