

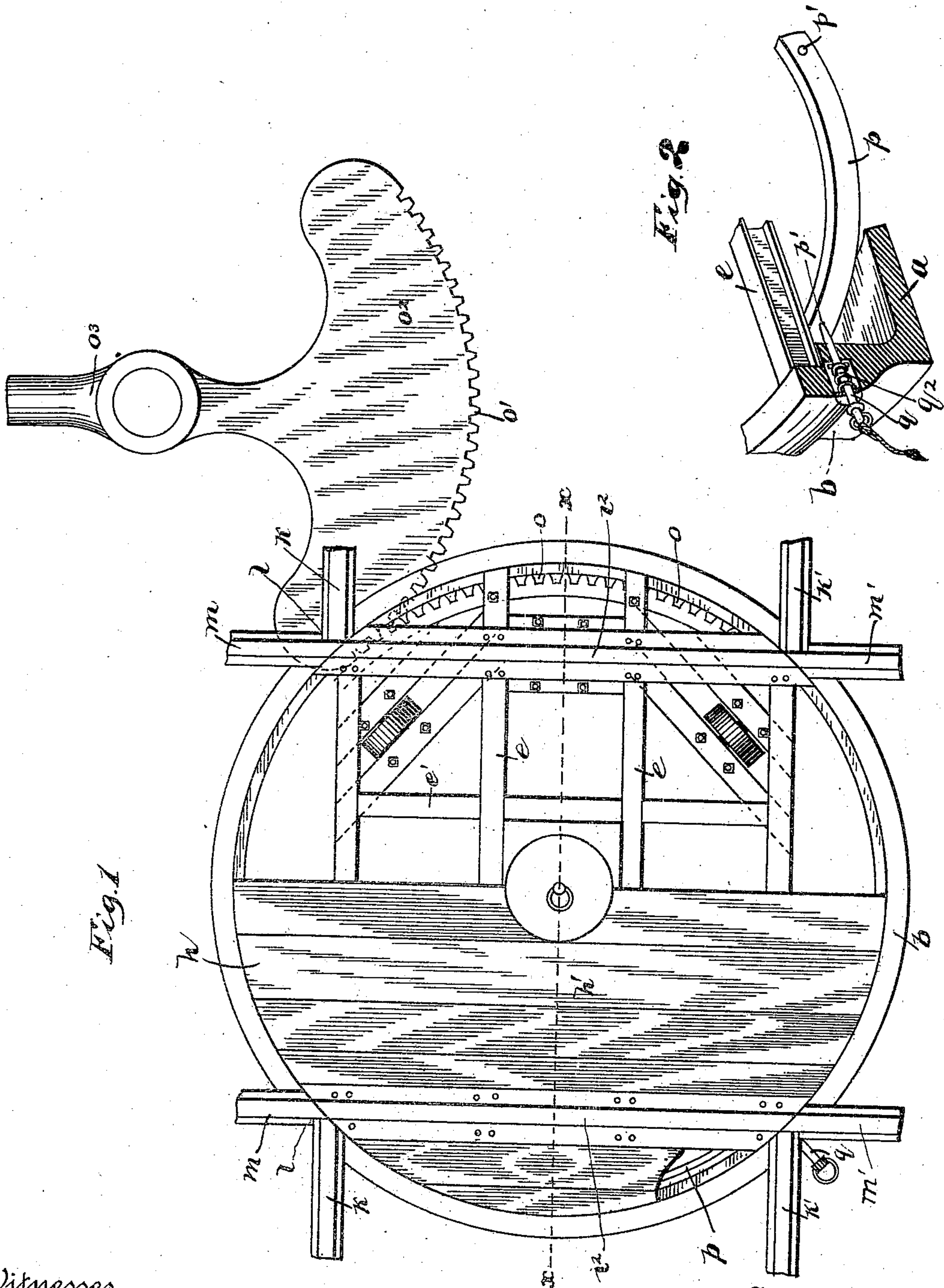
(No Model.)

2 Sheets—Sheet 1.

F. A. JOHNSON.
RAILWAY CROSSING.

No. 501,721.

Patented July 18, 1893.



Witnesses
H. B. Bradshaw
E. E. Bragg

Inventor
Frederick A. Johnson
By his Attorneys
Staley and Shepherd.

(No Model.)

