G. W. THOMPSON.

FROG.

APPLICATION FILED OCT. 11, 1909.

**956,447.** **Patented Apr. 26, 1910.**

Fig. 1.

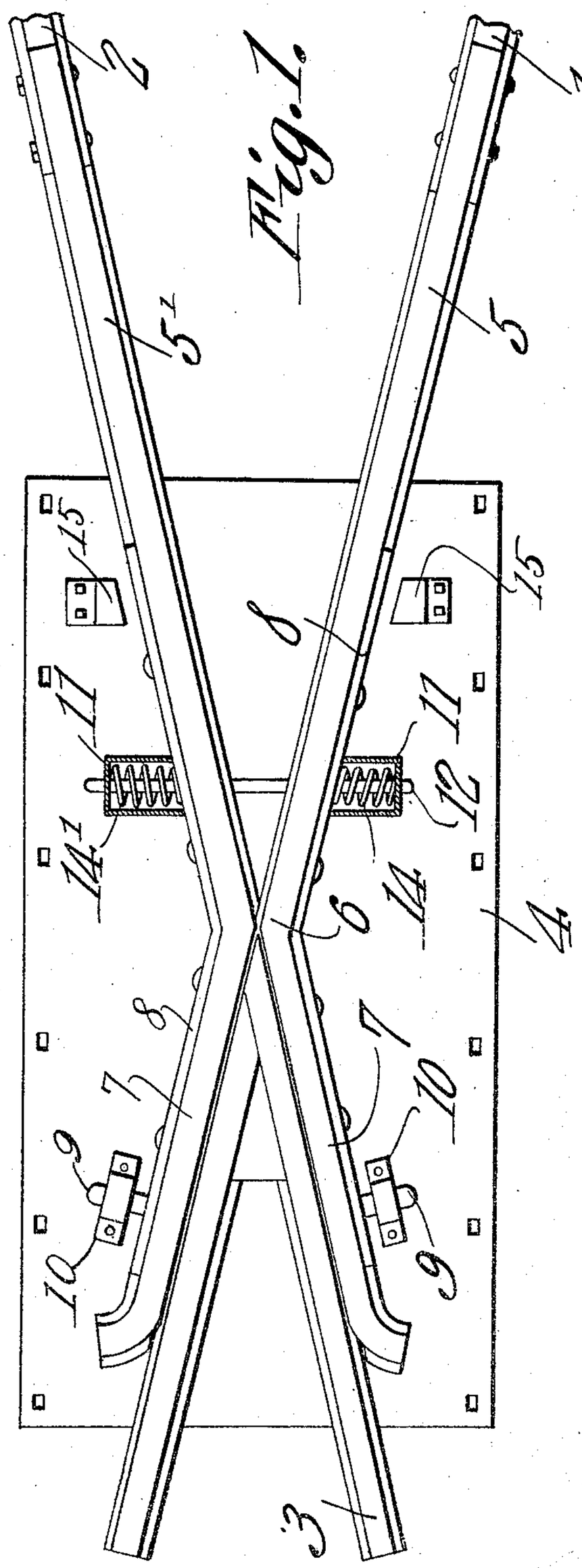
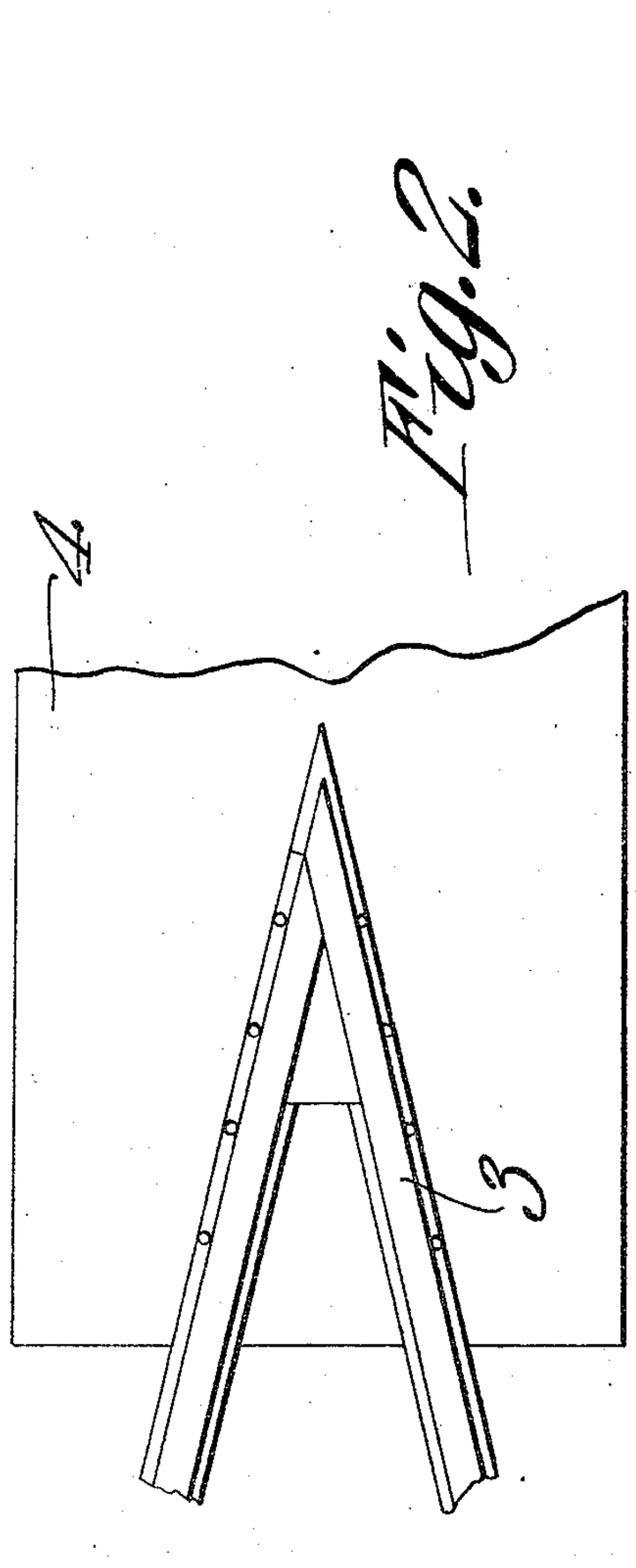



Fig. 2.




