No. 611,680. Patented Oct. 4, 1898.

C. M. DISSOSWAY.

REVERSIBLE RAILWAY RAIL.

(Application filed Jan. 14, 1898.)

(No Model.)

Fig 2.

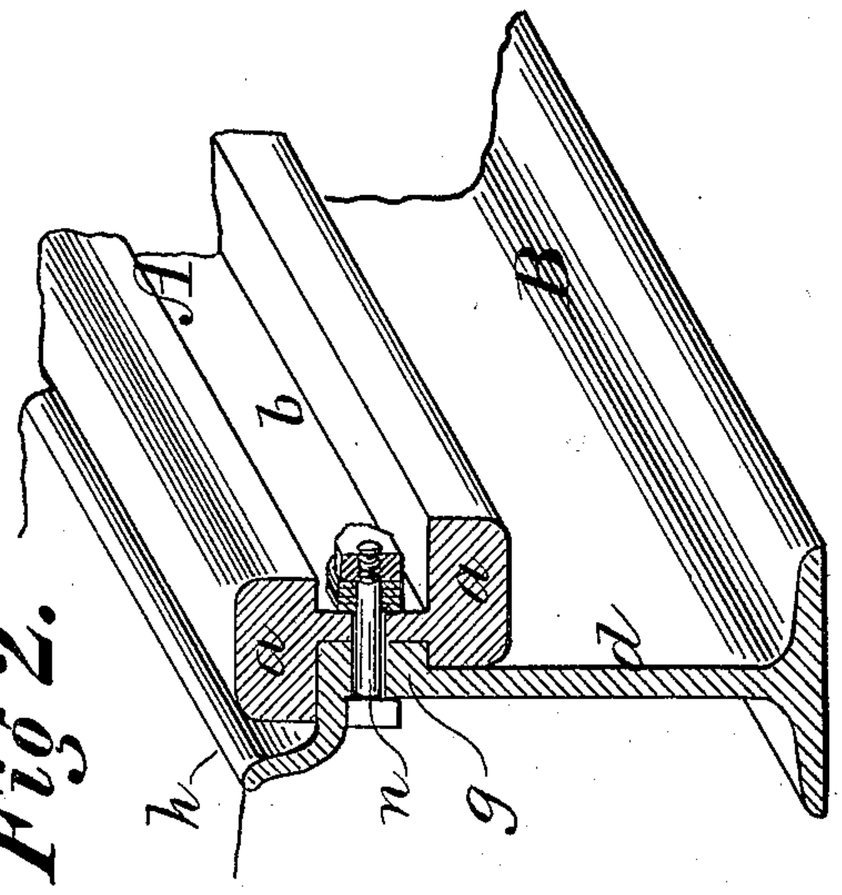


Fig 4.

