No. 618,351. Patented Jan. 24, 1899.

E. H. HINER.

RAILROAD CROSSING.

(Application filed July 12, 1898.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1

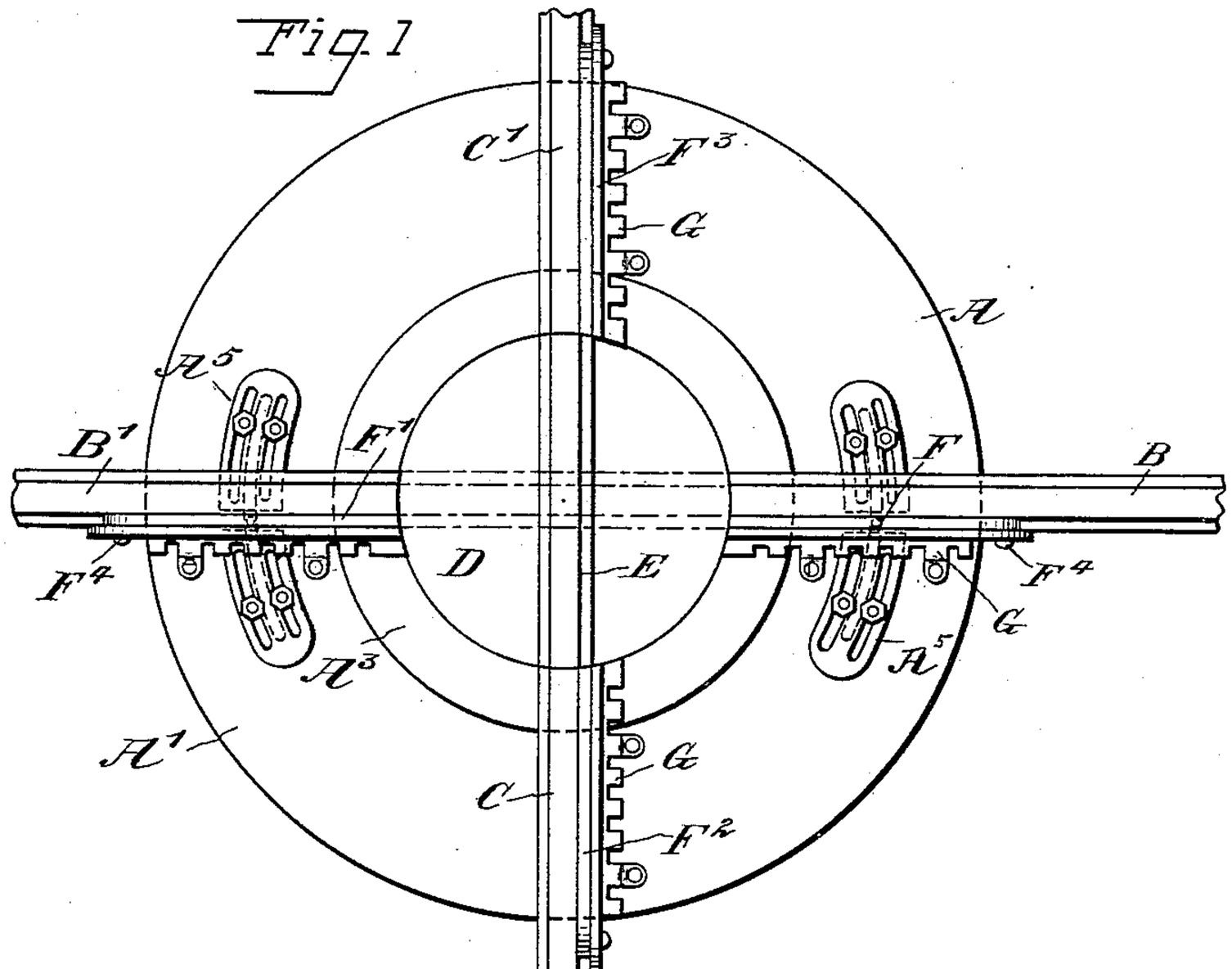


Fig. 2

WITNESSES:

J. A. Brophy

Rev. J. Hoster

INVENTOR

E. H. Hiner.

BY

ATTORNEYS.

No. 618,351. Patented Jan. 24, 1899.

E. H. HINER.

RAILROAD CROSSING.

(Application filed July 12, 1898.)

