This invention relates to an adjustable switch block adapted to be used in connection with railway switches for holding the switch point in its open position in case the switch operating means or any part thereof should be temporarily impaired or otherwise rendered unsafe in its operation.

The switch is usually operated by a bar or similar device attached thereto by one or more bolts extending entirely through the point of the switch and operating bar and one of the objects of the present invention is to provide a switch block capable of being easily and quickly installed in operative position between the rail and point of the switch for positively holding the switch in its open position until the opening means can be repaired.

Another object is to enable the switch block to be adjusted to conform to the throw of different switch points or to different distances between the switch and rail when the switch point is in its full open position.

Other objects and uses relating to specific parts of the device will be brought out in the following description.

In the drawing:

Figure 1 is a perspective view of a portion of a switch and adjacent portion of its operating means, together with the adjacent rail of the track with which the switch point is adapted to cooperate and my improved switch block in operative position for holding the switch open.

Figure 2 is an enlarged sectional view of the adjustable switch block, the dotted lines indicating portions of the rail and switch point.

Figure 3 is an end face view of the head end of the adjusting bolt of the switch block.

In order that the invention may be clearly understood I have shown a portion of a track rail A and the point of a switch B associated therewith to be moved from its closed position to its open position and vice versa by any suitable operating means including a shifting bar —C— which is secured to the switch point by one or more bolts c, Figure 1.

These bolts extend through registering openings in the switch B and operating member C so that their heads engage the inner face of the switch point while the nuts are preferably at the outer side of the switch point for convenience of adjustment.

The rail A may be secured to the usual ties D in any suitable manner as, for example, by the conventional spikes d. The adjustable switch block forming the subject matter of the present invention is adapted to be placed between the adjacent faces of the rail A and switch point B so that one end thereof may engage the web of the rail between the top flange and lower flange while the other end is adapted to engage the inner face of the switch point B preferably in line with one of the bolts c by which the operating member C is secured to the switch.

As illustrated, this switch block comprises a tubular member 1, a bolt 2 and a lock nut 3, the tubular member 1 being threaded internally for receiving the threaded end of the bolt 2 and permitting the latter to be adjusted according to the distance between the web of the rail and inner face of the switch when the latter is fully open.

The outer end of the tubular member —1— is provided with a socket —4— for receiving the head as c′ of one of the bolts c, the socketed end of the tubular member 1 being adapted to engage the inner face of the switch B around the head of the adjacent bolt c while the other end is angular in cross section to be engaged by a suitable wrench by which it may be turned for varying the length of the block.

This peripheral engagement of the socketed end of the tubular member 1 with the head of one of the bolts c serves to hold the adjacent end of the switch block in operative position against lateral movement.

The outer end of the bolt —2— is enlarged to form a head 2′ of sufficient vertical height to allow its lower and upper edges to engage respectively the upper side of the base flange of the rail A and underside of the top ball of the rail and also engage the adjacent face of the web of the rail thereby holding the corresponding end of the switch block against vertical movement relatively to the rail when adjusted for use.
The threaded end or shank of the bolt 2 extends through and some distance beyond the lock nut 3 and is engaged by the internally threaded tubular member 1 which may be adjusted axially by relative turning movement on the threaded end of the bolt to shorten or lengthen the switch block as may be necessary to conform to the distance between the web of the rail and inner face of the switch point when the latter is fully opened.

If desired, the head of the bolt 2 may be formed with relatively flat lateral extensions 6 provided with perforations 7 by which the entire device may be hung upon a hook, nail or other suitable support when not in use.

Operation

When the switch-operating means is broken or impaired and it is desired to use the switch block for holding the switch in its open position, said switch block is first shortened by proper adjustment of the parts — 1 and — 3 — relatively to the bolt 2 and is then placed between the adjacent faces of the rail A and switch member B with the socketed end of the tubular member 1 engaging the inner face of the switch member B around the head of the adjacent bolt c whereupon the member 1 may be turned upon the threaded portion of the member — 2 — to force the head 2' of the bolt into engagement with the adjacent face of the web of the rail A and when the parts are extended sufficiently to force the switch member to its open position, the lock nut 3 may be tightened to hold the parts 1 and 2 in said extended positions with the switch open.

When the switch block is placed in operative position in the manner described it will be in a plane a sufficient distance below the top of the wheel to clear the flange of the wheels of the rolling stock and at the same time will be held in this position by the engagement of the head 2' with the lower and upper flanges of the rail at the corresponding side thereof and by the engagement of the socketed end of the member 1 with the head of the adjacent bolt c.

When the switch operating mechanism has been repaired for safe use the switch block may be withdrawn by simply loosening the locking nut 3 and then relatively rotating the parts 1 and 2, one upon the other until the switch block is sufficiently loosened and shortened to permit its withdrawal by hand from between the rail A and switch member B.

What I claim is:

The combination with a main rail and a switch rail cooperating therewith, of an adjustable switch block placed between the main rail and the switch rail in a plane below the upper surfaces thereof for holding the switch rail in its open position and comprising two threaded members in screw engagement with each other for relative axial adjustment across the intervening space between the main rail and switch rail for engagement therewith, said switch rail being provided with means for engaging the adjacent end of the adjustable switch block for holding the latter against vertical or lateral movement relatively to said switch rail.

In witness whereof I have hereunto set my hand this 13th day of December 1928.

LEWIS H. HASSEL.