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CONTINUOUS RAIL FROG.

APPLICATION FILED JUNE 21, 1909.

Patented Dec. 14, 1909.

2 SHEETS—SHEET 1.

942,947.

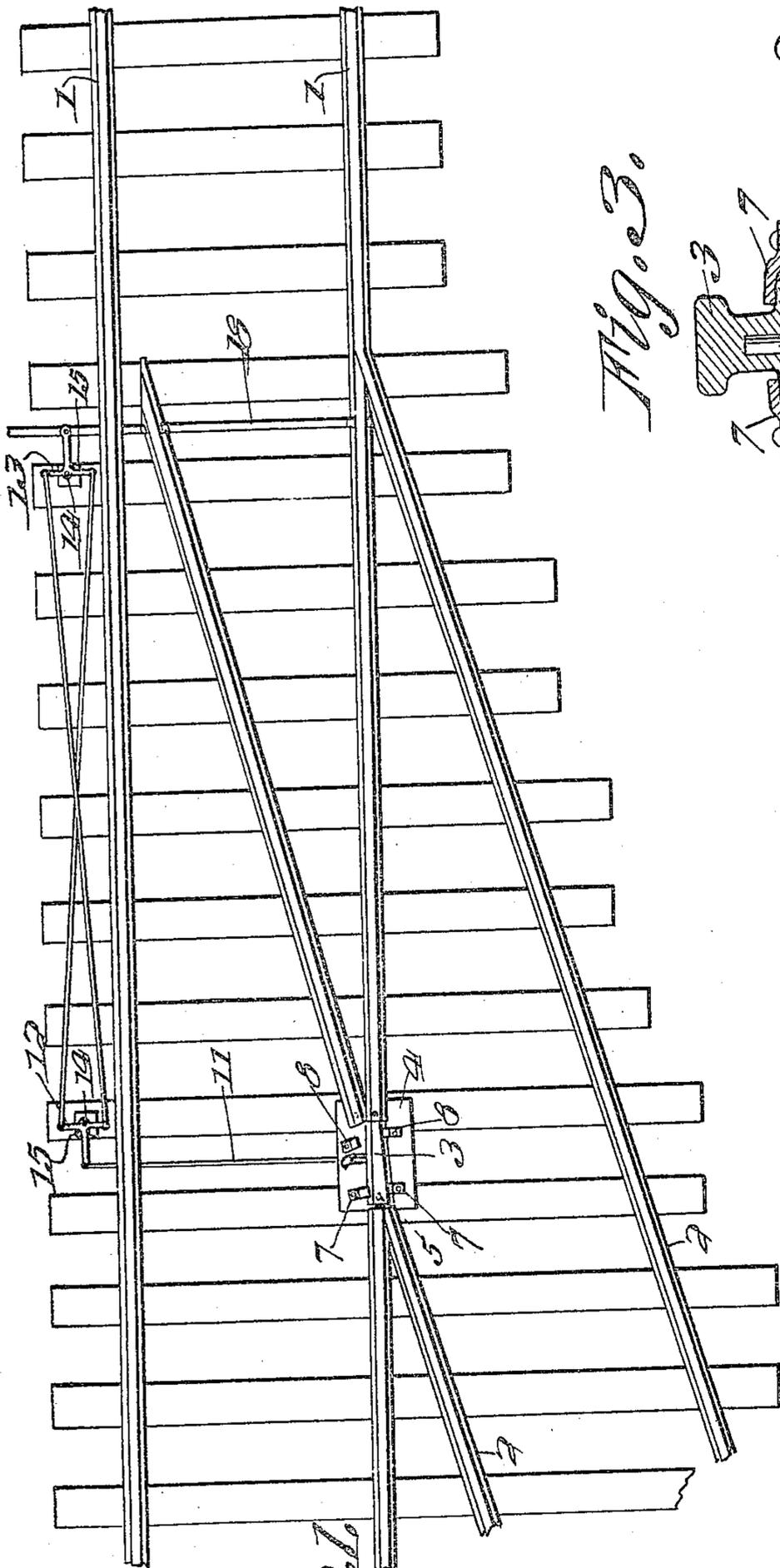


Fig. 3.

