

No. 788,466.

PATENTED APR. 25, 1905.

F. X. HARRISON.

RAIL TIE.

APPLICATION FILED NOV. 21, 1904.

Fig. 1.

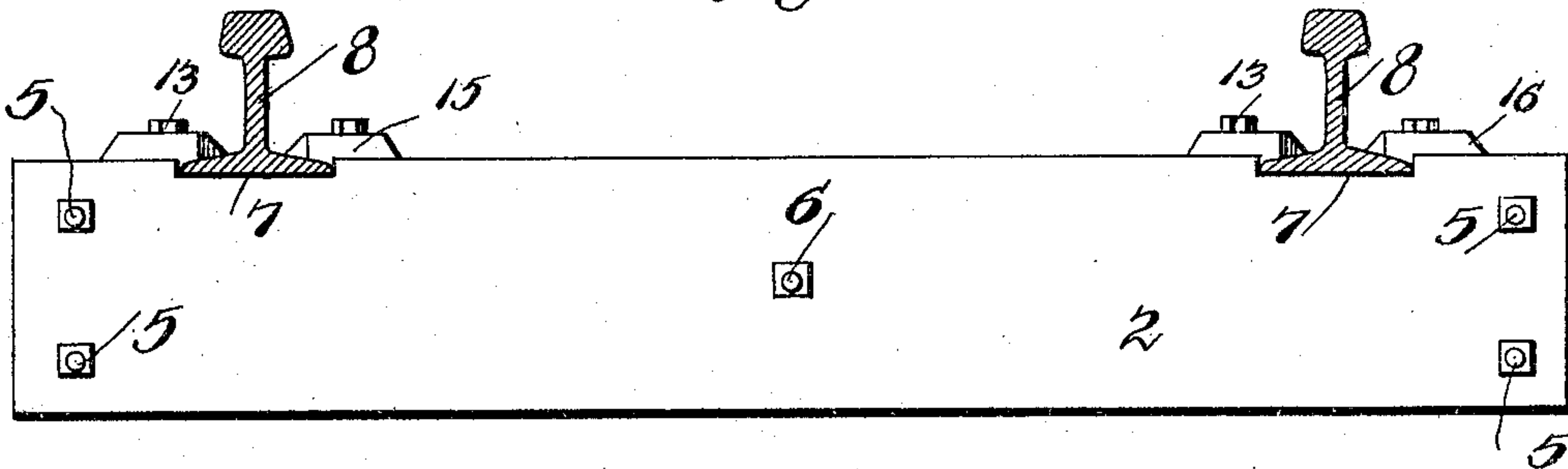


Fig. 2.

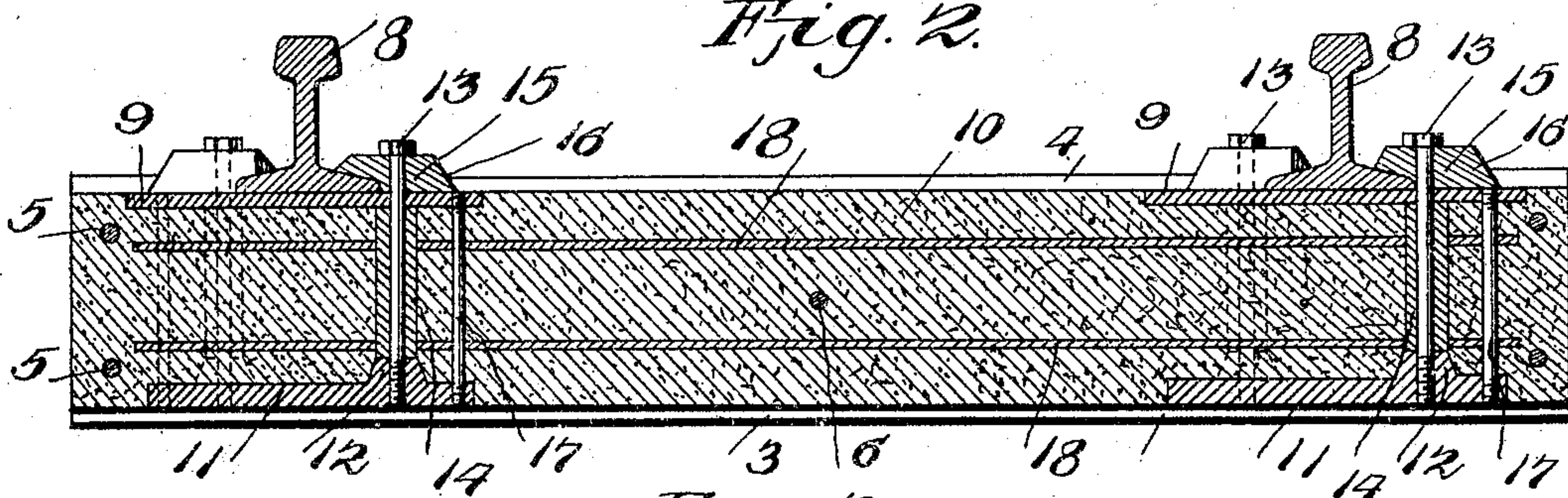


Fig. 3.

