

(No Model.)

S. G. SCOTT.
TIE TRUSS FOR RAILROADS.

No. 347,129.

Patented Aug. 10, 1886.

Fig. 1

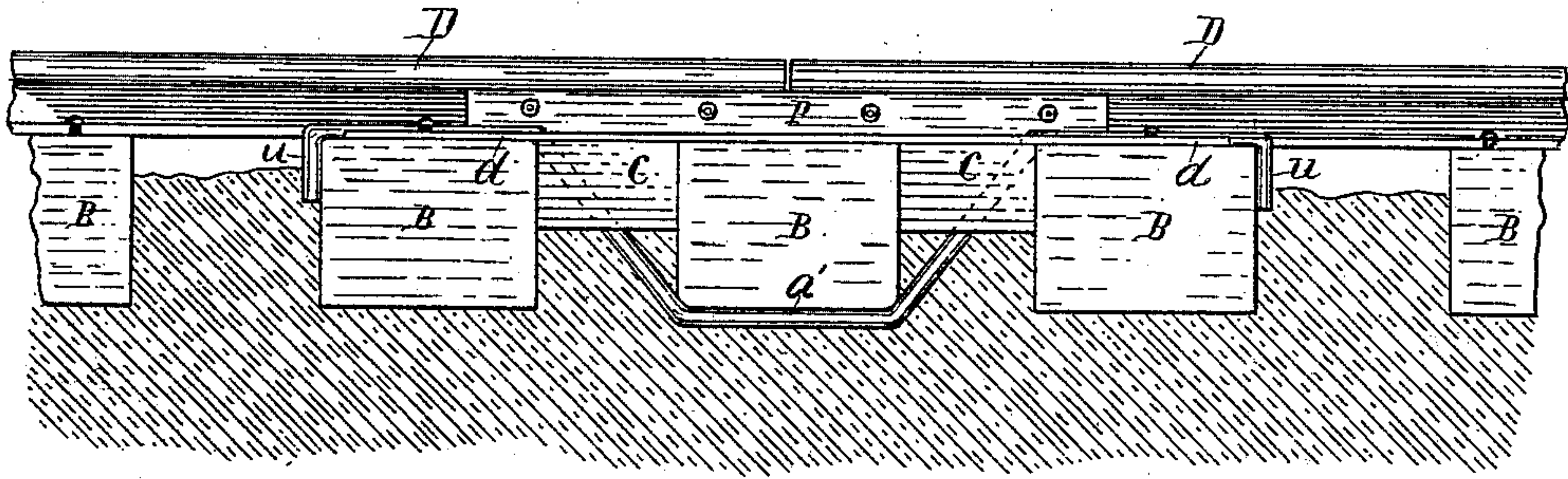


Fig. 3

