(No Model.)

W. N. COLAM.

CABLE TRAMWAY.

No. 395,424. Patented Jan. 1, 1889.

FIG. 1.

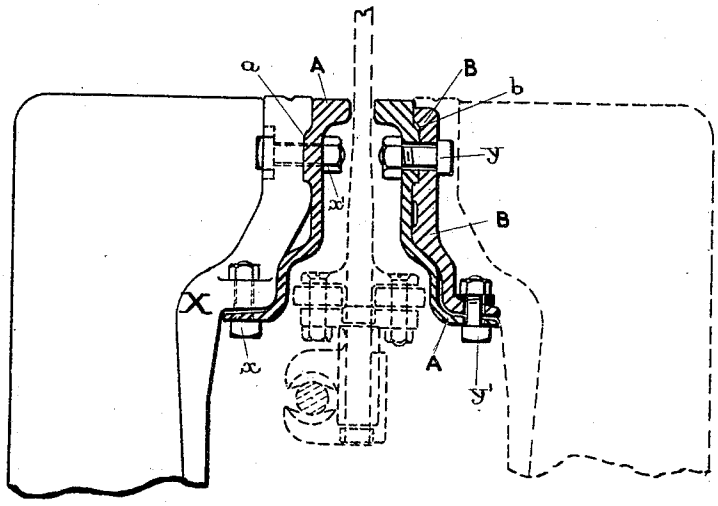
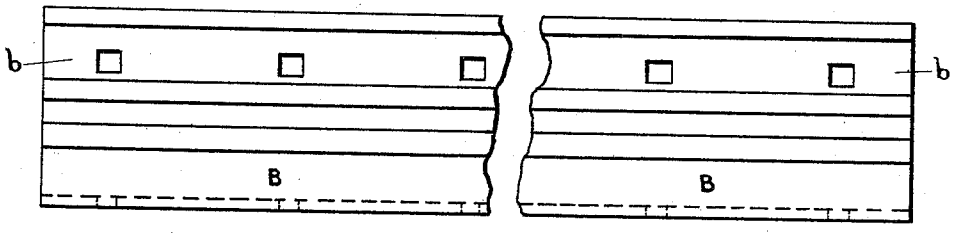


FIG. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM NEWBY COLAM, OF LONDON, COUNTY OF MIDDLESEX, ENGLAND.

CABLE TRAMWAY.

SPECIFICATION forming part of Letters Patent No. 395,424, dated January 1, 1889.

Application filed February 29, 1888. Serial No. 265,754. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM NEWBY COLAM, a subject of the Queen of Great Britain, residing at London, in the county of Middlesex, England, have invented certain new and useful Improvements in Cable Tramways, of which the following is a specification.

My invention relates to an improvement in cable tramways, the objects being, first, to support and fix the slot-rails in a more secure and rigid manner than has hitherto been done, and, secondly, to prevent the shank of the gripper from bearing against the sides of the slot-rails and thereby creating friction when the car is traveling on curves.

With these ends in view my invention consists in an improved section of slot-rail and an improved form of fish-plate therefor.

In the accompanying drawings, Figure 1 is a view in broken cross-section of my improved slot-rail and fish-plate, showing the slot-rail fixed to the frame-work of a cable-way and fish-plate, respectively; and Fig. 2 is a broken view, in side elevation, of a fish-plate.

Throughout the views similar parts are marked with like letters of reference.

The slot-rail A is made of a Z-section with a double bend in its vertical face, so that it is practically of a double-Z section. The top part forms the surface-edge and one edge of the slot for the passage of the gripper-shank. From the top or head the slot-rail extends vertically downward for a convenient distance, when it curves outward and again downward to increase the width of the slot, and thus give increased head-room in the cable-way and also to form a bearing-surface for thrust-rollers mounted on the gripper-shank. The rail then curves outward to form a horizontal flange, by which it is bolted by vertical bolts x to the frame X of the cable-way. In the outer side of the slot-rail—*i. e.*, the opposite side to that forming the slot—is a longitudinal projection, a, which serves to stiffen the rail laterally, and by engaging in recesses in the frames X of the cable-way supports it vertically and relieves the fixing-bolts x' of the shearing strain they would otherwise be subject to. It will be seen that a pair of these slot-rails is used to form the slot, being fixed to the frame-work of the cable-way parallel and opposite to each other, forming the slot for the gripper-shank by and between them.

The fish-plate B is made of a double-L section to coincide with the outside face of the slot-rail A. The bearing-face of the fish-plate that comes in contact with the slot-rail follows the outline thereof as far as the outward bend, where it slightly leaves the rail and curves outward to form the horizontal flange sooner than the rail, so that its horizontal flange does not rest on the horizontal flange of the slot-rail. In the inner face of the fish-plate is formed a longitudinal recess, b, to receive the longitudinal projection a of the slot-rail, and it is also preferably recessed lower down, as shown, so as not to prevent too large a bearing-surface to the slot-rail. Suitable holes are formed in the fish-plate to receive the fish-bolts y and y', the former fixing the fish-plate to the vertical web of the slot-rail through its longitudinal projection a, and the latter to the horizontal flange. By fixing the fish-plate to the slot-rails in this manner each row of bolts automatically locks the other, owing to the lines of tension being at right angles to one another, the spring of the horizontal flange of the fish-plate, which is not in contact with the horizontal flange of the slot-rail, as hereinbefore described, as it is drawn up by the bolts y', most effectively preventing their working loose.

I would have it understood that I do not limit myself to the exact construction hereinbefore described and shown, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. A slot-rail for a cable tramway, provided with a horizontal flange upon one side at the top of it, a double bend in its vertical web, thereby throwing the lower part of said web to one side, and a second horizontal flange at the bottom of the rail upon the opposite side of it from the top flange, substantially as and for the purpose set forth.

2. In a cable tramway, the combination, with the slot-rail hereinbefore described and shown, of the fish-plate adapted to be fixed to the slot-

rail by two rows of bolts whose lines of tension are at right angles to one another, as and for the purpose set forth.

3. In a slot-rail for a cable tramway, the combination of the outward bend of the vertical web to give increased width to the slot, increased head-room in the cable-way, and to provide a bearing-surface for thrust-rollers mounted on the gripper-shank, the lower horizontal flange for fixing the slot-rail, and the longitudinal projection for supporting the same, as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM NEWBY COLAM.

Witnesses:
ROBT. ED. PHILLIPS,
EDWARD C. HAMMOND.