A. D. FINN.

SWITCH LOCK.

APPLICATION FILED JAN. 9, 1913.

1,068,879.

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Fig. 1

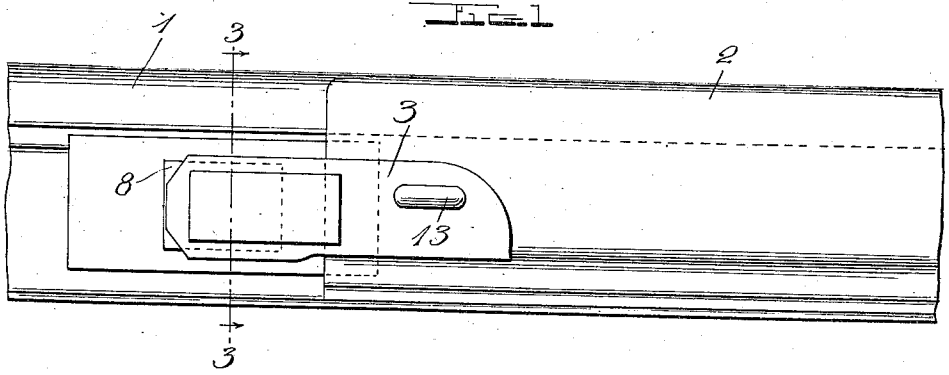


Fig. 2.

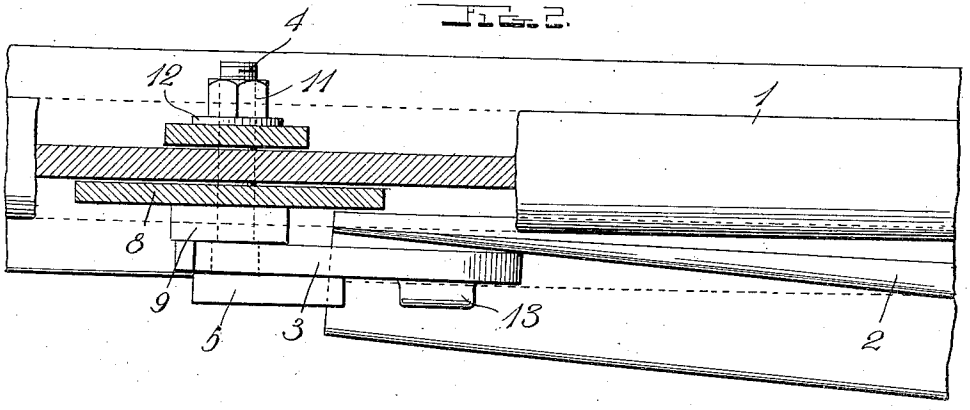
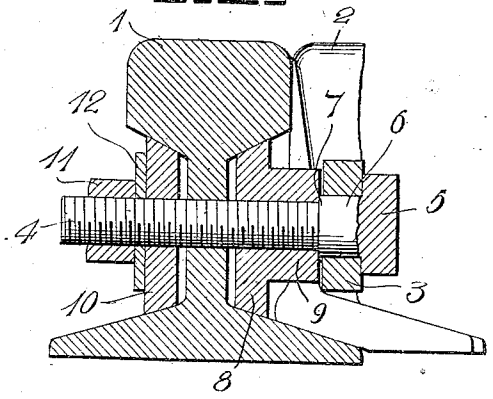


Fig. 3



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SWITCH-LOCK.

1,068,879. Specification of Letters Patent. Patented July 29, 1913.

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To all whom it may concern:

Be it known that I, ARTHUR D. FINN, a citizen of the United States, residing at Merrill, in the county of Lincoln and State of Wisconsin, have invented certain new and useful Improvements in Switch-Locks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in locks for the switches of railway rails.

One object of the invention is to provide a lock or fastening device by means of which a switch may be securely held in closed position when from any cause the switch operating mechanism should become disabled or inoperative to such an extent that the same will not hold the switch closed, said lock thus obviating all danger of a train running into an open switch or of part of a train running onto the main track and the other part onto the switch track by the splitting or jarring open of the switch point while the train is passing over the same.

