Jan. 22, 1929. 1,699,716

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SWITCH RAIL LOCK

Filed March 29, 1927 2 Sheets-Sheet 1

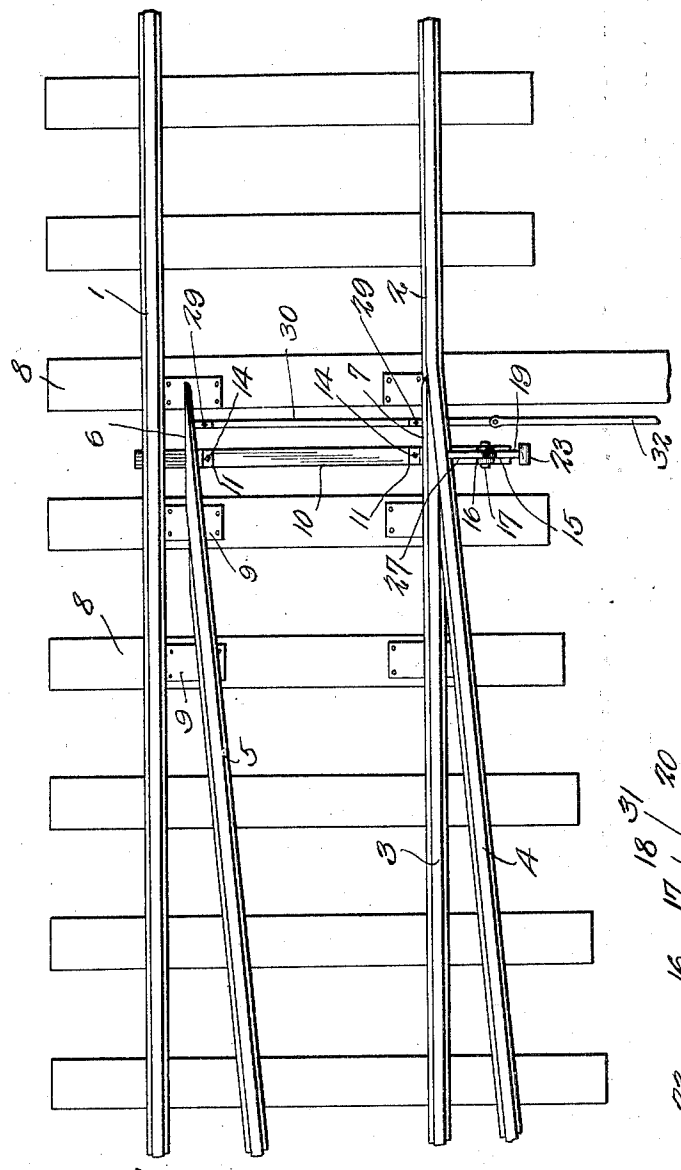


Fig. 1.

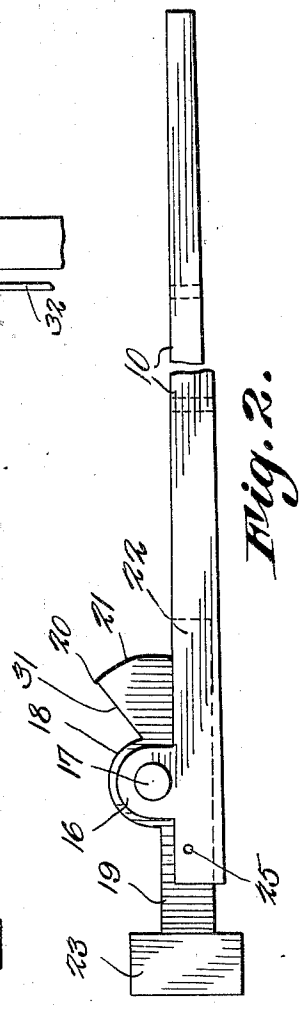


Fig. 2.

