(No Model.)

J. NEWTON.

RAILWAY TIE AND STRINGER.

No. 285,833. Patented Oct. 2, 1883.

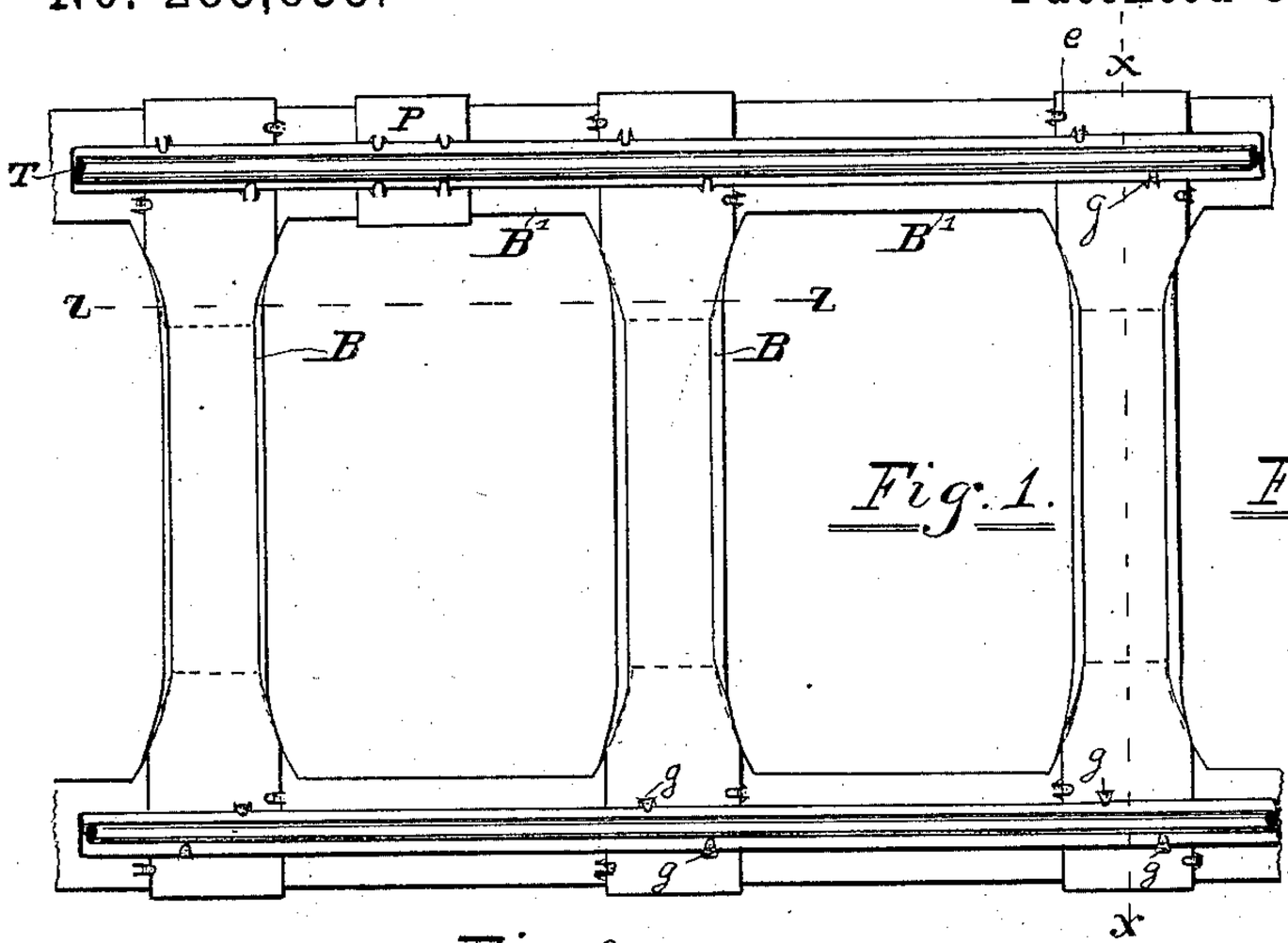


Fig. 1.

