(No Model.)

# W. C. MEEKER & J. WILSON.

## RAILROAD SWITCH BAR.

No. 422,241. Patented Feb. 25, 1890.

Fig. 1.

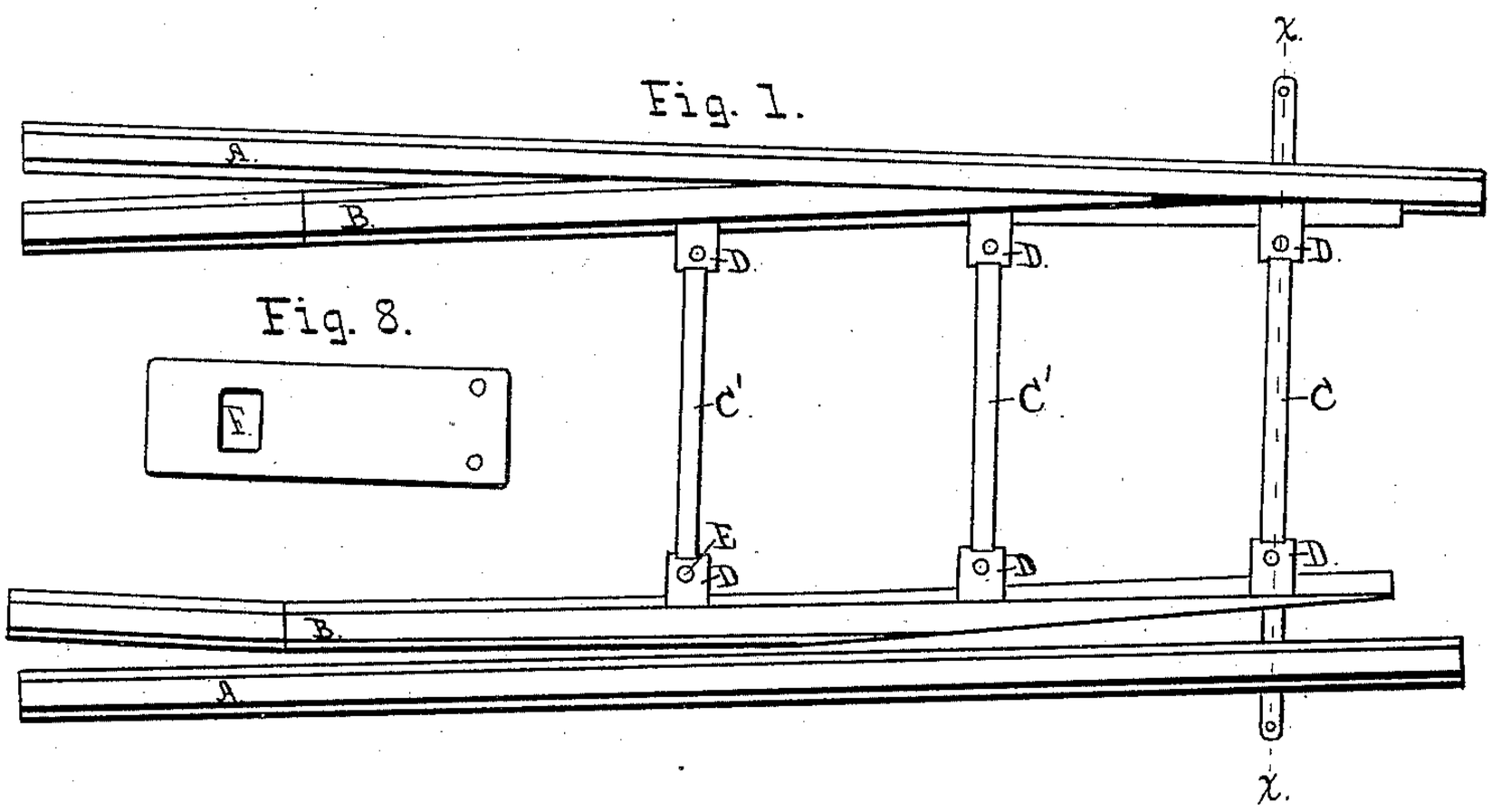



Fig. 8.




Fig. 2.

