(No Model.)

F. EUPHRAT.

RAILWAY RAIL.

No. 385,701. Patented July 10, 1888.

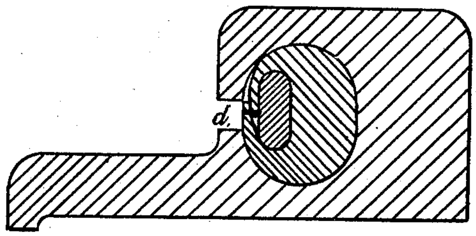

Fig. 1.

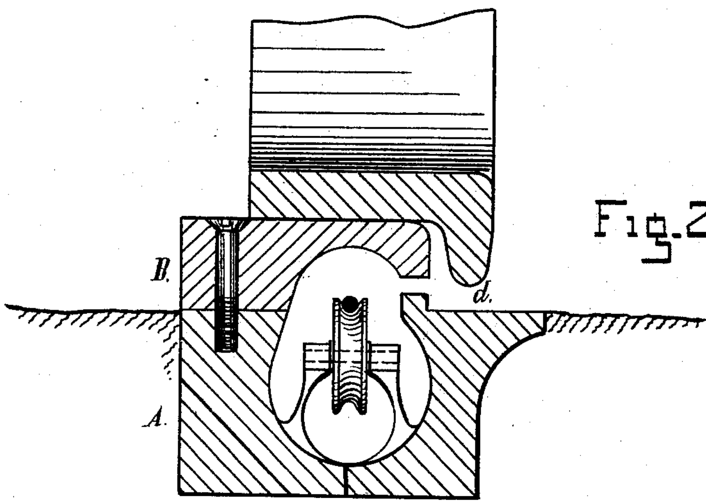

Fig. 2.

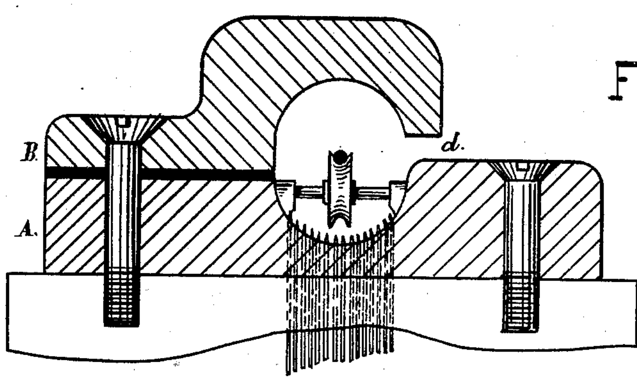

Fig. 3.

WITNESSES.

Max Horwinski.

[illegible]

INVENTOR.

Frederic Euphrat.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

FREDERIC EUPHRAT, OF SAN FRANCISCO, CALIFORNIA.

RAILWAY-RAIL.

SPECIFICATION forming part of Letters Patent No. 385,701, dated July 10, 1888.

Application filed April 20, 1888. Serial No. 271,259. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC EUPHRAT, a citizen of the United States, and a resident of the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Railway-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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to a railway-rail which is provided with a contained longitudinal conduit or tube and a slot communicating therewith, whereby power from a central station can be transmitted through the conduit or the tube in the rail and diverted through the slot to the car which moves on the track.

My improved railway-rail is adapted for conducting a wire, chain, or cable, either traveling or stationary, whether the power used be mechanical or electric, and permitting a shank-connection to be made between the car and the wire, chain, or cable through the slot, all as hereinafter more fully described.

Referring to the accompanying drawings, Figure 1 is a transverse section or end view of my railway-rail, showing the split insulator and electric conductor. Fig. 2 is a transverse section or end view of my rail adapted to carry a moving cable in its contained conduit or tube. Fig. 3 is a transverse section or end view of my rail, showing a modified arrangement for a moving cable and drains leading from the tube.

My improved rail I make in two principal parts, of which the base or lower part, A, may be of any desired size, and may be cast or rolled in one or more parts or pieces. Usually, however, it can be made in a single piece, as represented at Fig. 1.

The upper part, B, forms the tread portion of the rail, and is made in one piece, as shown, and can be bolted, screwed, or otherwise fastened in place upon the base or lower portion A. In the lower or base portion of the rail I make or form in its construction one-half of the conduit or tube C, which extends its entire length, and in the under side of the upper or tread portion A, I form the upper part of the conduit or tube, so that when the two parts are secured together in the proper position a complete conduit or tube is formed directly under the tread of the wheel and extending the full length of the rail. On the side of tube next to the flange of the car-wheel I leave a horizontal narrow slit or opening, *d*, which communicates with the conduit or tube throughout its entire length, for the purpose hereinafter described.

If a moving cable is to be carried inside the conduit or tube, I make this lower part of the rail quite heavy, as shown at Fig. 2, and in that case the greater portion of the conduit or tube will be constructed in this portion of the rail. The pulleys that sustain and carry the cable will then be mounted in the lower part of the rail, so as to carry the cable at about the level of the slot *d*. The shank that carries the grip and connects the car with the moving cable will then extend down from the car and pass horizontally through the slot to the rope or cable. If, however, the road is to be operated by electricity, the conduit or tube need not be made so large. In that case I place the wire-conductor inside of one of my split insulators, as represented, described, and shown in the Letters Patent, No. 368,576, which were issued to me on the 23d day of August, 1887, and this insulator I arrange in the conduit or tube, with its slip or open side opposite and toward the slot *d*, so that the shank which carries the contact-brushes for taking the current from the conductor will pass through the slot and slit insulator. By this arrangement I avoid the necessity of having an open slot in roadway between the rail-tracks, and also the heavy expense incident to the construction of an open tube underneath the roadway. The slot in my tubular rail is entirely out of the way, and, being horizontal, instead of opening directly downward into the conduit or tube, it will not admit the passage of dirt into the tube and is not liable to become obstructed.

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

1. A railway-rail made in two or more parts

or pieces and having a longitudinal conduit or tube extending its entire length, and a slot or passage through the inner portion of the rail connecting with said conduit or tube, substantially as described.

2. A railway-rail having its upper portion or tread made separate from the other portions of the rail and adapted to be secured upon or over a conduit or tube in the lower part of the rail, and having a horizontal slot or open passage leading from its inner face to and connecting with the conduit or slot, substantially as specified.

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

FREDERIC EUPHRAT.

Witnesses:
MAX HORWINSKI,
EDW. G. SALOMON.