

No. 719,900.

PATENTED FEB. 3, 1903.

G. F. STANSBURY.
METALLIC RAILWAY TIE.
APPLICATION FILED NOV. 22, 1902.

NO MODEL.

Fig. 1

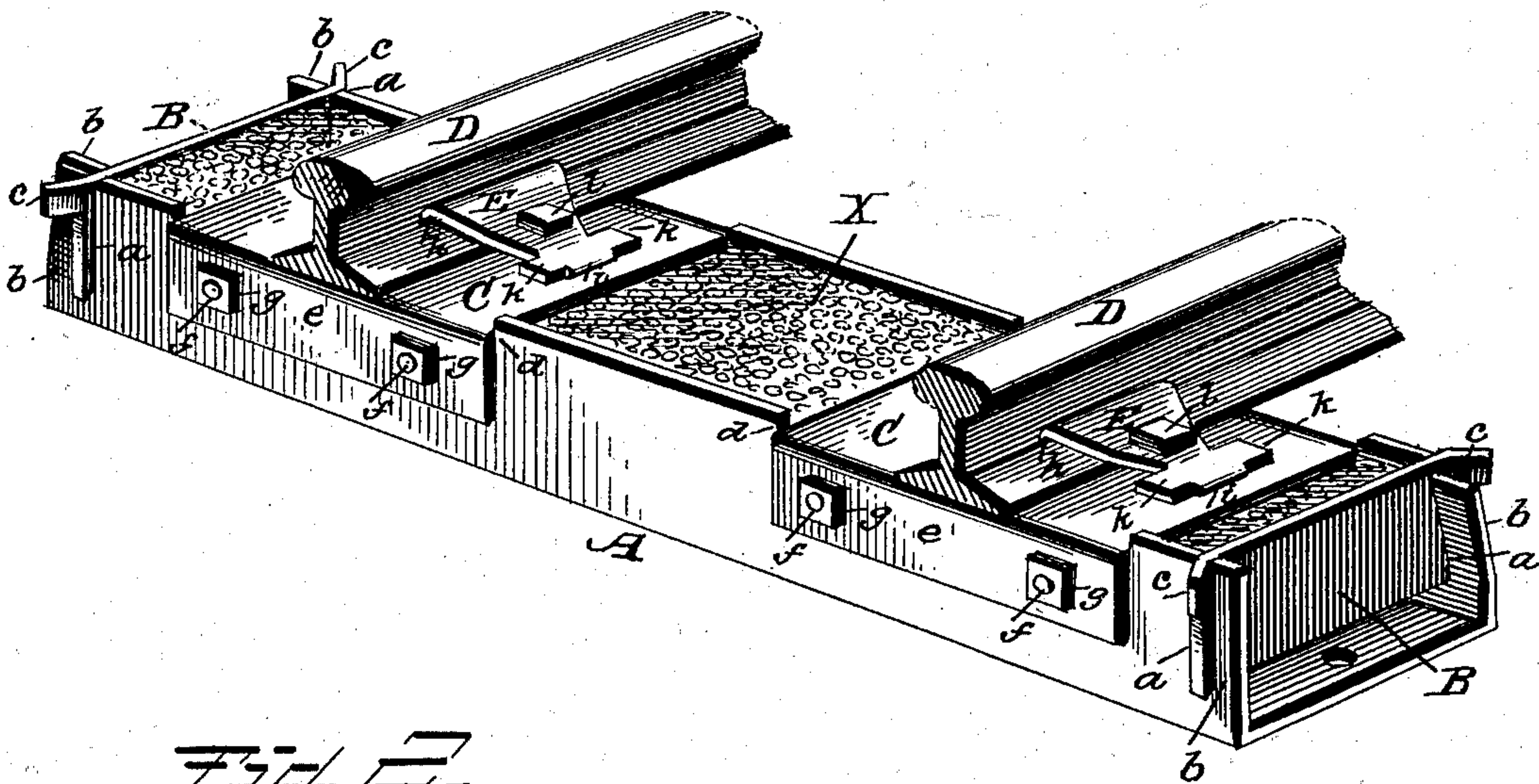


Fig. 2

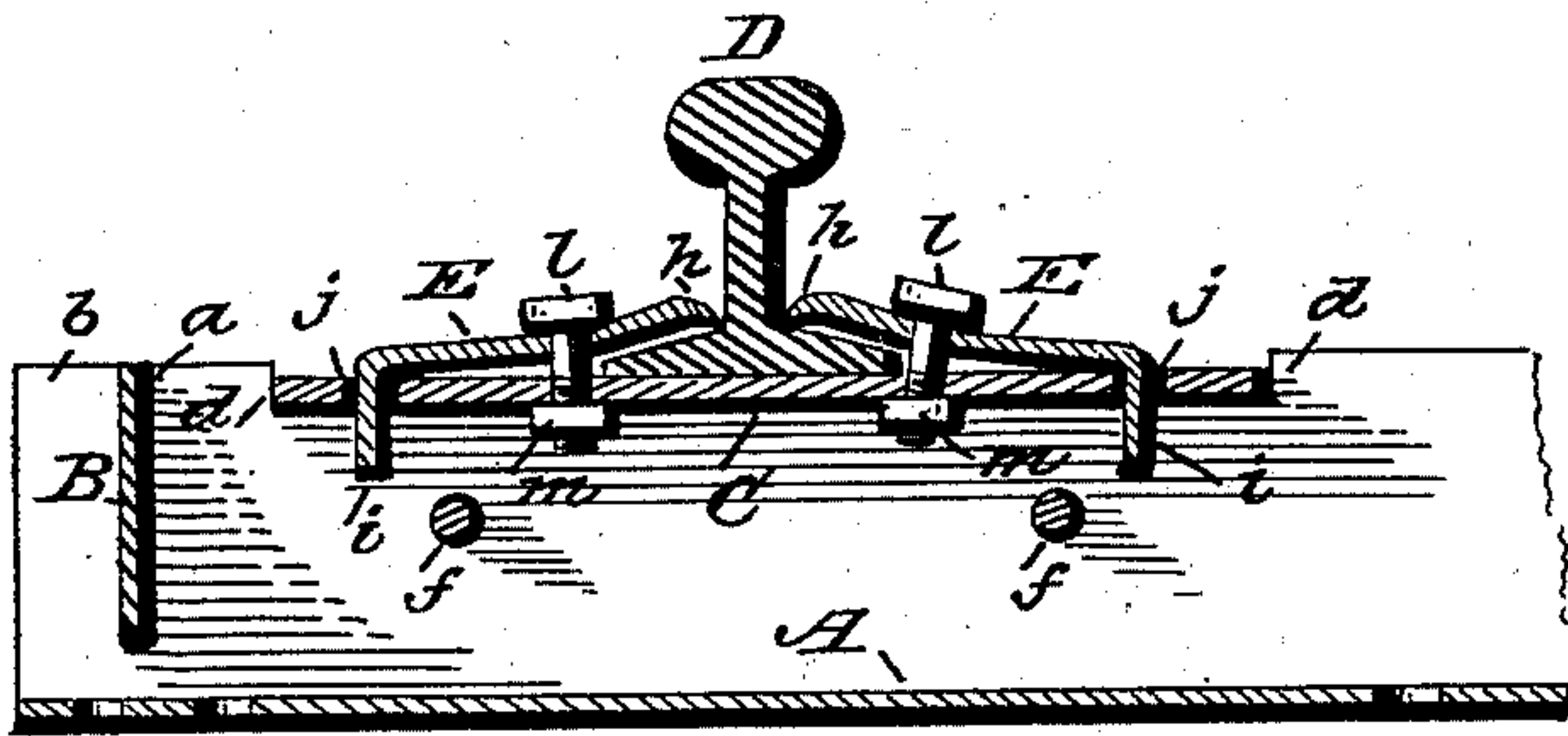
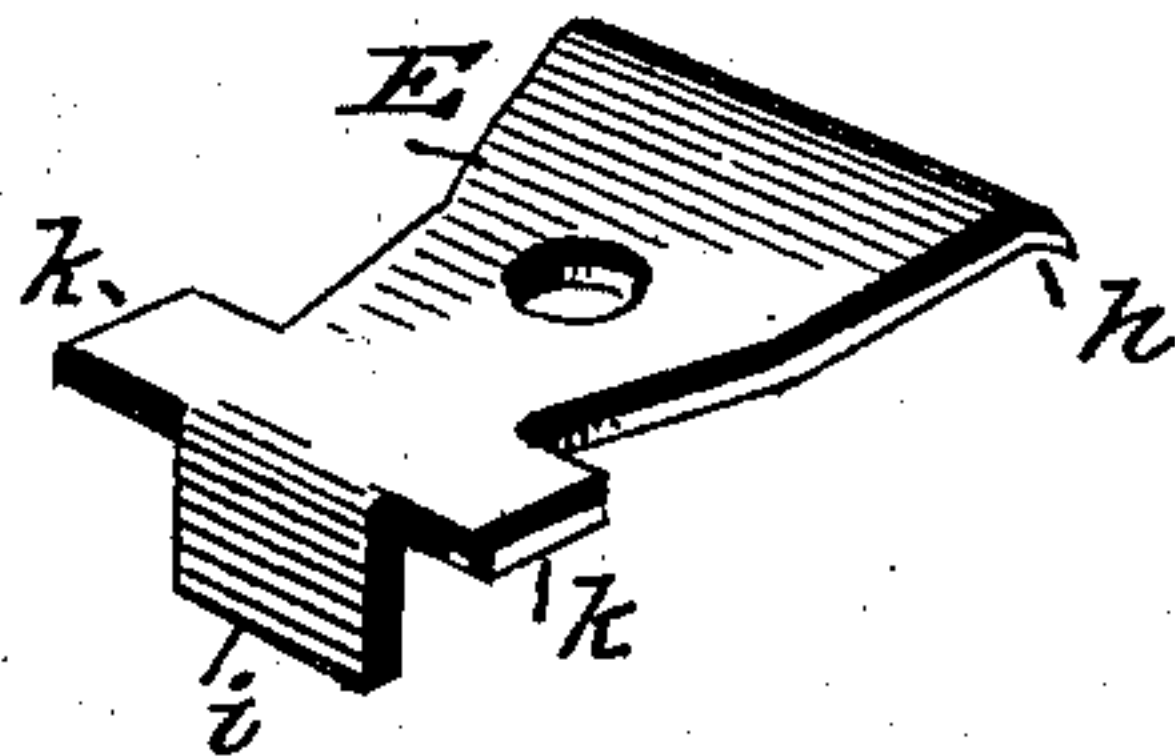