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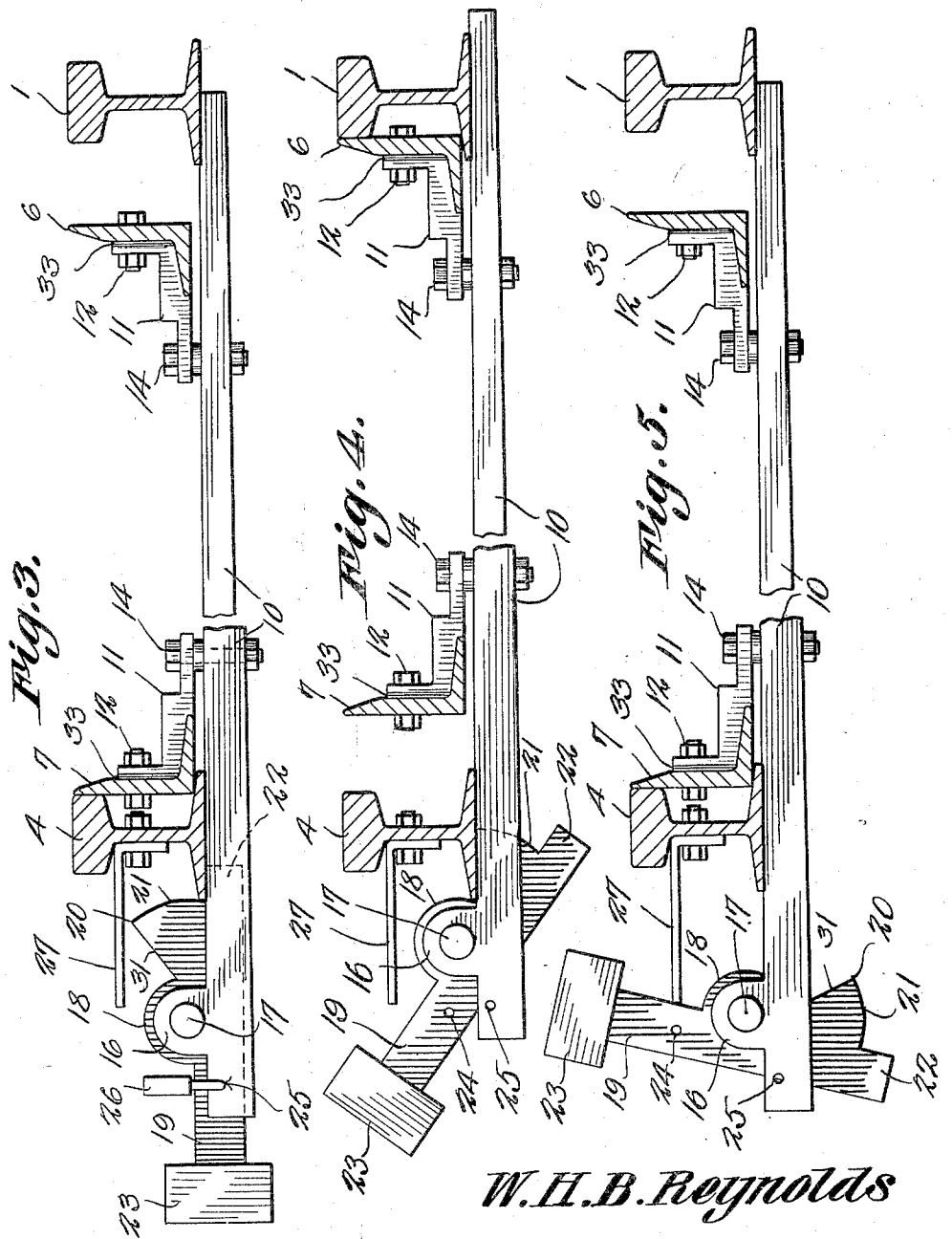


Fig. 3.

Fig. 4.

Fig. 5.

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Patented Jan. 22, 1929. 1,699,716

UNITED STATES PATENT OFFICE.

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SWITCH-RAIL LOCK.

Application filed March 29, 1927. Serial No. 179,314.

This invention aims to provide a novel means whereby the switch points in a railroad track may be locked securely in position, thereby retaining the switch points even though the switch stand, or some other part of the operating mechanism, should break.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the drawings:—

Figure 1 shows a stretch of railroad track equipped with the device forming the subject matter of this application;

Figure 2 is a side elevation showing a portion of the connection;

Figure 3 is a cross section showing the parts as they will appear whilst the switch points are locked in position for the main track;

Figure 4 is a sectional view showing the parts as they will appear after the switch points have been set for the siding;

Figure 5 is a view similar to Figure 3 but showing the latch mechanism in a slightly different position from that delineated in Figure 3.

