No. 750,345. PATENTED JAN. 26, 1904.

R. D. BURCHILL.

RAILROAD RAIL FASTENER.

APPLICATION FILED JUNE 29, 1903.

NO MODEL.

Fig. 4.

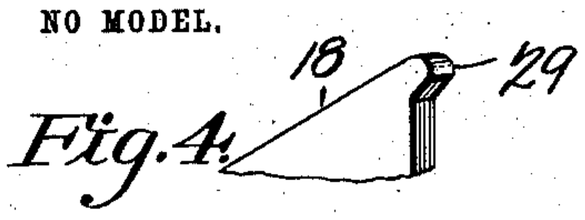

Fig. 5.

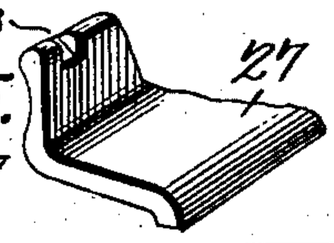

Fig. 1.

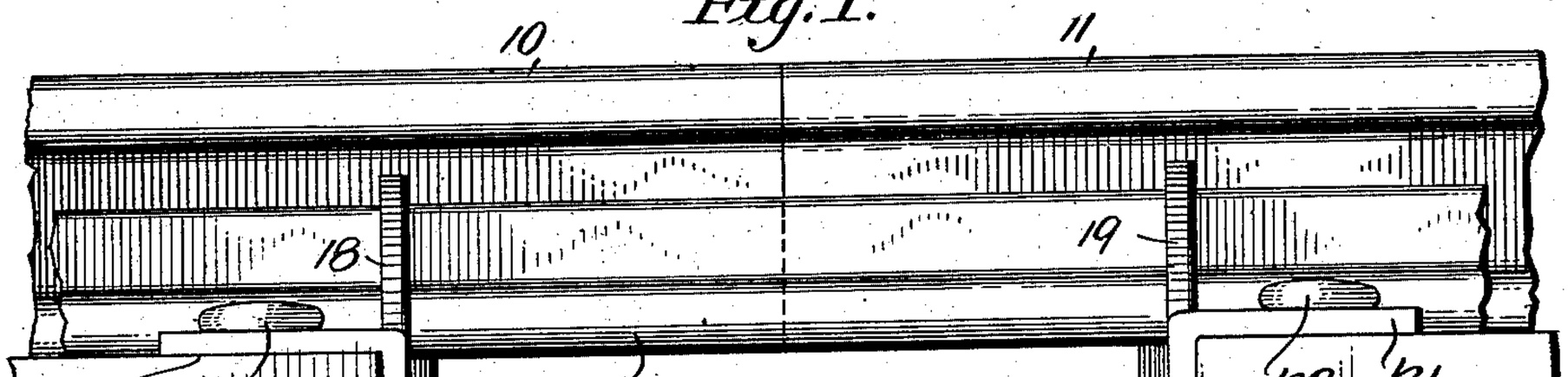

Fig. 2.

