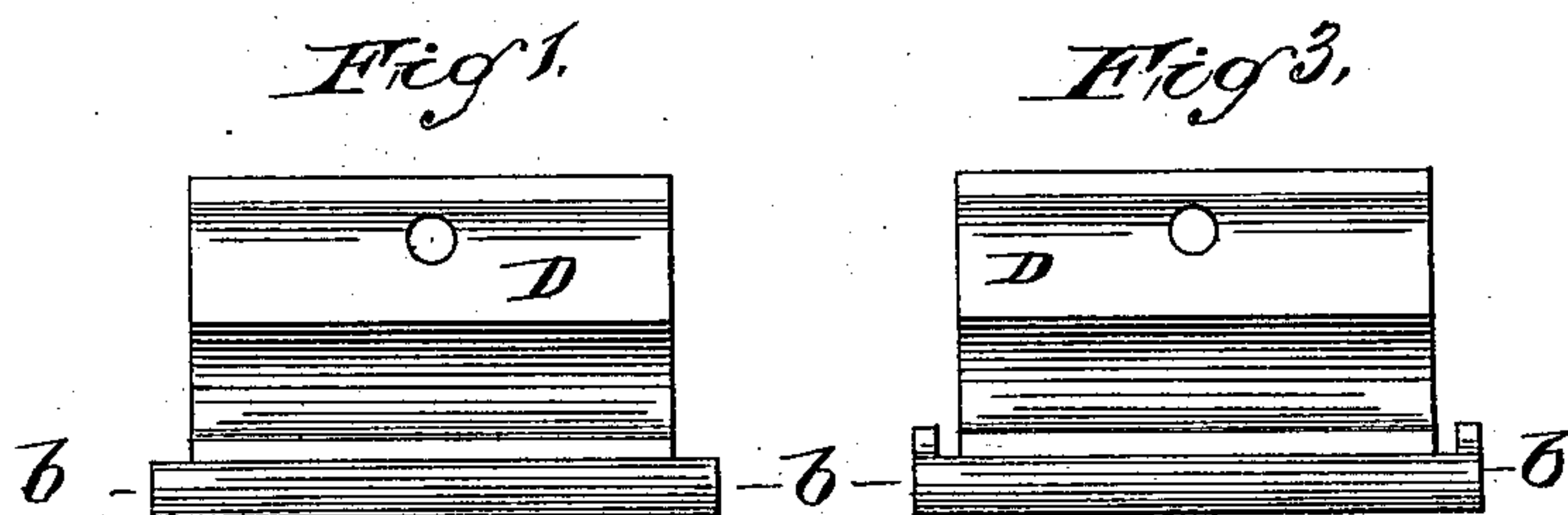
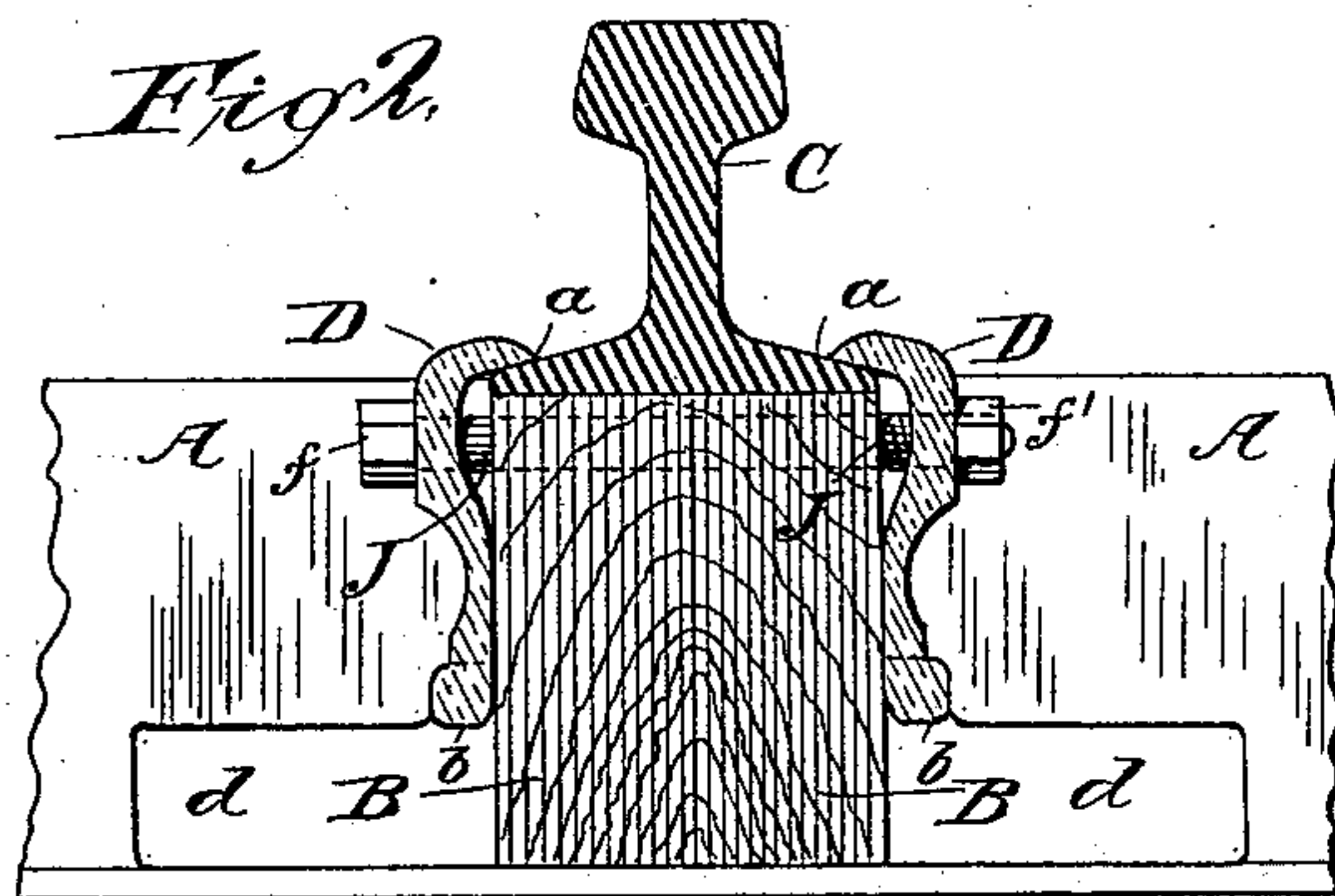


