Dec. 25, 1928. 1,696,209

W. R. POOL ET AL

RAILROAD WASHOUT SAFETY DEVICE

Filed March 19, 1928

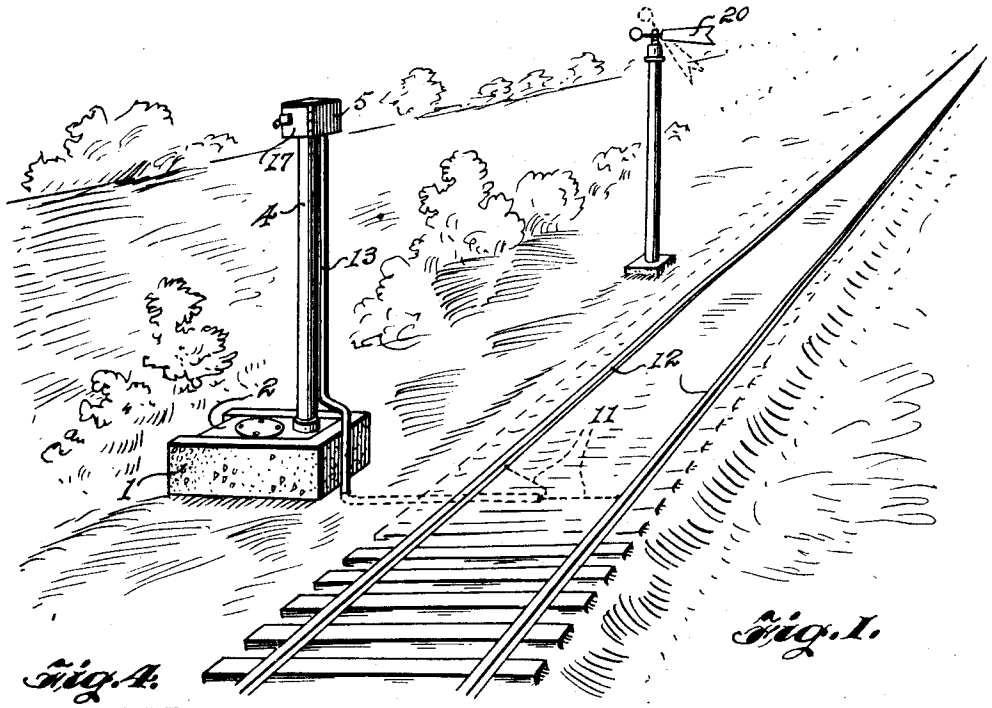


Fig. 1.

Fig. 4.

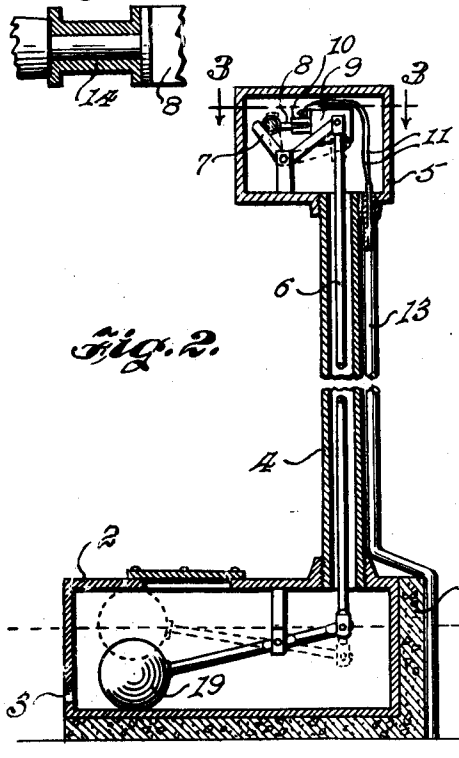


Fig. 2.