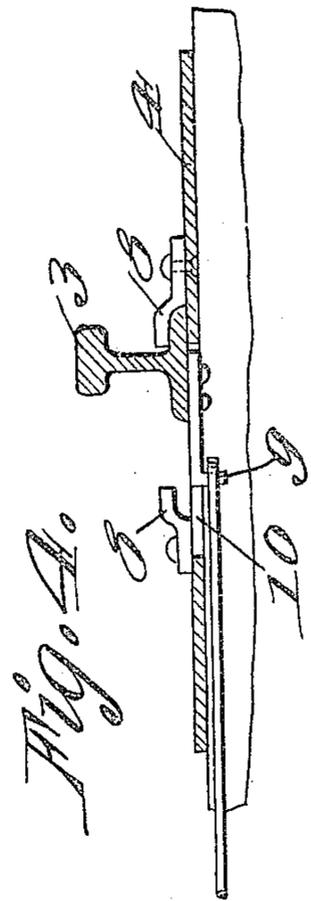
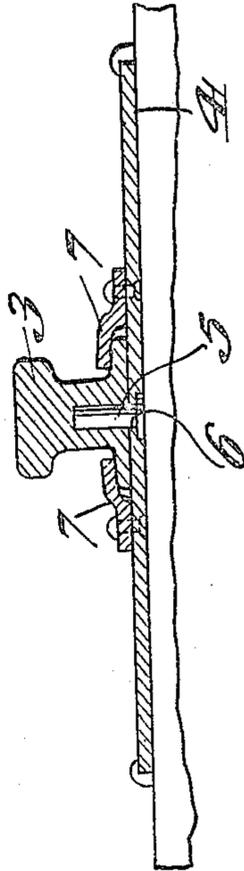


Fig. 4.

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Fig. 1.

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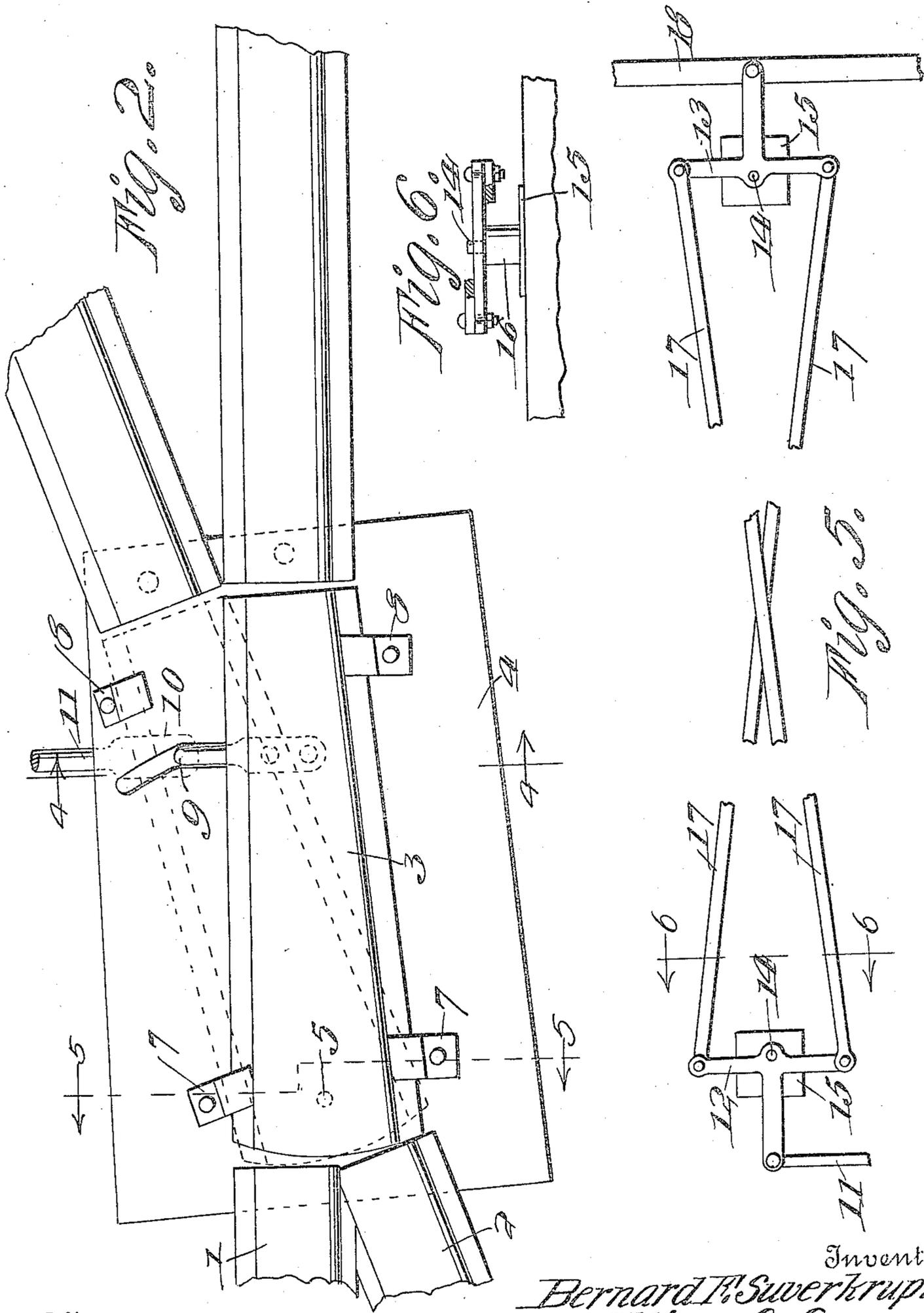
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# UNITED STATES PATENT OFFICE.