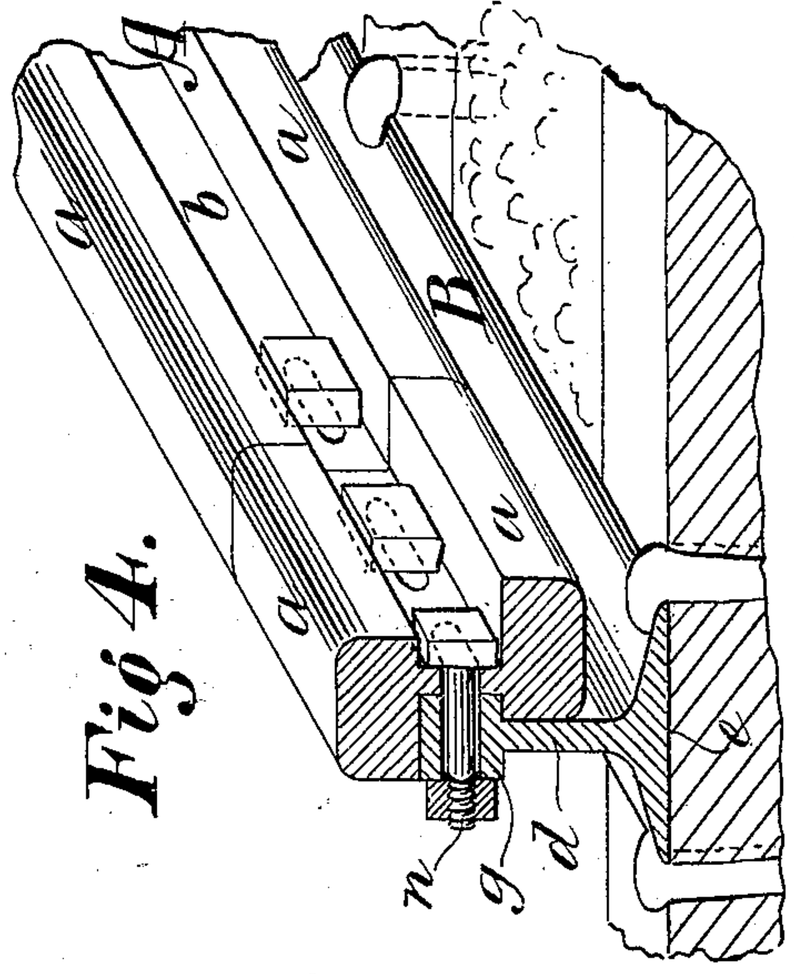


Fig 5.

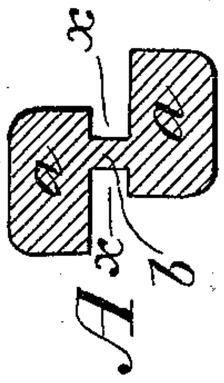


Fig 1.

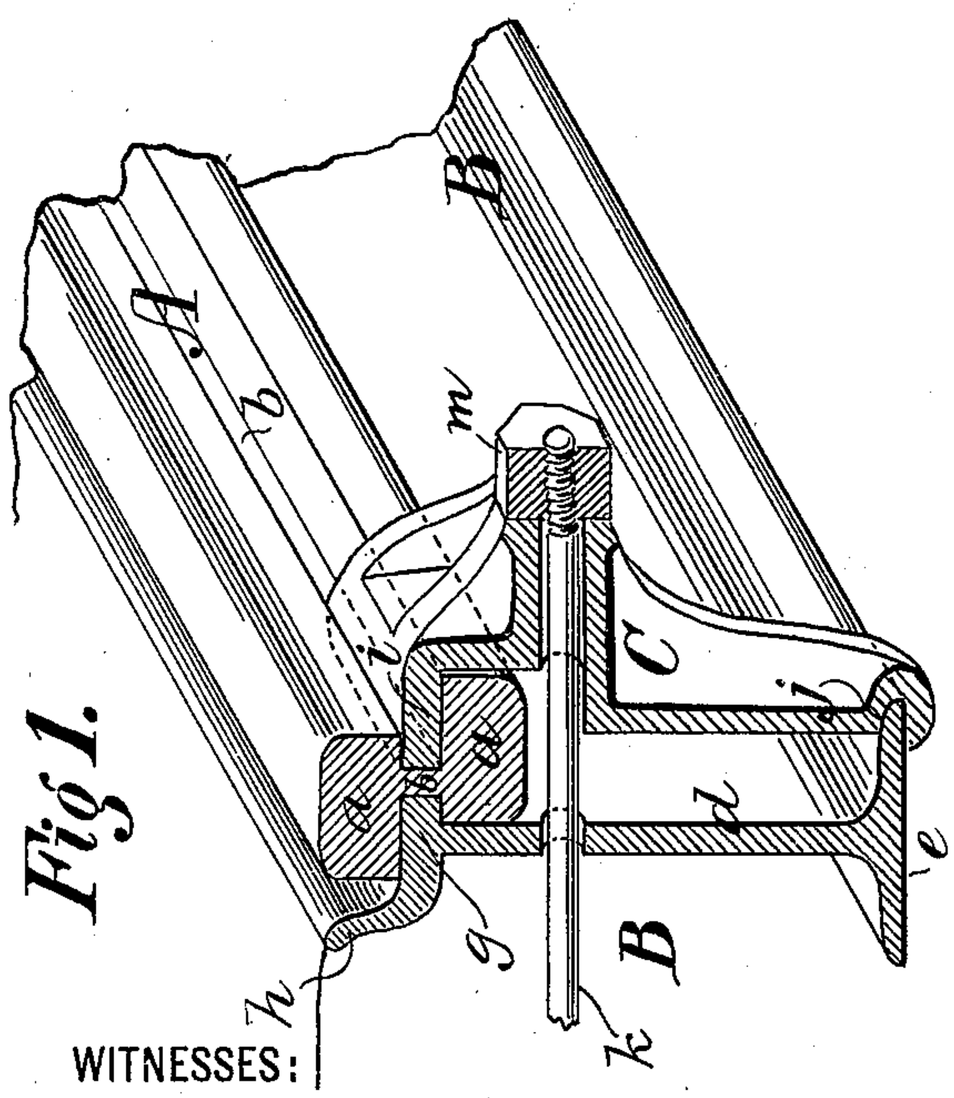
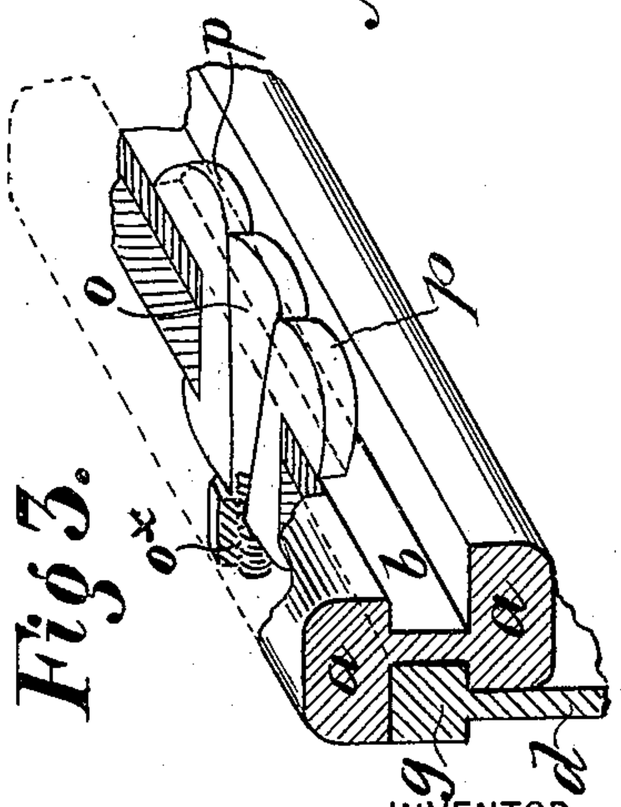