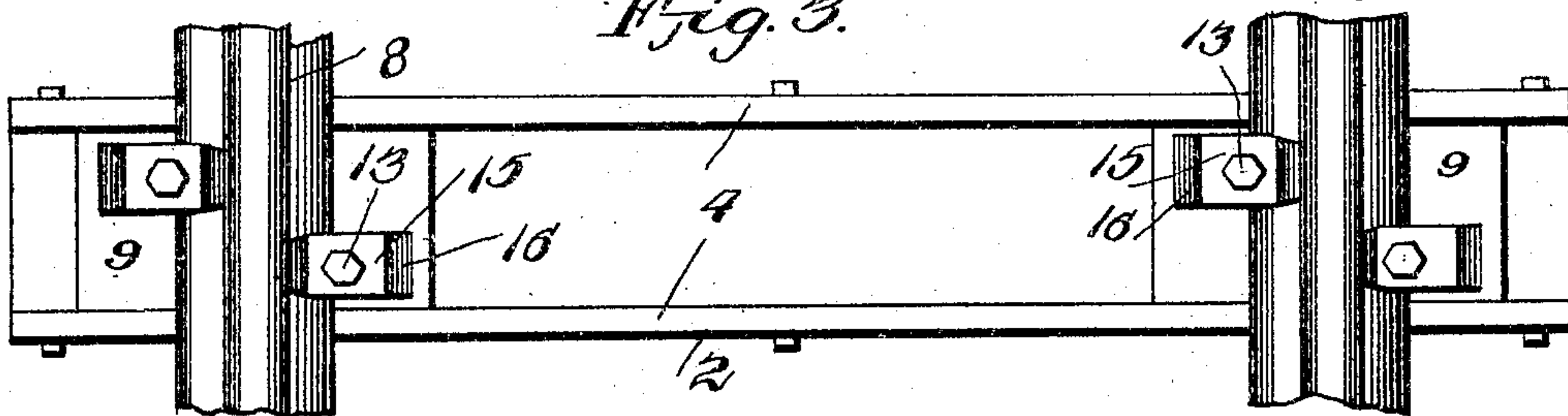


Fig. 4.

