

R. L. DUNIVANT.

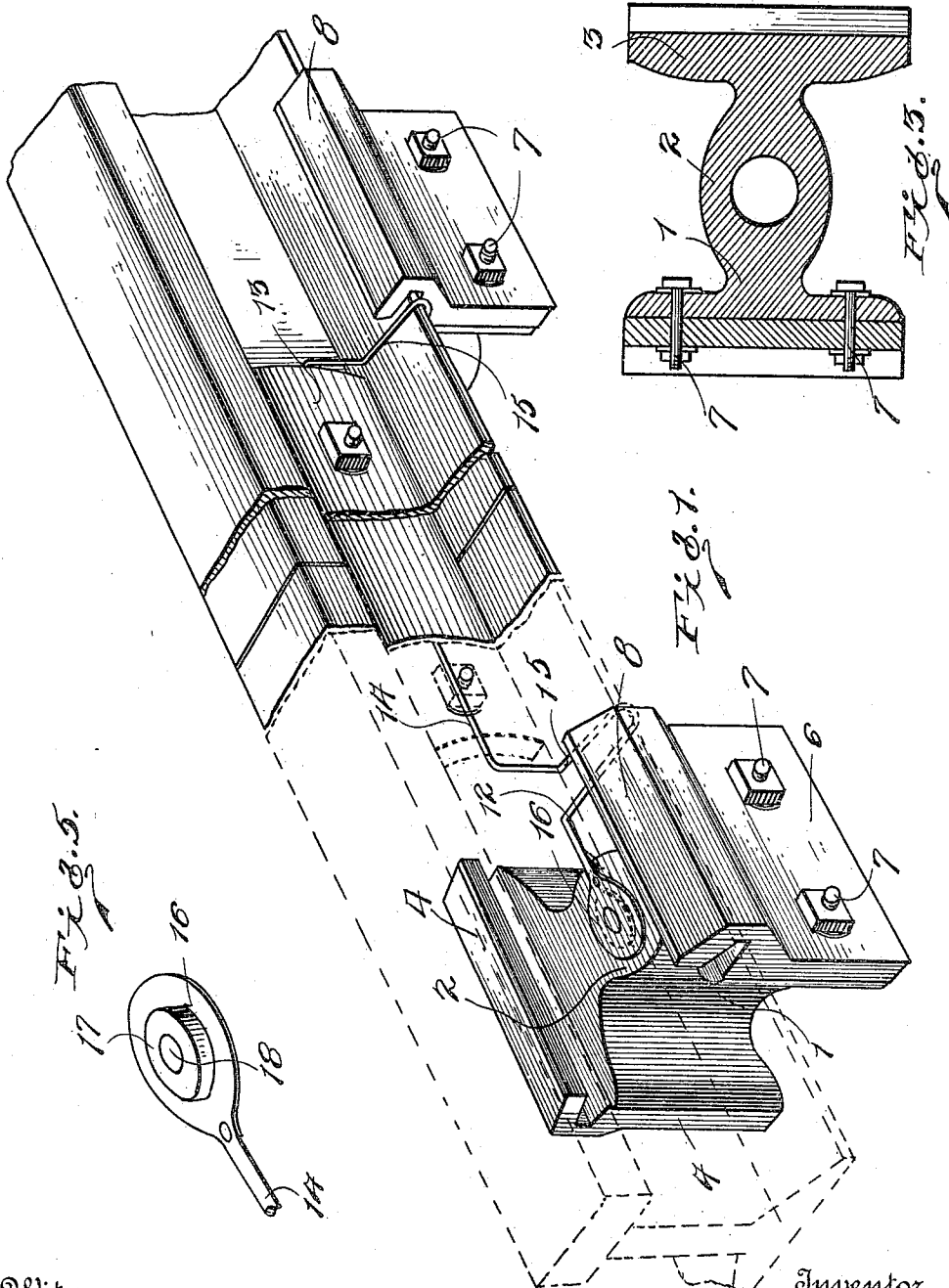
RAIL BOND.

APPLICATION FILED FEB. 7, 1910.

979,448.

Patented Dec. 27, 1910.

