

No. 685,752.

Patented Nov. 5, 1901.

E. B. ENTWISLE.
RAILWAY TRACK STRUCTURE.

(Application filed Apr. 8, 1901.)

(No Model.)

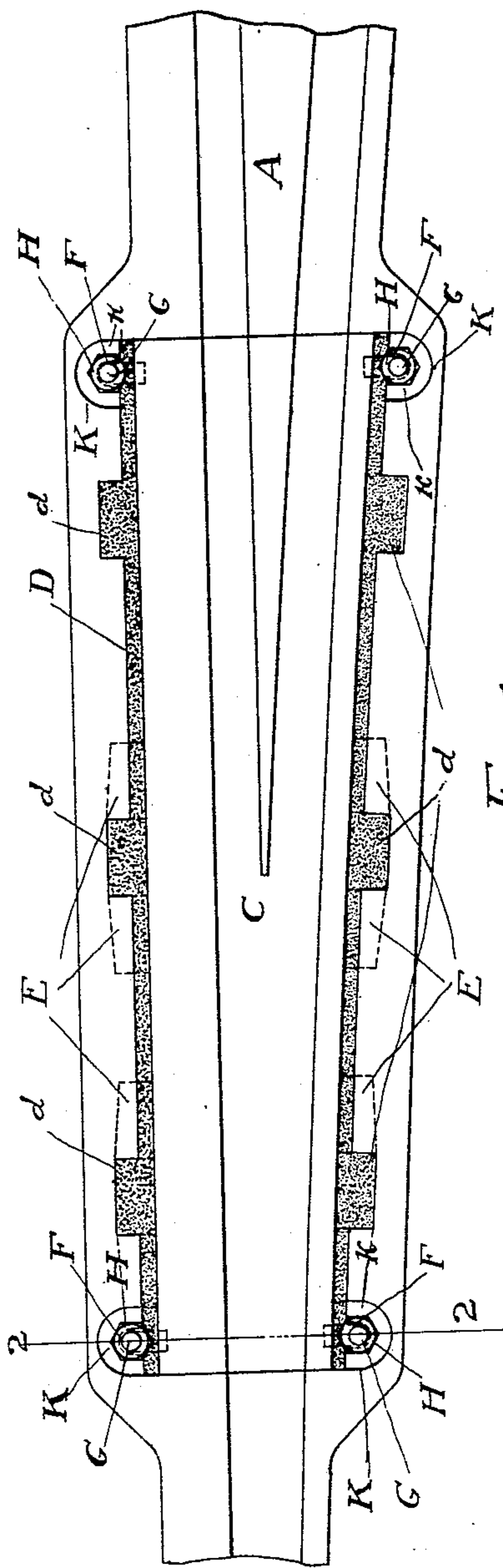


Fig. 1

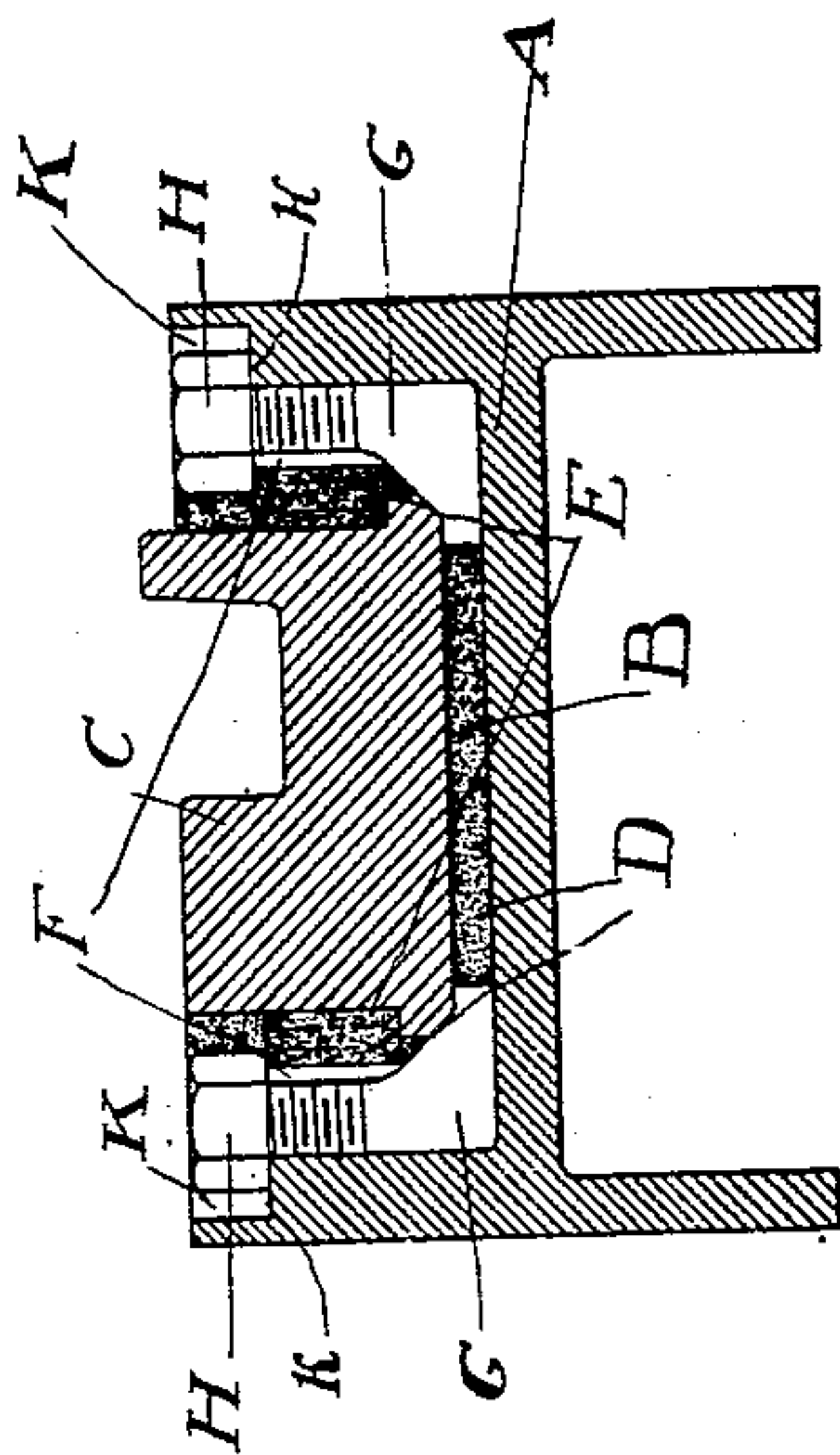


Fig. 2

WITNESSES:
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UNITED STATES PATENT OFFICE.

EDWARD B. ENTWISLE, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE
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RAILWAY-TRACK STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 685,752, dated November 5, 1901.

Application filed April 8, 1901. Serial No. 54,772. (No model.)

To all whom it may concern:

Be it known that I, EDWARD B. ENTWISLE, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Railway-Track Structures, 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.

My invention relates to railway-track structures of the type shown in the patents to A. J. Moxham, Nos. 536,734, 536,735, and 540,796, in which intersection or crossing plates are removably seated in the foundation structure. These plates when becoming worn or defective from any cause are designed to be removed and replaced by new ones; and the object of my invention is to provide a structure with means of simple and effective character, forming a part thereof, for facilitating such removal.

With this object in view my invention consists in the combination, with a track structure having a pocket or recess therein and a plate seated and removably secured in said pocket or recess, of one or more lifting devices seated in the walls of the pocket or recess and engaging the said plate, together with means for actuating the said device or devices, whereby the plate may be raised or partially raised from its seat.

My invention also consists in the novel construction, arrangement, and combination of parts, all as hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a plan view of a track structure embodying my invention, and Fig. 2 is a section on the line 2 2 of Fig. 1.

The letter A designates a track structure of the type above referred to, the particular construction illustrated being a mate, the rail members of which are secured together by a central body of cast-iron formed with a pocket or recess B, in which is seated a crossing or intersection plate C. This plate is shown as being secured in place by means of a retaining material D, such as spelter or Babbitt metal, which fills the spaces left at the side of the plate and also underneath the same, said material being introduced while in

a liquid state. Side keys or wedges E, as indicated in dotted lines in Fig. 1, may also be driven between the sides of the plate and the walls of the pocket by being introduced through recesses *d*. The side walls of the recess or pocket B are also, according to my invention, provided with the slotted bolt-seats F to receive lifting-bolts G, having inwardly-projecting lugs or extensions at their lower ends extending underneath the plate. These bolts are provided with threaded shanks to receive nuts H, which have a downward bearing on the bottom wall *k* of a recess or depression K, in which the nut is