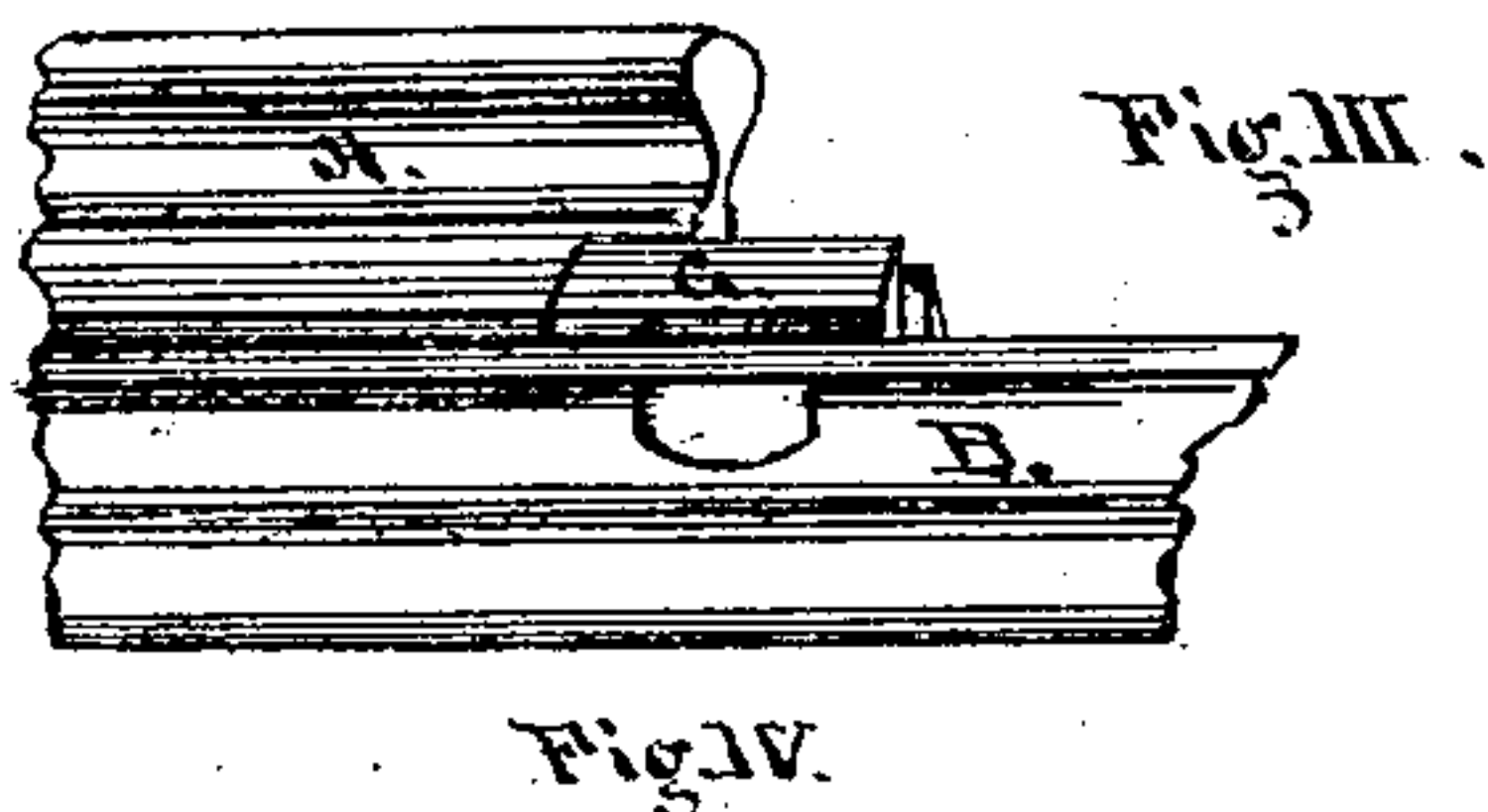