In Figure 1, the main line rails are shown at 1, 2 and 3, the siding rail being shown at 4, the lead rail at 5, the switch point on the rail 5 being designated at 6, and the switch point on the rail 3 appearing at 7. The ties are marked by the numeral 8, and the wear plates on which the switch points slide are shown at 9. The construction above described is common and no novelty is claimed for it saving in so far as it may enter into combination with parts hereinafter described.

Angle brackets 11 are secured at 12 to the switch points 6 and 7, and are attached at 14 (pivotally, if desired) to a connection 10, in the form of a tapered bar, extended beneath the siding rail 4, and the main line rail 1, the connection or bar 10 being disposed between certain of the ties 8. For the sake of adjustment, and to take up wear, any desired number of shims 33 may be placed on the connections 12, between the brackets 11 and the switch points 6 and 7.

In one end of the bar 10 there is a vertical slot 15. The bar 10 is provided on opposite sides of the slot 15 with upstanding ears 16 carrying a pivot element 17 passing through the enlarged intermediate portion 18 of a latch 19 that is mounted to swing vertically in the slot 15 of the bar 10. The latch 19 includes a head 20 having a curved inner edge 21, located in an arc the center of which is the pivot element 17, the head 20 having a radial edge 31. At its inner end, the latch 19 has a finger 22 disposed adjacent to the curved edge 21 of the head 20. On the outer end of the latch 19 there is a weight 23. The latch 19 has openings 24 adapted to be brought into alinement with openings 25 in the connecting bar 10. In the alined openings 24 and 25, a lock 26 (Fig. 3) may be placed. A laterally extended stop 27 is mounted on the siding rail 4 and overhangs the inner end of the latch 19, as shown in Figure 3.

The means 32 for throwing the switch points 6 and 7 may be of any desired sort, and may include a bridle 30 connected at 32 to the switch points.

In practical operation, when the switch points 6 and 7 are set for the main line, as shown in Figures 1 and 3, the latch 19 is disposed in a substantially horizontal position, with the finger 22 engaged beneath the base flange of the rail 4, the edge of the base flange of the rail 4 cooperating with the curved edge 21 of the head 20 on the latch 19, it being impossible for the bar 10 and the switch points 7 and 6 to move to the right in Figure 3. The latch 19 may be held in the position specified, by engaging the lock 26 in the opening 24 of the latch 19, and in the openings 25 of the connecting bar 10.

When it is desired to throw the switch points 6 and 7 for the siding, the lock 26 is removed, and the latch 19 is turned up into the substantially vertical position of Figure 5, the latch abutting against the stop 27. Then, when the bar 10 and the switch points 6—7 are carried to the right by the operation of the means shown at 32—30, into the position shown in Figure 4, the stop 27 tilts the latch 19 into the position shown in Figure 4, the radial or lateral edge 31 of the head 20 engaging beneath the base flange of the rail 4. The latch 19 thus is held in an intermediate position, temporarily, and when the latch swings down into the horizontal posi-

tion of Figure 3, to lock the switch points 6 and 7 for the main line, it does so without appreciable jar or knock.

Assuming that the parts are in the position shown in Figure 4, it will be clear that when the connection 10 is moved to the left by means of the bridle 30, to restore the switch points 6 and 7 to the positions of Figure 3, the latch 19 drops down again into the horizontal position of Figure 3, the finger 22 engaging beneath the base flange of the rail 4. The lock 26 then may be restored to its place.

It is to be observed that the center of the pivot element 17 is so disposed with respect to the edge of the base flange of the rail 4 that, no matter how great a thrust is exerted against the curved edge 21 of the head 20, the latch 19 will not move accidentally to an open position. The pivot element 17 is so placed with regard to the end of the stop 27 that when the latch 19 is swung into the position of Fig. 5, it will stay in that position until the bar 10 is moved to the right as hereinbefore described.

What is claimed is:—

The combination with track rails and switch points cooperating with the track rails...of a connection joining the switch points, a latch pivoted to the connection and engaged with the edge of one rail to hold the switch points releasably against movement, and a fixed stop wherewith the latch engages when the latch is swung upwardly out of engagement with the said rail, the stop constituting means for swinging the latch into an intermediate position and into engagement with the undersurface of said rail, when the connection and the switch points are moved in one direction with respect to the rails.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures.

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