C. N. GLYNN.

SWITCH STRUCTURE.

APPLICATION FILED FEB. 25, 1909.

972,104. **Patented Oct. 4, 1910.**

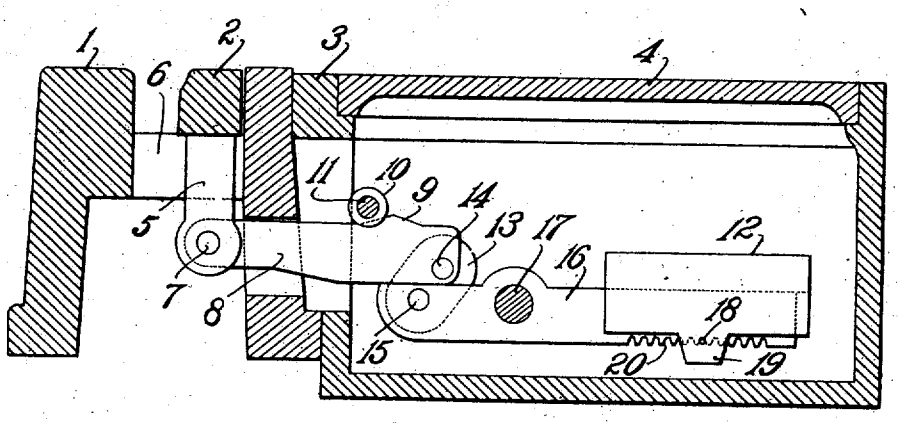

FIG. 1.

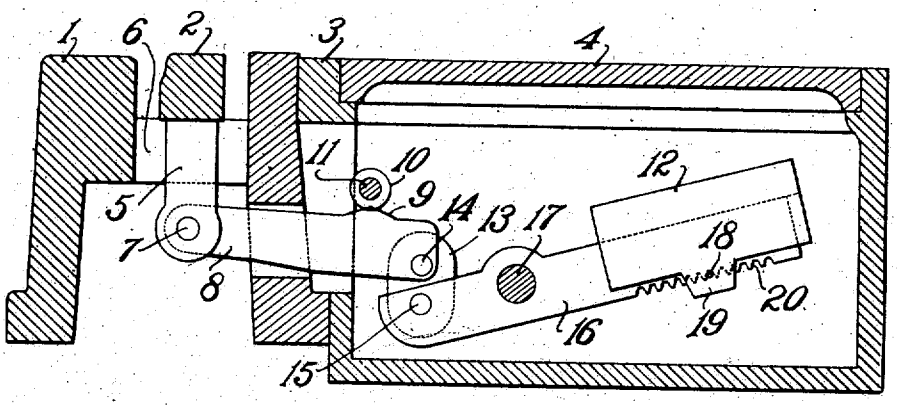

FIG. 2.

WITNESSES

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UNITED STATES PATENT OFFICE.

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SWITCH STRUCTURE.

972,104. Specification of Letters Patent. **Patented Oct. 4, 1910.**

Application filed February 25, 1909. Serial No. 480,079.

To all whom it may concern:

Be it known that I, CHARLES N. GLYNN, a citizen of the United States, residing in Philadelphia, county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Switch Structures, of which the following is a specification, reference being had to the drawings accompanying the same and forming a part thereof.

My invention relates to mechanism for preventing the displacement of a switch tongue by the wheels of cars passing over it.

The object of my invention is to provide a yielding switch tongue locking mechanism which will yieldingly hold the switch tongue in its operative positions against displacement by the wheels of cars passing over the switch, and yet permit the movement of the switch tongue from one operative position to the other.

In the drawings illustrating my invention—Figure 1 represents a vertical sectional elevation taken through the center of the switch structure and locking mechanism, showing the switch tongue in one of its operative positions; and Fig. 2 is a sectional elevation taken through the same line, but shows the switch tongue and mechanism in a mid position between its two operative positions to illustrate the operation of the yielding locking device.

In the drawings, 1 represents the body of the switch, 2 the switch tongue, 3 the box in which the switch locking-mechanism is contained, and 4 the cover to the box, which is made to be removable in order to get at the locking mechanism to clean, repair or replace it. The locking-mechanism consists of the stud 5 secured in the under side of the switch tongue and projects downwardly through the recess 6. The stud 5 is provided with the pivot 7 by means of which the lever 8 is pivoted to it. The lever 8 has a cam surface 9 thereon which is designed to contact with a roll 10 revolubly mounted on the stud 11, so that longitudinal movement of said link 8 will cause the cam 9 to pass by the roll 10 and raise the weight 12 through the action of the link member 13, the link member 13 being pivoted by the pivot 14 to the lever 8 and the pivot 15 to the lever 16; the lever 16 being pivoted in turn in the box upon the pivot 17, so that it will oscillate thereon. The weight 12 is slotted and movably mounted on the lever 16 and retained in position by a pin 18 which is inserted through the lug 19 of the weight and the teeth 20 formed in the bottom of the lever 16. The weight may be adjusted to bring more or less tension or leverage upon the lever 8 and roll 10 to increase or decrease the resistance to movement of the tongue 2.

This device is what might be termed a gravity locking device, for by moving the weight 12 to or from the pivot 17, the resistance to movement of the tongue is increased or decreased. The angle of the link 13 and the positions assumed by the pivots 14 and 15, with relation to each other when the tongue is in either operative position, assist in adding to the resistance of movement of the tongue 2, as will be readily seen by glancing at the figures and the different positions of said link as shown in Figs. 1 and 2.

The form of the parts in my gravity locking-mechanism may be changed considerably, and their location as well, without departing from the spirit of my invention.

What I claim is—

1. The combination in a switch structure, of a movable tongue; a link pivoted to said tongue having a cam surface thereon coacting with a stationary roll secured in the casing; said stationary roll; a casing; a lever mounted on a pivot in said casing; links connecting said lever with the first-mentioned lever; and a weight on the second-mentioned lever arranged to yieldingly hold the cam surface on the first-mentioned lever in contact with the roll.

2. The combination in a switch structure of a switch tongue; means for yieldingly retaining said switch tongue in a predetermined position, comprising a weight; a lever upon which said weight is mounted; a pivot upon which said lever is fulcrumed; a link connecting said lever with a longitudinally moving link; means for connecting said link to the switch tongue; a cam upon said link held in yielding contact against a roll by the lever and weight; and said roll.

3. The combination in a switch structure of a casing attached to one side of the structure; a movable tongue in the switch structure; a movable link pivoted to said movable tongue; a cam on said link; a roll mounted on a pivot in said casing against which the

sides of the cam may contact; a link connecting said movable link with a lever fulcrumed to the casing; pivots in the end of said lever and said movable link upon which a link is movably mounted; a weight adjustably mounted on said lever; and means for retaining the weight in a predetermined position.

4. In a yielding locking device for switch structures, a switch tongue; a casing, a weight and a lever; longitudinally moving links having cam surfaces thereon connecting said lever with the switch tongue; a stationary roll; and a weight to yieldingly hold the switch tongue in its operative positions.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses, this the 25th day of January, A. D. 1909.

CHARLES N. GLYNN.

Witnesses:
THOS. WAGNER, Jr.,
J. BAKER STEWARD.