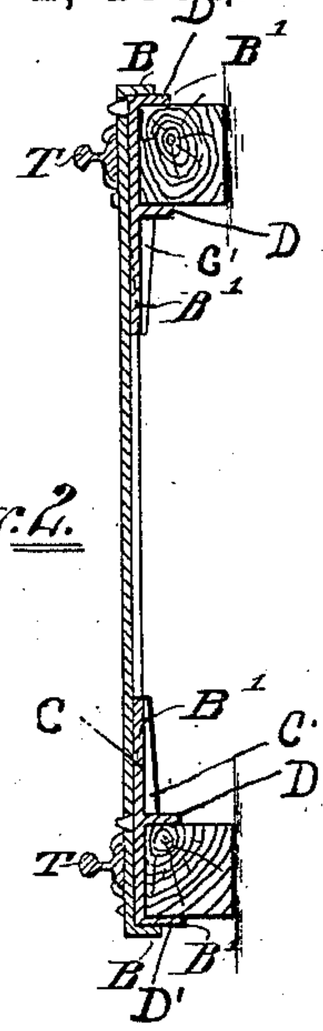


Fig. 2.

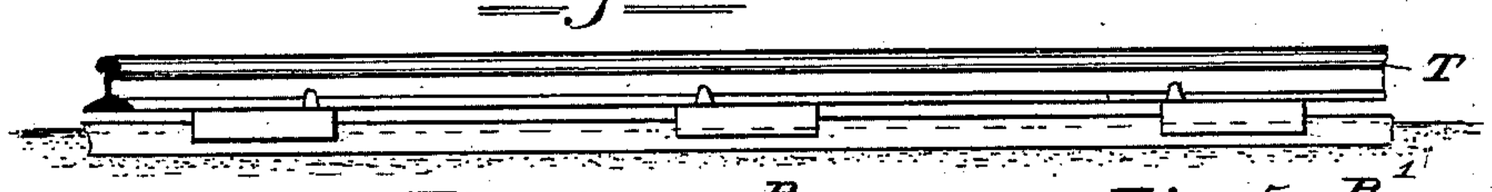


Fig. 3.

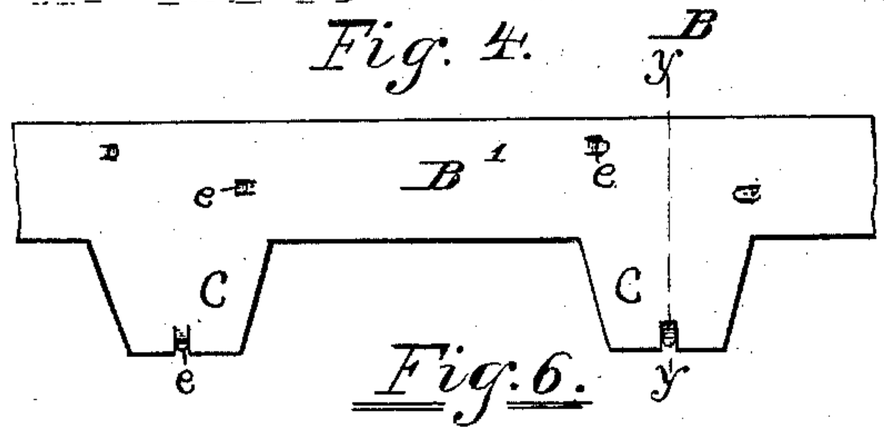


Fig. 4.

Fig. 6.

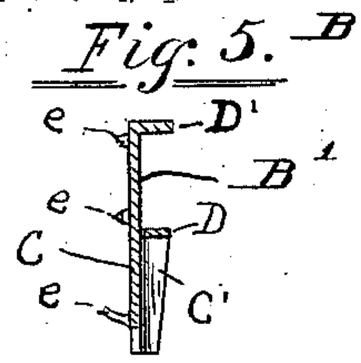


Fig. 5.

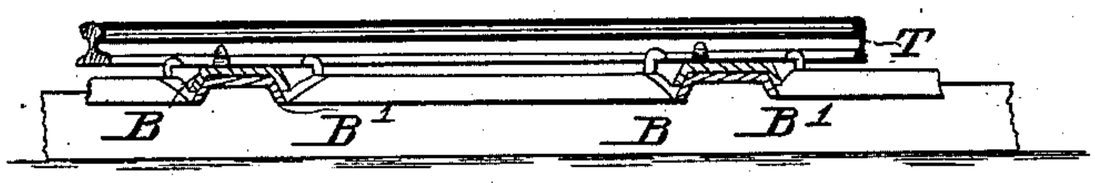
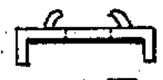


Fig. 7.