2 SHEETS—SHEET 1.



Witnesses

J. M. M.

J. L. M. Cathran

Inventor

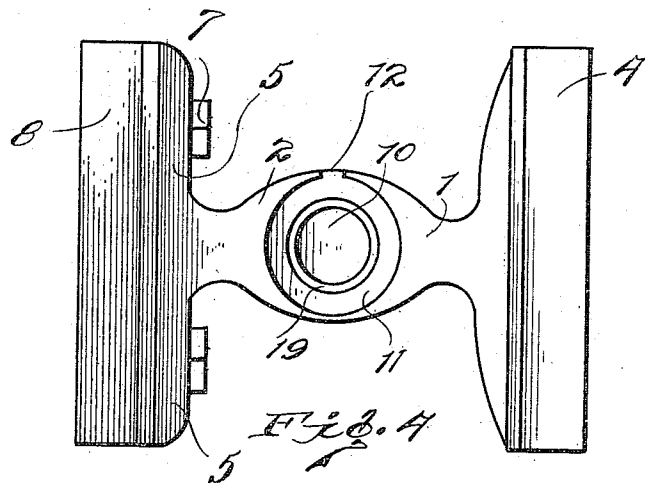
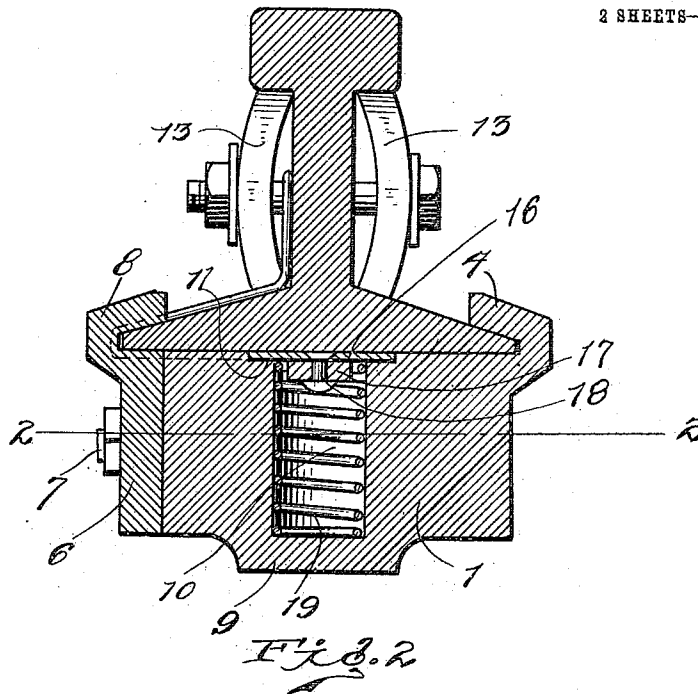
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By E. E. Vrooman,
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ROBERT L. DUNIVANT, OF FORT WORTH, TEXAS.

RAIL-BOND.

979,448.

Specification of Letters Patent. Patented Dec. 27, 1910.

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To all whom it may concern:

Be it known that I, ROBERT L. DUNIVANT, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Rail-Bonds, of which the following is a specification, reference being had therein to the accompanying drawing.

10 In electric railway practice, the necessity of a complete metallic circuit of sufficient capacity from the source of power to the motors on the line and back to said source of power is fully recognized, and since the ordinary fish plate, now very often used, is not sufficient to conduct electricity satisfactorily, from one rail to the other, it is necessary to join the rails electrically.

20 Therefore the most important object of the present invention, is the provision of means, for electrically connecting the rails and also, the provision of means for holding the connecting means in engagement with the rails, at all times.

25 Another object of this invention is the production of a clamp, adapted to carry the means for holding the bond in engagement with the rail.

30 With these and other objects in view this invention relates to certain novel constructions, combinations and arrangements of parts, as will be hereinafter fully described and claimed.

35 In the drawings: Figure 1 is a perspective view of the rails shown in connection with the rail bond. Fig. 2 is a vertical section taken through the clamp and rail showing the means for holding the rail bond in engagement with the rail. Fig. 3 is a transverse section of the clamp taken on line 3—3 of Fig. 2. Fig. 4 is a top plan view of the clamp. Fig. 5 is a perspective view of the portion of the rail bond adapted to form a contact with the rail.

