

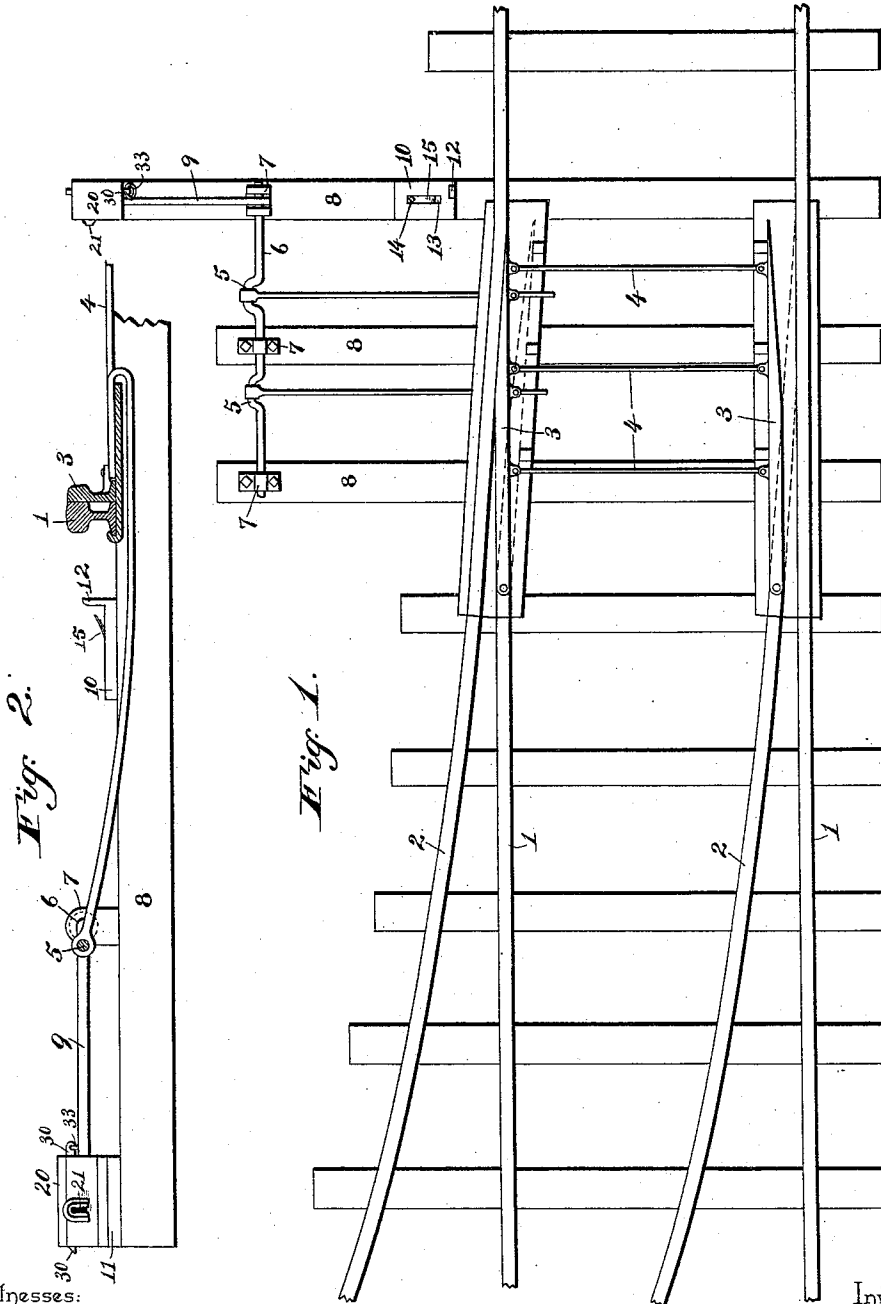
(No Model.)

2 Sheets—Sheet 1.

R. S. THOMAS & C. E. WOLTZ.
RAILWAY SWITCH LOCK.

No. 466,474.

Patented Jan. 5, 1892.



Witnesses:

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W. S. Duval

Inventors
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By their Attorneys,
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

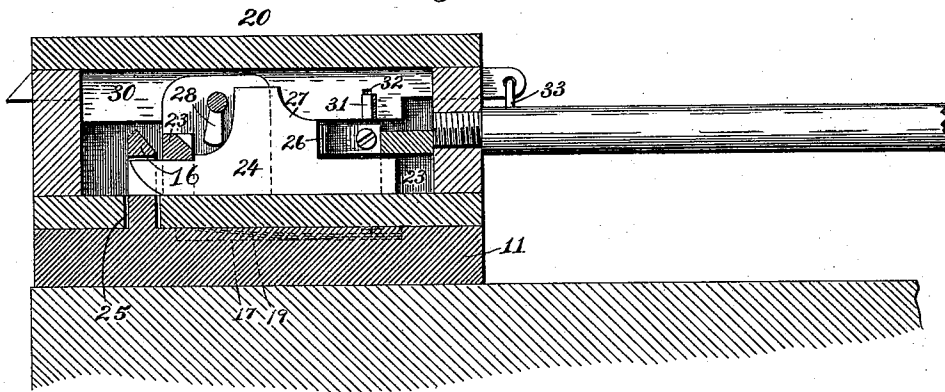


Fig. 4.