(No Model.) 2 Sheets—Sheet 2.

Fig 3

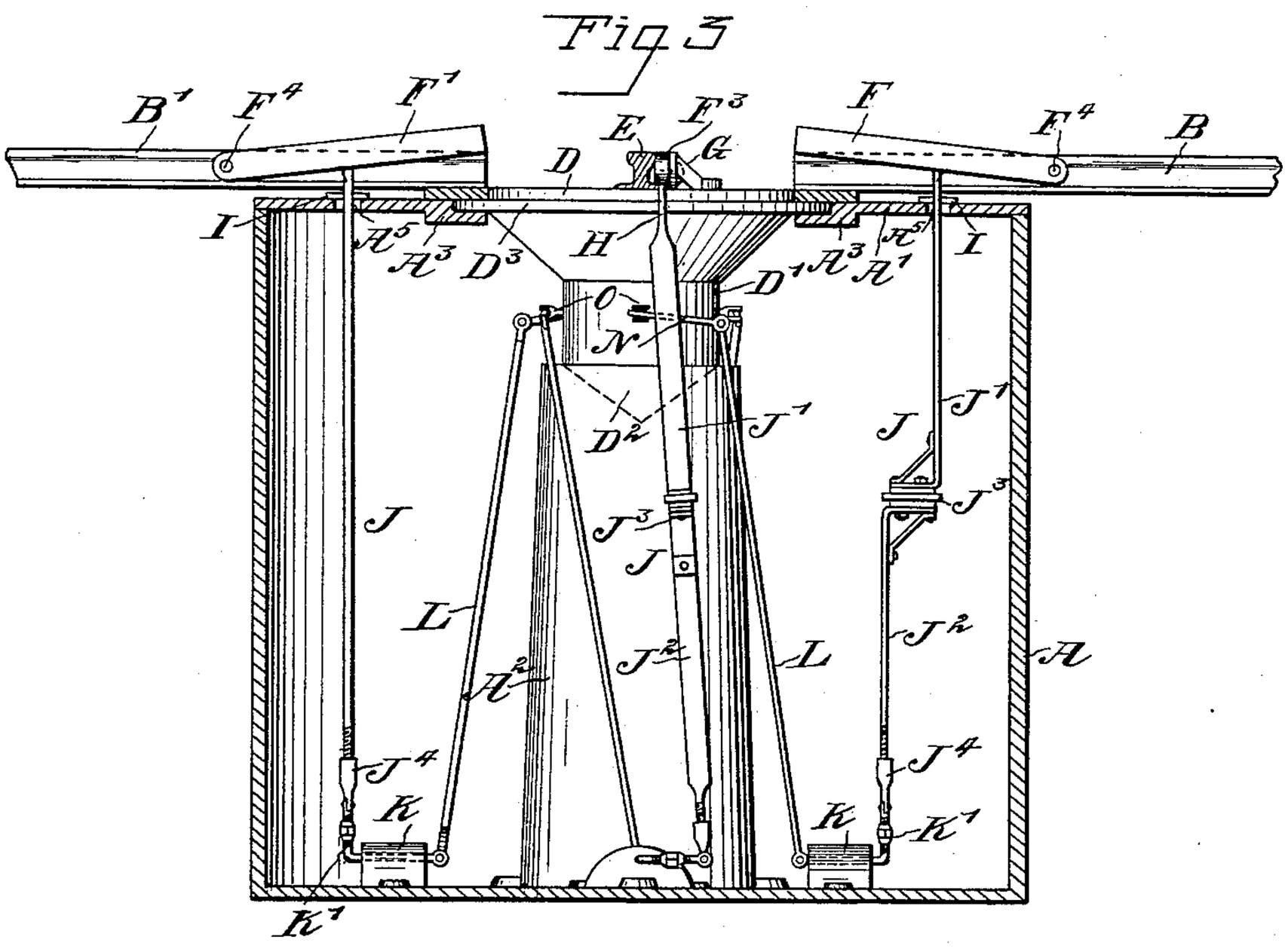


Fig 4

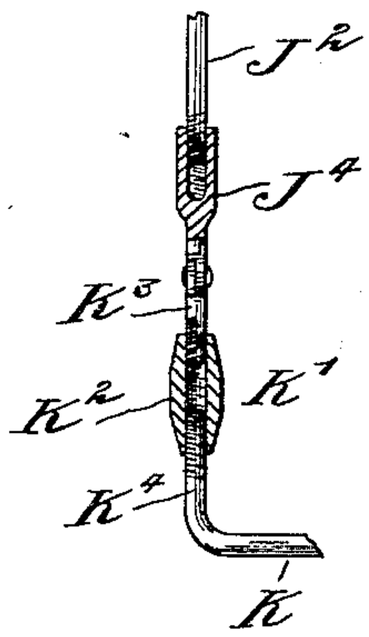
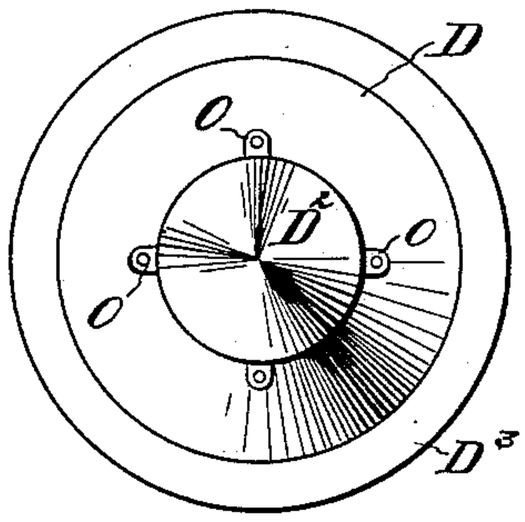


Fig 5



WITNESSES:

J. A. Bopley

Thos. G. Hoskins

INVENTOR

E. H. Hiner.

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ERNEST HIRAM HINER, OF ROGERS, ARKANSAS.

RAILROAD-CROSSING.

SPECIFICATION forming part of Letters Patent No. 618,351, dated January 24, 1899.

Application filed July 12, 1898. Serial No. 685,769. (No model.)

To all whom it may concern:

Be it known that I, ERNEST HIRAM HINER, of Rogers, in the county of Benton and State of Arkansas, have invented a new and Improved Railroad-Crossing, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved railroad-crossing arranged to automatically render the rails continuous by the action of an approaching train or car on either line.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement. Fig. 2 is a side elevation of the same. Fig. 3 is a sectional side elevation of the same. Fig. 4 is an enlarged sectional side elevation of the crank-shaft and link connection, and Fig. 5 is an inverted plan view of a turn-table.

The railroad-crossing is provided with a casing A at each intersection of the track-rails B B′ and C C′, the ends of the rails extending over part of the top A′ of the casing to the peripheral edge of a turn-table D, carrying a diametrically-arranged rail-section E, adapted to connect with either the rails B B′ or the rails C C′ to render the same continuous, as will be readily understood by reference to the dotted lines and full lines in Fig. 1. The turn-table D is provided on its under side with a shank D′, terminating in a pointed end D^2, mounted to turn in a step A^2, forming part of the casing A and extending in the center thereof, as is plainly illustrated in the drawings. The turn-table D is provided below its top surface with an annular flange D^3, mounted to turn in a suitable annular guide-way A^3, formed in the top A′ of the casing.

