No. 830,233. PATENTED SEPT. 4, 1906.

J. KIRKLAND.

ANCHOR OR SUSTAINING AND SECURING APPLIANCE FOR TRAMWAY AND LIKE RAILS.

APPLICATION FILED DEC. 15, 1905.

Fig. 3.

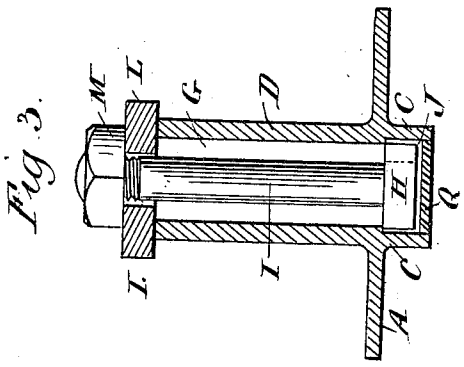


Fig. 4.

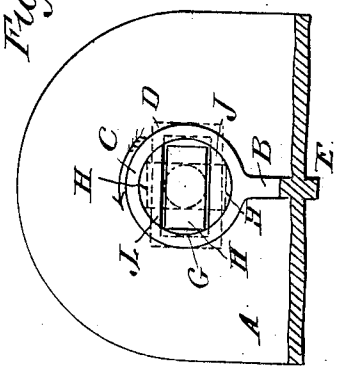


Fig. 1.

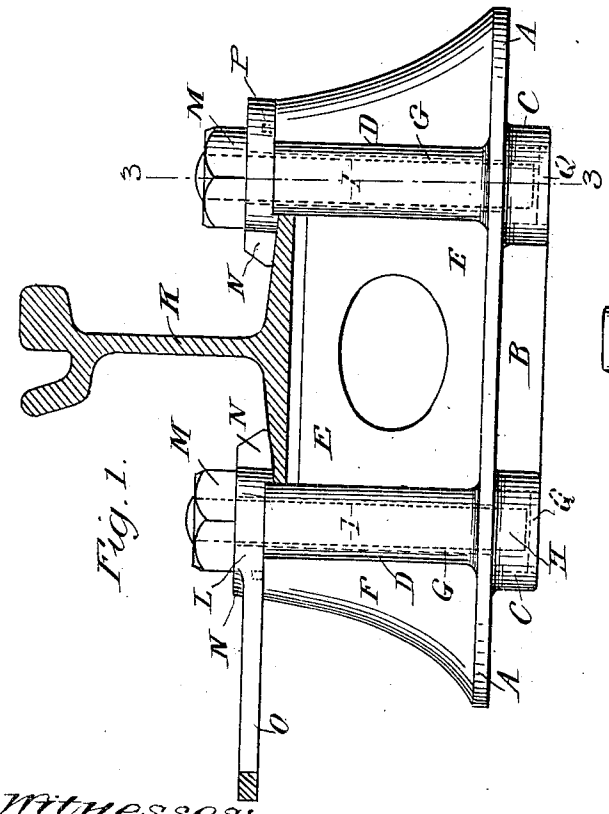
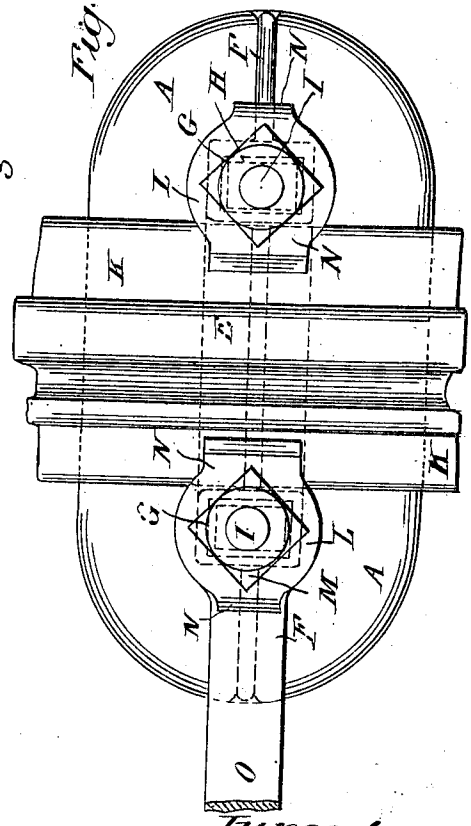


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN KIRKLAND, OF GLASGOW, SCOTLAND.

