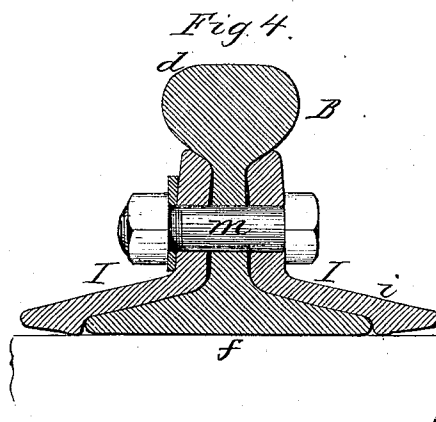
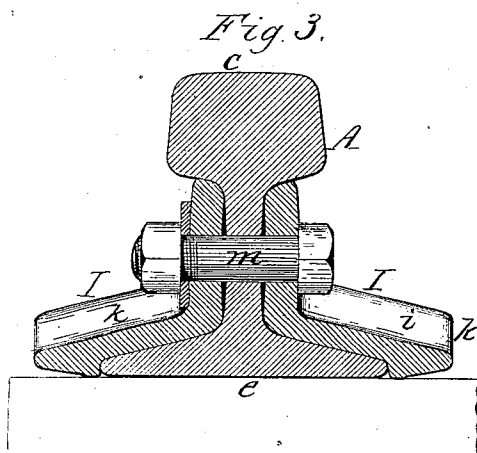
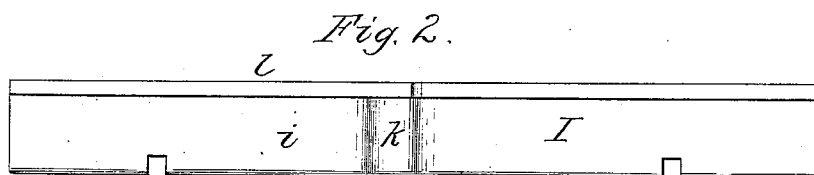
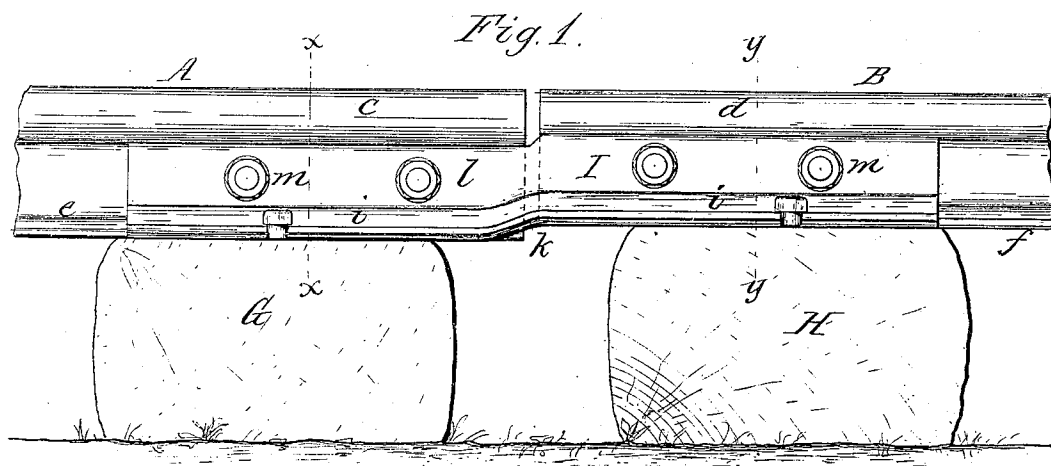


(No Model.)

J. D. HAWKS.
Angle-Splice for Railway-Joint.

No. 228,347.

Patented June 1, 1880.



Chas. D. Smith }
Edw. J. Brady. } Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES D. HAWKS, OF PAINESVILLE, OHIO.

ANGLE-SPLICE FOR RAILWAY-JOINTS.

SPECIFICATION forming part of Letters Patent No. 228,347, dated June 1, 1880.

Application filed April 19, 1880. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. HAWKS, of Painesville, in the county of Lake and State of Ohio, have invented new and useful Improvements in Angle-Splices for Railway-Joints, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an improved construction of the joints of railway-rails; and it has reference more particularly to that class of joints by which two rails of different heights are secured together.

Previous to my invention these joints have usually been formed by fish-plates, the ends of which were arranged at different heights, corresponding with the position of the rails, said ends being connected by an inclined neck adjacent to the abutting ends of the rails. This inclined neck forms the weakest part of the fish-plate, and being arranged opposite the ends of the rails, where the strain upon the fish-plate is greatest, it is easily broken, whereby frequent repairs are necessitated in joints of this kind.

The object of my invention is to obviate this defect; and it consists of a rail-joint for connecting two rails of different heights, in which an angle-splice is used which has its base-flange bent to correspond with the position of the bases of the two abutting rails, as will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a side elevation of my improved rail-joint. Fig. 2 is a top-plan view of one of the splices. Figs. 3 and 4 are cross-sections in lines $x x$ and $y y$, Fig. 1, respectively.

Like letters of reference refer to like parts in the several figures.

A represents a high rail, and B a low rail, having their heads $c d$ arranged on the same level, and their bases or feet $e f$ supported on cross-ties or sleepers G H at different heights.

I represents my improved splice, made angular in cross-section, and having its base-flange i bent, as shown at k , to correspond with the position of the bases $e f$ of the rails, and having its web or vertical flange l fitted under the heads of the two rails, as clearly shown.

When the heads of the two rails which are to be secured together are of the same cross-section the splice may be rolled straight, with the upper edge of its vertical web shaped to fit under the heads of the rails, and then bent to fit the rails; but when the heads of the rails are of different cross-section the splice may be rolled from one cross-section, and after bending the splice the edge of one portion of the vertical flange must be planed to fit under the head of the rail which differs in form from that to which the splice is rolled.

Two splices, I, are arranged on opposite sides of the abutting rails and secured by bolts m in the manner in which ordinary fish-plates are secured to the rails.

My improved splice is of uniform strength throughout its entire length, and a rail-joint constructed with the same is as strong and durable as an ordinary rail-joint in which rails of the same height are secured together. It prevents the removal of two rails from any part of the track and the substitution of high rails in their place without causing a weakening of the track by reason of an unreliable joint at the point where the high rails are secured to the low rails, and it is easily constructed at a reasonable cost.

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

1. A splice made angular in cross-section and having its base-flange i constructed with a bend, k , whereby the base-flange of the splice is adapted to fit upon the bases of two abutting rails of unequal height, and having its vertical web l fitted under the heads of the abutting rails, substantially as set forth.

2. The combination, with two abutting rails, A B, of unequal height, of two angle-splices, I, having their base-flanges bent at k and their webs fitted under the heads of the rails, the splices being applied to both sides of the rails and secured thereto by bolts m , substantially as shown and described.

J. D. HAWKS.

Witnesses:

EDWARD WILHELM,
JNO. J. BONNER.