Another object is to provide a lock of this character which will be simple, strong, durable and inexpensive in construction, efficient and reliable in operation and well adapted to the purpose for which it is designed.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings: Figure 1 is a side view of a portion of a track rail and switch tongue showing the application of the invention; Fig. 2 is a plan view of the parts shown in Fig. 1 with parts broken away and in section; Fig. 3 is a vertical cross section taken on line 3—3 of Fig. 1.

Referring more particularly to the drawings, 1 denotes one of the rails of the main track and 2 denotes the switch tongue of an adjoining switch or side track rail.

My improved locking mechanism comprises a latch plate 3 which is pivotally mounted at one end on a bolt 4. The bolt 4 is inserted through the web of the main track rail adjacent to the end of the switch tongue 2 and has on its outer end an enlarged head 5 and a cylindrical bearing portion 6 on which the latch plate 3 is mounted.

The threaded portion of the bolt is reduced thereby forming at the inner end of the portion 6 a shoulder 7 between which and the adjacent side of the main rail 1 is arranged a spacing plate 8 having on its outer side an offset or enlargement 9 with which the shoulder 7 of the bolt is engaged, said shoulder thus preventing the latch plate 3 from being clamped between the head 5 of the bolt and offset portion 9 of the spacing plate. The upper and lower edges of the spacing plate 8 are beveled or inclined to conform to the incline or shape of the under side of the head and the upper side of the flange of the rail with which the plate is engaged as clearly shown in Fig. 3 of the drawings.

The bolt 4 is inserted through an aperture in the spacing plate 8 and offset 9 and has its opposite end engaged with a spacing plate 10 on the opposite side of the rail said plate 10 having its upper and lower edges beveled to conform to the inclination or shape of the parts of the rail head and flange with which said edges of the plate are engaged. On the outer end of the bolt 4 is a clamping nut 11 between which and the outer side of the spacing plate is a washer 12. By thus constructing and arranging my improved switch lock it will be seen that the latch plate 3 thereof will be securely attached to the main rail adjacent to the end of the switch tongue, but may be swung upwardly and downwardly to inoperative and operative positions. When the latch plate is swung down to an operative position the lower edge of the plate engages the flange on the lower edge of the switch tongue and is supported by said flange in an operative potion and in engagement with the outer side of the switch tongue when the latter is in closed position thereby securely fastening the tongue in engagement with the main track rail. On the outer side of the latch plate adjacent to its outer end is preferably formed an offset lug 13 which provides a handle whereby the latch plate may be readily swung to operative and inoperative positions.

By means of a switch locking mechanism constructed in accordance with my invention it will be seen that the switch tongue when in closed position will be firmly held by the latch plate 3 of the lock thus obviating all danger of a train running into an open switch or of part of the train passing by the

switch on the main rails and the other part of the train running onto the switch or side tracks.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as claimed.

Having thus described my invention, what I claim is:

1. A switch lock comprising a latch plate, an attaching bolt engaged therewith and with a main track rail adjacent to the end of a switch tongue, spacing plates engaged with said bolt and adapted to be clamped thereby into engagement with the opposite sides of the main track and rail whereby said latch plate is held in operative position to be swung into and out of engagement with said switch tongue for the purpose of locking the latter in a closed position.

2. A switch lock comprising a latch plate having thereon an operating handle, a bolt engaged with said plate and adapted to be engaged with a main track rail adjacent to the end of a switch tongue, said bolt having thereon an enlarged cylindrical bearing portion adapted to receive said latch plate and to form a shoulder on the bolt, a spacing plate engaged with said bolt and having thereon an offset to engage the shoulder on the bolt, a spacing plate engaged with the bolt on the opposite side of the rail, and a clamping nut adapted to be screwed onto said bolt whereby said spacing plates are clamped into operative engagement with the opposite sides of the main rail to hold said latch plate in operative position to be engaged with the end of the switch tongue whereby the latter is locked in a closed position.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ARTHUR D. FINN.

Witnesses:
CARL ZOLLMANN,
C. H. RANDBY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."