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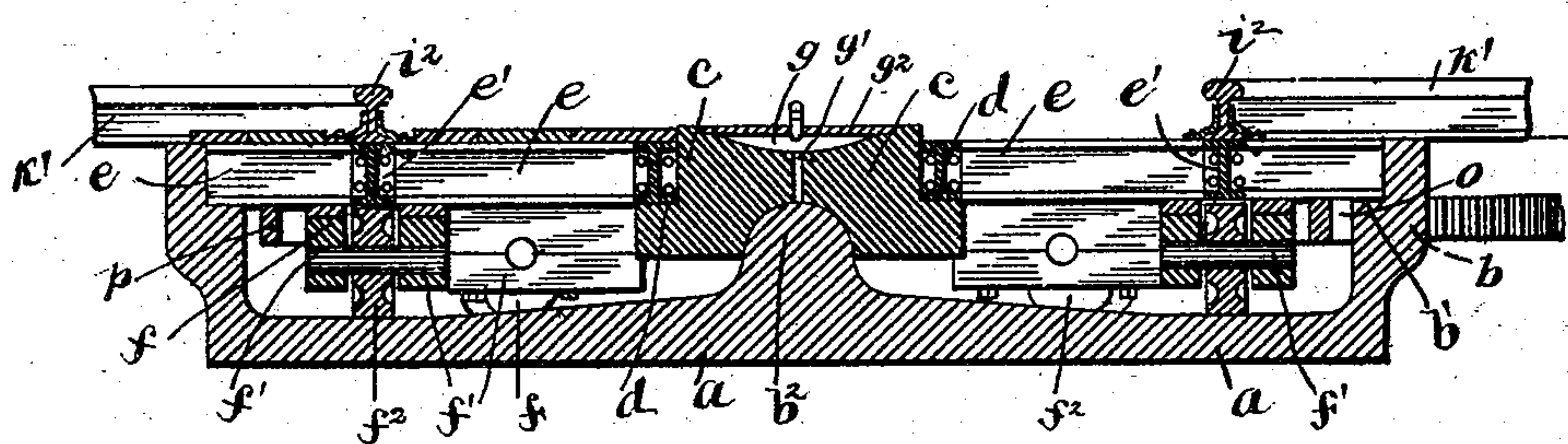