Fig. 3



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UNITED STATES PATENT OFFICE.

GEORGE F. STANSBURY, OF WEEDSPORT, NEW YORK, ASSIGNOR OF ONE-HALF TO JOHN E. MADDEN, OF PORT BYRON, NEW YORK.

METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 719,900, dated February 3, 1903.

Application filed November 22, 1902. Serial No. 132,367. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. STANSBURY, a citizen of the United States, residing at Weedsport, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Metallic Railway-Ties; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has for its object to provide a metallic railway-tie that will be strong and durable and in which the rails are securely connected thereto and prevented from spreading, thereby avoiding the many accidents resulting therefrom and also secure the advantages of a simple and practical tie that may be manufactured at a comparatively small cost.

The invention consists of a metallic railway-tie constructed substantially as shown in the drawings and hereinafter described and claimed.

Figure 1 is a perspective view of a railway-tie constructed in accordance with my invention, showing the rails in place thereon; Fig. 2, a longitudinal section of a portion of the tie, showing an end section of one of the rails; Fig. 3, a detail perspective view of one of the fish-plates on an enlarged scale.

In the accompanying drawings, A represents the railway-tie, which may be constructed of any suitable metal and of any desirable thickness found best adapted to the purpose, said tie consisting of a bottom and two sides to form a channel or receptacle for receiving gravel or other suitable ballast to aid in securing the tie in position in the road-bed, as indicated at X in Fig. 1 of the drawings, the construction of tie, as above described, being preferably termed for convenience a "hollow" metallic railway-tie. The tie at its ends has vertical slots *a* to receive removable end plates B, one of the wings *b*, forming the outer wall of the slots, extending inwardly from a perpendicular to form a wider bearing to the plate and better brace it against the ballast. The end plates A do not reach to the bottom of the tie, the bottom of the slots *a* terminat-

ing some distance above the bottom of the tie, so that a space will be left for the drainage of the water that may accumulate in the hollow tie.

The end plates B have laterally-projecting arms *c*, which act as stops to prevent the plates from sliding endwise out of the slots and also as a means to grasp by the hands when lifting the plates and removing them from the ends of the tie.