45 Referring to the drawings by numerals 1 designates the body portion of the clamp which is provided with a bulged portion 2, which bulged portion terminates upon one side in a transversely extending portion 3 preferably formed integral with the body portion 1. The transversely extending portion 3 is provided upon the top thereof with a folded portion 4 which is adapted to engage the base of the rail as shown clearly in Fig. 2. The other end of the body portion 1 also terminates in a transversely extend-

ing portion 5 constituting flanges upon each side of the body portion 1. A plate 6 is adapted to engage said transversely extending portion 5 and is held firmly in engagement therewith, by means of bolts 7. The plate 6 is also provided with a folded portion 8 which is adapted to engage the base of the rail.

60 The body portion 1 is provided upon its under surface with a downwardly extending portion 9 which is adapted to support the body portion 1 above the ground. The body portion 1 is provided with a socket 10 which terminates at its upper end in a socket portion 11 constituting a ledge. A notch 12 is formed upon the upper end of said body portion 1 and extends from the outer face of said body portion to the socket portion 11. The notch 12 is so formed as to allow the bond to pass out from the socket 11 and also allow the upper face of the clamp to firmly engage the under face of the rail.

70 The rails are joined, in the usual manner, by means of fish plates, 13, and the wire 14 of the bond is adapted to pass under the fish plate. The wire 13 is bent near its respective ends so as to fit snugly around the base of the rail as shown at 15, and has connected at each end a disk 16 which is adapted to be seated in the socket 11 and a washer 17 is secured to the under surface of the disk by means of a rivet 18 or any other suitable fastening means. A coil spring 19 is seated in the socket 10, and one end of the spring 19 is adapted to fit around the washer 17 for holding the spring against displacement from said disk. It will therefore be obvious that the spring 19 will at all times exert an upward pressure upon the disk 16 and hold the same in engagement with the bottom of the rail, thereby forming a contact with the rail. It will be further obvious that the disk will give with the rail, but at all times will be held firmly in engagement with the rail. By having the contact between the rails made in accordance with the present invention, the contact points will not be likely to become corroded as is the case with many of the bonds used at the present time, since the same will be protected through the medium of the clamp member.

What I claim is:—

1. In an electric railway, the combination with conductors, of a bond, disks carried by the ends of said bond and adapted to en-

gage the under surface of said conductors, and yieldable means engaging said disks for holding the same in engagement with said conductors.

- 5 2. In an electric railway, the combination with conductors, of a bond, clamps carried by said conductors, each clamp provided with a socket formed therein, spring means positioned within each socket, said bond adapted to overhang the sockets, and said spring means adapted to engage said bond for holding the same in engagement with said conductors.
- 10 3. In a device of the class described, the combination with a plurality of rails, of clamps engaging said rails, each clamp provided with a socket, a ledge formed around the upper end of said socket, a bond provided with enlarged ends, a washer carried by each enlarged end, a coil spring carried within said socket and adapted to engage said enlarged end for holding the same in engagement with said rails.
- 15 4. In a device of the class described the combination with a plurality of rails, of clamps secured to said rails, each clamp provided with a centrally located socket, said socket terminating at its upper end in an additional socket constituting a ledge, the upper surface of said clamp provided with a notch extending from the outside thereof to said additional socket constituting a ledge, a bond, said bond provided with enlarged ends, said enlarged ends adapted to be seated in said additional socket and
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- 35

adapted to extend through said notch, and means carried by said clamp and engaging said rails for securing the same in engagement with said rails.

5. A clamp of the class described, comprising a body portion provided with a bulged portion, said body portion provided upon one end with a transversely extending portion, said transversely extending portion provided with a bulged portion near its upper end adapted to engage the base of a rail, a transversely extending portion secured to the other side of said clamp, and a plate adapted to engage said last-mentioned transversely extending portion, means passing through said plate for securing the same to said last-mentioned transversely extending portion, and said plate provided with a bulged portion adapted to engage the base of a rail for securing the clamp firmly in engagement with said rail.

6. A clamp of the class described, comprising a body portion, said body portion provided with a rail engaging portion, a plate, said plate provided with a rail engaging portion, means carried by said body portion and engaging said plate for clamping said plate in engagement with said body portion.

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

ROBERT L. DUNIVANT.

Witnesses:

A. ARNESON,
ESTHER ESSEX.