

No. 847,538.

PATENTED MAR. 19, 1907.

A. E. ANDERSON.
RESILIENT SWITCH STAND CONNECTION.

APPLICATION FILED SEPT. 10, 1906.

Fig. 3.

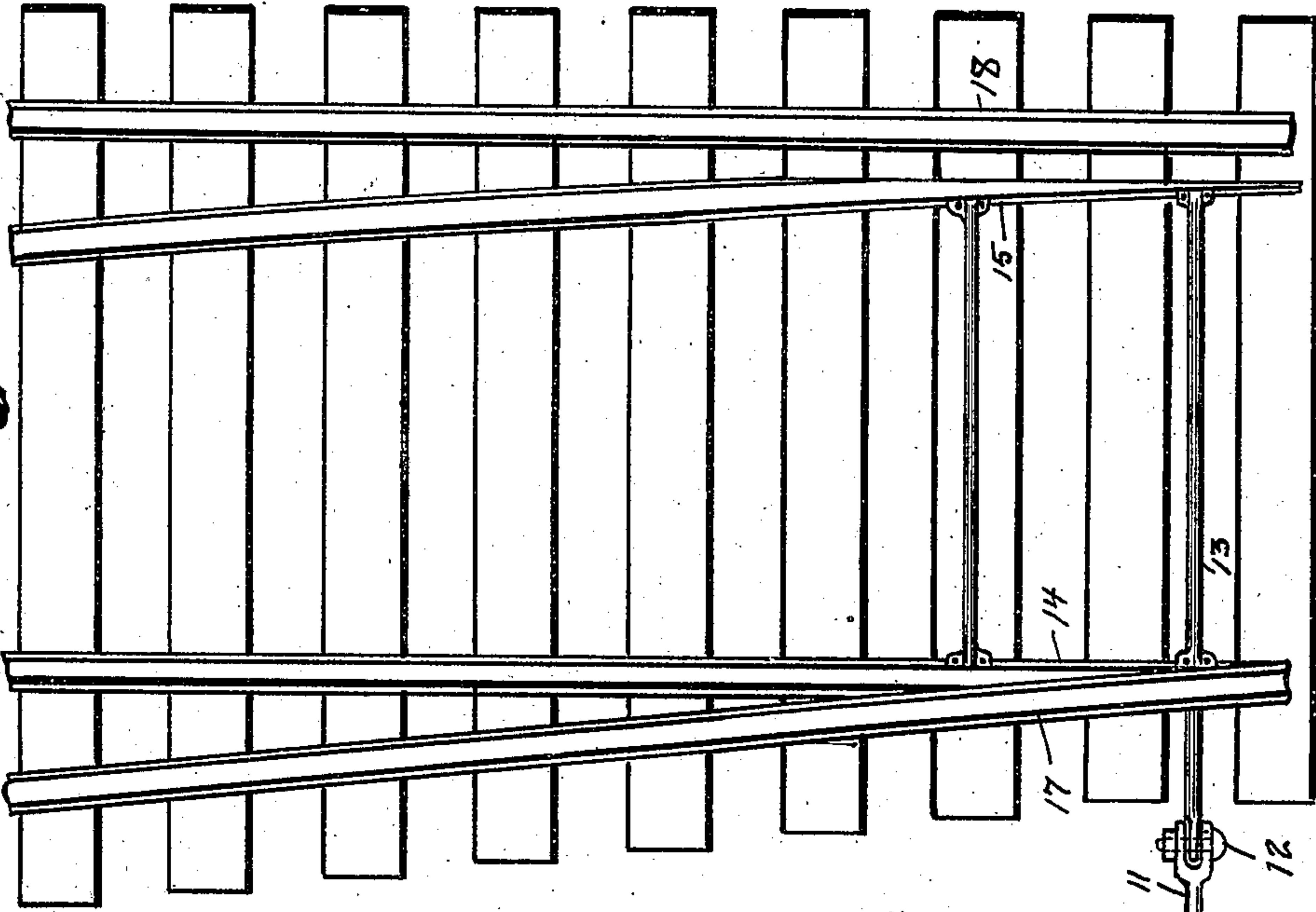
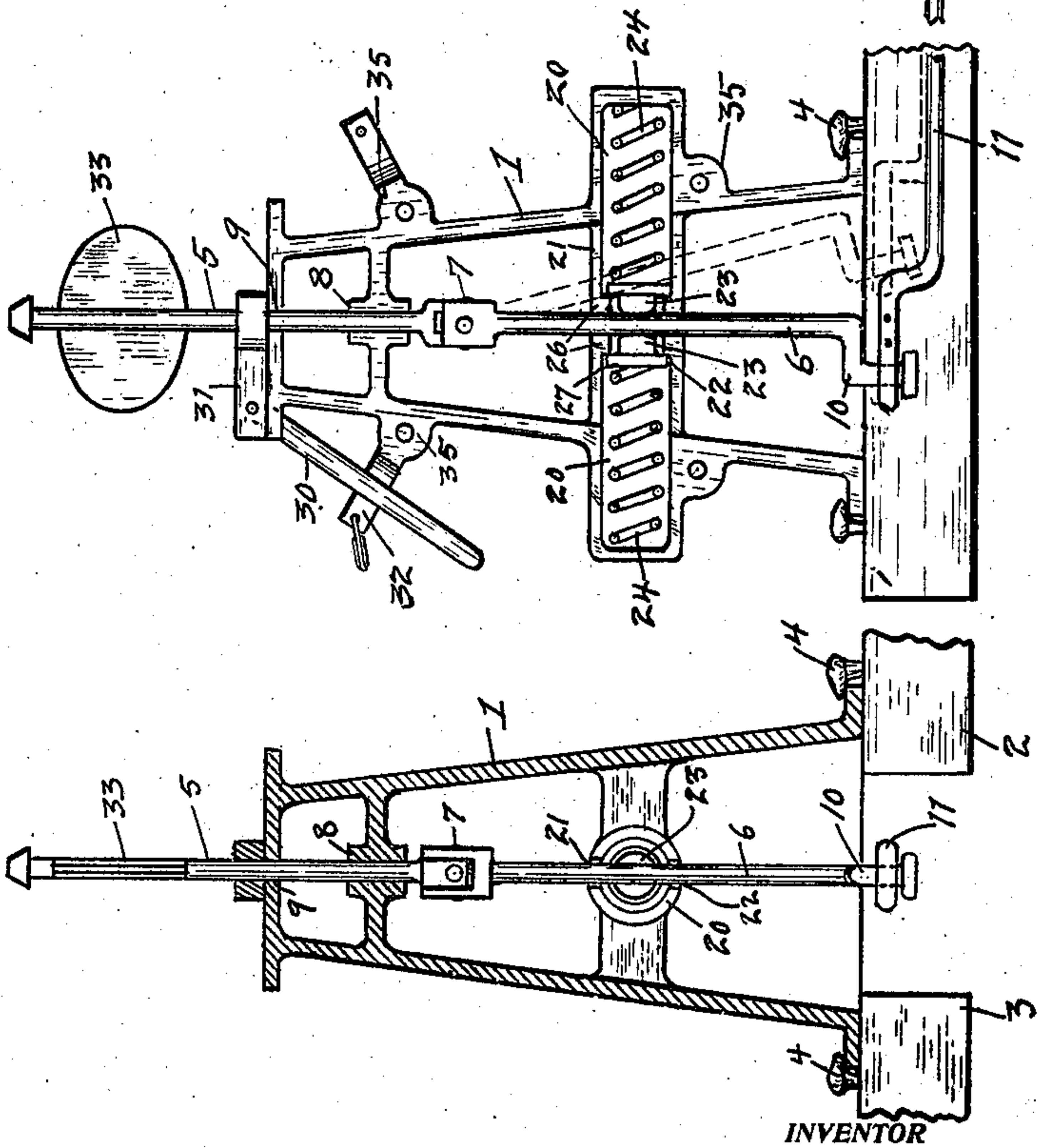


