

2 Sheets—Sheet 1.

No. 547,001.

Patented Oct. 1, 1895.



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(No Model.)

2 Sheets—Sheet 2.

T. S. DRURY.
RAILWAY SWITCH.

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Fig. 4.

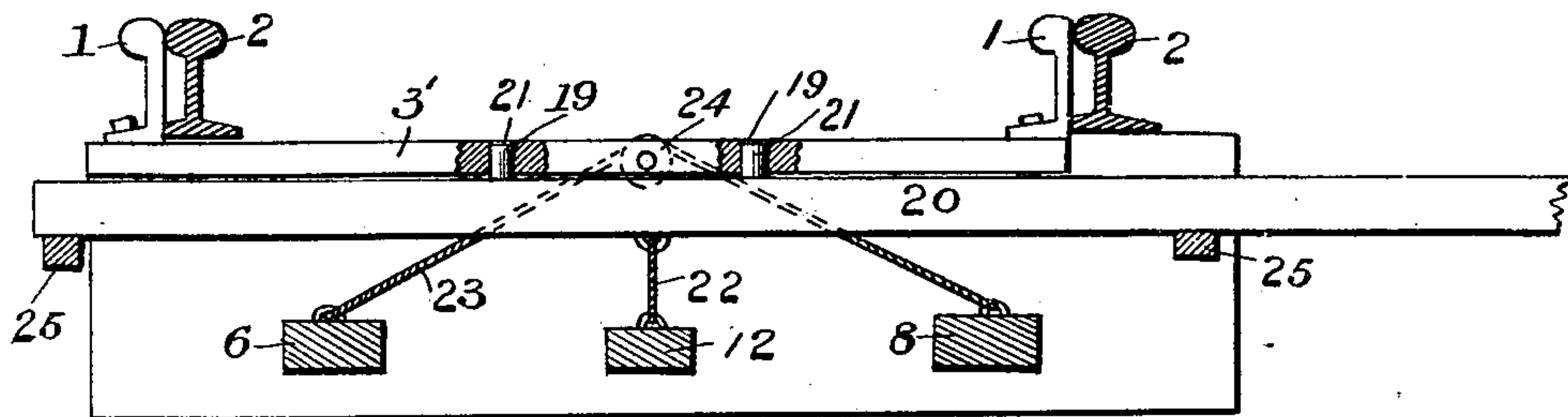
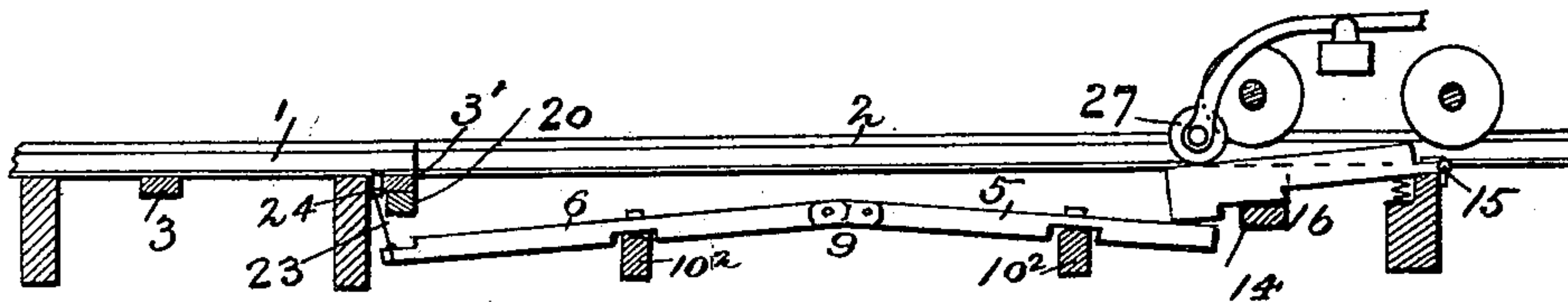


Fig. 3.



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UNITED STATES PATENT OFFICE.

THOMAS S. DRURY, OF ALGIERS, LOUISIANA.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 547,001, dated October 1, 1895.

Application filed April 3, 1895. Serial No. 544,309. (No model.)

To all whom it may concern:

Be it known that I, THOMAS S. DRURY, a citizen of the United States, residing at Algiers, in the county of Orleans and State of Louisiana, have invented certain new and useful Improvements in Railway-Switches; 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.

My invention has relation to railway-switches, and among the objects in view is to provide a railway-switch which is adapted to be operated automatically by a moving car or train whereby to permit the same to pass onto the switch or siding, said switch being also adapted to be operated by the ordinary switch-lever of the usual switch-stand when so desired.

A further object of my invention is to provide a switch which shall comprise but few parts and which is not liable to get out of order; and with the above and other objects in view the invention consists in the novel construction, arrangement, and combination of parts, as hereinafter fully described, illustrated in the drawings, and pointed out in the appended claim.

