No. 688,481. Patented Dec. 10, 1901.

E. OTT & E. B. ENTWISLE.

MEANS FOR REMOVING GUARANTEE PLATES.

(Application filed Apr. 8, 1901.)

(No Model.)

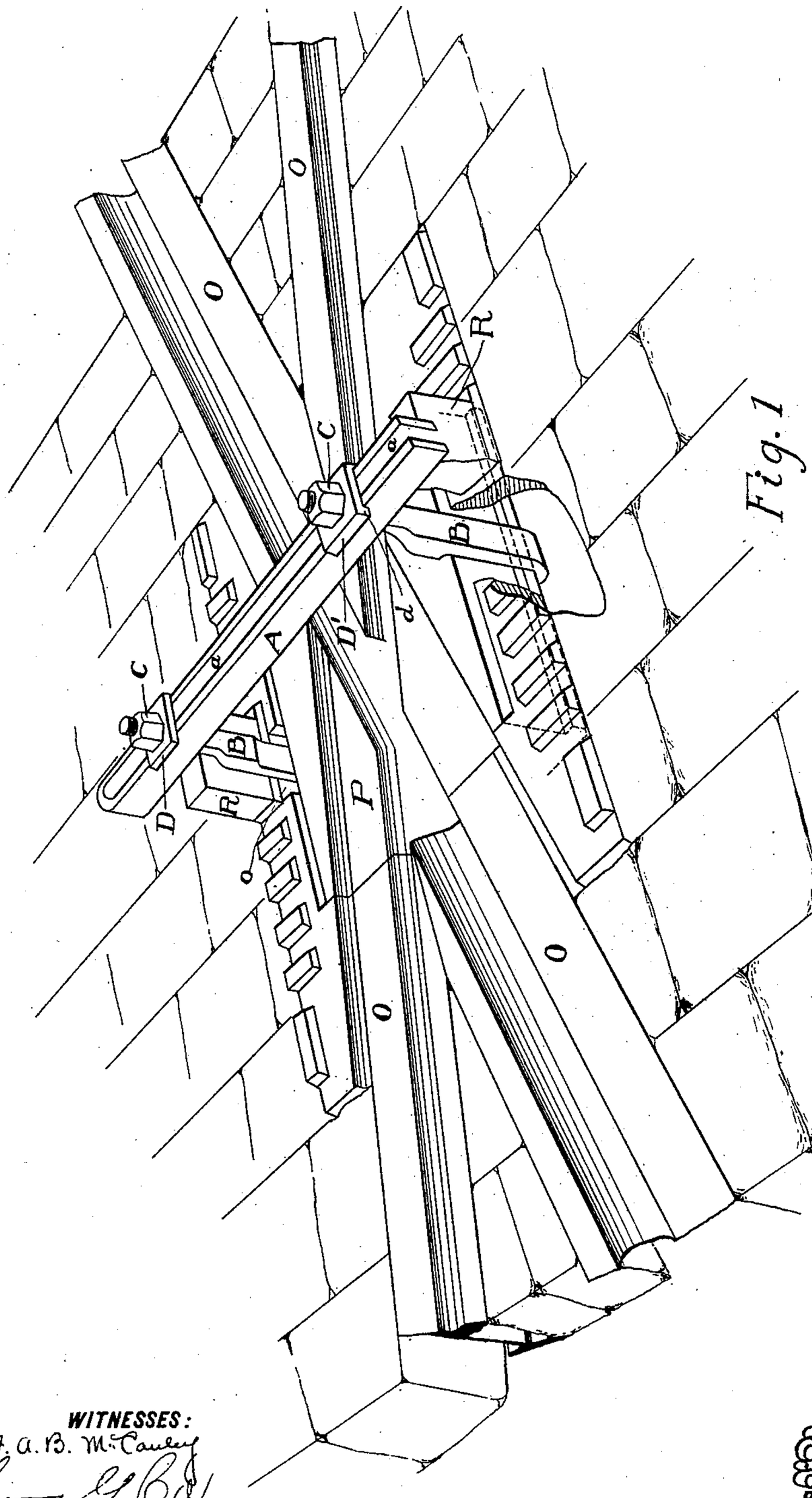

Fig. 1

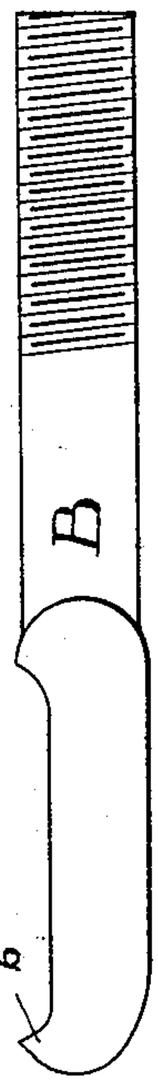

Fig. 2

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UNITED STATES PATENT OFFICE.

EDWARD OTT AND EDWARD B. ENTWISLE, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNORS TO THE LORAIN STEEL COMPANY, A CORPORATION OF PENNSYLVANIA.

MEANS FOR REMOVING GUARANTEE-PLATES.

SPECIFICATION forming part of Letters Patent No. 688,481, dated December 10, 1901.

Application filed April 8, 1901. Serial No. 54,779. (No model.)

To all whom it may concern:

Be it known that we, EDWARD OTT and EDWARD B. ENTWISLE, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Means for Removing Guarantee-Plates, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

Our invention has relation to means for use in the removal of intersection or crossing plates from railway-track structures of the general type shown and claimed in the patents to A. J. Moxham, Nos. 536,734, 536,735, and 540,796. These plates, which are seated and secured in a pocket or recess of the foundation structure, are intended to be removed and replaced by new ones when they become sufficiently faulty from any cause to constitute a defect in the track; and the object of our invention is to provide simple, convenient, and effective means for accomplishing such removal without disturbing the balance of the structure or the adjacent pavement.

A further object is to provide means of the character described so constructed that in operation any part thereof which would obstruct the passage of a car over that portion of the track may be quickly removed to permit the car to pass and then replaced.

With these objects in view our invention consists in the novel construction, arrangement, and combination of parts, all as hereinafter described, and pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view showing a device embodying our invention and also the manner of its use, and Fig. 2 is a detail view of one of the hook-bolts.

The letter A designates a bar of suitable length having a slot *a*, which extends the greater portion of the length of the bar and opens out through one end thereof.