seated in the structure. The slotted bolt-seats F may be cored in the foundation structure at the time the central body is cast about the rails. The lifting-bolts are seated prior to the insertion of the plate, and the latter is then placed in the pocket, resting upon the inward projections of the bolts, as clearly shown in Fig. 2. The side keys or wedges are then driven and the retaining material poured in place. To protect the threads of the bolts from the injurious action of the hot spelter, they may be wound or wrapped with some material which will be substantially burned away by the hot spelter, but yet will act to protect the threads until the spelter has become sufficiently chilled or set to keep it from injuring the threads. When it is necessary to remove the plate, the spelter is removed sufficiently by cutting or chipping it to at least allow the wedges to be loosened and withdrawn. By screwing the nuts H downwardly the bolts will be caused to lift the plate wholly or partially from its seat. In the particular construction shown in the drawings I have shown four of these bolts seated at opposite sides of the plate, one near each corner thereof. The bolts also form means by which the plate can be accurately leveled with respect to the track-surface of the structure.

I do not desire to limit myself to the exact construction which I have herein shown and described, it being obvious that changes may be made in the details thereof without departing from the spirit and scope of my invention.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. The combination with a track structure having a pocket or recess therein, and a plate seated and removably secured in said pocket or recess, of a lifting device seated in the wall of the pocket or recess and engaging the said plate, and means for actuating said device.
2. The combination with a track structure having a pocket or recess therein, and a plate seated and removably secured in said pocket or recess, of bolts seated in the walls of said pocket or recess and having a lifting engagement with the said plate, and means for actuating the said bolts.
3. The combination with a track structure having a pocket or recess therein, and a plate seated and removably secured in said pocket or recess, lifting-bolts seated in the walls of the pocket or recess and engaging said plate at opposite sides thereof, and nuts for actuating said bolts.

4. The combination with a track structure having a pocket or recess therein whose walls are formed with slotted bolt-seats, and a plate removably secured in said pocket, of bolts engaged with said seats and having inwardly-turned lower end portions which extend underneath the plate, and nuts seated on the threaded upper end of said bolts and having a downward bearing on the track structure.

5. In a track structure, the combination with a removable crossing or intersection plate; of lifting and leveling bolts seated in the walls of said structure and engaging the said plate, and nuts for actuating the said bolts.

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

EDWARD B. ENTWISLE.

Witnesses:

CORA G. COX,
H. W. SMITH.