Fig 3.



WITNESSES:

S. H. Hinman

Peter A. Ross

INVENTOR

Crowell M. Dissosway

BY

Henry Connett

ATTORNEY

UNITED STATES PATENT OFFICE.

CROWELL M. DISSOSWAY, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO JOHN GOODCHILD, OF SAME PLACE.

REVERSIBLE RAILWAY-RAIL.

SPECIFICATION forming part of Letters Patent No. 611,680, dated October 4, 1898.

Application filed January 14, 1898. Serial No. 666,625. (No model.)

To all whom it may concern:

Be it known that I, CROWELL M. DISSOSWAY, a citizen of the United States, residing in the city, county, and State of New York, borough of Manhattan, have invented certain new and useful Improvements in Reversible Railway-Rails, of which the following is a specification.

This invention relates to the class of double-headed reversible rails; and the object is to provide a rail of this character which may be conveniently rolled, which will have a firm support for its operative head, which may be rigidly secured to the rail base or chair, and which may when required be constructed with a suitable wheel-guard.

In the accompanying drawings, which illustrate several embodiments of the invention, Figure 1 is a perspective view illustrating a construction especially well adapted to street-railway tracks and wherein the wheel-guard is formed integrally on the rail-base. This figure also illustrates a rail-securing device, which forms an auxiliary support for the operative head of the rail. Fig. 2 is a view similar to Fig. 1, but showing the reversible rail bolted directly to the rail base or chair. Fig. 3 is a view illustrating a gib-and-key securing device, which may be substituted for the bolts of Fig. 2. Fig. 4 is a view similar to Fig. 1, illustrating a construction adapted for railways in general. Fig. 5 is an end view of the double-headed rail detached. This rail has the same form in all of the constructions shown, differing only slightly in proportions.

In most respects the several forms or constructions illustrated in the drawings are alike; but for convenience I will first describe that illustrated in Fig. 1, with reference also to Fig. 5.

The reversible rail A has two like heads *a a* of substantially rectangular cross-section, these heads being integrally connected by an upright web *b*, the web joining the respective juxtaposed or inner faces of the heads out of or to one side of a plane passing through their longitudinal axis, and so that while the rail as a whole is symmetrical when the web *b* is vertical a vertical plane through the web will divide the rail-heads unsymmetrically, the excess of one head being on the opposite side of the plane from that of the other. Thus the web *b* divides the rail-heads unsymmetrically. This unsymmetrical division of the heads is clearly shown in Fig. 5, where the rail is seen detached.

The head *a*, which may be for the time being uppermost and on which the wheel of the car runs, I call the "operative" head. It rests directly on the crown or head of a rail-base B, which comprises as its essentials an upright web *d*, a flanged foot *e*, and flanged head *g*, which projects out laterally from the web *d* and fits into one of the recesses (*x* in Fig. 5) between the heads *a a* of the rail, the upper or operative head of the rail being supported firmly on the crown of the head *g* of the rail-base.