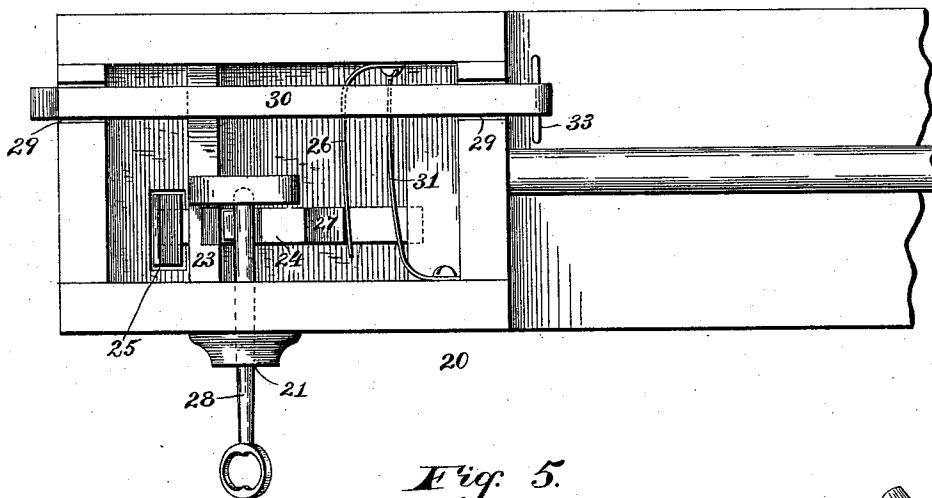
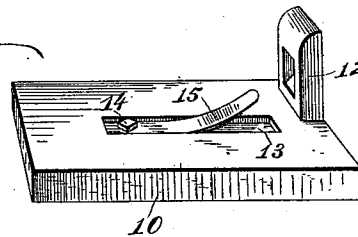
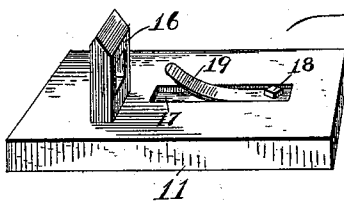


Fig. 5.



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UNITED STATES PATENT OFFICE.

ROBERT S. THOMAS AND CHARLES E. WOLTZ, OF REIDSVILLE, NORTH CAROLINA.

RAILWAY-SWITCH LOCK.

SPECIFICATION forming part of Letters Patent No. 466,474, dated January 5, 1892.

Application filed July 13, 1891. Serial No. 399,391. (No model.)

To all whom it may concern:

Be it known that we, ROBERT S. THOMAS and CHARLES E. WOLTZ, citizens of the United States, residing at Reidsville, in the county of Rockingham and State of North Carolina, have invented a new and useful Railway-Switch Lock, of which the following is a specification.

This invention relates to improvements in railway-switch locks and to that particular class thereof in which a swinging switch-rod provided at one end with a weight is employed.

The objects in view are to provide a cheap and simple means adapted to be substituted for the weight upon the rod, whereby said rod will be automatically locked in either of its positions, and when in the position for a clear main line to require the application of a key by an authorized person in order to manipulate the rod and swing it to such position as will side-track a train or break the main line.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a plan of a track, a switch, and a switch-lock constructed in accordance with our invention. Fig. 2 is a transverse section through the track, showing the switch-lock in side elevation. Fig. 3 is a similar section through the lock. Fig. 4 is a plan of the lock, the upper wall of the housing being removed. Fig. 5 is a detail in perspective of the switch-retaining plates.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the rails of the main line, 2 the rails of the side track or line, and 3 the usual pivoted switch-rails, to which are connected the switch-rail-operating connecting-bars 4, the outer ends of which are loosely connected with the cranked portions 5 of the rock-shaft 6, which, as shown, is journaled at intervals in suitable bearings formed in the upper ends of standards 7, projecting upwardly from convenient cross-ties 8. One of the bearing-standards is bifurcated and has mounted between its bifurcation and upon the rock-shaft

a switch-rod 9, adapted to swing from one side to the other and with it move the rock-shaft, and thus throw the switch-rails away from or against the main-line rails. Thus far I have described the ordinary construction of switches, with the exception that I have omitted the usual spherical weight with which the end of the swinging switch-rod is provided.