ANCHOR OR SUSTAINING AND SECURING APPLIANCE FOR TRAMWAY AND LIKE RAILS.

No. 830,233. Specification of Letters Patent. Patented Sept. 4, 1906.

Application filed December 15, 1905. Serial No. 291,857.

To all whom it may concern:

Be it known that I, JOHN KIRKLAND, marine and electrical engineer, of 45 Hope street, in the city of Glasgow, Scotland, have invented certain Improvements in and Relating to Anchors or Sustaining and Securing Appliances for Tramway and Like Rails, of which the following is a specification.

This invention relates to an improved anchor for rails adapted for use in connection with concrete road-beds, and has for its object the provision of an improved anchor adapted when embedded in the concrete to form an effective and strong anchor for the rail and also permitting the rail to be quickly disconnected from the anchor and effectively secured thereto by easily-operable means.

The invention will be more fully described in connection with the accompanying drawings and will be more particularly pointed out and ascertained in and by the appended claims.

In the drawings, Figure 1 is a sectional view of a rail supported and secured to an improved anchor embodying the main features of my invention. Fig. 2 is a plan view of the same. Fig. 3 is a sectional view on line 3 3 of Fig. 1. Fig. 4 is an inverted plan of the parts shown in Fig. 3.

Like characters of reference designate similar parts throughout the different figures of the drawings.

The improved anchor consists, as shown, of a horizontal base-plate A, provided with a vertically-projecting web E, forming a rail-support and provided on its upper end with a flange *e*, upon which the base of the rail directly seats. Said anchor is provided with laterally-disposed parallel columns D, preferably formed integral and extending up to and slightly above the flange *e* of the rail-support, thereby forming lateral engaging flanges for the base-rail K, as clearly shown in Fig. 1. In order to stiffen the anchor and reinforce the columns D, there are provided projecting wing-pieces F, extending upwardly from the base A and joining the columns D, the upper ends of said wing-pieces performing a function which will be hereinafter more fully described. Said columns D preferably extend below the base-plate A at C and are connected and stiffened by the web B. The columns D are provided with a rectangular bore G, extending throughout their length for receiving clamping-bolts I, provided with heads H and nuts M. The heads H preferably being of a width equal to the diameter of the bolt I in one plane and of a greater length in another plane form oblong rectangular retaining portions, the purpose of which will now be described. Near the lower portion of the bore G, preferably in a plane coincident with the base-plate A, there is provided projections J, spaced apart equal to the shorter cross-section of the head H and forming a shoulder. When the bolts are inserted, they are passed downwardly in the columns, head first, past the shoulders J and into the extensions C and are given a quarter-turn, so that the oblong portion of the bolt engages the lower faces of the shoulder J, said shoulders thereby serving as retaining means to lock the bolt from forward movement. The lower open ends of the extensions C may be closed by flat wooden disks Q.

It will be seen from the foregoing that if any breakage occurs including the bolts the same may be very quickly renewed, and the same are also firmly held when in service.

In order to effectively clamp the rail K upon its seat E and between the columns D, I provide non-rotatable clamping members L, adapted to be seated upon the columns D and having overhanging portions N engaging the upper face of the base of rail K. Said clamping members are apertured to receive the bolts I and are clamped in place by nuts M, as clearly shown in Fig. 1. In order to prevent the outermost member L from being rotated while the nut M is turned downwardly on the bolt I, said member is notched to receive a projection P on the adjacent wing-piece F. While the opposite clamping member L may be of the same construction as the one just described, I preferably connect said innermost member L by a bar O with the clamping member of the opposite rail in which construction the rail not only connects the members L, but prevents the same from being rotated when the nut M is turned home on its bolt.