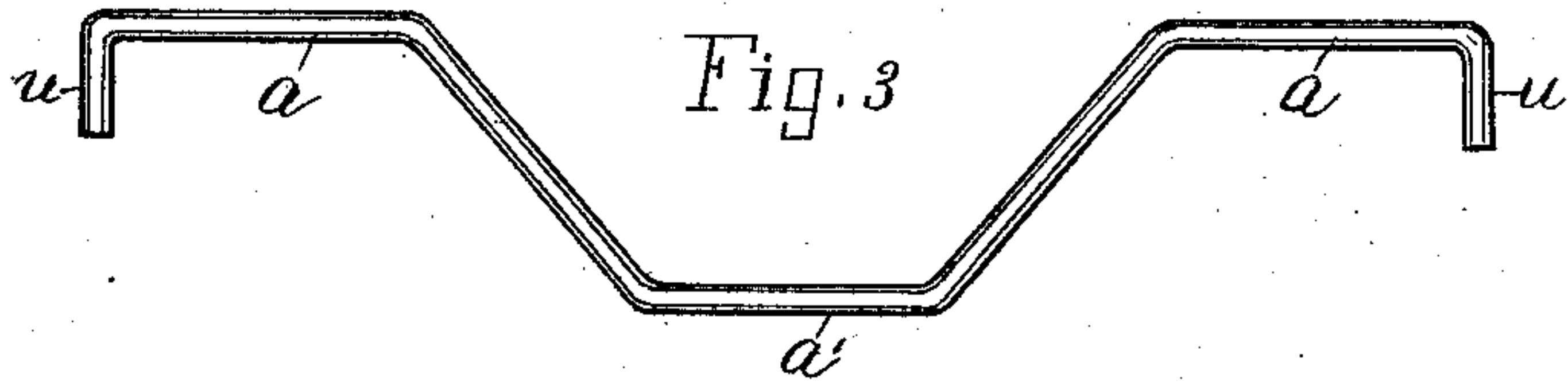


Fig. 2

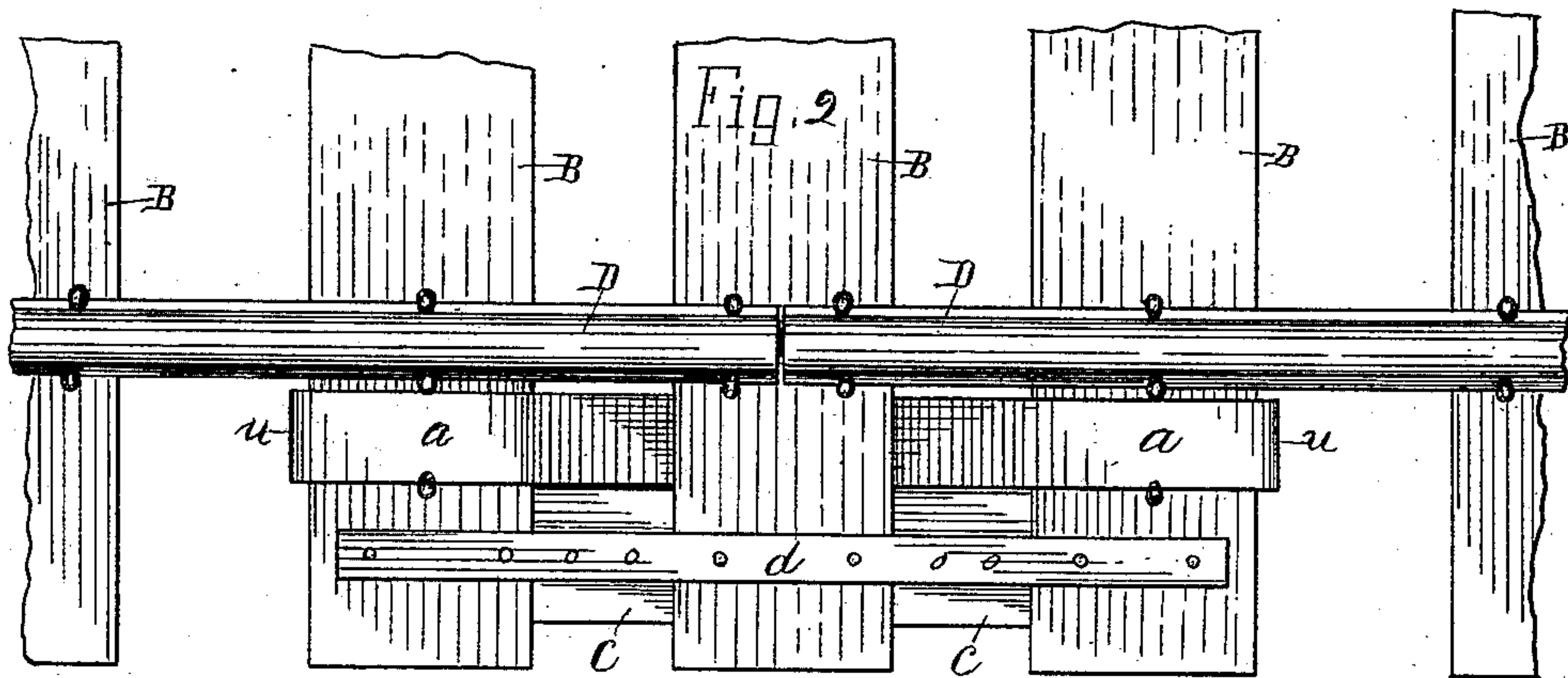
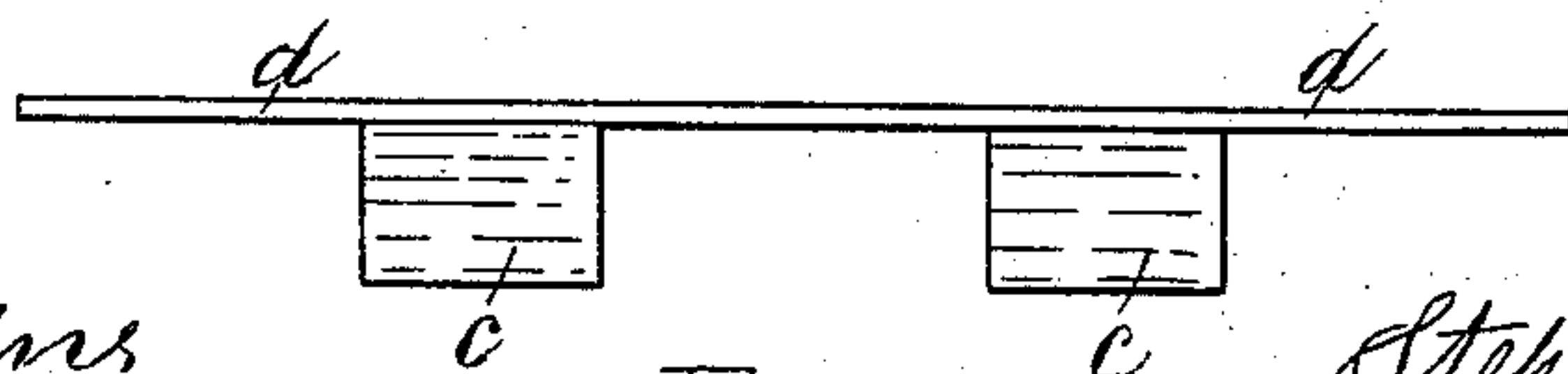


Fig. 4



Witnesses.