(No Model.)

I. S. MCGIEHAN.  
METAL TIE CLAMP.

No. 414,778.

Patented Nov. 12, 1889.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ISAAC S. MCGIEHAN, OF BERGEN POINT, NEW JERSEY, ASSIGNOR TO THE  
STANDARD METAL TIE AND CONSTRUCTION COMPANY, OF NEW  
JERSEY.

## METAL TIE-CLAMP.

SPECIFICATION forming part of Letters Patent No. 414,778, dated November 12, 1889.

Application filed November 30, 1888. Serial No. 292,223. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC S. MCGIEHAN, of Bergen Point, county of Hudson, and State of New Jersey, have invented certain new and useful Improvements in Metal Tie-Clamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Various styles of clips or clamps are used with railway metal ties for holding the rails in position. Prominent among them is the clamp shown and described in United States Patent No. 386,356, on which this invention is designed to be an improvement.

This clamp is peculiarly adapted for ties of the channel-beam form, and it is herein shown and described as applied to a deep one of that style.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a rear elevation of my improved clamp. Fig. 2 shows it in sectional elevation applied to a tie and rail. Fig. 3 is an elevation of a modified form of the clamp.

The tie A is a channel-beam, within the channel of which is set a block B, of wood or other suitable material, for the rail C to rest upon, all as described in the United States patent above referred to. This clamp D has its jaw beveled on its interior face to correspond with the bevel of the rail-base, as shown at *a*, and at the lower portion of its body it is provided with opposite lateral lugs *b b*, which are designed to be projected into and through slots *d*, made in the sides of the tie. Two rail-supporting blocks B (one herein shown) are designed to be placed in each tie and a pair of clamps will be used at each block; hence, to accommodate these four clamps, eight slots *d* will be made in each tie—four in each side thereof. As these clamps are designed, preferably, to be of the full width of the tie-channel, they must, because of their lugs, be introduced at an angle into the tie-channel until their lugs come opposite to and can be entered into the opposite slots *d*, when they may be turned at right angles to the tie sides and then be drawn up in position shown in Fig. 2; and to

facilitate this manipulation the said slots are made sufficiently large and of suitable shape, as indicated. It will be seen, too, that these slots *d* are preferably extended down to the tie-bottom, so that they may serve for the escape of water during a rainfall and for other purposes. When the clamp D is adjusted in position to hold a rail, it will be seen (in Fig. 2) that the upper portion of its body sets off from the supporting-block B; that the lower portion of the body bears or fulcrums against the said block, so that the lower edge, with the lugs *b b* in line therewith, curves outward in a reverse direction to that of the jaws, and that the lugs are drawn close up in the vertical offsets of the tie-slots, so that when the bolt *f* is inserted and the nut *f'* screwed up sufficiently tight thereon, the clamp becomes fully effective, as in the case above referred to.

In Fig. 3 is shown a modified form of the clamp, wherein the lateral lugs *b b* are fashioned into hooks which are designed to engage in corresponding slots in the sides of the tie.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is as follows—

1. A metal tie clip or clamp constructed, substantially as herein shown and described, with jaw beveled on its interior face to conform with the rail-base, and with opposite lugs projecting laterally from the lower portion of its body to engage in the tie sides to prevent the clamp from lifting when the jaw is forced over the rail-base, substantially as set forth.

2. The combination, with a metal tie having opposite closed side slots adapted to receive the lateral lugs of a rail-clamp, of a clamp provided with lateral lugs adapted to be engaged in said slots, substantially as herein shown and described.

In testimony that I claim the foregoing I have hereunto set my hand, in the presence of two witnesses, this 28th day of November, 1888.

ISAAC S. MCGIEHAN.

Witnesses:

JACOB J. STORER,  
W. H. SPENCER.