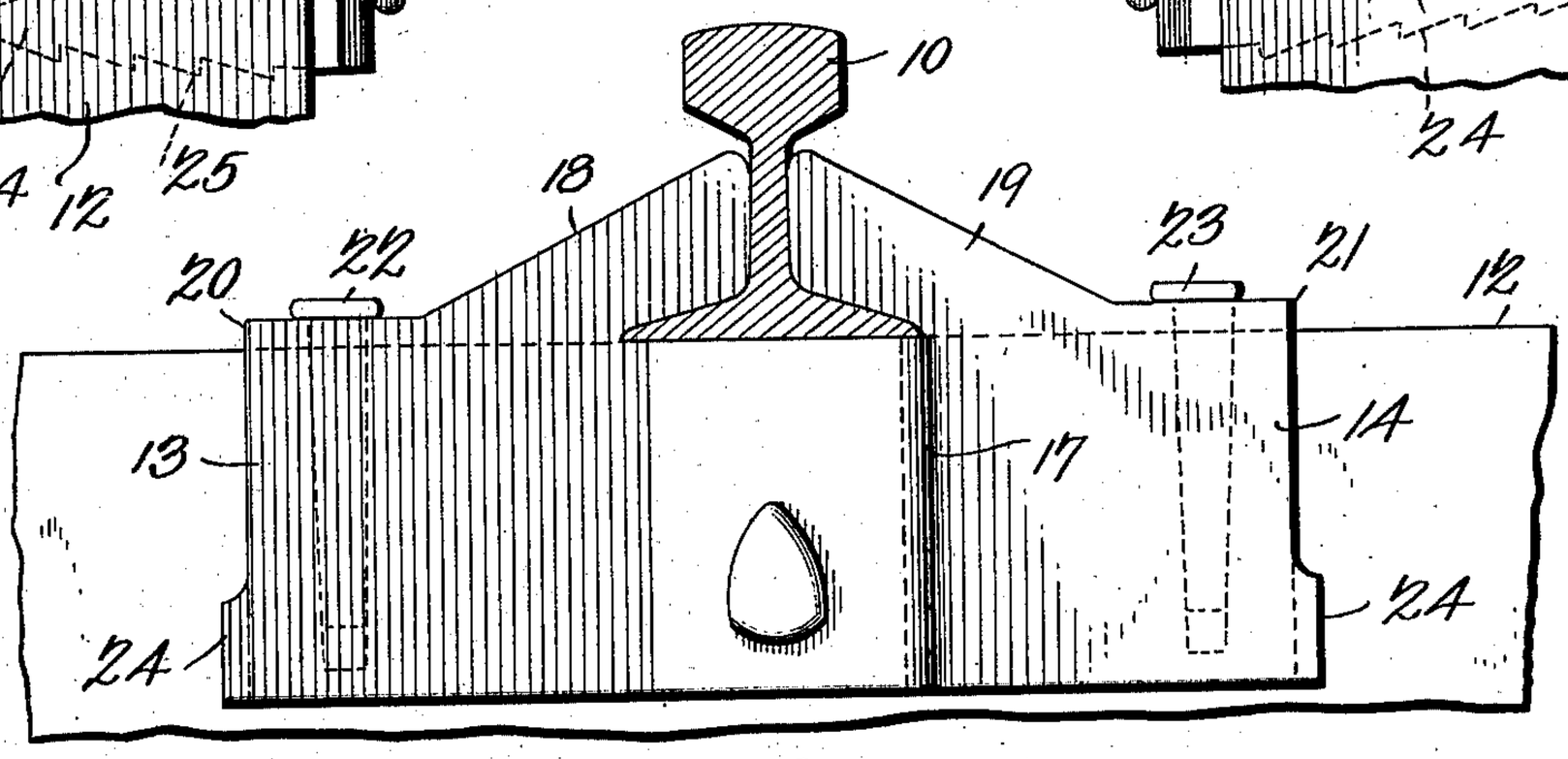

Fig. 3.

Witnesses
E. P. Stewart
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No. 750,345. Patented January 26, 1904.

UNITED STATES PATENT OFFICE.

RICHARD D. BURCHILL, OF TAMPA, FLORIDA.

RAILROAD-RAIL FASTENER.

SPECIFICATION forming part of Letters Patent No. 750,345, dated January 26, 1904.

Application filed June 29, 1903. Serial No. 163,627. (No model.)

To all whom it may concern:

Be it known that I, RICHARD D. BURCHILL, a citizen of the United States, residing at Tampa, in the county of Hillsboro and State of Florida, have invented a new and useful Railroad-Rail Fastener, of which the following is a specification.

This invention relates to devices employed for fastening railway-rails to the ties, and has for its object to simplify and improve devices of this character and produce a fastening means which may be cheaply constructed, readily and quickly applied, and adapted for employment opposite to and in conjunction with the ordinary rail-joint or at intermediate points between the rail ends, as may be required; and the invention consists in certain novel features of construction, as hereinafter shown and described, and specified in the claims.

In the drawings illustrative of the invention, in which corresponding parts are denoted by like designating characters, Figure 1 is a perspective view, and Fig. 2 is a side elevation, of a section of rails and the ties at the rail-joint, illustrating the application at this point. Fig. 3 is a transverse section illustrating the application at intermediate points or between the joints. Figs. 4 and 5 are portions of one of the brace-plates and one of the clamp-plates, illustrating the construction when applied to railway-rail joints.

The improved fastening means may be applied at any portion of the rail and to rails of all sizes and forms and to any form of tie, but is more particularly intended for use in connection with the ordinary forms of rails attached to the usual wooden ties, the rails being represented at 10 11 and the ties at 12.

In Fig. 3 the improved fastener is shown as applied to the rail intermediately of the joints, and in Figs. 1 and 2 the device is shown as applied at the rail-joint.

The improved fastening means consists of opposing lock-plates 13 14, bearing against the side of the tie 12 and extending beneath and bearing against the bottom or base flanges of the rails, the plates overlapping beneath the rail, as shown. At their overlapping points the lock-plates will be provided with registering spike-apertures 15, so that both plates will be secured with the same holding-spike. One of the plates will be provided with an offset 17 at the overlapping portion, so that both plates will engage the face of the tie to the fullest possible extent.

Extending from the lock-plates 13 14 are braces 18 19, conforming to and adapted to bear against the rail from opposite sides, as shown, and the lock-plates will likewise be provided, respectively, with lateral lugs 20 21, bearing upon the upper face of the tie and provided with spike-apertures, by which they may be secured in position by spikes 22 23.

