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E. R. EDSON

SWITCHING DEVICE

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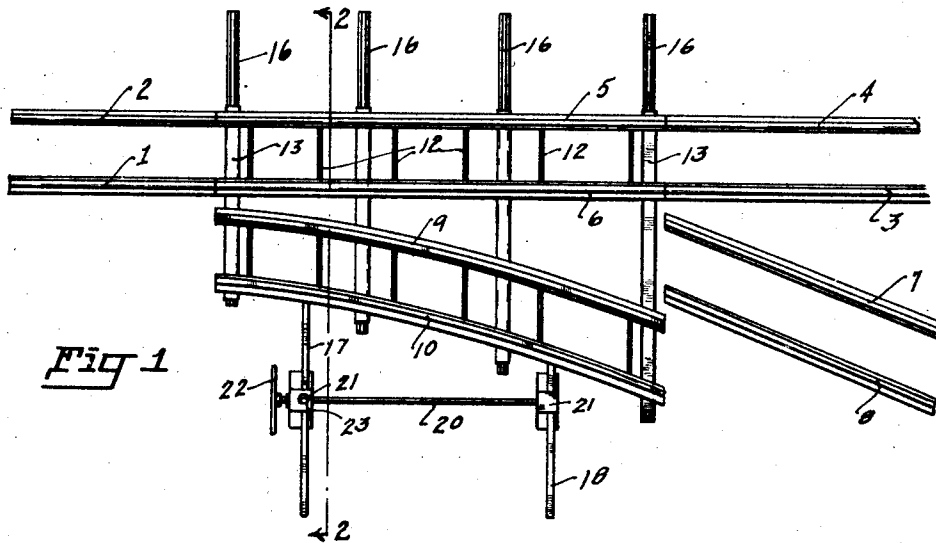


Fig. 1

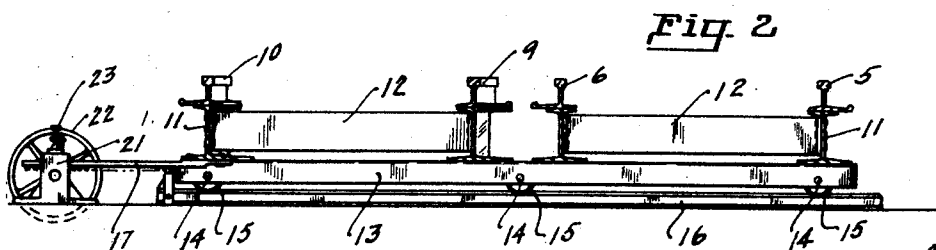


Fig. 2

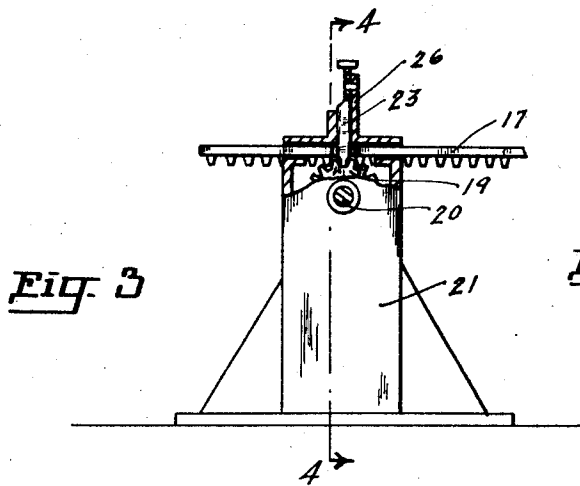


Fig. 3

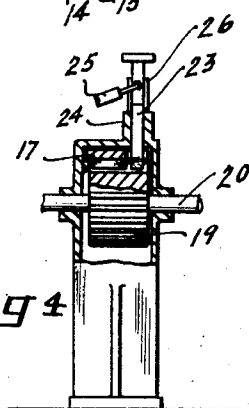


Fig. 4

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## UNITED STATES PATENT OFFICE.

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## SWITCHING DEVICE.

Application filed April 18, 1927. Serial No. 184,685.

My invention relates to my United States Patent Number 1,612,271 issued to me under date of December 28, 1926, for a railway track and rail; my invention also relates to

5 patent applications filed concurrently herewith, two in number, one upon a new and improved railway switch Serial No. 184,687, and the other upon railway road bed and track construction, Serial No. 184,686.

10 The primary object of my invention consists in providing a railway switch laterally movable and carrying one or more sections of track which provide for completion of either the main-line track as to its continuous alignment, or for completion of a side-track as to its continuous alignment with the main-line track depending on the adjustment of the switch. This switch, though

15 suitable for use by any type of railway, is particularly designed for use in flanged railway systems where an anti-derailment safety-wheel is employed to operate on a special flanged rail.