Fig. 3

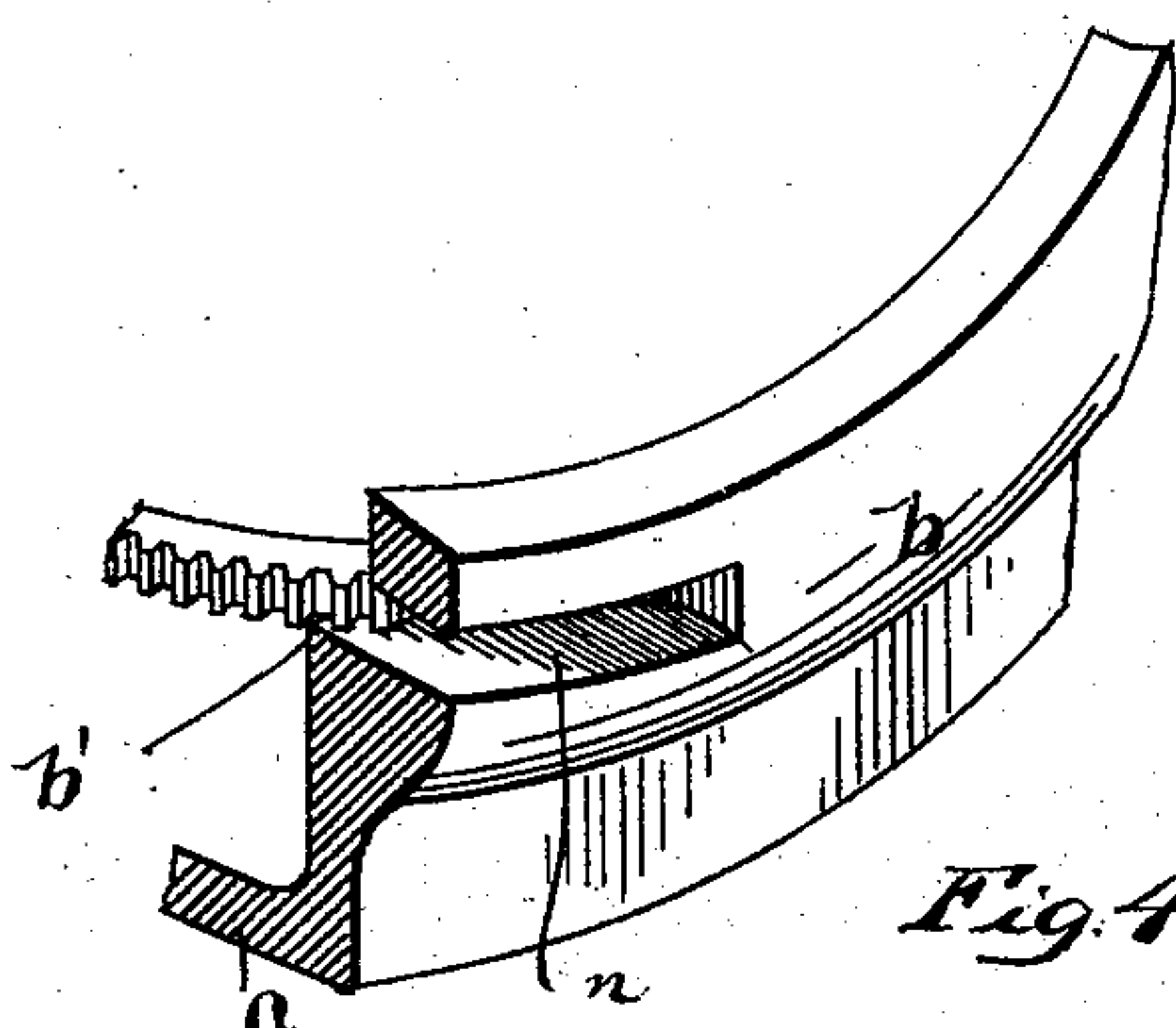


Fig. 4

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UNITED STATES PATENT OFFICE.

FREDERICK A. JOHNSON, OF COLUMBUS, OHIO, ASSIGNOR OF ONE-HALF TO
JAMES H. EVANS, OF SAME PLACE.

RAILWAY-CROSSING.

SPECIFICATION forming part of Letters Patent No. 501,721, dated July 18, 1893.

Application filed May 27, 1892. Serial No. 434,559. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK A. JOHNSON, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Railway-Crossings, of which the following is a specification.

My invention relates to railway crossings or intersections and the objects of my invention are, to provide a simple and reliable means whereby a substantially continuous rail connection is formed at track crossings or intersections; to obviate the necessity of spacing the intersecting rails of a railway; to admit of the passage therethrough of the wheel flanges and to otherwise produce a substantial and approximately continuous line of track rail at the crossings thereof. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my improved crossing mechanism. Fig. 2 is a detail view in perspective shown partly in section of the side framework and means for locking the switch table. Fig. 3 is a central vertical section on line $x x$ of Fig. 1, and Fig. 4 is a detail view in perspective, showing partly in section a portion of the table base and rack-bar for moving the switch or crossing table.

Similar letters refer to similar parts throughout the several views.

a represents the metallic base-plate or stationary portion of my improved crossing consisting as shown, of a disk-shaped bottom portion which is provided with an upwardly extending circumferential flange b , thus forming substantially a cup-shape, as shown. The flange b is provided on its inner side with a shoulder b' which forms a circular seat therein, as shown. With the bottom portion of the casting a is formed upon the upper side thereof, a central upwardly projecting rounded bearing projection b^2 upon which is pivotally supported a central pivot block c , the latter having formed in its under side a central rounded socket which receives the projection b^2 of the casting a . This central pivot block c is as shown in the drawings, provided with side shoulders or ledges d , upon which rest the inner ends of I-beams or other frame beams e which extend horizontally therefrom and have

their outer ends supported immediately above the shoulder b' of the base flange b . As shown in the drawings, these I-beams e are connected by cross-beams e' which extend at right-angles with the beams e between the latter at opposite sides of the central pivot block c . At desirable intervals, the frame-work thus formed has depending from the under side thereof, bearing blocks or boxings f between each pair of which is pivoted upon a shaft f' , a balancing wheel f^2 , said wheels being adapted to travel upon the base a .

As shown at g , I provide the upper side of the pivot block c with a suitable depression or oil receptacle which communicates with the surface of the pivot projection b^2 through a suitable oil channel g' , formed through the center of the block c . This oil depression g is normally covered by a suitable plate g^2 .