The turn-table D, with its rail-section E, receives a quarter-turn by a mechanism controlled by the approaching train or car coming over either line, and for this purpose arms F F′ F^2 F^3 are provided on the outside of the rails B B′ and C C′, respectively, each arm being hinged at F^4 to a bearing G, bolted or otherwise fastened to the top A′ of the casing, the bearing serving as a strengthening-brace for each of the arms. Each bearing G is formed at its under side with openings, so that any sand, gravel, or other impurities working under the arms F F′ F^2 F^3 are readily pressed out of the same through the openings upon the downward swinging of the arms.

Two of the arms (as shown in the drawings, F F′) extend with their free ends up above the tops of the rails B B′, while the other two arms (F^2 F^3) are at this time in a lowermost position—that is, with their top surfaces flush with the top surfaces of the rails C C′. In this position of the arms the rail-section E connects the rails C and C′ with each other to render the same continuous, and when a train or car now passes over the rails B or B′ then the car-wheels depress either of the arms F or F′, and in doing so the turn-table D receives a quarter-turn to bring the rail-section E in alinement with the rails B and B′ to render them continuous.

The connections between the arms F F′ and F^2 F^3 with the turn-table D for bringing about a quarter-turn of the latter when one of the arms is depressed by the wheel of the car are alike in construction, so that it suffices to describe but one in detail.

