

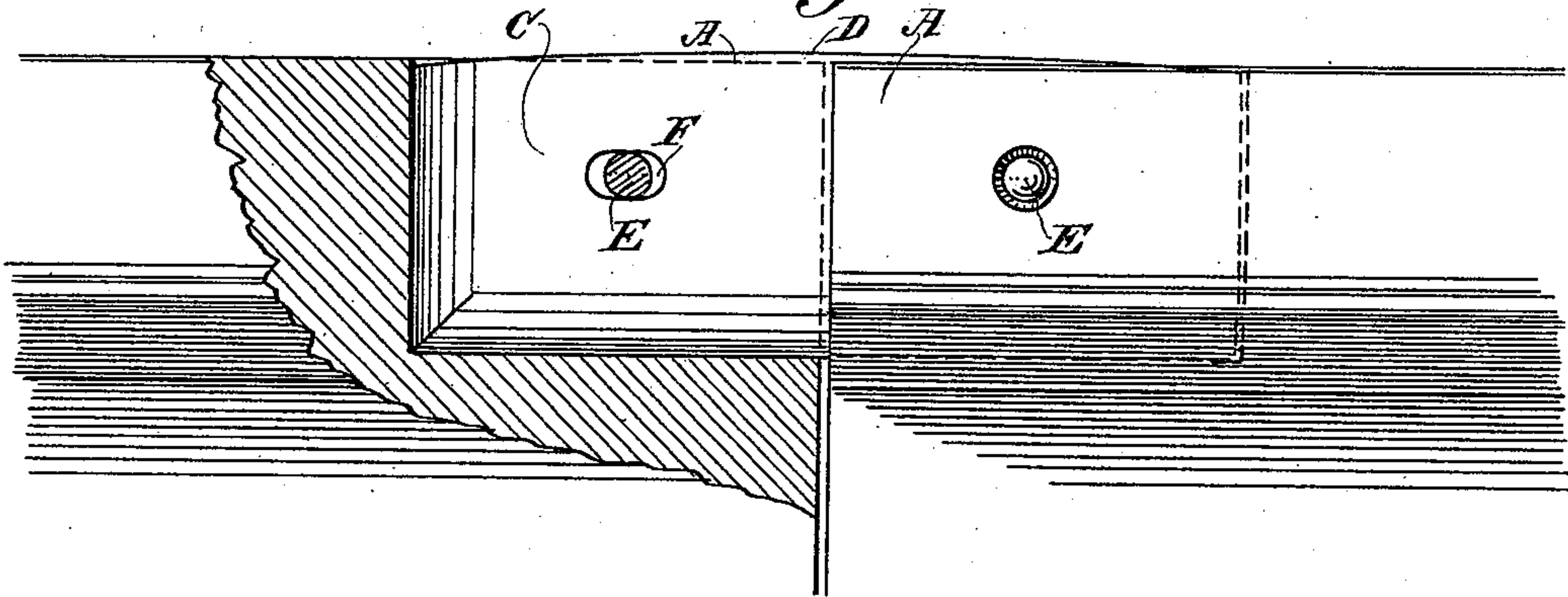
(No Model.)