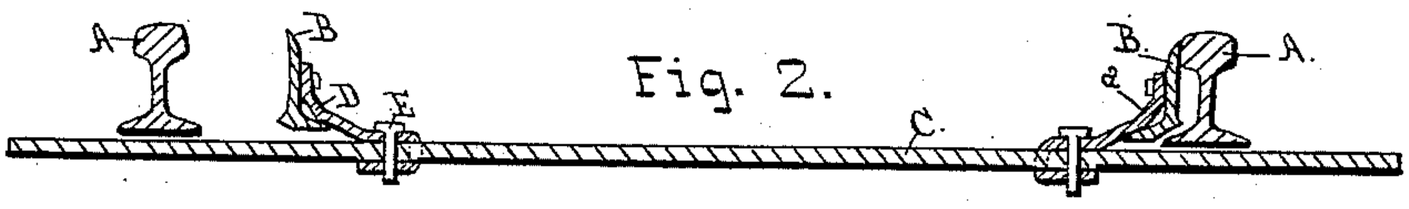



Fig. 3.

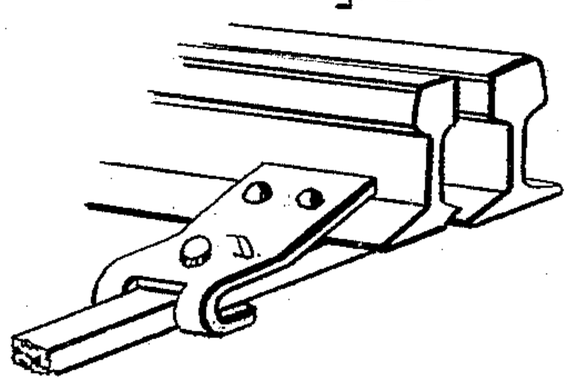



Fig. 4.

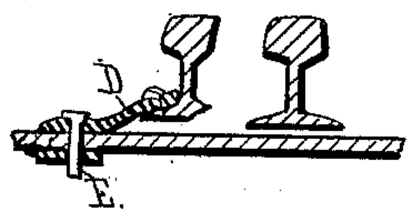



Fig. 5.

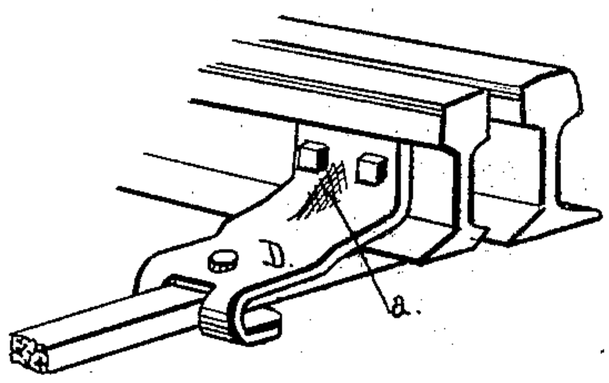



Fig. 6.

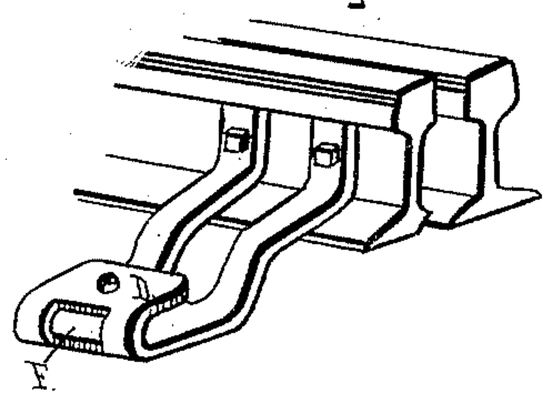



Fig. 7.

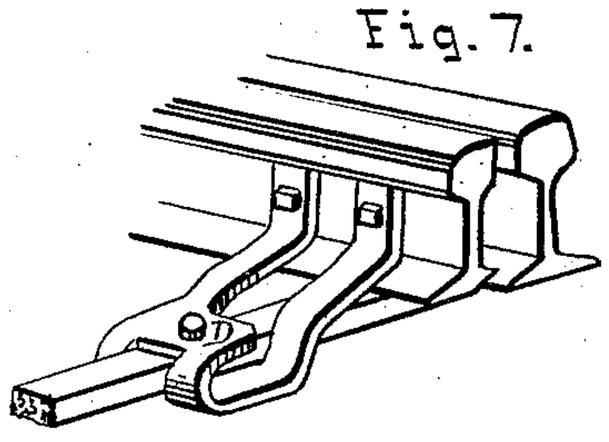



Fig. 9.

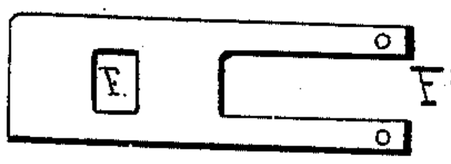
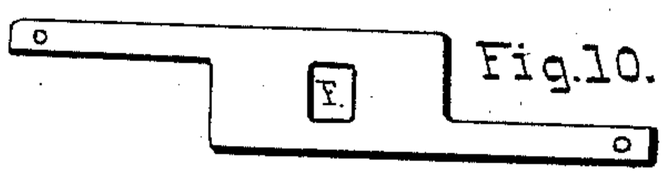



Fig. 10.

