

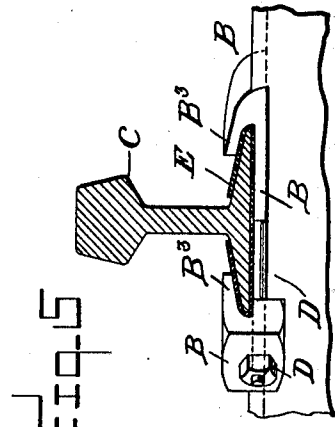
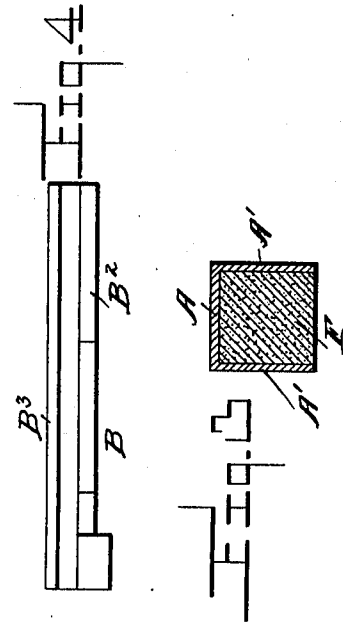
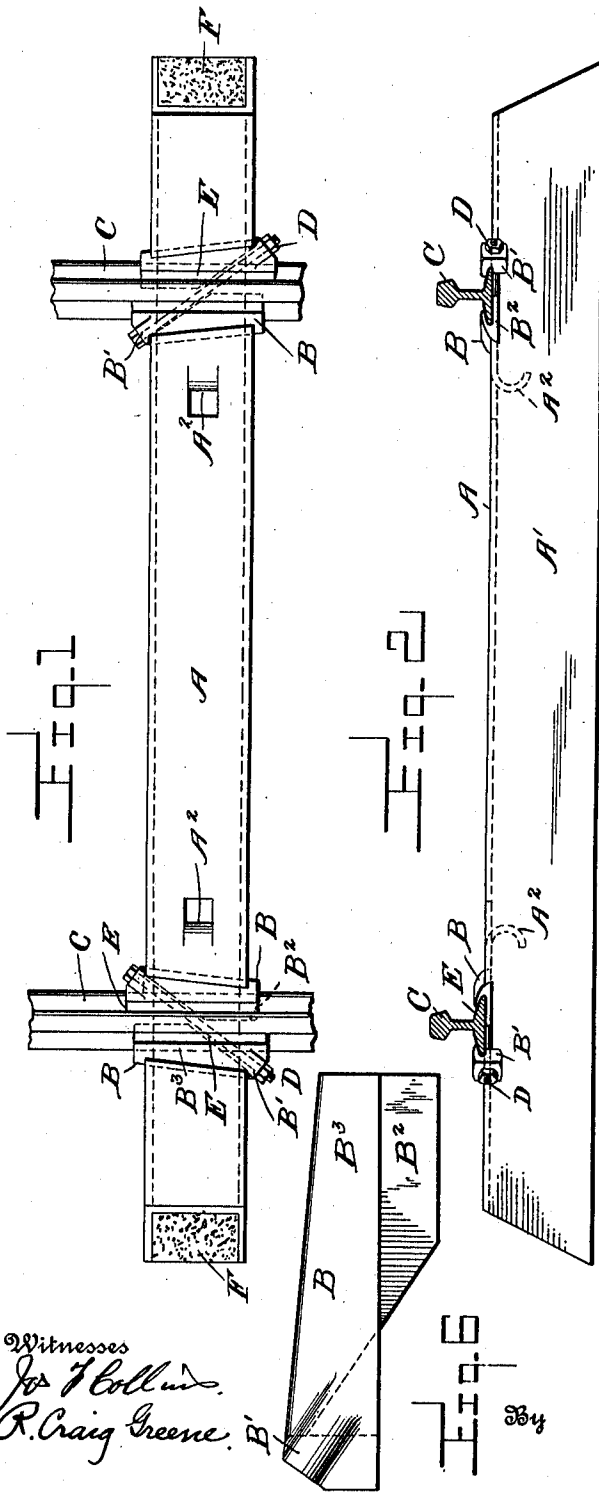
C. F. JENKINS.