I claim—

1. An improved anchor for rails adapted to be embedded in concrete or the like and comprising a horizontal base-plate, a vertical rail-support projecting upwardly therefrom and forming a seat for the rail, laterally-

disposed columns formed integral with said base-plate and rail-support, said columns extending below the base-plate for receiving heads of bolts and extending above the rail to engage lateral portions of the rail-base, clamping members disposed upon said columns and adapted to engage the upper portion of the rail to clamp the same upon said support, and bolts inserted in said columns and serving to hold said members in clamping position.

2. An improved anchor for rails adapted to be embedded in concrete or the like and comprising a horizontal base-plate, a vertical rail-support projecting upwardly therefrom and forming a seat for the rail, laterally-disposed columns formed integral with said base-plate and rail-support, said columns extending below the base-plate for receiving heads of bolts and extending above the rail to engage lateral portions of the rail-base, clamping members disposed upon said columns and adapted to engage the upper portion of the rail to clamp the same upon said support, bolts inserted in said columns and serving to hold said members in clamping position, and projecting wing-pieces provided with projections adapted to engage recesses in said clamping members to prevent rotation of the same.

3. An improved anchor for rails adapted to be embedded in concrete or the like comprising a horizontal base-plate, a vertical rail-support projecting upwardly therefrom and forming a seat for the rail, laterally-disposed columns extending upwardly from said base adapted to engage lateral portions of the rail, and clamping members disposed upon said columns and adapted to engage the upper portion of the rail-base.

4. An improved anchor for rails adapted to be embedded in concrete or the like comprising a horizontal base-plate, a vertical rail-support projecting upwardly therefrom and forming a seat for the rail, laterally-disposed columns extending upwardly from said base adapted to engage lateral portions of the rail, clamping members disposed upon said columns and adapted to engage the upper portion of the rail-base, and means for maintaining said members in a clamping position.

5. An improved anchor for rails adapted to be embedded in concrete or the like comprising a horizontal base-plate, a vertical rail-support projecting upwardly therefrom and forming a seat for the rail, laterally-disposed columns extending upwardly from said base adapted to engage lateral portions of the rail, clamping members disposed upon said columns and adapted to engage the upper portion of the rail-base, means for maintaining said members in a clamping position, and means for preventing rotation of said clamping members.

6. An improved anchor for rails adapted to be embedded in concrete or the like and comprising a horizontal base-plate, a vertical rail-support projecting upwardly therefrom and forming a seat for the rail, laterally-disposed columns extending upwardly from said base adapted to engage lateral portions of the rail, clamping members disposed upon said columns and adapted to engage the upper portion of the rail-base, wing-pieces reinforcing said columns and supporting said clamping members, and means for maintaining said members in a clamping position.

7. An improved anchor for rails adapted to be embedded in concrete or the like, comprising a horizontal base-plate, a vertical rail-support projecting upwardly therefrom and forming a seat for the rail, laterally-disposed columns, and clamping members disposed upon said columns and adapted to engage the rail.

8. An improved anchor for rails adapted to be embedded in concrete or the like, comprising a horizontal base-plate, a vertical rail-support projecting upwardly therefrom and forming a seat for the rail, laterally-disposed columns, and means associated with said columns for securing the rail to said anchor.

9. An improved anchor for rails adapted to be embedded in concrete or the like, comprising a horizontal base-plate, a vertical rail-support projecting upwardly therefrom and forming a seat for the rail, laterally-disposed columns, clamping members disposed upon said column and adapted to engage the rail, and reinforcing-wings for said columns.

10. An improved anchor for rails adapted to be embedded in concrete or the like, comprising a horizontal base-plate, a vertical rail-support projecting upwardly therefrom and forming a seat for the rail, laterally-disposed columns, means associated with said columns for securing the rail to said anchor, and reinforcing-wings for said columns.

11. An improved anchor for rails adapted to be embedded in concrete or the like, comprising a base-plate, a vertical rail-support projecting upwardly therefrom and forming a seat for the rail, means engaging the rail laterally, and devices for holding the rail upon the seat.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOHN KIRKLAND.

Witnesses:
JOSEPH HENRY PEARSON,
JOHN T. LIDDLE.