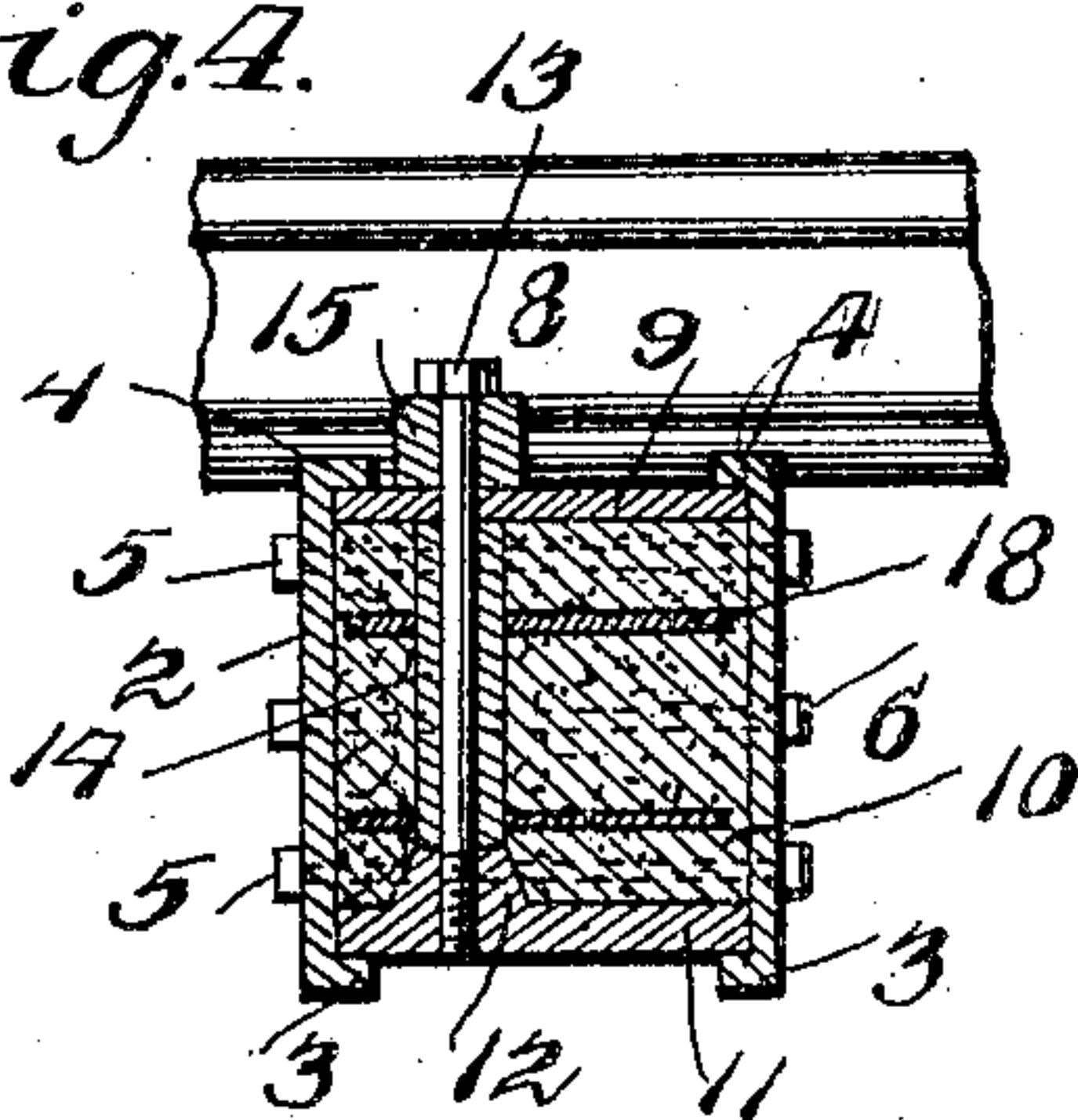
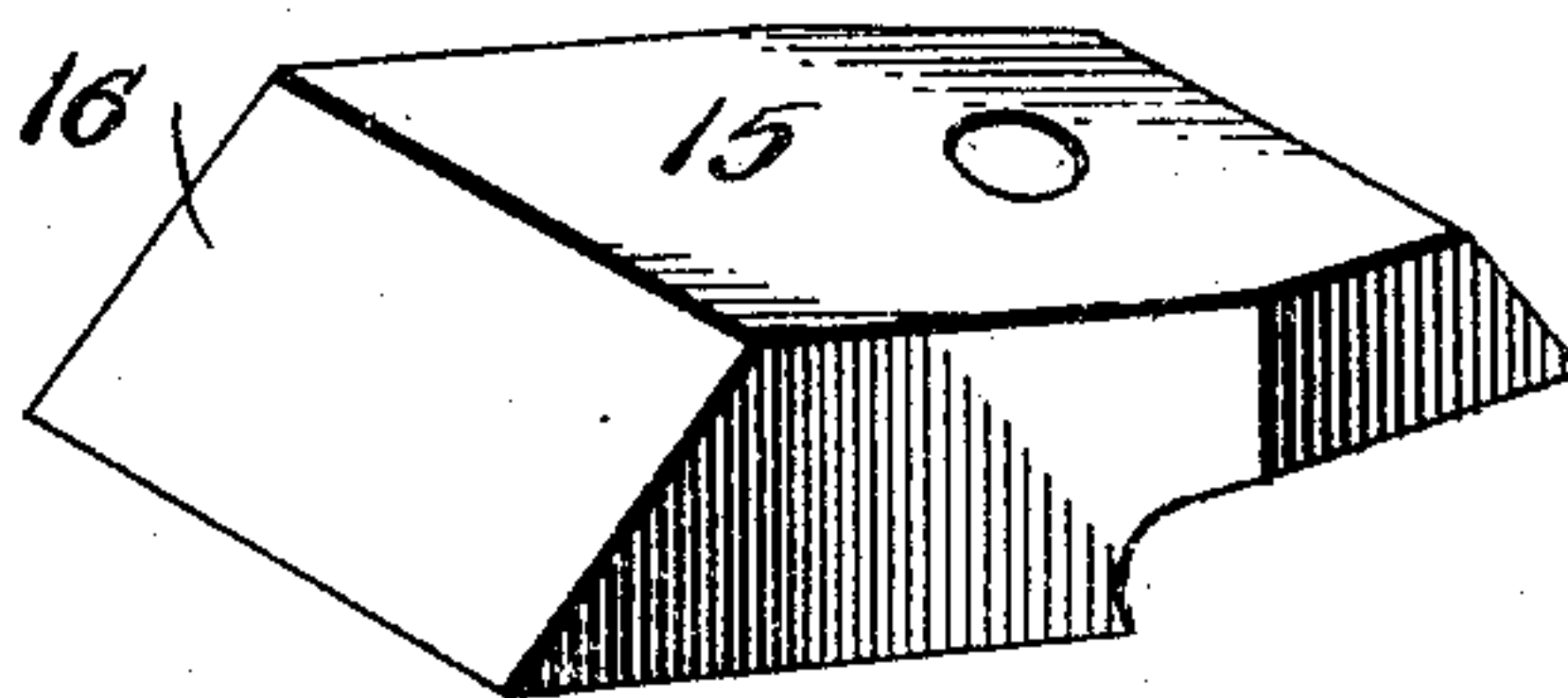


Fig. 5.



