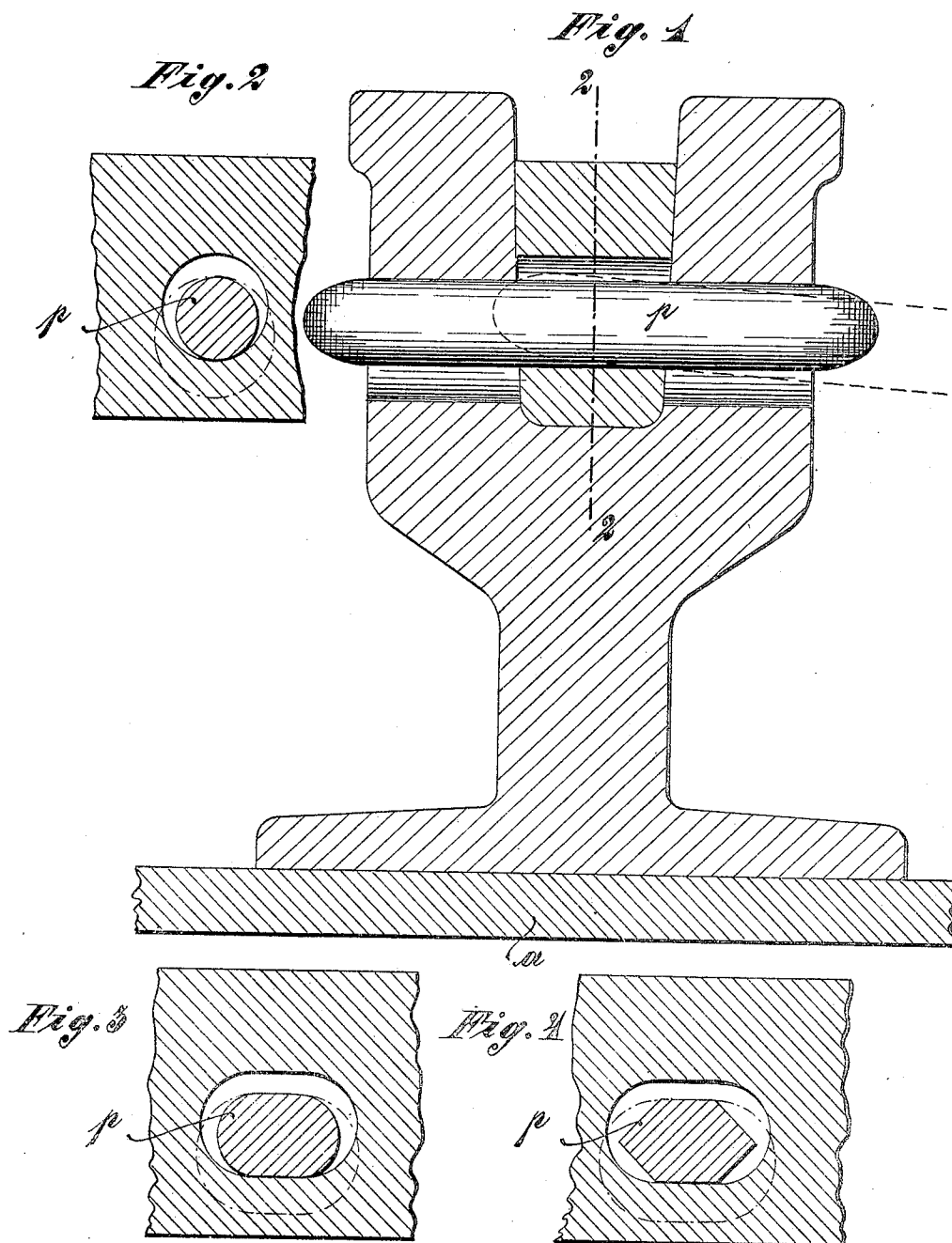


No. 813,387.

PATENTED FEB. 20, 1906.

F. A. LEHMANN,
RAIL CROSSING.

APPLICATION FILED NOV. 10, 1903. RENEWED JAN. 27, 1906.



WITNESSES:

Paul Lange.
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INVENTOR:

Friedrich August Lehmann

UNITED STATES PATENT OFFICE.

FRIEDRICH AUGUST LEHMANN, OF BERLIN, GERMANY.

RAIL-CROSSING.

No. 813,387.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed November 10, 1903. Renewed January 27, 1906. Serial No. 298,232.

To all whom it may concern:

Be it known that I, FRIEDRICH AUGUST LEHMANN, proprietor, residing at 56 Baerwaldstrasse, Berlin, S., in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Rail-Crossings, of which the following is a specification.

The subject of the present invention is an improved construction for the crossings of street-car lines; and it consists more particularly in inserting suitable plates or bars in slots made in the trough of the rails and securing them therein.

In the accompanying drawings, Figure 1 shows a vertical cross-section through a fastening or bolting point. Fig. 2 is a vertical section on line 2 2 of Fig. 1. Fig. 3 is a section similar to Fig. 2 with the fastening-bolts flattened. Fig. 4 is a view of the same section where a hexagonal bolt is used.

The effect of inserting the plates in the troughs of the crossing-rails is that at this point the car runs on the flanges of the wheel-rim. A crossing may, for instance, be laid out and constructed as follows: The lines which run unbroken are laid across sleepers *a*, while the crossing interrupted line lies along these sleepers. It is in the last-named rails that the longer uninterrupted plates or bars are inserted, while the shorter plates are inserted in the uninterrupted rails. The inserted plates are secured in place by means of the bolts *p*, which are suitably tapered.

The holes in the rails through which the bolts pass, as well as those in the inserted plates, are larger in diameter than the bolts used to secure them. Moreover, the slots made in the rails, as well as the plates inserted in them, are made slightly wedge-shaped, so that the bolts driven in from the side will tend to cause the inserted plates to press tightly against the rails.

Where the rails do not cross at right angles and where a bolt cannot be driven in from the side of the acute angle, the bolts are introduced from the obtuse-angle side and when it is desired to change the plates are driven through to the acute-angle side.

In order to prevent shock when the wheel-rim flange reaches and leaves the plate, the latter is sloped down at the ends to the level of the trough of the rail, and care is taken that both wheels of the car commence to run onto the plate simultaneously. All the plates are set at exactly the same level, so that their surface forms the crossing into a perfectly level one.

When the inserted plates are worn out, they can be quickly taken out and replaced by new ones.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

An improved crossing for the rails of street-cars having the usual intersecting rails provided in known manner with a slot in the trough-bottom for the reception of a filling-piece of metal for the flange of the wheel to bear on, comprising in combination horizontal bolts projecting through both walls of the trough as well as the said filling-piece, and horizontal borings within the latter arranged for a small space higher than the corresponding horizontal borings within the walls of the trough, substantially as described and shown and for the purpose set forth.

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

FRIEDRICH AUGUST LEHMANN.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.