

J. M. LIVELY.
RAILWAY CROSS-TIE,
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1,004,798.

Patented Oct. 3, 1911.

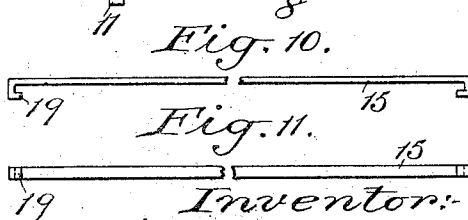
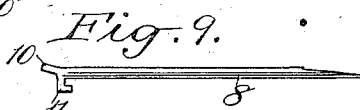
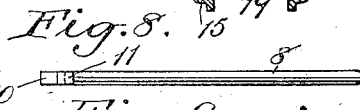
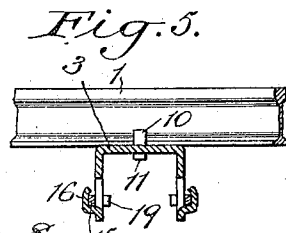
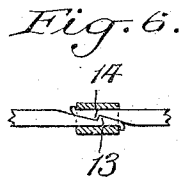
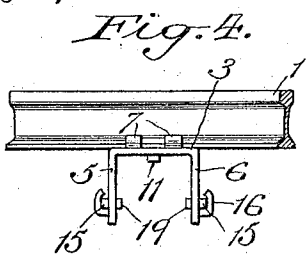
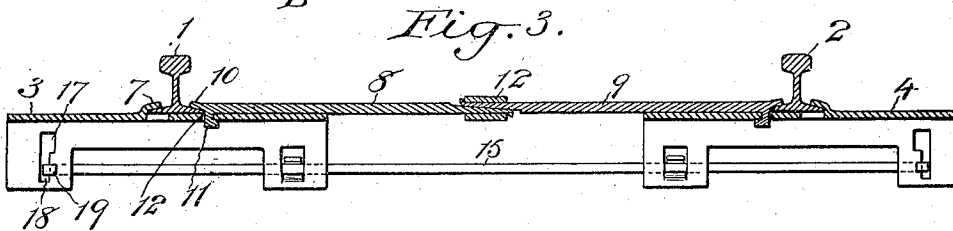
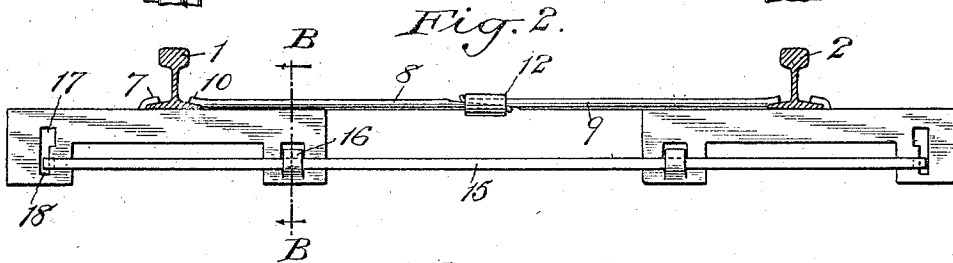
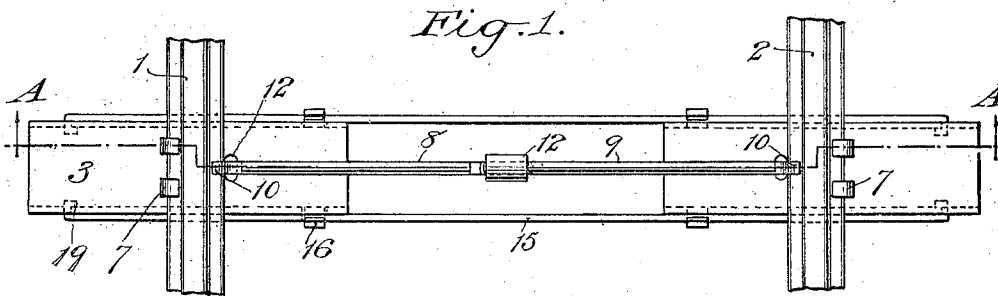


Fig. 11.

Inventor:
James M. Lively
by his attorney
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Witnesses:
J. George Barry
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UNITED STATES PATENT OFFICE.

JAMES M. LIVELY, OF NEW YORK, N. Y.

RAILWAY CROSS-TIE.

1,004,798.

Specification of Letters Patent.

Patented Oct. 3, 1911.

Application filed March 6, 1909. Serial No. 481,612.

To all whom it may concern:

Be it known that I, JAMES M. LIVELY, a citizen of the United States, and resident of the borough of Brooklyn, in the city and State of New York, have invented a new and useful Improvement in Railway Cross-Ties, of which the following is a specification.