Fig. 1. Fig. 2.



WITNESSES:

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RESILIENT SWITCH-STAND CONNECTION.

No. 847,538.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed September 10, 1906. Serial No. 333,887.

To all whom it may concern:

Be it known that I, ALFRED E. ANDERSON, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Resilient Switch-Stand Connections, of which the following is a specification.

My invention relates to improvements in resilient switch-stand connections.

The object of my invention is to provide means whereby cushioning devices can be applied to a so-called "upright" switch mechanism and the switch-points permitted to yield under pressure of the wheel-flanges in case they are misplaced, thus avoiding derailment.

A further object is to so locate the cushioning devices that they will not be clogged or interfered with by water or slush or sediment, and to so arrange the structure that the improvements can be applied with but little alteration in the plan of an ordinary switch or in its principle or ordinary operation.

In the following description reference is had to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of the upright portion of a switch mechanism embodying my invention. Fig. 2 is a vertical sectional view drawn at right angles to that given in Fig. 1, and Fig. 3 is a plan view of the portion of the switch mechanism (including the switch-points and track-rails) not illustrated in Fig. 2.

Like parts are identified by the same reference figures throughout the several views.

1 is the casing of a so-called "upright" switch mechanism. This is mounted upon two ties 2 and 3, to which it is secured by bolts 4. A vertical bar, formed in two sections 5 and 6, respectively, extends through the casing, and these sections are connected by a universal joint 7 within the casing. The upper section 5 is mounted to rotate in suitable bearings 8 and 9 and the lower section is provided with a crank 10, which is attached to connecting-rod 11. This connecting-rod extends inwardly or in the direction of the track between the ties and has jointed connection at 12 with a link 13, the latter being secured to the switch-points 14 and 15, whereby when the vertical bar is rotated the switch-points 14 and 15 may be adjusted either in the direction of the track-rail 17 or of the track-rail 18, as desired.