A further object of my present invention

25 consists in providing a switch section, composed of two parts, one being the main line section of the switch, and the other being the switching section, means being provided for the lateral movement of the switches to

30 place the main line section in position within the main line or to place the switch section in position to divert the vehicle passing thereover on to the switch section.

A still further object of my invention consists in the moving of the switch a minimum of distance to accomplish the result required.

A further object of my invention consists in providing a switch for railways without

40 the necessity of the cutting of the ball or supporting section of the rail longitudinally of the rail, so that the full cross sectional area of the rail is maintained at all times.

A still further object of my invention consists in providing means whereby the

45 flanged wheel engaging the underside of the rail may be utilized in switching operations.

Still further objects of my invention consist in providing a switch section that may

50 be moved with a minimum of resistance.

With these and incidental objects in view, the invention consists in certain novel features of construction and combination of parts, the essential elements of which are set forth in the appended claims, and a

55 preferred form of embodiment of which is

hereinafter shown with reference to the drawings which accompany and form a part of this specification.

In the drawings:

Fig. 1 is a top plan view of the assembled device, with the main line section of the switch being in position within the main line.

Fig. 2 is an end sectional view, taken on line 2—2 of Fig. 1, looking in the direction indicated.

Fig. 3 is a sectional side elevation of the mechanism for the lateral shifting of the track sections of the switch.

Fig. 4 is an end elevation, taken on line 4—4 of Fig. 3, looking in the direction indicated.

Like reference characters refer to like parts throughout the several views.

1, 2, 3, and 4, are the rail sections of the main line of the track, with a gap formed therebetween. My main line switch is placed in the gap between the sections of the main line track, as shown at 5 and 6. The rails of the side track are shown at 7 and 8, with the curved switch sections being shown at 9 and 10. The switch is normally placed in position, as illustrated in Fig. 1, in engagement and in registerable alignment with the main line track, and out of engagement and registerable alignment with the switching track. The rail sections are supported upon longitudinal girders 11 with the rails superposed thereupon, having the outwardly projecting base extending beyond the head section of the girders. The cross strut members 12, secure the longitudinal girders 11 rest upon track supporting beams 13, through which stub shafts 14 pass, and which are journaled therein by suitable bearings. Switch supporting wheels 15, are journaled about the stub shafts 14, the said wheels resting upon rails 16. This form of construction provides for a minimum of resistance in the shifting of the switch sections. Outwardly disposed upon one side of the rail 10, are two gear racks 17 and 18, and in working relationship therewith are pinions 19 which are mounted upon the shaft 20, journaled within the stand 21. Also mounted upon the shaft 20 is an operating hand wheel 22 for the turning of the pinions and the lateral movement of the gear racks 17 and 18 and the switch sections to which the same are attached. A locking pawl 23 passes through the boss 24 disposed on the

upper side of the stand 21 and is of sufficient length to maintain the locking pawl in alignment, the same being in shape and form on its lower end to permit of its engagement within the tooth section of the pinion 19. When the track sections have been positioned for the passage of trains, either over the line or over the switch line, the locking pawl 23 is made to engage the space within the pinion 19, and a lock 25 is then passed through the locking pawl 23 and the upwardly disposed adjacent side wall 26 of the boss 24, thus locking the pinion and rack in position to prevent the further lateral movement of the switch sections until the same has been unlocked and repositioned.

While the form of mechanism herein shown and described is admirably adapted to fulfill the objects primarily stated, it is to be understood that it is not intended to confine the invention to the one form of embodiment herein shown and described, as it is susceptible of embodiment in various forms, all coming within the scope of the claims which follow:

What I claim is:

1. In a device of the class described, the combination of a main line track and a switch line track each line being spaced apart to permit of a switch section of track being placed therebetween, a track section composed of a main line section and a switch line section, supporting beams for the track sections, supporting wheels journaled within

the supporting beams, rails mounting the supporting wheels, a multiple of gear racks outwardly extending from the track section, stands adapted to the passage of the racks therethrough, stub shafts journaled within the stands, and pinions in working relation with the racks mounted upon the stub shafts and secured thereto, means for rotating the shaft and means for locking the pinion in placed position.

2. In switching devices, the combination with a main line track having a gap therein and a side track departing from one edge of the said gap, of a plurality of beams disposed transversely of said gap, including supporting wheels adapted for travel upon rails, a rail disposed below and forming a track for the wheels of each individual beam to travel upon, tracks mounted upon said beam one of which is adapted for bridging the gap between the main line track section when said beams are moved in one direction, the other being adapted for bridging the gap between a main line track section and the aforesaid side track when the said beams are moved in the opposite direction, and means for moving said beams as aforesaid, comprising gear racks supported and extending from the movable track sections, a horizontal shaft, gears secured to said shaft and each engaging one of the aforesaid racks, and means for rotating said shaft substantially as described.

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