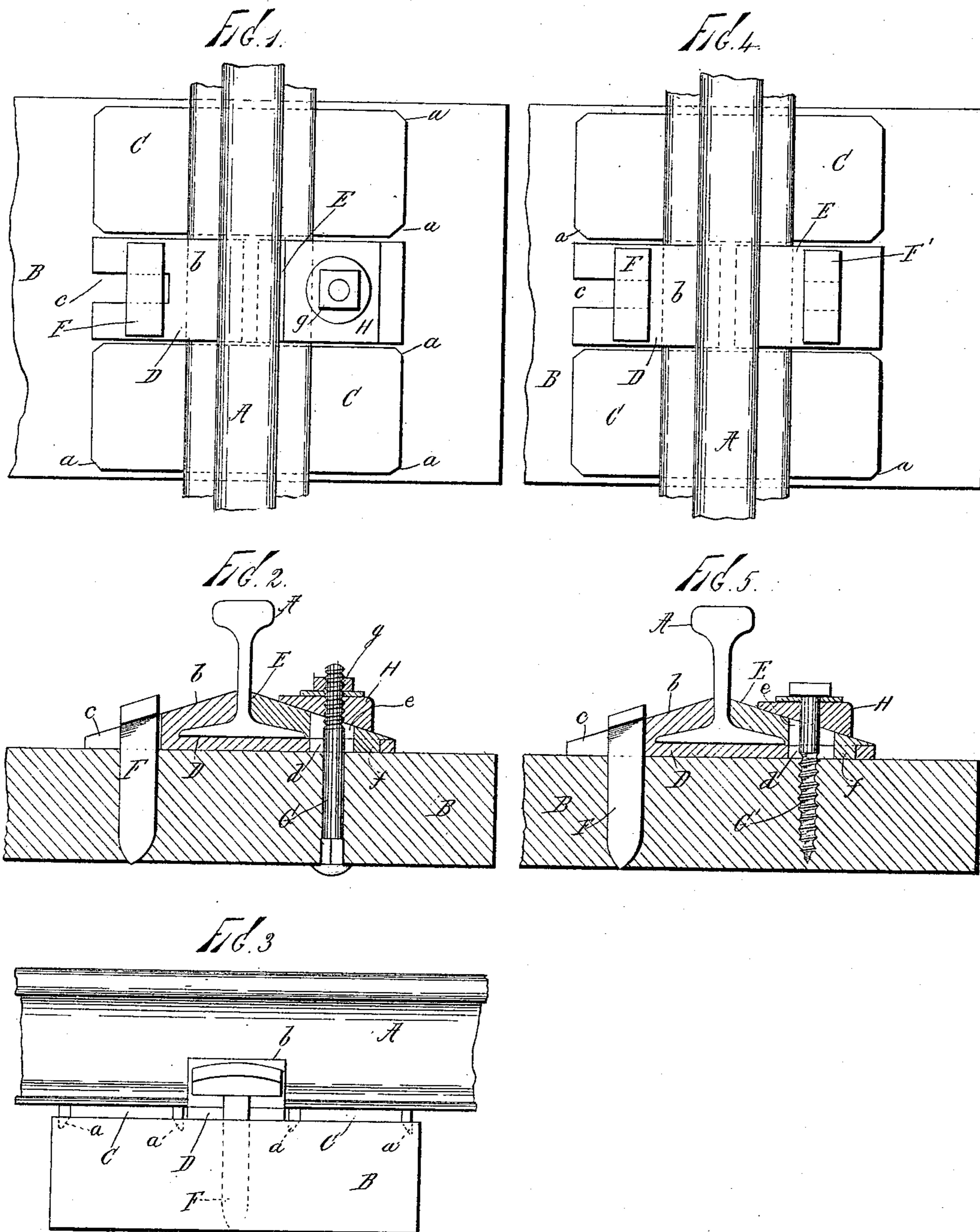


(No Model.)

W. H. BROOKS.
RAILWAY RAIL CLAMP.

No. 459,741.

Patented Sept. 22, 1891.



Witnesses:
John Buckler,
L. H. Osgood

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UNITED STATES PATENT OFFICE.

WILLIAM H. BROOKS, OF WEST POINT, NEW YORK.

RAILWAY-RAIL CLAMP.

SPECIFICATION forming part of Letters Patent No. 459,741, dated September 22, 1891.