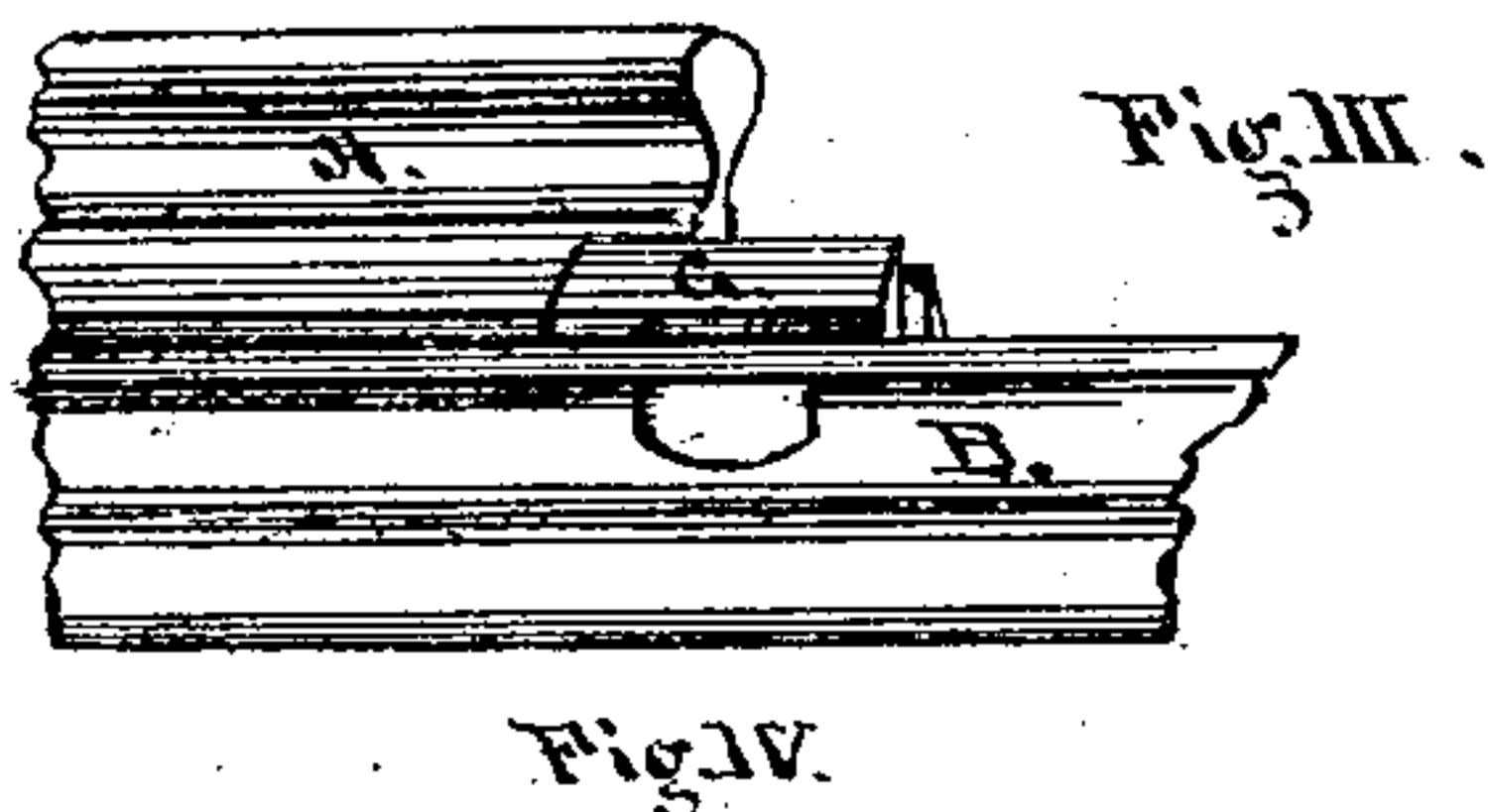