C. C. WELLS.  
RAILWAY JOINT BRIDGE.

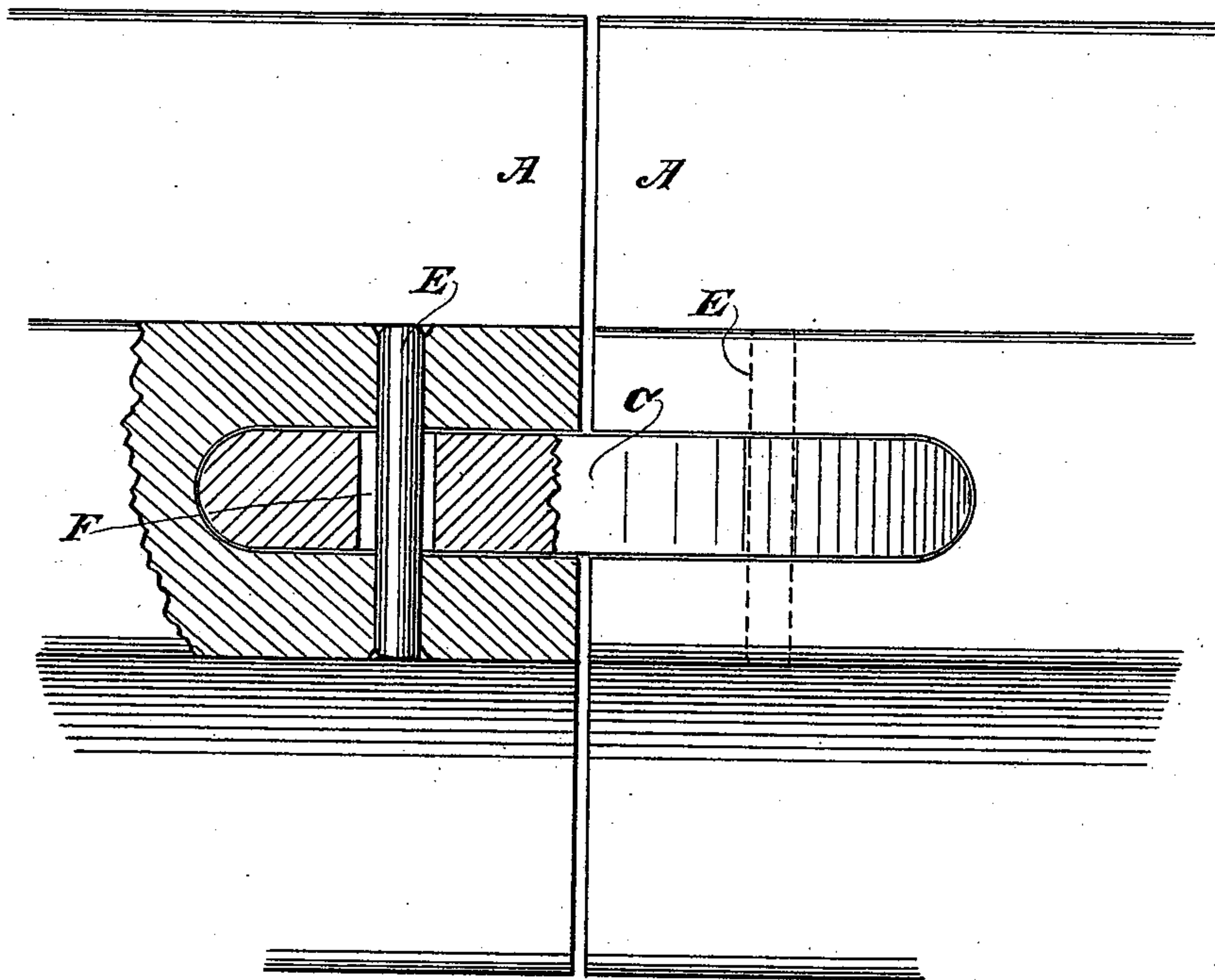
No. 526,954.

Patented Oct. 2, 1894.

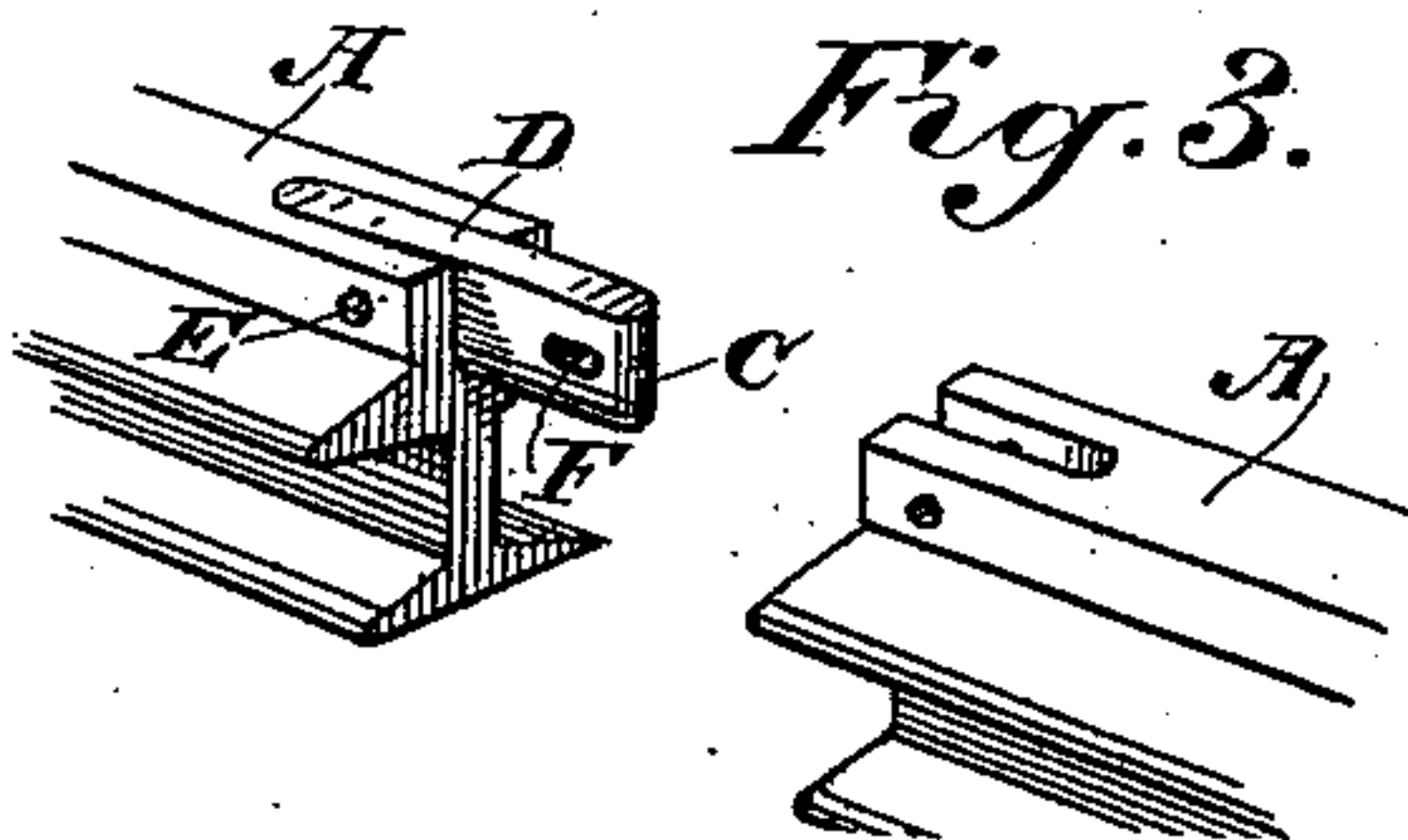
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:  
J. H. House  
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# UNITED STATES PATENT OFFICE.