To the tie 8, at opposite sides of that standard 7 which is bifurcated and receives the rod 9, I secure at equal distances from the standard an inner metal block or plate 10 and an outer metal block or plate 11. The inner plate 10 is provided near one of its outer corners with an upwardly-disposed keeper 12 and at its center with a shallow recess 13, in the inner end of which is secured by a bolt 14 a flat spring 15, the free end of which is upwardly extended above the face of the plate. The outer plate 11, at that corner diagonally opposite the corner of the plate 10, which is provided with the keeper 12, is provided with a keeper 16, upwardly disposed from the plate. A shallow depression or recess 17 is formed in the upper face of the plate 11, and in the inner end of the same there is secured by a bolt 18 a flat spring 19, the outer end of which is upwardly disposed above the plate.

Secured to the free end of the pivoted switch-rod 9 is a rectangular metal casing 20, the walls of which are thick, so as to give weight, and at one side of the casing a key-hole 21 is formed, which is provided at its outer end with an inverted-U-shaped hood secured to the outer face of the casing and adapted to shed water that would otherwise enter said casing through the key-hole.

In suitable ways 23, located longitudinally opposite each other in the case 20, there is mounted loosely for reciprocation a bolt 24, the outer end of which is beveled and terminates over an opening 25, formed in the bottom of the case, which opening is adapted to receive the keeper 16 of the plate 11. The bolt is yieldingly held over the opening by means of a flat spring 26, one end of which is secured to the wall of the case and the other end of which bears against the rear side of a lug 27, which constitutes a ward against

which the blade of a key 28 may operate for the purpose of withdrawing the outer end of the bolt from engagement with the keeper. When in such engagement it will be seen
 5 that the main line is intact or unbroken and the case will be swung toward the track and will rest upon the plate 10 when it is desired to break said main line. It will be seen, also, that unauthorized tampering or molestation
 10 with the switch cannot take place, so that the main line remains undisturbed unless an authorized agent of the company unlocks the switch and swings it to the opposite side. As soon as the bolt is withdrawn from the keeper
 15 the flat spring 19 elevates the case sufficiently to prevent it from returning to its locked position.

Recesses 29 are formed in the opposite end walls and at the opposite sides of the case to that
 20 at which the bolt 24 is located, and in said recesses a second bolt 30 is mounted for reciprocation, the ends of the bolt extending beyond the end walls of the case and the outer end of said bolt being chamfered and maintained
 25 yieldingly and outwardly projected through the medium of a flat spring 31, secured to the opposite wall of the case and having its free end resting in a kerf 32, formed in the edge of the bolt 30. The inner end of the bolt 30 is
 30 provided with a ring or pull 33. When the switch-rod and case are thrown over to the opposite side, or so as to rest upon the plate 10, a slight pressure by the hand or foot causes the beveled end of the bolt 30 to ride
 35 over the face and engage with the opening of the keeper 12, the flat spring 15, secured to said plate, being compressed or flattened into its recess 13. By simply pulling the ring-pull at the inner end of the bolt 30 the outer end
 40 of the latter will be disengaged from the keeper 12 and the switch-rod may be swung over so as to close the main line. It will be observed that this latter operation does not require a key, but may be carried out by any
 45 one, whether authorized or not.

From the foregoing description, taken in connection with the accompanying drawings, it will be seen that we have provided an improvement upon the old and usual form of switch stands or locks, which improvement
 50 may be readily applied without any change of construction of the switches, and when so applied will automatically and safely lock the switch in either a closed or open position.

Having described our invention, what we
 55 claim is—

1. The combination, with the pivoted switch-rod, the opposite plates having keepers and provided with recesses, and springs mounted in the recesses, of the weighted case secured to the end of the switch-rod and provided with bolts for engaging the keepers, substantially
 60 as specified.

2. The combination, with the pivoted switch-rod and the opposite plates having keepers, of the case secured to the end of the rod and provided with longitudinally-opposite recesses, a bolt mounted for reciprocation therein and having its outer end beveled and terminating
 70 beyond the end of the case and its rear end provided with a ring beyond the opposite end of the case, a spring for pressing the outer end of the bolt outwardly, whereby it is adapted to engage with the keeper of one plate, a shorter bolt mounted in recesses located in the case, beveled at one end, and a spring for pressing said end over an opening formed in the wall of the case, which opening is in line with the inner keeper, and a lug formed on the bolt and adapted to receive the blade of
 75 a key passed through a hole in the wall of the case, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

ROBERT S. THOMAS.
 CHARLES E. WOLTZ.

Witnesses:

TOM TERRY,
 D. A. HENDRIX.