Dec. 23, 1930 W. A. ENGLAND 1,785,895

SWITCH OPERATED FROG

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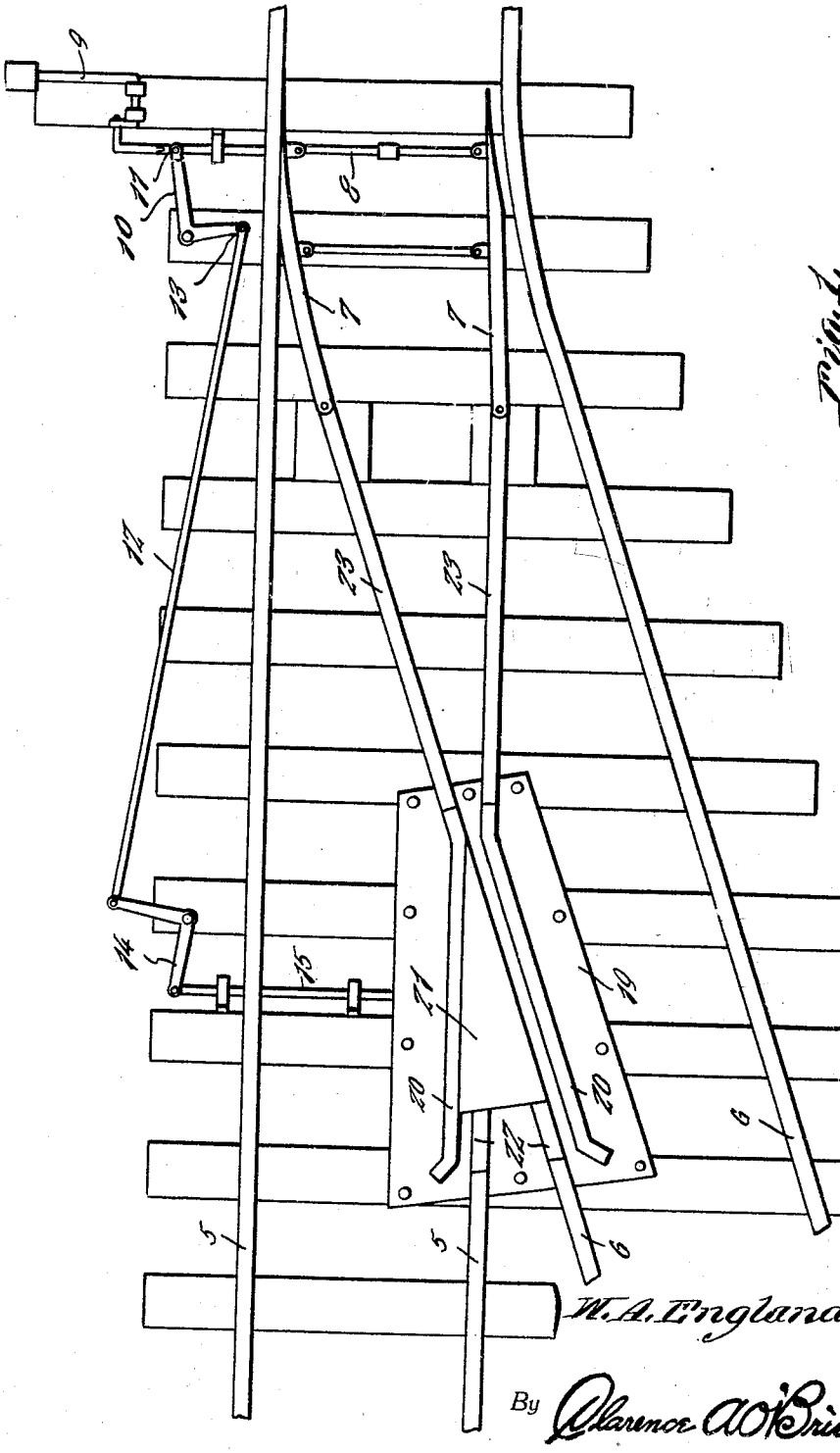


Fig. 1.

Inventor

W. A. England

By Clarence A. O'Brien

Attorney

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Fig. 4.

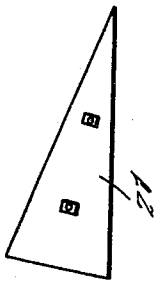


Fig. 5.

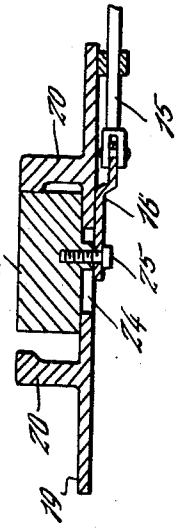


Fig. 6.

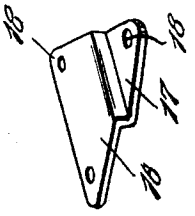


Fig. 7.