Formed integral with the plates 13 14 are projections in the form of spikes 24, preferably with inclined sides having spaced barbs 25, so that when turned at right angles to the plates and driven into the ties they serve as holding means to materially assist in fastening the plates. By this simple means a very strong and durable fastening means is provided which may be cheaply constructed, quickly and easily applied, and which will support the rails very firmly from either vertical or lateral movement, and thus maintain the integrity of the road-bed. The device will also be applied opposite the usual joints supported by "fish-plates" or clamp-plates 26 27, as shown in Figs. 1 and 2, and when thus applied the members 26 27 will be provided with recesses 28 where the brace members 18 19 are to come, and the latter will be provided with projecting lugs 29 for engagement with the recesses. By this means the clamp-plates are effectually held from longitudinal movement, and when the lock-plates are secured in position by the holding-spikes the necessity for transverse clamp-bolts through the clamp-plates and rails is obviated.

When applied at the "joint" between the rails, two sets of the lock-plates will preferably be employed, one set for each rail end, as shown in Fig. 2.

The lock-plates will preferably be formed from plates of steel and bent to proper shape by suitable machinery.

Having thus described my invention, I claim—

1. A rail-fastener comprising oppositely-

disposed plates bearing against the side of the tie and overlapping beneath the rail and having braces bearing against opposite sides thereof and provided with registering spike-apertures, whereby both plates may be fastened by the same holding-spike, substantially as described.

2. A rail-fastener comprising oppositely-disposed plates extending beneath the rails and provided with braces bearing against opposite sides thereof one of said plates having an offset overlapping the adjacent portion of the other plate, and with registering spike-apertures, whereby both plates will closely engage the tie and be fastened by the same holding-spike, substantially as described.

3. A rail-fastener comprising oppositely-disposed plates bearing against the side of the tie and overlapping beneath the rail and having braces bearing against opposite sides thereof and provided with registering spike-apertures in the overlapping portions and with lateral lugs bearing upon the upper surface of the tie and provided with spike-apertures, substantially as described.

4. In a rail-fastener, the combination with the abutting rail ends having longitudinally-disposed clamp-plates engaging their opposite sides, of oppositely-disposed lock-plates bearing against the side of the tie and overlapping beneath the rail, and having braces bearing against said clamp-plates from opposite sides of the rails and with registering spike-apertures in said overlapping portions, substantially as described.

5. In a rail-fastener, the combination with the abutting rail ends, of longitudinal clamp-plates engaging the rails from opposite sides and overlapping their adjacent ends, and provided with oppositely-disposed recesses, oppositely-disposed transverse lock-plates bearing against the side of the tie and overlapping beneath the rails and having braces bearing against said longitudinal clamp-plates and engaging the recesses therein, and means for fastening said lock-plates to the tie, substantially as described.

6. In a rail-fastener, the combination with the abutting rail ends having longitudinal clamp-plates engaging their opposite sides, of oppositely-disposed lock-plates bearing against the side of the tie and overlapping beneath the rail, and having braces bearing against said clamp-plates from opposite sides of the rails and with lateral lugs bearing upon the tie, and means for fastening said lock-plates to the tie, substantially as described.

7. A rail-fastener comprising a lock-plate bearing against the side of the tie and against the bottom of the rail and formed with a brace bearing against the side thereof, said plate having an integral spike extending therefrom and adapted to be driven into the tie, substantially as described.

8. A rail-fastener comprising a lock-plate bearing against the side of the tie and against the bottom of the rail and formed with a brace bearing against the side thereof and with lateral lugs bearing upon the upper surface of the tie, said plate having an integral spike extending therefrom and adapted to be driven into the tie, substantially as described.

9. A rail-fastener comprising oppositely-disposed plates bearing against the side of the tie and overlapping beneath the rail and having braces bearing against the opposite sides of the rail and provided with registering spike-apertures, in the overlapping parts, said plates having integral spikes extending therefrom and adapted to be driven into the tie, substantially as described.

10. A rail-fastener comprising a lock-plate bearing against the side of the tie and against the bottom of the rail and formed with a brace bearing against the side of the rail, said plate having an integral spike extending therefrom tapering toward its free end and formed with spaced laterally-extending barbs and adapted to be driven into the tie, substantially as described.

11. A rail-fastener comprising a lock-plate bearing against the side of the tie and against the bottom of the rail and formed with a brace bearing against the side of the rail, said plate having an integral spike extending therefrom tapering toward its free end and formed with spaced laterally-extending barbs decreasing in size toward the point of the spike and adapted to be driven into the tie, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

RICHARD D. BURCHILL.

Witnesses:
H. E. HOOKS,
E. M. GREESON.