B B designate hook-bolts, each of which has a threaded shank adapted to pass through the slot *a* and receive a nut C upon its upper end portion.

D and D′ are washers which are interposed between the nut C and the upper surface of the bar A. The washer D′ is different from the washer D in that it is formed with depending ribs or flanges *d*, which embrace the lateral faces of the bar, and thus keep the latter from spreading at that end through which the slot *a* extends. Below this threaded shank or bolt B is a comparatively thin flattened portion of greater breadth than thickness, whose lower end terminates in an inwardly-bent hook *b*, preferably pointed or sharpened at its end.

O designates a track structure, and P an intersection or crossing plate seated therein. The particular structure shown is similar in character to the construction shown in the patent to Moxham, No. 540,796, above mentioned, in which a space is left at the two sides and underneath the plate P for the reception of a retaining materal, such as spelter or Babbitt metal, lateral recesses *o* being formed in the sides of the plate-pocket through which such retaining material in a liquid state is poured after the plate has been seated or through which side keys or wedges may be seated, or for both these purposes. To remove the plate with the aid of the device above described the spelter or other retaining material is first wholly or partially removed from the sides of the plate P and from the recesses *o* by cutting or chipping with a chisel or other suitable tool. The hook-bolts B are then inserted at opposite sides of the plate P (shown in Fig. 1) in the recesses *o*, and their hooks *b* are engaged with the side of the plate. This may be done by driving wedges between the plates and the outer walls of the recesses *o*, thus forcing the edges of the hooks inwardly underneath the plate. The manner in which the hooks engage the plate is clearly shown in Fig. 1, in which we have broken out a portion of the track structure and of the adjacent pavement in order to show such engagement. The bar A is laid across the top of the structure upon blocks R with the threaded shanks of the bolts extending up through the slot *a*. The nuts and washers are then applied and by means of a track-wrench or other suitable wrench the nuts are screwed down until the plate is lifted wholly or partially