The side walls of the tie are recessed, as shown at *d*, to receive the base-plates C, so that they will be below or on the same horizontal plane as the upper edges of the side walls; also, to form a seat for the base-plate and prevent any lateral strain on the fastening-bolts.

The base-plates C have downwardly-extending flanges *e*, which embrace the side walls of the tie and strengthen said walls at a point where the greatest weight comes when a moving train passes over rails and tie. The bolts *f* extend through holes in the flanges *e* and through holes in the side walls of the tie, and screw-nuts *g* engage the screw-threaded ends of said bolts to draw them tight, said screw-rods not only providing a fastening for the base-plates, but also stay-rods to further strengthen the side walls of the tie.

The rails D rest upon the base-plates C and are held in place thereon by the fish-plates E, which plates are of peculiar construction and when in place prevent the rails from spreading and hold them firmly in position.

The fish-plates E upon their inner ends have downwardly-extending jaws *h* to engage the base of the rail, and the opposite end of the fish-plate has a downwardly-extending tongue *i* to engage a transverse slot *j* in the base-plate C to hold said plate against lateral displacement and avoid the necessity of using two bolts as a means to hold the fish-plate in place. The fish-plate has laterally-extending arms *k* at the juncture between the body of the plate and the tongue, as shown in Fig. 3 of the drawings, said arms serving as stops to prevent the tongue *i* from crowding down in the slot *j* in case the nut *m* should disengage itself from the fastening-bolt *l* and an extra heavy strain from the moving train against the edge of the fish-plate, especially

in passing around curves. Should the nut come off or the fastening-bolt break that holds the fish-plate in place, said plate would be still held in place by the tongue thereof engaging the slot in the base-plate, thereby holding the rails against spreading or from sliding toward each other.

The bolts *l*, that pass through the fish-plates *E*, extend down from the top of said fish-plates, and therefore the nuts *m* are upon the under side of the base-plate *C* and are prevented from turning on the bolts by the gravel packed in the hollow railway-tie; but should the nut require removing the end plate, which holds the gravel in the tie, may be first removed and access had to the nut.

The tie may have holes or perforations in its bottom for convenience in handling by inserting an iron hook and also to hold the usual planks in place used on the outside and inside of rails at crossings.

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

1. In a hollow metallic railway-tie adapted to receive ballast, the side walls of the tie having vertical slots, and end plates removably supported therein, the lower edge of the end plates extending above the bottom of the tie to form a space between the two for the water to drain, substantially as and for the purpose set forth.

2. In a hollow metallic railway-tie adapted to receive a ballast, suitable end plates removably connected to the ends of the tie, said plates having laterally-extending arms at an angle to the plane thereof to serve as stops, said plates engaging slots in the side walls of the tie, substantially as and for the purpose specified.

3. In a hollow metallic railway-tie adapted to receive a ballast, the side walls of the tie having vertical slots, and removable end plates engaging the slots, one of the wings forming the outer wall of each pair of slots extending inwardly to form a double or in-

creased bearing and support for the end plates, substantially as and for the purpose set forth.

4. In a hollow metallic railway-tie adapted to receive a ballast, the side walls of said tie being recessed, base-plates upon which the rails are supported having downwardly-extending flanges to overlap the side walls of the tie, suitable means for fastening the plates thereto and means for fastening the rails to the plates, substantially as and for the purpose described.

5. In a hollow metallic railway-tie adapted to receive a ballast, suitable base-plates connected thereto having elongated slots, and fish-plates for holding the rails to the base-plates, said fish-plates having downwardly-extending tongues to engage the slots in the base-plates, substantially as and for the purpose specified.

6. In a hollow metallic railway-tie adapted to receive a ballast, suitable base-plates connected thereto and having elongated slots, and fish-plates having downwardly-extending tongues engaging with the slots and laterally-extending arms, said fish-plates holding the rails on the base-plates, substantially as and for the purpose set forth.

7. In a hollow metallic railway-tie adapted to receive a ballast, suitable end plates removably connected to the ends of the tie, base-plates connected to the side walls of the tie and having elongated slots therein, and suitable fish-plates for holding the rails on the base-plates, said fish-plates having downwardly-extending tongues engaging the elongated slots, substantially as and for the purpose described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE F. STANSBURY.

Witnesses:

A. W. SHURTLEFF,
H. D. BROWN.