The under side of each arm F F′ F^2 F^3 engages a link J, fitted to slide in a plate I, held adjustably on the top A′ of the casing, the link extending through an elongated aperture A^5 in the said top A′. (See Fig. 3.) The link J is connected with the arm K′ of a crank-shaft K, journaled in suitable bearings attached to the bottom of the casing A. The crank-shaft K is connected by an upwardly-extending link L with a link N, arranged transversely and pivotally connected with a stud O, extending radially from the shank D′ of the turn-table D. Now it is evident that when an arm F is pressed downward by the passage of a car-wheel over the arm, as above explained, then a downward movement is given to the corresponding link J, so that the crank-shaft K is turned and the links L and N exert a pull on the stud O to turn the shank D′ of the turn-table D and change the position of the rail-section E, as above explained. The link J, as indicated in Fig. 3, is prefer-

ably made in sections J′ J², with interposed plates J³ for lengthening or shortening the link to properly fit the device to any crossing. The section J² is also provided at its lower end with a screw-head J⁴, having pivotal connection with the crank-arm K, likewise made for lengthening and shortening, as indicated in Fig. 4.

A turnbuckle K² connects the two ends K³ K⁴ with each other, and the operator upon turning said turnbuckle can lengthen or shorten the crank-arm to suit the conditions of the crossing.

The several crank-shafts are so arranged that when one of the arms F or F′ is depressed the other swings downward with it and the two arms F² F³ swing upward, and when either of the arms F² F³ is depressed by the action of a car-wheel passing over the same then the other arms F F′ swing upward back to the position shown in Fig. 3.

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

1. In a railroad, two intersecting rails interrupted at the point of intersection, a turn-table mounted to turn about an axis which passes through said point of intersection, said turn-table carrying a rail-section adapted to register with and fill the gap between the alining sections of either rail, a depressible arm located adjacent to one of the stationary rail-sections, a stationary bearing, a crank-shaft journaled therein, a connection from the depressible arm to the crank of said shaft, the crank being extensible to regulate the extent of the angular movement of the shaft, and an operative connection between the shaft and the turn-table.

2. In a railroad, two intersecting rails interrupted at the point of intersection, a turn-table mounted to turn about an axis which passes through said point of intersection, said turn-table carrying a rail-section adapted to register with and fill the gap between the alining sections of either rail, a depressible arm located adjacent to one of the stationary rail-sections, a stationary bearing, a crank-shaft journaled therein, a connection from the depressible arm to the crank of the shaft, said connection being longitudinally extensible to vary the normal position of the shaft, and an operative connection between the shaft and the turn-table.

3. A rail connection adapted for use at the points of intersection of railroad-rails, consisting of a casing having a bearing and slots concentric with the axis of said bearing, depressible arms extending above said slots and constructed for movable connection with a suitable support, a turn-table journaled in said bearing and carrying a rail-section, and an operative connection between the turn-table and said arms, said connection comprising parts extending through the slots of the casing and adjustable, with the said arms, to different points of the slots, whereby the angle between the said arms may be varied to correspond to the angle of the intersecting rails to be connected by said turn-table rail.

4. A railroad-crossing, provided with an arm adjacent to a rail and adapted to be moved downward by a wheel passing over the arm, and a longitudinally-extending bearing on which said arm is pivoted, the bearing forming a guide or brace for the arm, said bearing being also formed with transverse apertures near its lower end for the passage of sand and other impurities, substantially as shown and described.

5. In a railroad, two intersecting rails interrupted at the point of intersection, a turn-table mounted to turn about an axis which passes through said point of intersection, said turn-table carrying a rail-section adapted to register with and fill the gap between the alining sections of either rail, a depressible arm located adjacent to one of the stationary rail-sections, an operative connection between said arm and the turn-table, and an adjusting device effecting said connection, for varying the extent of the angular movement of the turn-table caused by the depression of said arm.

6. A connection for intersecting interrupted railroad-rails, consisting of a turn-table, arms constructed for a movable connection with a suitable support, and movable for adjustment around the axis of said turn-table, whereby the angle between said arms may be varied, an operative connection between said arms and the turn-table, and an adjusting device, controlling said connection for varying the extent of the angular movement of the turn-table caused by the movement of the said arms.

ERNEST HIRAM HINER.

Witnesses:
A. R. DOESCHER,
ELI COSBY.