from its seat. In some structures the under side of the plate or the bottom of the plate-pocket is provided opposite the recesses *o* with a recess or depression made for the especial purpose of facilitating insertion of a pry-bar or other implement, such recess or depression being filled with clay for the purpose of excluding spelter and which may be readily chipped out. With such structures the hooks *b* can be made to enter these recesses or depressions and may accordingly be made thicker and heavier than those shown in the drawings.

The slot *a* in the bar A permits lateral adjustment of the bolts therein for the purpose of adapting them to plates of different widths. The slot *a* might be closed at both ends; but we preferably leave it open at one end, as above described, in order that whenever it is necessary to permit a car to pass over the structure O, after the device is applied to the plate, the bar can be quickly removed by endwise movement by simply slacking the nuts C. If the slot is closed at both ends, it is of course necessary to entirely remove both nuts and washers.

It is obvious that changes may be made in the details of construction herein shown and described without departing from our invention.

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

1. A device for removing crossing-plates from track structures, comprising a bar, depending hooks carried thereby and adapted to engage the under side of the plate to be removed at opposite sides thereof, and lifting-nuts engaging threaded portions of such hooks and having a downward bearing on the said bar, said hooks having shanks of sufficient length to enable the bar to be supported above and clear of the upper surface of the plate.

2. A device for removing crossing-plates from track structures, consisting of a bar adapted to lie across the structure, depending hooks carried by said bar and arranged to engage the under side of said plate through recesses in the track structure, and nuts arranged to exert a lifting action on the said hooks, said hooks having shanks of sufficient length to enable the bar to be supported above and clear of the upper surface of the plate.

3. A device for removing crossing-plates from track structures, consisting of a slotted bar adapted to lie across the structure, hook-bolts arranged to engage the under side of the plate to be removed through recesses in the said structure and having threaded shanks extending through the said slot and laterally adjustable therein, and lifting-nuts on the said shanks, the shanks being of sufficient length to enable the bar to be supported above and clear of the upper surface of the plate to be removed.

4. A device for removing crossing-plates from track structures, consisting of a bar adapted to lie across the track structure, a pair of laterally-adjustable hooks carried by said bar and movable vertically therethrough, and lifting-nuts on the shanks of said hooks having a downward bearing against the said bar, said hooks having shanks of sufficient length to enable the bar to be supported above and clear of the upper surface of the plate.

5. A device for removing crossing-plates from track structures, consisting of a bar adapted to lie across the track structure, a pair of laterally-adjustable hooks carried by said bar and movable vertically therethrough, lifting-nuts on the shanks of said hooks having a downward bearing against the said bar, and means for effecting the removal of the bar from the said hooks by endwise movement.

6. A device for removing crossing-plates from track structures, consisting of a bar having a longitudinal slot extending through one end thereof, hook-bolts having threaded shanks extending vertically through the said slot and laterally adjustable therein, and lifting-nuts on the said shanks having a downward bearing on said bar.

7. A device for removing crossing-plates from track structures, consisting of a transverse bar having a longitudinal slot extending through one end thereof, hook-bolts having threaded shanks extending vertically through said slot and laterally adjustable therein, lifting-nuts on the said shanks, and washers interposed between the said nuts and the upper surface of the bar, one of such washers having flanges which embrace the sides of the bar at its open end.

In testimony whereof we have affixed our signatures in presence of two witnesses.

EDWARD OTT.
EDWARD B. ENTWISLE.

Witnesses:
CORA G. COX,
H. W. SMITH.