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## CONTINUOUS RAIL-FROG.

942,947.

Specification of Letters Patent. Patented Dec. 14, 1909.

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*To all whom it may concern:*

Be it known that we, BERNARD F. SUVERKRUP and WILLIAM O. OWENS, citizens of the United States, residing at Urbana, in the county of Champaign and State of Illinois, have invented certain new and useful Improvements in Continuous Rail-Frogs; and we 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.

This invention relates to improvements in continuous rail frogs.

One object of the invention is to provide a rail frog of this character having a short pivotally mounted section of rail adapted to be brought into and out of alinement with the main line and switch rails of the track.

Another object is to provide a frog of this character having an improved construction of operating mechanism whereby the movable section of the rail is shifted.

With the foregoing and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a plan view of a railway track, showing the application of the invention; Fig. 2 is an enlarged plan view of the movable section and the ends of the main and switch rails of the frog, showing the movable section in full lines in one position, and in dotted lines in another; Fig. 3 is a cross sectional view on the line 5—5 of Fig. 2; Fig. 4 is a similar view on the line 4—4 of Fig. 2; Fig. 5 is an enlarged plan view of the operating mechanism of the movable frog section; Fig. 6 is a vertical cross section on the line 6—6 of Fig. 5.

Referring more particularly to the drawings, 1—1 denotes the rails of the main track and 2—2 denotes the rails of the switch track. At the intersection of the inner main and switch line tracks 1 and 2, a portion of the rails is removed to form a space in which is arranged a movable rail or frog section 3 which is adapted to be brought into alinement with one of the other of said inner rails of the main and switch tracks whereby said rails are made continuous.

The movable rail section 3 is wider at one

end than the other and is pivotally mounted at its wider end upon a base or supporting plate 4 which is secured to the ties in any suitable manner. The section 3 is provided on its outer side with a pivot pin 5 which is engaged with a bearing aperture 6 formed in the plate 4, as shown. On the plate 4, adjacent to the wider end of the section 3, of the rail, are arranged stop lugs 7 which hold said end in operative engagement with the plate and on the plate, adjacent to the opposite or narrow end of the rail, are secured stop lugs 8 which are designed to limit the pivotal movement of the section 3 of the rail.

On the underside of the section 3 of the rail, adjacent to its narrow end, is arranged a downwardly projecting pin 9 which works through an arcuate slot 10 formed in the plate 4 and to the end of the pin 9 which projects below the plate 4, is secured the end of an operating rod 11 which extends outwardly below the rails to a suitable point alongside the outer rail and is connected with a suitable operating mechanism whereby the movable section 3 is swung or shifted in either direction to form a continuous inner main line or switch rail.

The operating mechanism for shifting the section 3 of the rail is here shown and preferably comprises a pair of T-shaped levers 12 and 13 which are pivotally mounted on suitable bearing studs or bolts 14, the lower ends of which are secured in base plates 15 which are bolted or otherwise suitably secured to the ties. On the bolts 14 are arranged spacing blocks 16 by means of which the T-shaped levers are spaced a suitable distance above the bearing plates 15. The operating rod 11 is connected to the longer arm of the T-shaped lever 12, while the shorter arms of the levers 12 and 13 are connected together by cross connecting rods 17, as shown. The longer arm of the T-shaped lever 13 is operatively connected to the usual switch operating rod 18 of the tracks, whereby when said rod is operated, the T-shaped lever 13 will be rocked and the movement thereof imparted, through the connecting rod 17, to the lever 12 and through said lever and the operating rod 11 will swing the pivoted section 3 of the rail to the desired position for forming a continuous inner main line or switch rail.

In the ordinary construction of railway frogs, accidents are frequently caused by the

failure of the frog to operate at the proper time, because of stones or other foreign objects becoming wedged between the movable and stationary portions of the frog or rails  
5 and the present invention is designed to overcome these objections by providing a positively operating rail or frog member which cannot be blocked or held against operation in the manner described.

10 From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

15 Various changes in the proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention, as defined in the appended claim.

20 Having thus described our invention, what we claim is:

In a device of the character described, the combination with the inner rails of the main and switch tracks of a railway, said rails be-  
25 ing cut away to form a space at their point

of intersection, of a base plate secured in said space, a tapered frog rail section pivotally mounted at one end of said plate, stops arranged on said plate to limit the pivotal movement of said rail section, a pair of  
30 pivotally mounted T-shaped operating levers, an operating rod to connect one of said levers with said rail section, connecting rods crossing or intersecting each other and connecting opposite ends of said levers together,  
35 and a switch lever connected to the other of said T-shaped levers whereby the movement of said switch lever is imparted to said pivoted rail section to shift the same into en-  
40 gagement with one or the other of said inner rails.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

BERNARD F. SUVERKRUP.  
WILLIAM O. OWENS.

Witnesses:

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FRED. B. HAMILL.