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UNITED STATES PATENT OFFICE.

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TIE-TRUSS FOR RAILROADS.

SPECIFICATION forming part of Letters Patent No. 347,129, dated August 10, 1886.

Application filed April 29, 1886. Serial No. 200,514. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN G. SCOTT, a citizen of the United States, residing at Plainwell, county of Allegan, State of Michigan, have invented a new and useful Tie-Truss for Railroads, of which the following is a specification.

The object of this invention is to truss the ties where the joints between the rails come in a manner to prevent the weight of the train from settling the rails at this point. This object I accomplish by the means substantially as below described and claimed.

In a general description, the means consist of a truss-bar beneath the tie where the rail-joint is, each end of the truss-bar being from thence extended upward onto and locked with the contiguous tie each side of the trussed tie, and separating-blocks between the ties, to prevent the latter from being drawn toward each other.

In the drawings forming a part of this specification, Figure 1 is an elevation showing the side of the rail and the end of the ties; Fig. 2, a plan of Fig. 1; Fig. 3, a truss-bar in elevation, and Fig. 4 an elevation of separating-blocks.

Referring to the letters of reference marked on the drawings, D D are two broken rails, and P the ordinary fish-joint at the adjacent ends of the rails. B B are the ties.

It being a well-known fact that the tie or ties at the joints of the rails unduly settle, (because the joint will yield under the weight of the train more readily than the solid portion of the rail,) thus making the track uneven, I need not dwell upon the utility of means to successfully obviate this difficulty. The means employed should be cheap and so simple that the section-men can readily adjust them, so as not to entail an undue expense to the railroad companies.

The truss is shown in Fig. 3 disconnected from the ties. The flat portion *a'* supports the tie B, which is beneath the fish-joint P, and the flat portions *a a* rest on top of the contiguous ties. The angles *u u* lock over the sides of the ties, as in Fig. 1. The portions of the truss between the parts *a'* and *a a* are at upward oblique diverging angles. The side of the truss

fits closely against the spikes which hold the flange of the rail, and a spike may be employed at the other side of the truss at each end to keep the truss firmly in place. (See Fig. 2.) The truss is preferably on the outside of the rail, but not necessarily so. If more than one tie is employed to support the fish-joint of the rail, the truss may have other portions, *a'*, to support them. At *c c* the separating-blocks are shown with a strip, *d*, on the ties, and fastened to the ties and blocks, Figs. 2 and 4. Of course it will be understood that the plan in Fig. 2 shows only one side of the track, and that the construction is the same at the other rail of the track. By means of this construction the track will not settle more readily at the joint of the rails than at any other point in the rails. Thus the rails in effect, in their capacity to sustain weight, are solid all through, and the ties with which the truss-bars are connected are in effect as one broad solid tie.

The blocks *c c* and strip *d* are preferably wood, while the truss-bar is of course strong metal.

In Fig. 1 the ties B are shown resting on and supported by the ground in the ordinary manner.

By experiments with this invention in a low marshy locality where it seemed impossible to keep the track in order, I find that the rails which had become bent by settling of the joints have actually been straightened by the weight of the passing trains, and that the common clicking sound of the wheels of the train in passing the fish-joints is no longer heard, the wheels rolling over the track as noiselessly as though the rails were continuous.

Having thus described my invention, what I claim is—

1. In a railroad, the combination of the joint-supporting tie and the contiguous ties with the metal truss-bar passed beneath said joint-supporting tie, from thence extending both ways obliquely upward, and the ends being anchored directly to the other ties, substantially as set forth.

2. In a railroad, the combination, with the rails and the ties at the joint of said rails, of separating-blocks between the ties and a

truss-bar supporting the joint-supporting tie, and thence extended obliquely upward and anchored on the contiguous tie at each side of the joint-tie, substantially as set forth.

5 3. In a railroad, the truss-bar comprising the portion for supporting the joint-supporting tie, the portions for resting on the contiguous ties, the angle ends for locking over the side of the latter-named ties, and the oblique
10 portions between the ties, substantially as set forth.

4. In a railroad, the combination of the ties at the joints of the rails, the separating-blocks

and connecting-strip attached to the blocks and ties, and the truss-bar supporting the 15 joint-supporting ties and resting upon and locking over the side of the contiguous ties, substantially as set forth.

In testimony of the foregoing I have hereto subscribed my name in presence of two 20 witnesses.

STEPHEN G. SCOTT.

Witnesses:

GEO. B. SCOTT,
EUGENE C. SOUTHARD.