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# UNITED STATES PATENT OFFICE.

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SAID WILSON ASSIGNOR TO SAID MEEKER.

## RAILROAD-SWITCH BAR.

SPECIFICATION forming part of Letters Patent No. 422,241, dated February 25, 1890.

Application filed April 24, 1889. Serial No. 308,467. (No model.)

*To all whom it may concern:*

Be it known that we, WALTER C. MEEKER and JOSEPH WILSON, of Jersey City, county of Hudson, and State of New Jersey, have made certain new and useful Improvements in Railroad-Switches, not heretofore known and used; and we hereby declare the following specification to be a full and clear description of the same, reference being had to the accompanying drawings.

Our invention relates to railroad-switches, and comprises an improved appliance or mode of securing the point-rails to the switch-bar and to the tie-bar.

The object of our invention is to provide a simple, durable, and inexpensive attachment for securing the point-rails to the bar by which they are moved, commonly called the "switch-bar," and to the tie-bars connecting the point-rails to each other, which will take the place of the cast-metal "sockets" or lugs now used in the construction of switches.

In the accompanying drawings, Figure 1 is a plan view of a switch, showing the manner in which our improved attachment or lug is used in the construction of the switch. Fig. 2 is a cross-section of Fig. 1 on line X X. Fig. 3 is a perspective view showing the lug secured to the flange of the rail. Fig. 4 is a cross-section of Fig. 3. Fig. 5 is a perspective view of our improved lug secured to the web of the rail. Figs. 6 and 7 are perspective views of modifications of the lug. Figs. 8, 9, and 10 are views of the blanks of forged metal for the lugs shown in Figs. 5, 6, and 7, before they are formed up into the complete lugs.

In the construction of the lugs used we prefer to form them from blanks of soft steel, wrought-iron, or other similar metal of suitable dimensions by first cutting or stamping out the hole, as shown in the blanks on Figs. 8, 9, and 10, and then heating such blanks to a proper heat and bending or forming them in dies of suitable shape.

In the drawings, A A are the main or stock rails, and B B are the switch-points.

C is the switch-bar by which the point-rails are moved, and C′ C′ are tie-bars for connecting the point-rails to each other by means of the lugs.

D represents our improved lug or attachment for fastening the point-rails to the switch-bar C and tie-bars C′ C′, such bars passing through the opening F, a portion of the lug being below and a portion above the bars, so that a pin or bolt E may be passed vertically through both the upper and lower portions of the lug and the intervening switch-bar or tie-bar and secure them firmly together.

We have found the form of lug shown by D, Fig. 5, to give the best results; but a good result may be obtained and our improvement utilized if the lug only extends onto the flange and is secured to it, as shown in Fig. 3.

The modifications of the lug shown in Figs. 6 and 7 will be lighter and take less metal, as will appear from the blanks shown in Figs. 9 and 10.

In order to have the bars C and C′ C′ of the simplest, most efficient, and inexpensive form it is desirable that they should be of straight flat iron or steel, a hole being made in a suitable position for securing them to the lugs. The switch-bar passes below the rails and should extend under the main rails A A a sufficient distance to always be in a position to bear against them and prevent lifting of the points B B. The lug D is therefore formed so as to fit snugly against the web of the rails, extend outward over the flange, depending somewhat so as to lie on the bar, and then returning in a half loop or U shape toward the points, care being taken to have the hole or opening F for the bar to come just at the U-bend in the lug. The bar being passed through the opening F in the lug and coming to the proper position, the lug and bar are secured together by the pin or bolt E.

The lug D may be either bolted or riveted to the web or flange of the point-rail and may extend out along the bars C C′ any desired length to provide against any tendency of the switch-points to rock.

In order to stiffen the lug D where it bends and bears against the flange and web of the rail an indentation is made on the under side thereof, as shown in Fig. 2, which causes a protuberance *a* on the opposite side. (Shown in Fig. 5.)

This construction of railroad-switch and

form of switch-lug contains all the best elements of efficiency, durability, simplicity, and economy.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The within-described lug or tie-piece for railroad-switches, formed in one piece from rolled steel, wrought-iron, or other similar metal, with an aperture to receive the tie-bar, and with the portion beyond such aperture bent back toward the point of attachment to the rail, substantially as shown and described.

2. The lug or tie piece D, bent or formed up from a blank of rolled steel, wrought-iron, or other similar metal, first stamped or cut into the shape shown in Fig. 9.

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