WITNESSES.

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UNITED STATES PATENT OFFICE.

JOHN NEWTON, OF CLIFFORD, INDIANA

RAILWAY TIE AND STRINGER.

SPECIFICATION forming part of Letters Patent No. 285,833, dated October 2, 1883.

Application filed February 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN NEWTON, of Clifford, Indiana, have invented a new and useful Improvement in Railway Ties and Stringers, of which the following is a description, reference being made to the accompanying drawings, in the several figures of which like letters indicate like parts.

My invention relates to the laying of track on iron cross-ties and stringers, and is intended to obviate the necessity of using wood for ties or stringers, except on cattle-pits, as hereinafter explained.

In the drawings, Figure 1 is a top view of the rails laid on my improved ties and stringers and secured at points between the cross-ties by chairs. Fig. 2 is a cross-section on the line *x x*, Fig. 1, and shows, also, how the stringers are secured to wooden stringers when needed for cattle-pits, or when laid on a bridge. Fig. 3 is a side view of my invention, and shows the stringers laid directly on the gravel or earth of the grade. Fig. 4 is a top view of a part of one of my stringers, showing the projecting ribs and clamps. Fig. 5 is a cross-section at *y y*, Fig. 4. Fig. 6 is a longitudinal section at *z z*, Fig. 1; and Fig. 7 is an end view of the chair P.

In detail B B are the cross-ties, which are made of rolled iron, with the edges turned downward, as shown in Fig. 6 in cross-section. The ends are also turned downward over the edges of the stringer, as shown in Fig. 2. These ties are laid across iron stringers B′ at suitable distances, and the clamps, struck up from the stringer, are bent down upon the cross-ties to hold the two together.

C represents the inwardly-projecting arms on the stringer B′.

C′ is a truss-strip under arm C. One end of the strip C′ is secured to the stringer-flange D.

D′ is a flange on stringer B′.

e e are spurs struck up on the stringer B′ for securing the cross-tie.

g g are spurs struck up from the metal of the cross-ties for securing the rails.

The stringers B′ have their edges turned down, and may be laid on a wooden stringer, as shown in Fig. 2, or directly on the gravel, as shown. To save the expense the cross-ties may be laid at considerable distance apart, and chairs P may be used between the cross-ties and the rail secured to them by clamps. Fig. 1 shows the method of laying and securing the rail to the cross-ties and chairs.

The stringers B′ have projecting arms or ribs, as shown in Fig. 4, and the cross-ties are fitted down over them, adding greatly to the strength of the structure.

Instead of the clamps shown, when wooden stringers are used the parts may be secured together and to the wooden stringers by spikes.

What I claim and desire to secure by Letters Patent is the following, viz:

1. In a combined railway tie and stringer, the combination of a metallic stringer, consisting of a thin flat bar, having inwardly-projecting arms and downwardly-projecting flanges, whereby said stringer is adapted to be secured to a longitudinal parallel base-stringer, the arms of the metallic superposed stringer lying under the cross-ties and aiding in the support of the same, substantially as described, and for the purpose set forth.

2. A metallic stringer, composed of a thin flat bar, having inwardly-projecting arms and downwardly-projecting outside and inside flanges, and a truss or supporting-plate between the inside flange and arm, substantially as described, and for the purpose set forth.

3. A metallic stringer, composed of a thin flat bar having inwardly-projecting arms and downwardly-projecting outside and inside flanges, and a truss or supporting-plate between the inside flange and arm, said stringer and its arms being provided with spurs or lips struck from the metal thereof, substantially as described, and for the purpose set forth.

4. A stringer provided with arms C, flanges D D′, truss-plate C′, spurs *e*, and a surface-stringer, as specified, in combination with a cross-tie, substantially as described, and for the purpose set forth.

5. A stringer provided with arms C and flanges D D′, and a surface-stringer, as specified, in combination with cross-ties having outside downwardly-projecting flanges, sub-

stantially as described, and for the purpose set forth.

6. A stringer provided with arms C, flanges D D′, and spurs *c*, and a surface-stringer, as specified, in combination with a metallic cross-tie having spurs struck up thereon for the reception of the base of the rail, substantially as set forth.

In witness whereof I have hereunto set my hand this 9th day of February, 1883.

JOHN NEWTON.

Witnesses:
C. P. JACOBS,
C. S. SPRITZ.