

No. 745,413.

PATENTED DEC. 1, 1903.

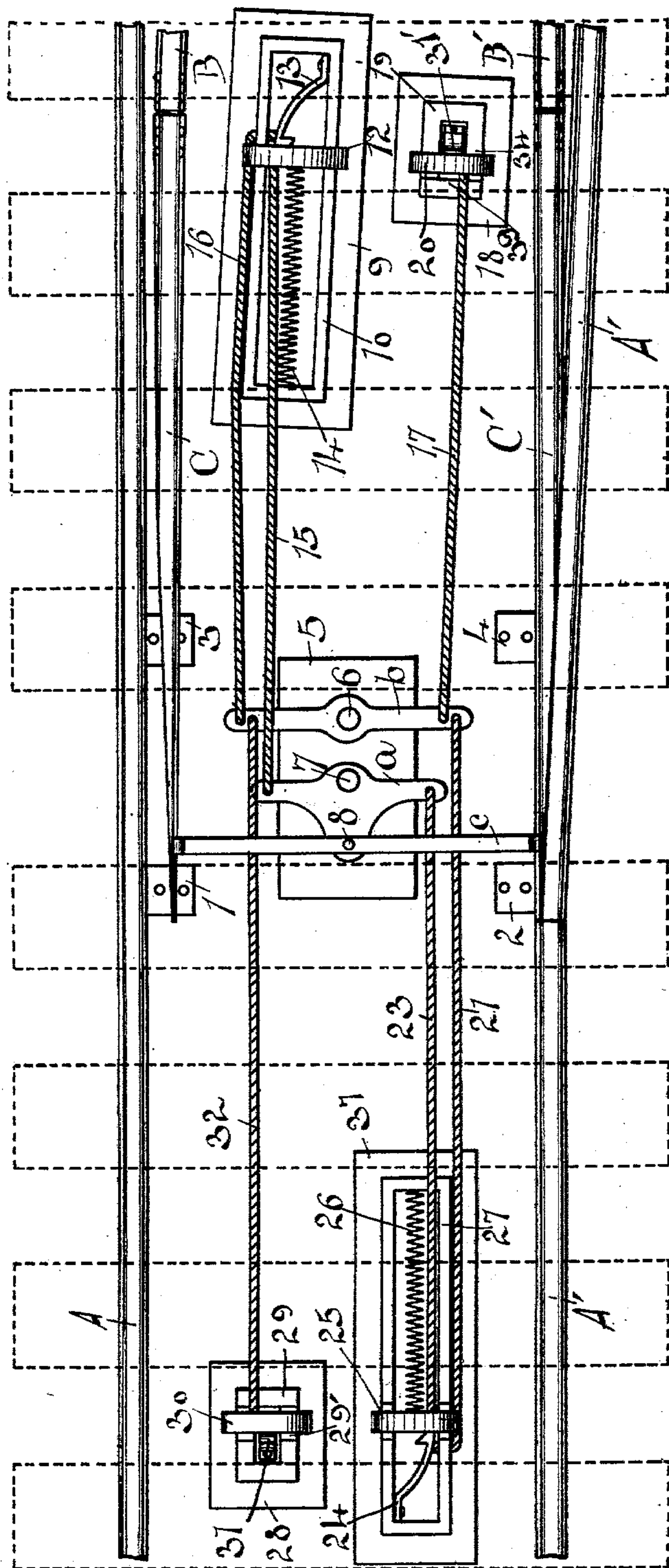
C. B. BLANK.

AUTOMATIC SWITCH ATTACHMENT.

APPLICATION FILED JUNE 4, 1903.

2 SHEETS—SHEET 1.

NO MODEL.



*WITNESSES:*

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2 SHEETS--SHEET 2.

NO MODEL.

119.2.