In Figs. 1 and 2 a wheel-guard *h* is formed integrally with the head *g* of the rail-base B, said guard curving upward at the inside of the rail, as clearly shown, and leaving a channel between the guard and rail-head for the flange of the car-wheel.

It will be noted that so far as described only the major portion of the width of the operative head of the rail is supported, and that on the crown of the rail-base B; but the construction shown in Fig. 1 provides also an auxiliary support at the outer margin of this rail-head, such support being derived from the clip C, which forms an element of the device which secures the rail to the base B. This clip has a lip *i*, which takes under the inner margin of the operative head of the rail, while at its lower part it has a shoulder *j*, which rests on the flanged foot *e* of the rail-base. A screw-threaded tie-rod *k*, extending across the track from rail-base to rail-base, extends through the web of the rail-base and through the clip C and has a nut *m* on its outer end, whereby the clip C may be forced up in such a manner as to clamp the rail up laterally to the rail-base. Of course it is not essential that the rod *k* shall extend across the track in a manner to tie the two rail-bases together. Any one skilled in the art will understand that this rod might be cut off just inside of the web of the base B and have a suitable head, in which case it would become an ordinary bolt. In any case it might not be found necessary to have a tie-rod at

every point of fastening, especially where the base B is made continuous and breaks joints with the reversible rails.

Fig. 2 shows the same construction as that already described, except that the web *b* of the rail and the head *g* of the rail-base are made deeper to provide room for bolts *n*, which extend through said web and head and form securing devices in lieu of the clip C, Fig. 1, for securing the reversible rail to the rail-base. It will be understood, however, that the head *g* and web *b* of the construction shown in Fig. 1 may be made as deep as these parts are shown to be in Fig. 2 and also that both of the forms of fastenings—that of Fig. 1 and that of Fig. 2—may be used at different points along the same line of rails.

Fig. 3 shows a gib-and-key securing device, which may be used in lieu of bolts *n*. In this view, which is a horizontal section of the rail-web and rail-base head, *o* is the key, *p p* the gibs, and $o^{\times}$ a nut on the screw-threaded stem of the key.

Fig. 4 illustrates the application of the invention to the ordinary surface railway, the flanges of the base being represented as spiked to the ties and the web *d* of the base reduced in height. In this construction the wheel-guard is omitted and bolts *n* are employed, as in Fig. 2, to secure the web of the reversible rail to the head of the rail-base. It is desirable, unless the rail is quite heavy, to extend the rail-bases B continuously under the rails, abutting them end to end, like the rails, but breaking joints with the latter. This is not, however, absolutely essential to my invention. The rail-bases might be placed only under the joints between the sections of the rail.

Having thus described my invention, I claim—

1. In a railway-rail, the combination with a rail-base, of a reversible rail having two unsymmetrically-divided heads connected by an upright web, as described, the operative or upper head, being seated directly on the crown of the rail-base and the reversible rail wholly supported at this point, and means for securing the rail to the base, substantially as set forth.

2. In a railway-rail, the combination with a rail-base having a flanged head *g* which projects laterally, as described, of a reversible rail having two unsymmetrically-divided heads *a*, *a*, connected together by a web *b*, the operative head of the rail being seated directly on the head of the rail-base and said flanged head *g* projecting laterally into the space between the rail-heads, and means for securing the rail to the base, substantially as set forth.

3. In a railway-rail, the combination with a rail-base having a wheel-guard *h* formed integrally therewith, of a reversible rail having two unsymmetrically-divided heads connected by a web, the operative head of the rail resting directly on the rail-base, and means for securing the rail to the base, substantially as set forth.

4. In a railway-rail, the combination with a rail-base having an upright web, a flanged foot, and a head, and a reversible rail having two heads connected together by a web, whereby recesses *x* are formed between said heads at either side of the connecting-web, the operative head of the rail resting upon the head of the rail-base, of a clip C, having a lip *i* which takes under the operating-head of the rail and a shoulder *j* which is supported on the rail-base below, and means substantially as described for securing said rail-base, rail and clip firmly together.

5. In a railway-rail, the combination with a rail-base having a flanged head which projects laterally, of a reversible rail supported wholly on the crown of said base, said rail having two unsymmetrically-divided heads *a*, *a*, connected by an upright web *b*, the operating, or upper head being seated on the crown of the rail-base and the lower head being suspended and taking under the flanged head on the rail-base, and means for securing the rail to the base, substantially as set forth.

In witness whereof I have hereunto signed my name, this 11th day of January, 1898, in the presence of two subscribing witnesses.

CROWELL M. DISSOSWAY.

Witnesses:

PETER A. ROSS,

HENRY CONNETT.