The frame-work produced by the connection and use of the beams e and e' is covered as partially shown in Fig. 1 of the drawings by suitable planks or sheeting h , thus producing the circular platform h' , shown.

$i^2 i^2$ represent track rail sections which are supported and secured to the upper side of the platform h' , said track section i^2 extending on opposite sides of the center of the platform and forming chords of said platform circle. As shown in the drawings, the ends of these rails i^2 and their flanges are cut to correspond to the curve of the outer edge of the platform h' with which they are flush.

$k k$ and $k' k'$ represent respectively portions of rails which may be the main track rail, the ends of which as shown in the drawings, rest upon the outer side of the flange b , the rail portions bearing corresponding reference letters being opposite or in alignment with each other.

$m m$ and $m' m'$ respectively represent end portions of track rails, which extend at an angle with the rails $k k'$ and the ends of which rest upon the upper side of the base flange b . The inner ends of these rail portions m' and m are cut to conform to the circle described by the outer edge of the platform h' adjacent to which they are supported. As indicated at l , each of the rails m and m' has its flange on its outer side cut away to admit of the ends of the rails $k k'$ abutting against

the sides of the rails $m m'$ and thus bringing the surface of said rails adjacent to and flush with each other.

Formed in the base flange b is an elongated 5 slotted opening n . On the inner side of said flange and opposite said slotted opening is arranged a curved rack-bar o which is preferably supported from the under side of the beams e . With the teeth of the rack bar o 10 are adapted to engage the teeth o' of the curved or rounded head o^2 of a suitable lever o^3 , which may be fulcrumed at a suitable distance from said crossing. At a point opposite the rack bar o is secured to the under 15 side of the beams e and adjacent to the base flange b , a suitable bar p which is provided at desirable points with openings p' .

q represents a stop-pin, passing through a suitable opening in the base-flange b and being surrounded by a coiled spring q^2 therein, one end of which is connected with said stop pin and its inner end bearing by the pressure of said spring against the outer side of the bar p . 20

The method of operating and utilizing my improved railway crossing is as follows: Supposing the crossing table to be in the position shown in Fig. 1 of the drawings, that is, with the table rails i^2 in connection or in abutment 30 with the inner ends of the track rails $m m'$, it will be seen that said table rails i^2 will serve to operate to preserve the continuity of said rails $m m'$. In case it is desired to connect the rails k and k' and form substantially a continuation of the latter at the crossing, the table h' may be rotated through movement of 35 the lever o^3 and its engagement with the rack o , until the ends of the table rails i^2 are in alignment with the ends of the rails $k k'$. In this manner it will be seen, that the angular inner ends or points of the rails m will serve as filling pieces to provide a continuous track surface from the rails i^2 to the rails k . The openings p' of the bar p are so located in said 40 bar as to cause the pin q to drop into one of said openings when a connection of the rails of the above described character is effected, said pin thus serving to lock the crossing

table in position. It will thus be seen that by my construction, a crossing or switch table is 50 produced by means of which tracks which run at angles with each other may cross each other without the usual separation of the rails at the point of intersection and that a connection of the rails may be produced which 55 will obviate the wear or jolt usually contributed to cars passing over crossings.

It will be observed that my improved crossing or switch table may be produced at a reasonable cost of manufacture and without complication, and that its construction is such as to require but slight power to operate the same. 60

Having now fully described my invention, what I claim, and desire to secure by Letters 65 Patent, is—

1. In a railway crossing, the combination of the base a , having flanged sides b , a circular frame pivoted centrally thereon as described, permanent track rail sections i^2 on 70 said frame having their ends cut to conform to the circle described by said frame and main or switch track rails having their ends cut in the arc of the circle described by said frame and supported upon said base flange 75 b , said rails i^2 adapted to be brought as described, into alignment with either said main or switch rails, substantially as specified.

2. In a railway crossing, the combination of the base a , side flange b formed therewith, 80 a circular frame pivoted centrally on said base, wheels f^2 journaled in boxings depending from said frame and adapted to bear on said base, permanent track rail sections i^2 on said frame having their ends cut to conform 85 to the circle described by said frame and main or switch track rails having their ends cut in the arc of the circle described by said frame said rails i^2 adapted to be brought into alignment with said main or switch rails, substan- 90 tially as specified.

FREDERICK A. JOHNSON.

In presence of—

O. B. BAKER,

C. C. SHEPHERD.