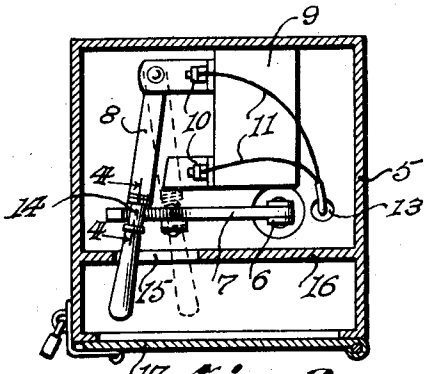


Fig. 3.

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UNITED STATES PATENT OFFICE.

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RAILROAD-WASHOUT SAFETY DEVICE.

Application filed March 19, 1928. Serial No. 262,855.

Our invention relates to signals and particularly to devices for use in connection with railways, in low lands and on trestles and bridges where excessive flood water threatens to cause damage or collapse of such structures or trackage.

The object had in view is to provide means for closing the circuit between the rails of a track when water rises to a dangerous height and is intended more particularly to be used in connection with the block signal system already installed on railways, and to set the danger signal when water rises to a predetermined height.

The invention consists also of special means for permitting the circuit to remain closed after the water has receded or until such time as it is desired to open it by hand.

For full understanding of the invention reference is to be had to the following description and accompanying drawing, in which:—

Figure 1 is a perspective view of a railway with our device installed,

Figure 2 is a vertical sectional view of the float chamber, the switch box and the post connecting the two,

Figure 3 is a section of switch box taken on the line 3—3 of Fig. 2,

Figure 4 is a detail section of the roller on the switch handle, and is taken on line 4—4 of Figure 3.

Corresponding and like parts are referred to in the following accompanying description and indicated in all the views of the accompanying drawings by the same reference characters.

In the drawings, the concrete box 1 contains and protects the float casing 2. In the casing is an opening 3 to permit an inflow of water. A hollow post 4 acts as a support for the switch box 5 and carries the float rod 6, the upper end of which is attached to a bell-crank 7. An ordinary knife switch 8 mounted on an insulated block 9 with contact points 10 is so positioned that a movement of the bell crank 7 will close a circuit through the conductor wires 11 which connect with the rails 12 through the conduit 13. The handle of the switch 8 is provided with a roller bearing 14. This bearing is intended to reduce the friction between the bell-crank and the switch when in operation. The handle of the switch protrudes through a slot 15 in the partition wall 16 where it can be reached by hand through the door 17 and opened when it has once been closed.

In operation water rising in the float chamber to the danger line 18 raises the float 19 which movement closes the switch 8 through the float rod 6 and the bell-crank 7. The circuit being now closed through the rails of the track operates semaphore 20 showing the danger signal to the trainmen. It will be noted that when the switch is once closed it will remain closed, even after the water has receded, and until it is again opened by hand. This is a part of the novel feature of our invention and for which we will make claim.

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

In a signal, the combination with a concrete box positioned at high-water level adjacent a railroad semaphore alongside track rails, of a hollow post supported on and extending upwardly from said box, a switch box mounted on the upper end of said post, a float arm pivoted intermediate its ends within said concrete box, said arm having one of its ends in the form of a float and its opposite end terminating below said post, a bell crank pivotally mounted in said switch box having legs extending at substantially right angles to each other, a switch comprising contact members and a pivoted handle mounted in said switch box for closing the circuit through said contact members, a roller bearing on said handle, a connecting rod projecting axially through said post having its lower end pivoted to the end of said float arm opposite said float, said connecting rod having its upper end pivoted to one of said legs, said roller bearing engaging the other of said legs to move said handle to close said switch when the bell crank is actuated by the float moving upwardly under the influence of water rising to a high-water

level in said concrete box, said switch being in circuit with said rails and said semaphore, whereby the dangerous rise of water moving the said float to close said switch will automatically set the danger signal in said semaphore, said danger signal remaining in set position even after the float has dropped as a result of the dropping of the level of the water adjacent the signal, until said arm is manually moved to open said switch.

In testimony whereof we affix our signatures.

WILLIAM R. POOL.
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