J. A. KIRBY.

Railway-Switch Bar.

No. 210,860. Patented Dec. 17, 1878.

Fig. 1.

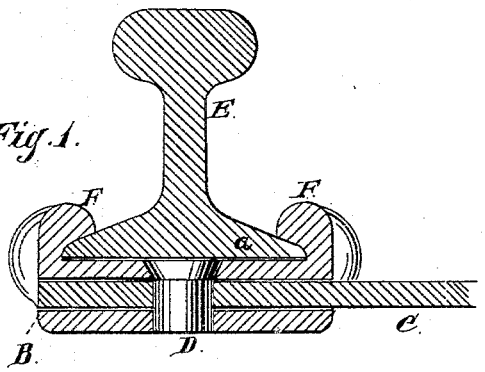


Fig. 3.

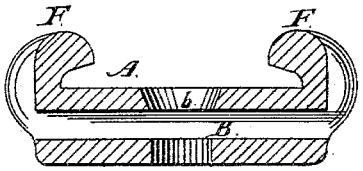


Fig. 2.

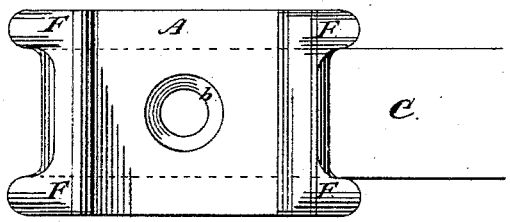
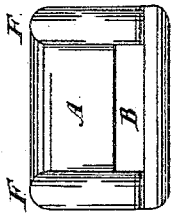


Fig. 4.



Witnesses:

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D. H. Donovan

Inventor:

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UNITED STATES PATENT OFFICE.

JAMES A. KIRBY, OF CHICAGO, ILLINOIS, ASSIGNOR TO WILLIAM B. KEEP, OF SAME PLACE.

IMPROVEMENT IN RAILWAY-SWITCH BARS.

Specification forming part of Letters Patent No. **210,860**, dated December 17, 1878; application filed January 24, 1878.

To all whom it may concern:

Be it known that I, JAMES A. KIRBY, of the city of Chicago, Cook county, State of Illinois, have invented a new and useful Improvement in Bridle-Bars for Railroad-Switches, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section, showing the rail-bridle-bar head and a portion of the bridle-bar; Fig. 2, a top or plan view of bridle-bar head and bridle-bar; Fig. 3, a longitudinal vertical section of the head; Fig. 4, an end view of the bridle-bar head.

It is customary to attach the bridle-bars of a railroad-switch to the rails by turning a flange on the outer end of each bar, and welding a flange to the bar inside of the rail to form a clasp for holding the bar to the rail, which construction requires the entire bar to be made of wrought-iron, and the welding of the piece to the bar is somewhat difficult, so that such bridle-bars as now constructed are expensive.

The object of this invention is to provide a device by the use of which the bridle-bar can be easily and firmly secured to the rail; and its nature consists in providing a clasp or head so formed as to fit the base of the rail, which head is provided with an opening to receive the bridle-bar, the bar being secured in the head or clasp by means of a bolt or other suitable locking device, kept in position by the inserted rail.

In the drawings, A represents the head or clasp; B, the longitudinal opening; C, the bridle-bar; D, the bolt; E, the rail; F, the flanges; *a*, the base of the rail; *b*, the countersink for the head of the bolt.

The head A is made from malleable iron, steel, or other suitable material, and may have side bearings of any desired shape. The longitudinal opening B is of a size corresponding with the size of the bridle-bar used, and extends from end to end through the head, leaving a sufficient amount of metal on all sides to insure the proper strength to prevent the easy breakage of the head in use. At the center of the head or clasp is a vertical opening.

The bridle-bar C is made of wrought-iron or other suitable material, and is the required length for the width of track with which it is to be used. Near each end is a hole for the passage of the bolt D, which bolt fits the vertical hole provided at the center of the head or clasp. The bolt D, as shown, is made of wrought-iron or steel, and is provided with a head, which head fits the countersink *b* of the vertical opening in the head or clasp for the bolt, so that when the bolt D is in place its top will be on the same line with the top surface of the clasp or head A.

The rail E may be of any of the ordinary forms for rails, and is made in the usual manner. The flanges F are cast with the head or clasp, and are so cast as to leave the proper opening for the reception of the bottom flange, *a*, of the rail. These flanges F may be of the form shown, or of any other suitable form; but if made as shown they add materially to the strength of the clasp by reason of the projecting ends.

The bridle-bar C is slipped into the opening B in the head or clasp A until the opening therein is brought in line with the vertical opening in the head. Then the bolt D is passed through the head and bridle-bar. Then the rail E is slipped under the flanges F and laid on the ties, as usual, when the parts will be held securely together, the base of the rail being in contact with the head of the bolt and preventing it from being jolted or worked out. By this arrangement the labor of forming the flanges on the bridle-bar is dispensed with, as the head or clasp is provided with the necessary flanges, and the bridle-bar can be attached to the rail securely and rapidly, it only being necessary to slip the rail in place and secure it after the bridle-bar is attached to the head.

In case of the breakage of the bar or head, all that has to be done is to take up the rail and replace the broken part by another of a similar character, and replace the rail.

By this arrangement a bridle-bar is provided which will be as strong and as efficient as a

bar made wholly of wrought-iron, and which will not cost near as much, and one which can be attached to the rail much more easily than the old style of bar, and be equally as desirable.

What I claim as new, and desire to secure by Letters Patent, is—

A head provided with seat and flanges to retain the rail, and a transverse opening or recess below said seat, in combination with a bridle-bar and locking devices in the interior of the head, kept in engagement by the inserted rail, substantially as specified.

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