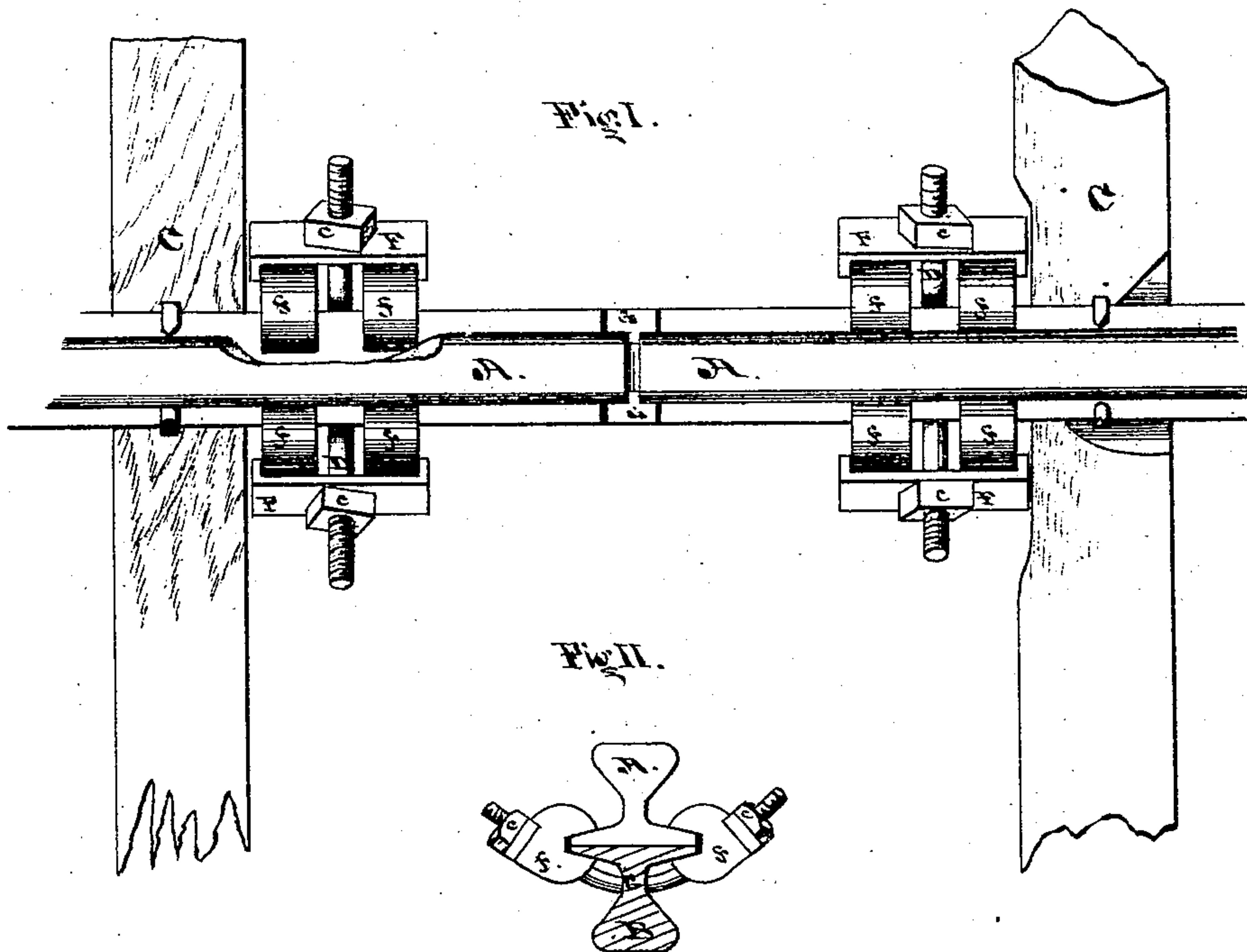