*WITNESSES:*

*J. F. Larson.*

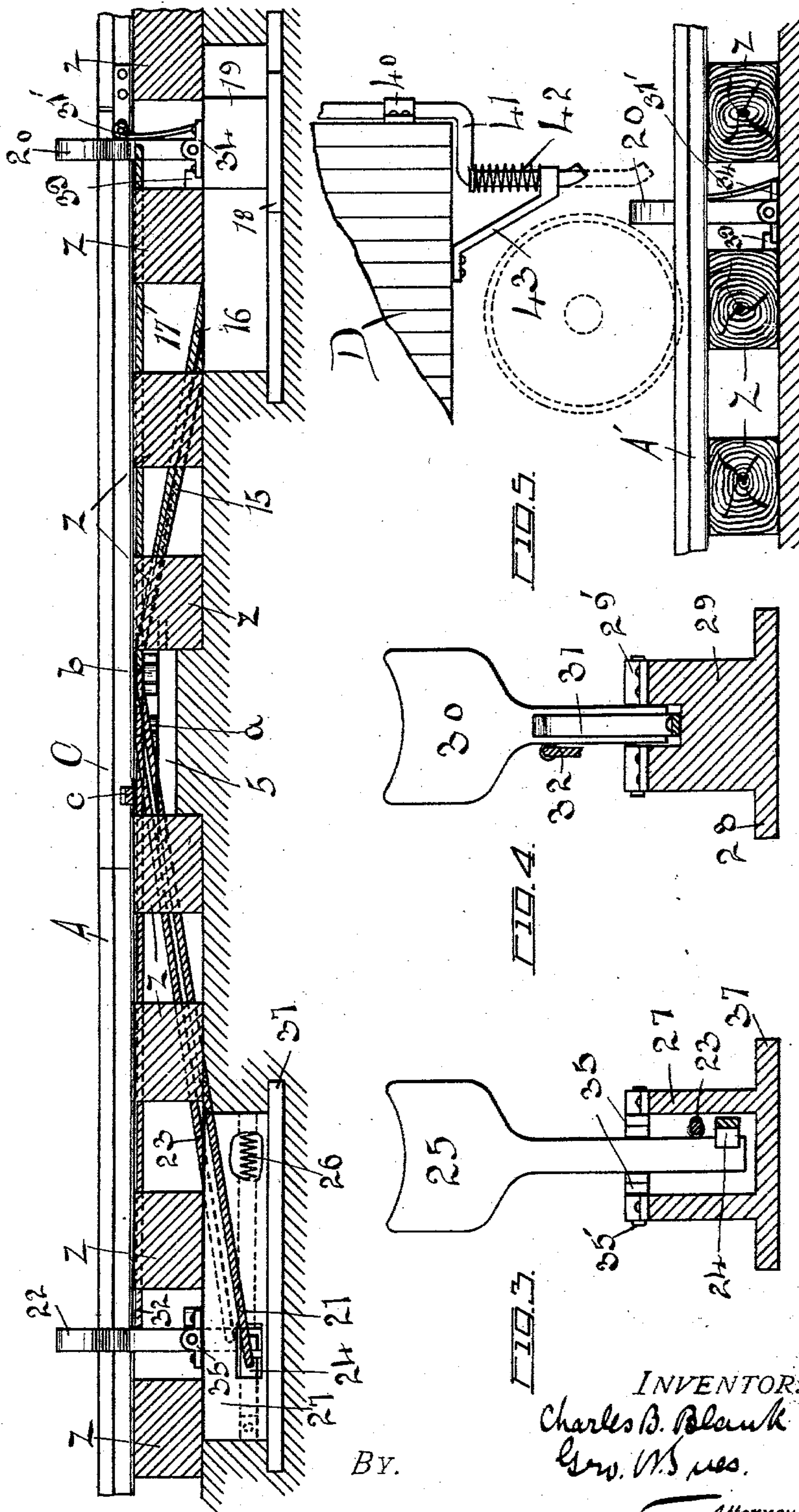
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# UNITED STATES PATENT OFFICE.

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## AUTOMATIC SWITCH ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 745,413, dated December 1, 1903.

Application filed June 4, 1903. Serial No. 160,022. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES B. BLANK, residing at Fort Riley, in the county of Geary and State of Kansas, have invented certain  
5 useful Improvements in Automatic Switch Attachments; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable  
10 others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to a new and novel improvement in switch-throwing mechanism.

15 The aim of my invention is to provide a mechanism to automatically throw a switch.

In the accompanying drawings I have shown in Figure 1 a top view of a switch-throwing mechanism embodying my invention.  
20 Fig. 2 shows an elevation between the rails with portions removed. Fig. 3 discloses one of the setting-trips. Fig. 4 discloses one of the releasing-trips, while Fig. 5 discloses a detail in which a striker secured to a car is  
25 about to engage one of the releasing-trips as used in my invention.

The aim of my invention is to provide a mechanism adapted to be placed between the rails and arranged to be engaged by a suitable  
30 striker to upset the same to throw a suitable switch, the mechanism being further arranged so that the same striker will later reset the switch.