RAILWAY TIE.

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1,003,751.

Patented Sept. 19, 1911.



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UNITED STATES PATENT OFFICE.

CHARLES FRANCIS JENKINS, OF WASHINGTON, DISTRICT OF COLUMBIA.

RAILWAY-TIE.

1,003,751.

Specification of Letters Patent. Patented Sept. 19, 1911.

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To all whom it may concern:

Be it known that I, CHARLES FRANCIS JENKINS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to railway ties of metal and concrete provided with clamping devices for detachably holding the rails, and the general object is to provide comparatively inexpensive ties which permit the repeated attachment and detachment of the rails without injuring any of the parts which support and secure them. With this object in view, a thin metal structure of inverted U-shape is provided with interior concrete-engaging hooks and is then filled with concrete material and provided with bolt-actuated wedge-like clamps for locking the rail to the metal member, the rail being electrically insulated from the clamping members.

In the accompanying drawings, Figure 1 is a plan view of the novel devices with the bases of the rails held thereby. Fig. 2 is a side elevation of the same devices. Fig. 3 is a cross section of the body of the tie. Fig. 4 is a side view of one of the clamping wedges. Fig. 5 is an enlarged view showing, in end or cross-sectional view, one rail and the insulating and holding devices. Fig. 6 is a plan view of one of the clamp members.

In these views, A represents a plane metal sheet forming the top of the tie and having at its lateral margins downwardly turned, approximately parallel flanges A' and upon its lower side oppositely turned concrete engaging hooks A². The trough-like member thus formed is filled with concrete F and the ends of the structure are preferably beveled downwardly and outwardly as shown. At points where the rails are to be placed, the sheet A is cut away to form transverse channels wider than the rail bases and slightly inclined to the tie and having overhanging side walls as shown. In each channel is placed a clamp composed of two wedge-like members B and an oblique bolt D passing below the rail and through bosses B' at opposite ends of the wedge-like members so that it may simultaneously urge the wedges oppositely in the channel. Each member of the clamp has a base plate portion B² ex-

tending under the corresponding side of the rail base and a flange B³ projecting over the upper face of the rail flange to a short distance toward the vertical web of the rail. The bolt D lies in the plane of the portions B² which are cut away so that they do not interfere with the bolt at any time although they extend under nearly the whole of this portion of the rail base, and the bosses B', which project below the top of the tie normally lie at a short distance therefrom so that they may move inward without striking it, when the rail is to be clamped.

The rail is insulated from the clamp by means of an interposed sheet, E, of insulating material which preferably projects beyond the margin of the flange B³ nearly or quite to the vertical web of the rail and which lies between the rail and all parts of clamping members.

Obviously, all the parts being in position, strain applied by the bolt forces the clamping wedges under the overhanging walls of the channel in which they lie and at the same time forces them to grip the rail base, and so long as the nut on the bolt is not loosened all the parts must remain rigidly connected, yet the rail may at any time be quickly freed when desired.

While the tie is largely of concrete, the latter is so reinforced and protected by the metal that it is not readily broken nor injured, either before or after it is embedded in the earth, and its form is such that it resists the strains of traffic and transmits them to the road bed quite as well as the common tie of wood. Preferably, the metal portion of the tie body is made from sheet steel cut and bent to form.

What I claim is:

1. In a tie of the class described, the combination with a sheet metal member U-shaped in cross section, of a tie's length, and provided upon its upper side with transverse channels having overhanging side walls, of a concrete mass filling said member, a pair of wedge-like clamping members lying in each channel and normally engaging under said overhanging walls, respectively, and means for forcing said members in opposite directions in the channel, to grip an interposed rail.

2. The combination with a concrete tie body having its upper and lateral faces protected by an integrally formed metal plate provided above with transverse channels, of a

pair of oppositely turned wedge-like clamps
located in each channel and provided with
portions to extend above and below a rail
base, and a bolt passing, below the place of
5 the rail, from the wider end of one clamp
to the wider end of the companion member,
forcing the members in opposite directions
to clamp an interposed rail base, and a body
of electrically insulating material in position

to insulate the clamp from the rail clamped 10
thereby.

In testimony whereof I affix my signature
in presence of two witnesses.

CHARLES FRANCIS JENKINS.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
