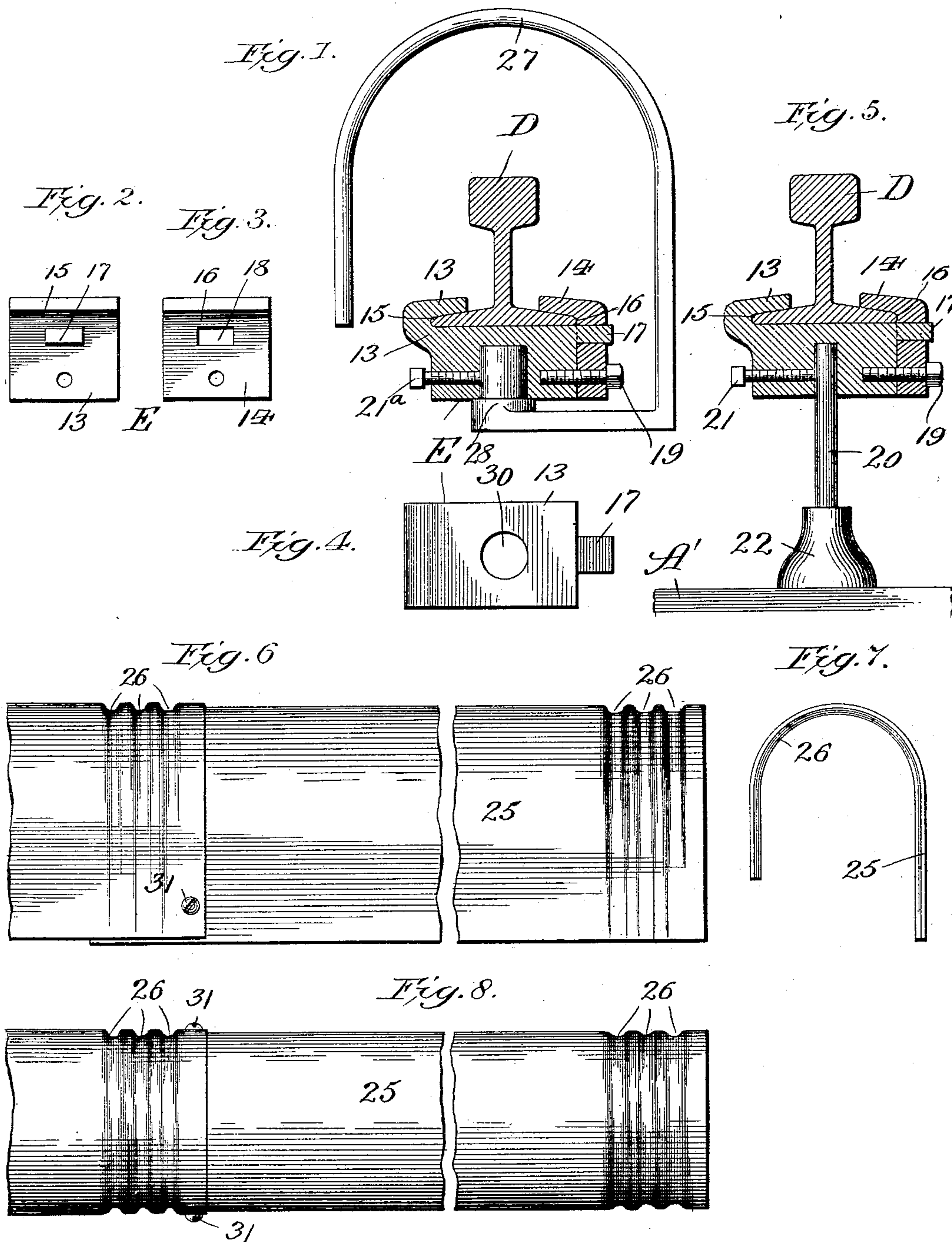


No. 702,986.

Patented June 24, 1902.

P. E. McINTOSH.
ELECTRIC THIRD RAIL.
(Application filed Dec. 22, 1900.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

PETER E. MCINTOSH, OF NEW YORK, N. Y.

ELECTRIC THIRD RAIL.