Application filed December 3, 1890. Serial No. 373,439. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BROOKS, of West Point, county of Orange, and State of New York, have invented certain new and useful Improvements in Railway-Rail Clamps, of which the following is full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention has relation to metallic clamps for securing railway-rails upon their ties, the object of my invention being to produce a simple, cheap, and efficient clamp, which may be readily and quickly applied at any part of the rail, which will hold the rail properly and without damage to or wear upon the tie, and which will admit of the ready, accurate, and easy adjustment or lining up of the rail as occasion may require. To accomplish all of this and to secure other and further advantages in the matters of construction, operation, and use, my improvements include certain novel and useful features of invention, as will be herein first fully described, and then pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a top or plan view showing one of my improved clamps applied in connection with a railway-rail. Fig. 2 is a sectional elevation of the same on a plane cutting across the rail; and Fig. 3 is an elevation from a point at the left of Fig. 1, showing the manner of applying the clamp with one nut-bolt and one spike. Fig. 4 is a plan view like Fig. 1, but showing the clamp applied with two spikes. Fig. 5 is a sectional elevation like Fig. 2, but showing the clamp applied with one spike and one lag-screw.

In all the figures like letters of reference, wherever they occur, indicate corresponding parts.

A represents a railway-rail, and B one of the cross-ties which support it. C C are metallic self-holding shields affixed to the tie by simply driving in the bent corners *a a*. These shields are located at a distance from each other sufficient to accommodate the lower portion of the clamp between them, and while protecting the tie against wear of the rail thereon they elevate the rail above the tie far enough to permit the clamp to be moved,

and form a channel between them, in which the clamp may be adjusted.

The clamp is made in two principal parts, the lower part D being turned or bent or formed at one end, as at *b*, so as to bear upon the flange of the rail on one side, as indicated, having on that end an elongated slot or opening *c* and at the other end an elongated perforation *d*, this part of the clamp being long enough to reach under the rail. The other piece or binder, represented at E, bears upon the opposite side or flange of the rail and is provided with an elongated perforation *e* and on its under face with a projection *f*, which enters the perforation *d* and rides therein, so that the clamp may be securely fitted to the rail. The two parts of the clamp when assembled have their upper faces inclined downwardly and away from the position of the rail, substantially as indicated. When in place on the rail and between the shields, the slot *c* is located on the outside of the track. A spike, as F, is driven down through slot *c* and into the tie. The particular spike F shown in the drawings is double-headed, and the under faces of the head are inclined so as to bear fairly on the clamp when the spike is driven in a vertical direction; but any ordinary railroad-spike may be used and, if necessary, more than one such to make the holding secure.

When it is desired to make the clamp adjustable with the rail, and that is one of the main advantages of the improvement, the fastening opposite the spike is made in the form of a screw or bolt.

G represents an ordinary nut-bolt, which passes up through the tie through the perforations in the lower part of the clamp and in the binder and through a washer H, which rides upon the binder. The bolt may be made secure by any nut or nut-lock, as *g*. Instead of this form of bolt the wood-screw or lag-screw G' may be employed, as shown in Fig. 5, having the advantage of being capable of being turned in from the top of the clamp, the clamp being thus located and arranged to adjust the rail, as when it is necessary to take up any spread or when desired to line up the rail the bolt or screw has only to be loosened a trifle and the clamp and rail together forced

to the desired position, when both are set by tightening the screw or bolt and driving the spike down to a firm bearing. The projection *f* carries the binder with the clamp as the latter moves, so that the alignments may be made without disarranging either of the parts. When it is desired to hold the rail immovably, as in positions where no adjustments are liable to be required, the same clamp is employed and is secured to the tie and rail by employment of a second spike *F'*, omitting the screw or bolt and the beveled washer, as indicated in Fig. 4. The inclined faces of the clamp add to the security of the device when located for use, for if the fastening on either side should become loosened a constantly-increasing height of metal must be crowded under the head of the fastener before the rail or the clamp could be shifted, as will be readily understood. By substituting a bolt or bolts for the spike or spikes the improved form of clamp may be applied on metallic as well as on wooden ties.

The improved device admits of the withdrawal of a tie from under the rails and a substitution of another without in any way disturbing the rails or any of the other ties, and is well calculated to answer the purposes or objects of the invention previously set forth.

Having now fully described my invention, what I claim as new herein, and desire to secure by Letters Patent, is—

1. In a clamp for railway-rails, the lower section having an elongated slot or opening at one end and an elongated perforation at

the other, the same being combined with the similarly-perforated binder and the fasteners and made adjustable with the rail, the upper faces of the clamp being inclined, substantially as shown and described.

2. In a clamp for railway-rails, the lower section having an elongated slot or opening at one end and an elongated perforation at the other, the same being combined with the similarly-perforated binder and the fasteners and made adjustable with the rail, the said binder carrying a projection which enters the elongated perforation in the lower section, substantially as and for the purposes set forth.

3. In a clamp for railway-rails, the lower section having an elongated slot or opening at one end and an elongated perforation at the other, the similarly-perforated binder mounted on the lower section, the beveled washer mounted on the binder and the fasteners, these parts being combined and arranged as explained, so that the clamp may be adjusted with the rail, as shown and described.

4. In combination with a railway rail and tie, a clamp for the rail, fasteners for the clamp, and the two shields applied upon the tie on each side of the clamp, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

WILLIAM H. BROOKS.

Witnesses:

THOS. P. SCOTT,
JOHN G. PAUCK.