Witnesses
Frank W. Hough.

W. H. Clarke.

Inventor
F. X. Harrison

By Victor J. Evans
Attorney.

UNITED STATES PATENT OFFICE.

FRANCIS XAVIER HARRISON, OF SCHENECTADY, NEW YORK.

RAIL-TIE.

SPECIFICATION forming part of Letters Patent No. 788,466, dated April 25, 1905.

Application filed November 21, 1904. Serial No. 233,708.

To all whom it may concern:

Be it known that I, FRANCIS XAVIER HARRISON, a citizen of the United States, residing at Schenectady, in the county of Schenectady and State of New York, have invented new and useful Improvements in Rail-Ties, of which the following is a specification.

This invention relates to rail-ties.

The objects of the invention are to improve and simplify the construction of such devices; furthermore, to decrease the expense attending their manufacture.

With the foregoing and other minor objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a rail-tie constructed in accordance with the invention. Fig. 2 is a longitudinal vertical section thereof. Fig. 3 is a plan view. Fig. 4 is a transverse vertical section. Fig. 5 is a perspective view of a clamping-plate.

Like reference-numerals indicate corresponding parts in the different views.

The improved rail-tie of this invention comprises, preferably, a pair of facing-plates 1 and 2, each of which is formed at its lower edge with a flange 3 and at its upper edge with a flange 4. The facing-plates 1 and 2 are bound together by means of connecting-rods 5, two of said rods being disposed, preferably, at each end of the rail-tie. A single connecting-rod 6 is disposed at the center of the facing-plates in order to strengthen the construction of the rail-ties. At their upper edges the facing-plates 1 and 2 are slotted or recessed, as shown at 7, to receive the base portions of the rails 8. Disposed beneath the base portion of each rail is a bed-plate 9, which is constructed of any suitable material—such, for example, as vulcanized fiber or steel. Each of the bed-plates 9 is fitted beneath the upper flanges 4 of the facing-plates 1 and 2, as shown clearly in Fig. 4, and the two bed-plates are supported upon a mass 10 of filling material—such, for example, as cement or the like—which is disposed between the facing-

plates 1 and 2. Resting upon the lower flanges 3 of the facing-plates 1 and 2 is a pair of anchor-plates 11, one of said plates being disposed beneath each of the bed-plates 9, as shown in Fig. 2. Each of the anchor-plates 11 is formed with one or more conical projections 12 to receive the lower screw-threaded end of an anchor-rod 13, which extends through a suitable spacing-sleeve 14, disposed between the anchor-plate and the bed-plate, and through a clamping-plate 15, the rear edge of which is beveled, as shown at 16, and the forward edge undercut in order that the clamping-plate may fit over the base portion of the rail. In addition to the anchor-rods 13, which serve to bind together the bed-plates 9 and anchor-plates 11, connecting-rods, such as 17, are disposed between said bed and anchor plates.

The improved rail-tie is strengthened in a longitudinal direction by a plurality of brace-plates 18, which are embedded in the filling material 10.

From the foregoing description it will be apparent that the improved rail-tie of this invention is strong, simple, and inexpensive in construction.

Minor changes in the precise embodiment of invention illustrated and described may be made within the scope of the following claims without departing from the spirit of the invention or sacrificing any of the advantages thereof.

Having thus described the invention, what is claimed is—

1. A rail-tie comprising facing-plates having flanges on their lower and upper edges, connecting-rods between said facing-plates, anchor-plates resting upon the lower flanges, bed-plates resting against the upper flanges, spacing-sleeves between the anchor and bed plates, anchor-rods extending through the bed-plates, sleeves, and anchor-plates, rail-clamps connected with said anchor-rods, filling material between said facing-plates, and bracing-plates embedded in said material.

2. A rail-tie comprising facing-plates having flanges on their upper and lower edges, and being cut away at their upper edges to receive the base portions of the rails, connecting-rods between said facing-plates, anchor-

plates resting upon the lower edges and having conical projections, bed-plates resting against the upper flanges, spacing-sleeves between the bed-plates and the conical projections of the anchor-plates, anchor-rods extending through the bed-plates, slots, and conical projections, rail-clamps connected with said anchor-rods, connecting-rods between the anchor and bed plates, filling material between

said facing-plates, and longitudinally-extending bracing-plates embedded in said filling material.

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

FRANCIS XAVIER HARRISON.

Witnesses:

GEORGE GREGORY,
GEORGE C. MOON.