Witnesses

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# UNITED STATES PATENT OFFICE.

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## FROG.

956,447. Specification of Letters Patent. Patented Apr. 26, 1910.

Application filed October 11, 1909. Serial No. 522,027.

*To all whom it may concern:*

Be it known that I, GEORGE W. THOMPSON, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented a new and useful Frog, of which the following is a specification.

It is the object of this invention to provide a rail-way frog the component parts of which are light and portable in form, so that, should one portion of the frog become broken or worn, the same may readily be replaced without disturbing the alinement or grade of the frog as an entity, and without calling into requisition, the large force commonly required to reset a frog.

Another object of the invention is to provide a frog, the movable rails of which are assembled with the main line rail and with the lead rail to reciprocate readily and freely upon the base plate upon which the frog-point is mounted, the coöperation between the frog-rails and the plate being such that the frog-rails may readily be removed without disturbing the base plate.

Another object of the invention is to provide a frog, the movable rails of which shall at all times be held yieldingly against the frog-point, so that a continuous line is formed, both along the siding and along the main line rail.

With these and other objects in view, the invention consists in the novel construction and arrangement of parts hereinafter described and delineated in the accompanying drawings, it being understood, that, since the drawings show but one form of the invention, changes, properly falling within the scope of what is claimed, may be made, without departing from the spirit of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings, wherein;—

Figure 1 shows the invention in top plan; and Fig. 2 is a top plan of the frog-point and of a portion of the base plate whereby the frog-point is supported.

Referring to the drawings, a portion of the main line rail is shown, and denoted by the numeral 1, the lead rail being denoted by the numeral 2, the point of the frog being denoted generally, by the numeral 3. As shown clearly in the drawings, with most clearness in Fig. 2, the point 3 is riveted, bolted, or otherwise secured in any permanent manner to a base plate 4 which forms the foundation element of the frog. The point 3 is the only portion of the frog which is rigidly and permanently secured to the base plate 4, it being one of the objects of the invention, so to construct the device that the parts of the same may be removed, without disturbing the base plate 1.

Assembled with the main line rail and with the lead rail 2, are movable frog rails 5 and 5′, which, adjacent the apex of the frog-point 3, are bent, as denoted by the numeral 6, to form arms 7, which are adapted to lie closely against the walls of the rails constituting the frog-point, it being understood that the flanges of the portions 7 are cut away adjacent the frog point 3, so that the parts may be disposed as shown in Fig. 1 of the drawings.

Mounted upon the remote faces of the frog rails 5 and 5′, are reinforcing rails 8, which are bent to correspond to the shape of the frog rails. Adjacent one end, the rails 8 are provided with outstanding lugs 9 adapted to be received beneath and to reciprocate in, guides 10 which are secured in any desired manner to the base plate 4.

The reinforcing rails 8 carry casings 11, in which is slidably mounted, a transversely disposed rod 12, compression springs 14 and 14′ being located within the casings 11, and connected, at their remote ends, in any desired manner, with the rod 12, the adjacent ends of the springs 14 being arranged to bear against the remote faces of the reinforcing rails 8. For the limitation of the movement of the frog rails 5 and 5′, in their intermediate portions, suitable stops 15, of any desired construction may be mounted upon the base plate 4.

From an examination of Fig. 1 of the drawings, it will be obvious that both the main line and the siding present at all times a substantially uninterrupted line through the frog. Supposing that a wheel is traversing the main line rail 1, the flange of the wheel, as the same approaches the apex of the frog-point, will engage the frog rail 5′ causing the same to spring outwardly, compressing the spring 14′ and holding the arm 7 of the track rail 5 closely against the frog-point.

When the wheel traverses the lead rail 2,

the flange of the wheel, engaging the frog rail 5 will compress the spring 14, drawing the rail 5′ closely against the frog-point 3.

From the foregoing, it will be obvious that the line through the frog remains substantially unbroken when the track is in use, no matter whether the wheel be traversing the lead rail 2 or the main line rail 1.

When it becomes necessary to remove one of the frog rails 5 and 5′ the base plate 4 need not be disturbed, the operation of replacing one of the frog-rails necessitating merely the removal of a screw, bolt or the like, the frog rails, owing to their relatively small and portable nature, being readily handled and replaced by one or two men, without interruption of the traffic.

Having thus described the invention, what is claimed is: —

A device of the class described comprising a base plate; a frog point secured thereto; movable frog rails terminally extended beyond one end of the base plate and bent intermediate their ends to form arms arranged to lie yieldably against opposite sides of the frog point; reinforcing rails removably secured to the outer faces of the frog rails and having their outer faces terminating flush with the flanges of the frog rails, there being lugs outstanding from the reinforcing rails; guides mounted upon the base plate and arranged to receive the lugs; the coöperation between the guides and the lugs constituting the sole means for securing the frog rails to the base plate; and stops secured to the base plate, against which stops the outer faces of the reinforcing rails are adapted to bear, to limit the outward movement of the frog rails.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GEORGE W. THOMPSON.

Witnesses:

A. J. Gilleland,

Tom Vaughan.