In the drawings, Figure 1 is a plan view illustrating a portion of the railing track and switch with my improvements applied thereto. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a like view taken through one of the outside operating-levers for the switch. Fig. 4 is a transverse section on line $x x$.

In carrying out my invention I provide the usual switch-rails 1, which are arranged and adapted to be operated so as to permit a car or train of cars to pass from the main line of tracks 2 onto a siding or switch. The said switch-rails 1 are connected together by means of cross-pieces 3 3', and one of said rails is pivoted, as at 4, to a cross-tie of the road. Extending longitudinally of the track between the rails thereof are rods 5 6 and 7 8, the rods 5 and 6 being hinged together, as at 9, at their adjacent ends, while the rods 7 and 8 are similarly hinged together, as at 10. The said rods 5 to 8 have a slot-and-pin connection, as at 10², with bearing-pieces 10³. Between

the said rods 5 to 8, and also extending longitudinally of the track, are rods 11 12, hinged together, as at 13, at their adjacent ends, and also having a slot-and-pin connection at 13' with bearing-pieces 10³. One of the rods 11 is provided with a cross-piece 14. Having a hinged connection at one end, as at 15, to a cross-tie are levers 16 16', the opposite ends of which extend over and are adapted to operate upon the ends of the cross-piece 14 and the ends of the rods 5 and 7. Beneath each of said levers 16 16' is a coiled spring 18, which normally forces the operating end of the levers 16 upwardly slightly above the tread of the rails.

The cross-piece 3 is provided with perforations 19, and beneath said cross-piece lies a rod 20, provided with upwardly-extending pins or studs 21, which enter the perforations 19, and thus hold the switch-rails normally in a fixed position. The rod 20 extends beyond the track-rails and at one side is connected with the usual switch-lever of a switch-stand and adapted to be operated by said lever when desired. For the purpose of so freeing the cross-piece to enable the switch to be operated automatically from a moving car or train I connect the end of the rod 12 with the rod 20 by means of a cord, rope, or chain 22, so that when the cross-piece 14 is depressed by the levers 16 the end of the rod 12 adjacent to the switch will be depressed, owing to the hinged connection between the adjacent ends of the rods 11 12, and thus draw down the rod 20 and free the pins from the perforations of cross-piece 3, leaving the switch free to be operated.

In order that the switch may be operated automatically, the inner ends of the rods 6 8 are connected to a rope or chain 23, which makes a turn around and is secured to a pulley 24, carried by the cross-piece 3. The ends of the rod 20 rest upon strong plate-springs 25, which are secured to the cross-ties alongside the track-rails, the purpose of which springs is to raise the rod 20 to cause the pins to enter the perforations of the cross-piece after the switch has been moved back into its unshifted position. The outer ends of the rods 5 7 and the cross-piece 14 are so arranged relatively to the levers 16 that the said cross-piece will be operated (depressed) by the

levers 16 16' before either of the rods 5 7 is depressed to thus first withdraw the pins from the perforations of the cross-piece 3, after which the rod 5 or 7 will be depressed to cause the rod 6 or 8 to draw upon the rope or chain 23 to thus shift the switch in one direction or the other, as the case may be—that is to say, when the rod 7 is depressed, the rod 8 shifts the switch to permit the car to pass onto the siding, while when the rod 5 is depressed the rod 6 causes the switch to be returned into its normal position. The main-track rail may be grooved, as at 28, to permit the switching of the car onto the siding.

In practice each engine will be provided with two rollers 27, carried by the forward truck and adapted to be lowered and raised by the engineer through suitable intermediate mechanism to cause the one or the other roller to depress a lever 16.

It will be understood that by providing two rollers on the engine-truck the right-hand one will be used to depress the right-hand lever 16 to shift the switch to allow it to enter a siding, while the other roller will be used to operate the lever 16' when the engine passes back onto the main track to return the switch into its normal position.

I would state that my invention is applicable to street-railway lines, and in such case the operating rollers or wheels would be carried by the platform and adapted to be operated by the motorman or driver.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

The combination with main track rails, and a pivoted switch section, of a cross piece connecting the rails of said switch and having perforations, a transversely arranged rod adapted to be depressed having pins entering said perforations, springs acting to normally raise said rod, two pairs of rods or levers jointed together at their adjacent ends, and each adapted to rock as described, said levers or rods extending longitudinally of the track rails, a third pair of rods or levers jointed together at their adjacent ends and also adapted to rock as described, a rope or chain connecting the inner end of one of said latter jointed rods with the rod adapted to be depressed, a cross rod extending transversely and carried by the outer end of one of said latter jointed levers, a rope or chain connected with the inner ends of the first mentioned pairs of levers, a pulley on the cross piece of the switch, and over which said latter rope or chain passes, and rocking levers adapted to be depressed and extending over the said cross rod and the outer ends of the said two pairs of rocking levers, for the purpose specified.

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

THOMAS S. DRURY.

Witnesses:

THOS. C. DUFFY,
JAMES DRURY.