In the accompanying drawings I have shown in Fig. 1 a railway embodying the rails  
35 A upon one side and the rails A' A' upon the opposite side and the rails B and B' interposed. From the interposed or central rails B B' extend the pivotally-held split-rail sections C and C', forming the switch, which rail-  
40 sections reciprocate upon the plates 1, 2, 3, and 4. Positioned a suitable distance from these split-rail sections is a setting-trip 25, (shown in detail in Fig. 3,) which setting-  
45 trip is adapted to be held in a vertical position by means of the coil-spring 26, as shown in Fig. 1. Below the supporting-pin 35', supporting this setting-trip 25, is a cable 23, which is secured to one of the arms of a piv-  
50 oted lever *a*, this cable 23 being of such a length that when the lever *a* is set trans-

versely to the rails the setting-trip 25 will be in a vertical position. Situated between the track upon the side opposite to the lever *a* is a counterpart setting-trip 12, pivotally sup-  
55 ported, this trip 12 being held within a box 10, secured to the base-plate 19. The setting-trip 25 upon the opposite side is held within the box 27, secured to the base-plate 37.

The setting-trip 12 is held in a vertical po-  
60 sition by means of the coil-spring 14 and has also extending from it a cable 15, counterpart to the cable 23, secured to the lever *a*, so that this setting-trip is also held vertically when the lever *a* is held transversely to the  
65 rails.

Suitably secured to the pivoted lever *a*, mounted upon the plate 5, is the connecting-  
bar *c*, supported by means of the pin 8, and this connecting-bar *c* is slidably secured to  
70 the split switch-sections C and C', so that as the lever *a* is tilted from side to side the connecting-bar *c* will be thrown sidewise to force the split rails C in connection with the rail  
75 A, the split rails C being normally in engagement with the rail A', as shown in Fig. 1. Positioned adjacent a lever *a* and held by the pin 6, secured to the base-plate 5, is the second lever *b*. From this lever *b* extends the  
80 cable 32 upon one side, which is secured to a releasing-trip 30, held in a vertical position by means of the spring 31, as disclosed in Fig. 4, while extending from the opposite end of this lever *b* is the counterpart cable 17, se-  
85 cured to a second releasing-trip, as shown in Fig. 1. Extending from the lever *b*, to which the cable 32 is secured, is the latch-cable 16, secured to the spring-latch 13, held adjacent  
90 to the lower end of the setting-trip 12. Extending from the opposite end of the lever *b* is the cable 21, secured to a counterpart spring-latch 24, placed adjacent the lower stem of the setting-trip 25.

Now when all the instrumentalities have been constructed so that all the trips will be  
95 held vertically under spring tension, and in which condition the split rail C' is adjacent the rail A', the operation of my device will be as follows: Should a train approach upon the  
100 rails A and A' to first approach the base-plate 37, supporting the setting-trip 25, and it be desired that the train should be switched



to the right, the operator would throw down a suitable striker 41 to engage the setting-trip 25 to tilt the same forward. This would result in the trip 12 also being inclined or tilted forward, permitting the coil-springs 14 and 26 to promptly upset these setting-trips 25 and 12, which would then be locked in their inclined or tilted position by means of the spring-catch 13. This forward tilting of the setting-trip 25 carries the cable 23 backward to tilt the lever *a* to throw the split rail C in engagement with the rail A and at the same time carries the rail C' out of engagement with the rail A'. As soon as the striker comes in engagement with the releasing-trip 20 the lever *b* is tilted to release both of the spring-latches 13 and 24, permitting the setting-trips 25 and 12 assuming their vertical position again to throw the split rails C and C' into their normal position. Should a train approach from an opposite direction upon the rails B and A' to first engage the trips 12 and 20 will be actuated to operate lever *a* to throw the split rails in the manner set forth. The device is simple of construction and readily operated, and,

Having thus described my said invention, what I claim as new, and desire to secure by United States Letters Patent, is—

A switch-throwing mechanism comprising a lever pivoted between the rails, a connecting-bar secured to said lever, said connecting-bar being secured to two split rails, a setting-trip, a spring to normally hold said trip

in a vertical position, a cable extending from said setting-trip, to said lever, a second setting-trip upon the side opposite the said first-mentioned trip, a spring to hold said second trip in a vertical position, a cable extending from said last-mentioned setting-trip to said pivotally-held lever, a second pivotally-supported lever, a strand extending from one end of said second lever, a spring-latch secured adjacent said first-mentioned setting-trip, said spring-latch, a second spring-latch, a strand extending from said second spring-latch, said second spring-latch being held adjacent said second setting-trip, a strand extending from said second spring-latch and secured to said second pivoted supporting-lever, a releasing-trip, a spring to hold said releasing-trip vertically, a strand extending from said releasing-trip to said second pivotally-held lever, a second releasing-trip positioned upon the side opposite said first-mentioned releasing-trip, a spring to normally hold said second releasing-trip and a strand extending from said second releasing-trip to said second supporting-lever, all arranged substantially as and for the purpose set forth.

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

CHARLES B. BLANK.

Witnesses:

JOSEPH RARDEN,  
ROBT. O. RIZER.