C. O. STORM.

RAIL CLAMP.

APPLICATION FILED JULY 10, 1914.

1,139,237. Patented May 11, 1915.

Fig. I.

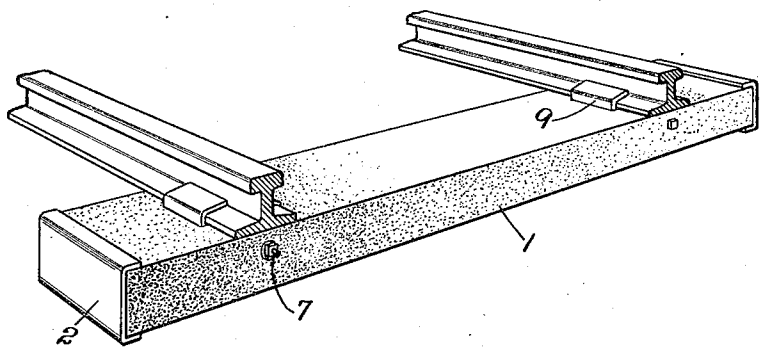


Fig. II.

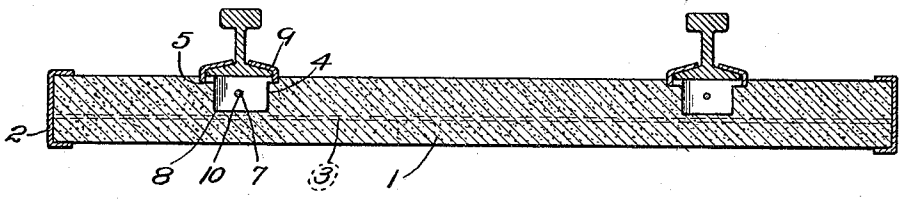


Fig. III.

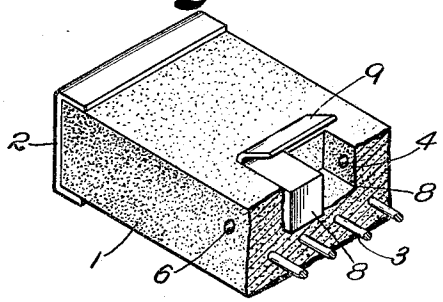
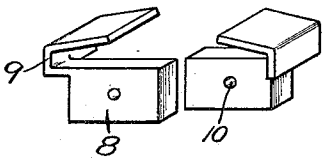


Fig. IV.



WITNESSES:

Lynn A. Robinson,

Arthur W. Capa.

INVENTOR

Clarence O. Storm.

BY

Arthur B. Brown

ATTORNEY

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CLARENCE O. STORM, OF KANSAS CITY, MISSOURI.

RAIL-CLAMP.

1,139,237. Specification of Letters Patent. Patented May 11, 1915.

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To all whom it may concern:

Be it known that I, CLARENCE O. STORM, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Rail-Clamps; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to rail clamps, and has for its principal object, to provide a device for removably attaching a railway rail to a cross tie, and particularly to a cement tie.

It is also an object of the invention to provide a clamp of this character, which may seat in the tie and be removably connected therewith, so that the rail may be held firmly in position, but so that the rail and clamp may be easily and quickly removed from the tie.

In accomplishing this object, I have provided the improved details of structure hereinafter described and illustrated in the accompanying drawings, wherein:—

Figure I is a perspective view of a railway tie and clamp constructed according to my invention and showing a rail clamped to the tie. Fig. II is a longitudinal vertical section of the tie, and a cross section of the rails and clamps. Fig. III is an enlarged perspective view of a portion of the tie in transverse section through the clamp socket. Fig. IV is a detail perspective of a pair of clamp members.

Referring more in detail to the parts: 1 designates a railway tie here shown to be composed of cement and provided with metallic caps 2, for preventing the ends from becoming chipped and broken, and longitudinal reinforcing rods 3.

Within the upper face of the tie at each rail position, is a downset socket 4, having seats 5 at its opposite longitudinal ends for receiving the chair portions of the clamp, and having apertures 6 opening transversely through its side walls to receive the bolts 7 by which the clamp members are held in place.

The clamp proper comprises a pair of members each having a block base 8 adapted to seat snugly within the tie socket, and having a lipped upper portion 9 offset from the base to seat on the seat 5 and extending laterally therefrom to overlie the cooperating block, and upwardly above the top of the tie; the said lipped portion being spaced from the base block to a degree and on such lines that the base of a rail may seat snugly between the lip and base of the clamp; and the width of the lip being such that the web of a rail may seat snugly between the spaced edges of the paired clamp members.

The base portions of the clamp members are provided with channels 10, which are adapted to register with each other and with the apertures 6 in the sides of the tie to receive the bolt 7, so that when the clamp members are assembled in the tie, they may be fixed securely in place.

In using the device, presuming the parts to be constructed as described, the ties are set in place and the rails laid on the ties in position for attachment thereto. When the rails are in place and are ready to be clamped to the ties, they are jacked up from the ties and the clamps are applied to the rail bases. The rails are then lowered, so that the base blocks seat in the tie sockets, and the said blocks are then secured permanently to the ties by extending the bolts 7 through the transverse apertures in the ties and through the aperture in the clamp bases.

By constructing the clamp members so that the base blocks completely fill the sockets when the clamps are in place, lost motion of the clamp in the tie socket is obviated, and by properly constructing the clamp lips, the rail bases may be held firmly and snugly to the ties.

It is apparent that when the rails are to be removed, the bolts may be removed from the ties and clamps, and the latter lifted from the tie sockets by jacking the rails, so that not only placement but replacement of the rails may be accomplished quickly and without injury to the tie, so that the latter may be reused and its life thereby extended.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters-Patent, is:—

1. The combination with a tie having a rectangular socket provided with laterally opening apertures, of a clamp comprising paired members having base blocks adapted

to seat in the tie socket, and having transverse apertures adapted to register with said tie socket apertures and with each other, clamp lips spaced from the base blocks and extended laterally to overlie the adjacent base, and a bolt extending through the apertures in said base blocks and tie socket.

2. The combination with a tie having a rectangular socket provided with offset seats, of a rail clamp comprising paired members each having a base block adapted to seat in said socket, and a lipped portion on the block adapted to seat in the tie seat and spaced from the base block to clamp a rail.

3. The combination with a tie having a rectangular socket and a downset seat at each side of said socket, of a rail clamp comprising paired members each having a base block adapted to seat in said socket and lie flush with the top of said tie, an offset shoulder projecting laterally from said base block and adapted to rest on one of said downset seats, an upwardly inclined lip integral with said shoulder and extending laterally therefrom to overlie the adjacent block, and a bolt for holding said clamp to said tie.

In testimony whereof I affix my signature in presence of two witnesses.

CLARENCE O. STORM.

Witnesses:
L. E. COATS,
LYNN A. ROBINSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."