The casing 1 is provided with a transverse sleeve 20, forming a cylindrical chamber having slots 21 and 22 in its upper and lower walls between the outer walls of the casing, and the section 6 of the switch-actuating bar passes through these slots and between cushion-heads 23, which are forcibly pushed against the section 6 by means of springs 24, seated in the ends of the sleeve 20, which form spring-containing sockets. The middle portion of the sleeve 20 is provided with inwardly-projecting flanges 26 on each side of the normal position of the bar 6, and the cushion-heads are provided with outwardly-projecting flanges 27, adapted to bear against the flanges 26, which thus prevent the cushion-heads from passing the central portion of the sleeve.

With this construction it is obvious that pressure exerted upon the switch-points will be transmitted through the link 13 and connecting-rod 11 to swing the section 6 on the joint 7 as a pivot and against the tension of one of the springs 24, but as soon as the pressure is relieved the spring will restore the section 6 and the switch-points to their original position of adjustment. Since the movement of the cushion-heads is limited by the flanges 26, it is obvious that the tension of the springs 24 need not be absolutely equalized in order to hold the bar-section 6 normally in a true vertical position.

30 is a lever connected by arm 31 with the upper bearing 9 of the section 5, whereby the switch may be actuated in the usual manner.

32 is an ordinary switch-lock, and 33 is an ordinary signal connected with the upper section 5.

It will be observed that the casing is separable along a median plane upon which Fig. 2 is drawn. The parts of the casing 1 are connected by ordinary bolts passing through the outwardly-projecting ears 35.

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

1. In a device of the described class, the combination with the switch-points of a railway-track, of a substantially upright jointed axially-movable bar; an actuating-lever connected to its upper end; motion-transmitting connections between the bar and switch-points, and springs holding the lower portion of the bar substantially in a normal upright position, together with an inclosing casing for the lower portion of the bar and springs.

2. In a device of the described class, the combination with the switch-points of a railway-track, of a substantially upright axially-movable bar, universally jointed at an intermediate point, and provided with an offset arm at its lower end; a casing having bearings for the upper section of the bar and enclosing the joint and lower section; connections between said offset arm and the switch-points; and springs for holding the lower section of the bar normally in a vertical position.

3. In a device of the described class, the combination with switch-points and track-rails of a railway-track, of a substantially upright axially-movable bar at one side of the track-rails universally jointed at an intermediate point and having an offset arm at its lower end, connected with the switch-points; a casing provided with a bearing for the upper section of the bar and guides for the lower section, adapted to permit said section to swing toward and away from the track-rails; and springs seated in the casing and arranged to resist the movement of the lower bar-section in said guides in either direction from a normal vertical position.

4. In a device of the described class, the combination with switch-points and track-rails of a railway-track, of a substantially upright axially-movable bar at one side of the track-rails, universally jointed at an intermediate point and having an offset arm at its lower end, connected with the switch-points; a casing provided with a bearing for the upper section of the bar and guides for the lower section, adapted to permit said section to swing toward and away from the track-rails; and springs seated in the casing and arranged to resist the movement of the lower bar-section in said guides in either direction from a normal vertical position, said springs being arranged to exert pressure on opposite sides of the bar in the plane of swinging movement, with interposed bearing-heads, and stops on the guides to prevent the bearing-heads from moving across the normal line of the bar.

5. In a device of the described class the combination with the switch-points and

track-rails of a railway-track, of a substantially upright axially-movable bar at one side of the track-rails, universally jointed at an intermediate point and having an offset arm at its lower end connected with the switch-points; a casing provided with a bearing for the upper section of the bar above said universal joint; said casing having guides for the lower section adapted to permit said section to swing toward and away from the track-rails; compression-springs seated in the casing and arranged to resist the movement of the lower bar-section in said guides in either direction from a normal vertical position; bearing-heads interposed between said springs and the bar-section; and stops adapted to prevent the bearing-heads from being moved by the springs across the normal line of the bar.

6. In a device of the described class the combination with the switch-points and track-rails of a railway-track, of a substantially upright axially-movable bar at one side of the track-rails, universally jointed at an intermediate point and having an offset arm at its lower end connected with the switch-points; a casing provided with a bearing for the upper section of the bar above said universal joint, said casing having guides for the lower section adapted to permit said section to swing toward and away from the track-rails; compression-springs seated in the casing and arranged to resist the movement of the lower bar-section in said guides in either direction from a normal vertical position; bearing-heads interposed between said springs and the bar-section; and stops adapted to prevent the bearing-heads from being moved by the springs across the normal line of the bar; said casing being formed in vertically-separable sections adapted to be mounted respectively upon adjacent ties.

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

ALFRED E. ANDERSON.

Witnesses:

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M. M. SCHULZ.