R. Randolph,

Rail Joint.

No. 99,948.

Patented Feb. 15. 1870.



Inventor.

Richard Randolph.
by his attorneys
Gardner & Hyde.

Witnesses.

Thomas M. Munn
Charles Wilson

United States Patent Office.

RICHARD RANDOLPH, OF WASHINGTON, DISTRICT OF COLUMBIA.

Letters Patent No. 99,948, dated February 15, 1870.

IMPROVEMENT IN RAILWAY-RAIL SPLICE.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern :

Be it known that I, RICHARD RANDOLPH, of Washington, District of Columbia, have invented a new and useful Improved Railroad Splice; and I do hereby declare the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

In the drawings—

Figure I is a plan view.

Figure II is a cross-sectional view.

Figure III is a partial side view.

Figures IV and V detail views of my invention.

The object of my invention is to form a railroad splice of a piece of discarded rail of the same pattern as that in use, or of a pattern which combines the greatest rigidity and bearing surface with the smallest amount of iron, and has a good bearing surface at its two ends which come against the sides of the cross-ties, and which splice may be easily and cheaply applied and held securely in place by means of self-adjusting clamps, and which, by means of plugs arranged in a peculiar manner, prevents the creeping of the rails, and will allow of their longitudinal contraction and expansion, and supports them laterally.

In construction, I form my splice as follows:

Inverted under the two ends of the rails A A, to be spliced, is placed a piece of rail, B, so that its bottom surface comes directly against the bottom surface of the rails A A, and its ends against the sides of the cross-ties C C, which are at the usual distance apart, at two points near the ties, respectively, and in the stem of the piece B are holes, b, for the reception of bolts D D.

These bolts are curved in form, and threaded at each end for nuts, c, the object of the curvature being to get the nuts into a position easily accessible, and to enable one nut to be screwed on without the one at the other end of the bolt having to be held in a wrench during the operation.

Upon each side of this bolt, upon each side of the rail, are placed two grooved clamps, f f. The grooves fit over the combined flanges of rails A A and splice-piece B, and are drawn tight by nuts c coming against spring-washers F, having projecting flanges, which come over the clamps f f and hold them in place, and prevent them turning with the nut.

Room is allowed in the grooves of the clamp-pieces

for the spring-washers F to draw the clamps tight against the flanges of the rails, as the jar of travel and pressure of clamps against them wears off the rough surface.

Stock is removed from the ends of each rail A A to let in the head of the plugs G G upon each side of the rails. The shanks of the plugs are run through holes made in the flange of piece B, while hot, and riveted to the inner side of flange of piece B, where the beveled surface keeps it from turning.

These plugs are for the purpose of allowing the rails to move longitudinally only a certain distance before being stopped by them, while the rail is prevented from moving laterally.

The stock is removed from the rails for the reception of the plugs, at a point where the least strain is upon the rail, and where, consequently, it will be least weakened.

The advantages of this device are its strength and the cheapness with which all its parts may be made and applied, while by it one continuous rail is formed, in effect, and space is left for the rails to contract and expand, and the grooved clamps allow the flanges of the rails to move freely through them, while serving their purpose of holding the flanges of piece B and rail A as one piece.

Only two bolts are required in the splice, and if desired, one instead of two grooved clamps may be used on a side, by having the bolt D run through a hole made in one clamp-piece for the purpose.

The grooved clamp-pieces may be cut off in sectional pieces from a bar rolled and stamped to the proper form.

The spring-washers can be cheaply made of sheet-steel.

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

1. A splice formed of a piece of rail, B, and held in place by clamps, constructed as described, of grooved clamp-pieces f f, spring-washers F, and curved bolt D D, all arranged substantially in the manner and for the purpose shown.

2. The construction and arrangement of the guide-plugs G G, substantially as described.

RD. RANDOLPH.

Witnesses:

T. DRURY,
R. F. HYDE.