SPECIFICATION forming part of Letters Patent No. 702,986, dated June 24, 1902.

Application filed December 22, 1900. Serial No. 40,753. (No model.)

To all whom it may concern:

Be it known that I, PETER E. MCINTOSH, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Electric Third Rails; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to electric three-rail systems for railways, and has for its object to provide certain improvements in connection therewith, as will be hereinafter set forth.

In the drawings, Figure 1 is a transverse section through the electric rail and chair parts, an arched yoke for supporting a hood-covering being shown in elevation. Figs. 2 and 3 are detached elevations of the two rail-chair parts. Fig. 4 is a bottom plan of the larger chair part. Fig. 5 is a like transverse section to that of Fig. 1, the arched yoke being omitted and one of the electric-rail-supporting posts shown. Fig. 6 is a side elevation of the hood-covering; Fig. 7, an end elevation. Fig. 8 is a top plan of the same.

A A represent the usual track-rails resting on the cross-ties A'; B, the truck-wheels; C, the truck-frame; C', the car-axle, and D the electric or third rail. The electric rail is seated in the retaining chair-clamps E, consisting of the larger base parts 13 and the smaller side part 14. The larger part 13 of the rail-chair bears against the under side of the rail and extends upwardly at one side thereof and curves inwardly, overlapping the web edge of the rail, and provides a recess-bearing 15 therefor, as more clearly shown in Figs. 1 and 5. The lesser part 14 of the chair bears against the base part and is turned inwardly along the line of the upper edge and overlaps the edge of the rail on the opposite side from the base part and forms a recess-bearing, as shown at 16. The larger base part of the chair is provided with a projecting lug 17, Figs. 1, 2, 4, and 5, which is adapted to loosely engage with the corresponding aperture 18 in the chair part 14. This lug feature, together with the bolts 19, firmly secures the chair parts together and provides a rail-clamp that is well adapted for the purpose and which

may be conveniently assembled or removed from its clamping position.

The chair-clamps and electric rail are supported in position above the road-bed by posts 20, disposed at proper intervals. The upper ends of these posts are inserted in the under side of the chairs, Fig. 5, and stop short therein, these parts being secured together by a set-screw 21. The lower base end 22 of these posts rests on the track-ties, as shown.

The electric rail is protected from exposure by being roofed over with the arched hood-covering 25, provided circumferentially with corrugations 26 in the overlapping engaging ends of the different hood-sections and provides means for more securely uniting the same and permits of ready adjustment with reference to the position of the hood-supports.

The hood-covering is supported in place by a number of yokes 27, disposed at intervals and arranged alternately with reference to the rail-supporting posts 20 and the chair-clamps E. These yokes are of the form shown in Fig. 1 and are provided on the lower end with an anchor-post 28, engaging a socket-aperture 30, Fig. 4, formed in the under side of the chair-clamps. The hood-covering is fastened to the yokes by a number of bolts 29 and the joining-sections of the cover secured together by the screw 31. A set-screw 21^a engages the yoke-post 28 and removably secures the same in its fixed position. The hood-covering prevents accidental contact with the electric rail and protects the same from rain, snow, and atmospheric changes generally.

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

1. In an electric third-rail system, the combination with the electric rail, of a retaining chair-clamp, consisting of a larger base part extending under the rail and upwardly at one side thereof and overlapping the web edge and provided with a projecting lug, and a lesser chair part, removably secured to the larger part and overlapping the rail edge on the opposite side and provided with an aperture with which said lug is adapted to engage in securing the parts together, substantially as described.

2. In an electric third-rail system, the combination with the electric rail, of its retaining-chairs, the series of yokes, and the hood-covering, mounted on and supported by said
5 yokes in position above said rail, substantially as described.

3. In an electric third-rail system, the combination with the electric rail, of its retaining-chairs, the series of yokes, provided on
10 the lower ends with anchoring-posts fixed in said chairs and extending upwardly there-

from and curving over said rails and having its upper end disengaged, and the hood-covering, supported on said yokes, substantially as described.

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

PETER E. MCINTOSH.

Witnesses:

WILLIAM STAMP,
HENRY L. LYNES.