My invention relates to railway cross ties and has for its object to provide certain improvements in the construction, form and arrangement of the several parts of a cross tie whereby the track rails may be securely fastened to the tie in a simple and effective manner and in which the rail supporting plates as well as the rails are rigidly spaced apart.

My invention further contemplates the securing of the several parts of the tie together and the securing of the track rails to the tie without the use of bolts.

In the accompanying drawings, Figure 1 represents my improved cross tie in top plan, portions of two track rails being shown secured in position thereon. Fig. 2 is a side view of the same, Fig. 3 is a longitudinal central section taken in the plane of the line A—A of Fig. 1, looking in the direction of the arrows, Fig. 4 is a view of the tie in end elevation, the track rail being shown in side elevation, Fig. 5 is a section taken in the plane of the line B—B of Fig. 2, looking in the direction of the arrows, Fig. 6 is a detail view showing a modified form of the means for securing the members of the sectional cross brace together, Fig. 7 is a detail view showing a modified way of interlocking the end of the cross bar to the rail supporting plate, Figs. 8 and 9 are plan and side views of one of the sectional cross brace members, and Figs. 10 and 11 are side and plan views partially broken away of one of the cross bars.

The track rails are denoted by 1 and 2. The rail supporting plates are of sheet metal and are denoted by 3 and 4. Each of these plates has depending sides 5 and 6. These plates 3 and 4 are provided with lugs 7 for engaging the outer edges of the bases of the rails 1 and 2. These lugs are preferably struck from the plates and overlap the outer edges of the rail bases.

A sectional cross brace is removably interlocked with the plates 3 and 4 and engages the inner edges of the rail bases. This sectional cross brace comprises two members 8 and 9, the outer end of each member hav-

ing a lip 10 fitted to overlap the inner edge of a rail base, and a depending hook 11 fitted to enter a transversely elongated slot 12 when the member is at right angles to the plate and to be interlocked with the plate when the member is swung into alinement with the plate. The overlapping ends of these two members 8 and 9 may be removably secured together in various ways.

In the form shown in Figs. 1, 2 and 3, the inner overlapping ends of the members 8 and 9 are tapered and a sleeve 12 may be slid over these tapered overlapping ends. The points may then be spread sufficiently to hold the sleeve in position. In Fig. 6, the inner ends of these members 8 and 9 may be interlocked by providing matched hooks 13, 14.

Cross bars 15 are removably interlocked with the corresponding depending sides of the two plates 3 and 4 for rigidly spacing the plates apart. In the form shown in Figs. 1, 2 and 3, this is accomplished by providing each depending side of each plate with a lug 16 struck therefrom, near its inner end and a vertically elongated slot through its outer end, said slot having an enlarged upper portion 17 and a smaller lower portion 18. The ends of the bar 15 are provided with hooks 19 which may be freely entered into the larger portions 17 of the vertically elongated slots and may then be dropped into the smaller portions 18.

The free ends of the lugs 16 may be bent inwardly after the bars are in position for retaining the bars in their interlocked engagement with the plates.

In Fig. 7 the lug 16 and the vertically elongated slot 17, 18, are both located near the inner end of the rail supporting plate to permit the use of a longitudinal stringer 20.

What I claim is:—

1. A sheet metal railway cross tie comprising two rail supporting plates having lugs for engaging the outer edges of the rail bases, a sectional cross brace having the inner ends of its members overlapped and the outer ends of its members interlocked with the plates for engaging the inner edges of the rail bases and a sleeve for removably securing the overlapping inner ends of the members together.

2. A sheet metal railway cross tie comprising two rail supporting plates having lugs struck therefrom for engaging the outer edges of the rail bases, a sectional cross

brace having the inner ends of its members overlapped and the outer ends of its members interlocked with the plates for engaging the inner edges of the rail bases and a sleeve for removably securing the overlapping inner ends of the members together.

3. A sheet metal railway cross tie comprising two rail supporting plates having depending sides and provided with lugs for engaging the outer edges of the rail bases, cross bars interlocked with corresponding sides of the two plates and a cross brace interlocked with the plates for engaging the inner edges of the rail bases.

4. A sheet metal railway cross tie com-

prising two rail supporting plates having depending sides and provided with lugs for engaging the outer edges of the rail bases, cross bars removably interlocked with corresponding sides of the two plates and a cross brace interlocked with the plates for engaging the inner edges of the rail bases.

In testimony, that I claim the foregoing as my invention, I have signed by name in presence of two witnesses, this twenty-sixth day of February 1909.

JAMES M. LIVELY.

Witnesses:

F. GEORGE BARRY,
HENRY THIEME.