CHARLES C. WELLS, OF SAN FRANCISCO, CALIFORNIA.

## RAILWAY-JOINT BRIDGE.

SPECIFICATION forming part of Letters Patent No. 526,954, dated October 2, 1894.

Application filed March 8, 1894. Serial No. 502,900. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES C. WELLS, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Railway-Joint Bridges; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a bridge for railway rail joints which is especially applicable for the meeting ends of street railway rails.

It consists of the construction and arrangement of parts which I shall hereinafter describe and claim.

Referring to the accompanying drawings for a more complete explanation of my invention,—Figure 1 is a side view of the meeting ends of two rails with my appliance in place, showing one of them in section. Fig. 2 is a top view of the meeting rails showing a portion of one of them in section also. Fig. 3 shows them separated from one another.

The object of my invention is especially to relieve the jar caused by the pounding of the wheels when the cars cross the joints formed by the meeting ends of street railway rails, and by causing an essentially smooth passage of the wheels over these joints to enable the rails to be placed with the meeting ends at any point desirable, to rest upon the yokes which form the cable tunnels of cable roads or at any point where they may happen to abut.

A A' are the meeting ends of two rails. The heads of these rails have vertical channels made in them, these channels being of essentially rectangular outline of the same width from top to bottom. The vertical ends of the channels may be semi-circular as would be the case if they were made by first boring into the top of the rail and afterward planing out the channel between this bore and the end of the rail, or they may, if otherwise formed, be straight or of other suitable shape. The connecting bridge C is a rectangular plate of metal adapted to fit loosely the channels made in the ends of the rails. The ends of the plate are slightly lower than the upper surfaces of the rails in which it is embedded, so that when the wheels reach this point, they do not strike the ends of these plates, but roll a short distance over them before taking a

bearing upon the upwardly curving upper edge of the plate. This upward curve rises sufficiently to practically lift the wheel above the joint between the rails, and as it passes over this curvature and down upon the opposite side, it comes down gently and easily upon the surface of the next adjoining rail. These plates are preferably held in place in the channels in the rails by pins E extending through transverse holes in the rails, and slots F made in the ends of the plates corresponding in position with the holes in the rails. These slots allow for a certain amount of end movement, and vertical rocking movement of the plate, and for such change of position of the rails as may take place by slight separation of the rail ends.

In the construction shown I use two bolts, one in each rail head, passing through slots of considerable length in the connecting bridge, and by reason of this arrangement there is always a certain amount of hinge-like movement allowed to the rails, which is especially manifest when the meeting ends of the rails have settled or been raised a little. If four bolts were used as is usual in this class of devices, the parts would be rigidly held, and would not allow of any adjustment, but with a single bolt in each end of the bridge bar and an elongated slot, there is formed a loose hinged joint which, while allowing a movement of the joint, does not destroy the smooth surface over which the wheel passes, and obviates the pounding and shock which would soon batter the end of the rail and greatly damage it before the track repairers would have time to bring the rail into its proper alignment. The slots provide for a certain amount of end movement and adjustment of the bridge bar, and consequently for such change of position as may take place by a slight separation of the rail ends.

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

1. A bridge for the joints formed by the abutting ends of railway rails, consisting of a rectangular bridge bar having the upper side made convex, and the lower portions of the ends and lower edges rounded, and a single elongated slot in each end, open-ended

correspondingly-shaped channels in the top of each rail end, into which the bridge bar loosely fits with its central convex portion slightly above the surfaces of the rail ends, 5 and a bolt passing transversely through the single slot in each rail end and the corresponding slot in each end of the bar whereby a loosely hinged and movable joint is formed.

2. A bridge for the joints formed by the 10 meeting ends of railway rails, consisting of a rectangular bridge bar, having a single elongated slot in each end, open-ended correspondingly-shaped channels in the top of each

rail end, into which the bridge bar loosely fits, and a single bolt passing through each rail end 15 and the corresponding slot in each end of the bar whereby a loosely hinged and movable joint is formed, substantially as herein described.

In witness whereof I have hereunto set my 20 hand.

CHARLES C. WELLS.

Witnesses:

S. H. NOURSE,

J. A. BAYLESS.