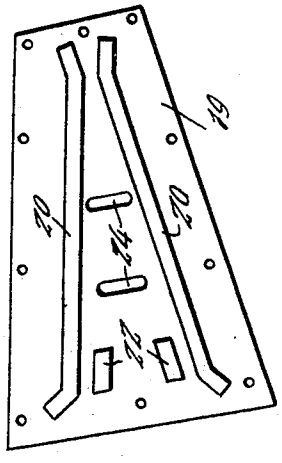
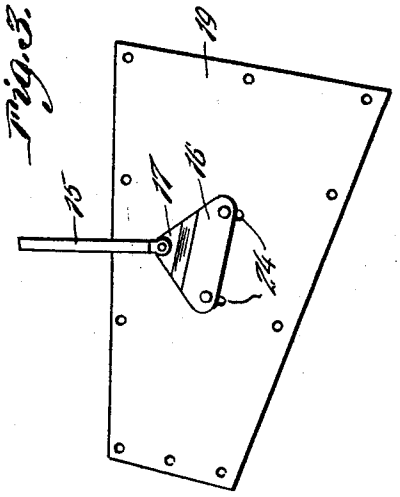


Fig. 8.



Inventor

W. A. England

By Clarence O'Brien

Attorney

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UNITED STATES PATENT OFFICE

WILLIAM A. ENGLAND, OF DAVY, WEST VIRGINIA

SWITCH-OPERATED FROG

Application filed February 26, 1930. Serial No. 431,519.

This invention appertains to new and useful improvements in railroad switch frogs, and more particularly to an adjustable frog operated by the motion of the switch.

An important object of the invention is to provide a shiftable frog point capable of being operated to aline one edge thereof, with the proper rails, so as to prevent the occurrence of slit cross points and the consequential damage which frequently results.

In the following specification and claim, numerous important objects and advantages of the invention will readily become apparent to the reader.

In the drawings:—

Figure 1 represents a top plan view of the invention.

Fig. 2 represents a top plan view of the cross plate, with the point removed.

Fig. 3 represents a bottom plan view of the frog plate.

Fig. 4 represents a bottom plan view of the cross point.

Fig. 5 represents a cross sectional view through the novel frog structure.

Fig. 6 represents a perspective view of a connecting plate employed.

Referring to the drawings wherein like numerals designate like parts, it can be seen that numerals 5—5 represent the rails of the main line while numerals 6—6 represent the rails of the branch line.

Numerals 7—7 represent the usual switch points, which are connected by the bridle bar 8 to the switch throw 9. A bell crank 10 is mounted on one of the ties and has one end thereof, pivotally connected to the bridle bar 8 as at 11. The other end of the bell crank is connected to one end of the throw rod 12 as at 13, and this throw rod is connected to one end of a second bell crank 14, pivotally mounted on one of the ties.

A connecting rod 15 is interposed between the other end of the bell crank 14, and a triangular-shaped plate 16, the apex portion of which is offset as at 17. Each corner portion of the plate 16 has an opening 18 therein, and as clearly shown in Fig. 3, the apex portion thereof is pivotally connected to the connecting rod 15, by having a pin disposed through the opening therein and through an opening in the rod 15.

As is clearly shown in Figs. 1 and 2, the frog plate 19 has a pair of converging wings rails 20—20, secured thereon, and between these rails 20—20 is shiftable the cross point 21. The lead 22 on the plate 19 abuts the rails 5 and 6, while the distant ends of the wings 20—20 abut the lead rails 23—23 which connect with the switch points 7—7.

As is clearly shown in Fig. 5, the frog plate 19 is provided with a pair of slots 24 therein, and through these slots are disposed screws 25, which are disposed through the remaining openings 18 in the plate 16, and are driven into the frog point 21.

It can now be seen that when the switch is thrown, there will be a consequential movement of the rod 20 and the connecting plate 16 so that the frog point 21 is shifted to a position effective to aline one end portion thereof with either the lead rails 22—23 on one side, or the lead rails 22—23, on the other side.

Through the use of this novel automatic frog, the occurrence of slit frog points, and the resulting damage to property will be eliminated, and while the foregoing specification has set forth the invention in detail, it is to be understood that changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having thus described my invention, what I claim as new is:—

A railway frog comprising a base plate having a pair of spaced slots elongated transversely of the plate and a pair of integrally formed rail members extending longitudinally of the plate and adjacent relatively opposite ends of the slots, said rail members being angularly disposed to converge toward one end of the plate to provide a triangular space therebetween, a pair of relatively short longitudinally extending rails members disposed oppositely between the divergent ends of the angularly disposed rail members in relatively spaced relation, a triangular frog block disposed in the triangular space between said rail members

and slidable transversely of the plate, a relatively small slide plate of triangular shape disposed against the under side of said base plate and crosswise thereof with its base bridging the said slots and its apex pointed laterally of the base plate for connection with an operating rod, said slide plate having an opening in each corner, and headed fasteners extending upwardly through the corner opening in the base of the slide plate and threadedly engaged with said frog block.

In testimony whereof I affix my signature.

WILLIAM A. ENGLAND.