Jan. 2, 1923.

1,440,754.

F. A. WALKER.

RAILROAD CROSSING.

FILED MAY 17, 1922.

3 SHEETS—SHEET 1.

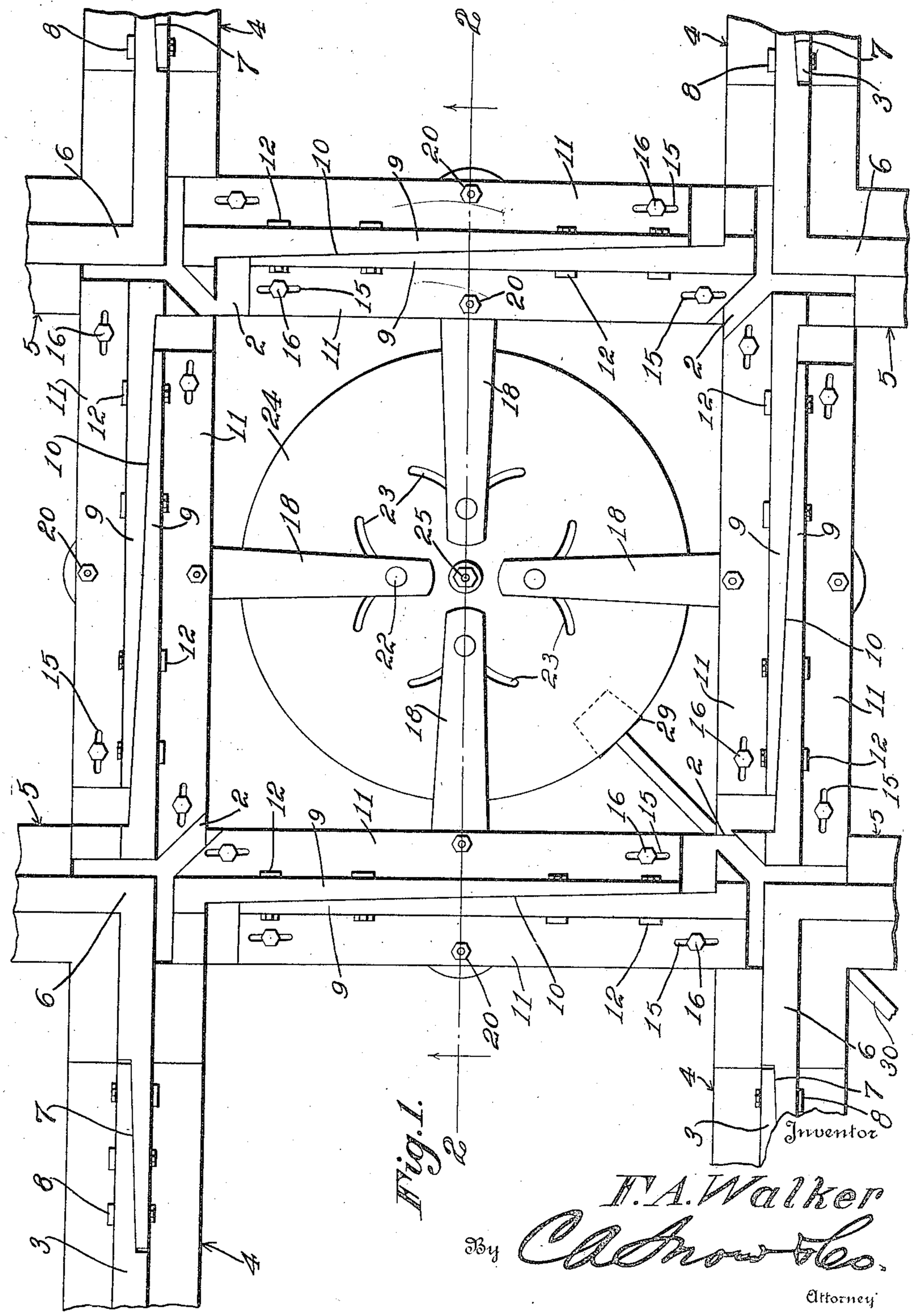

Fig. 1.

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3 SHEETS—SHEET 2.

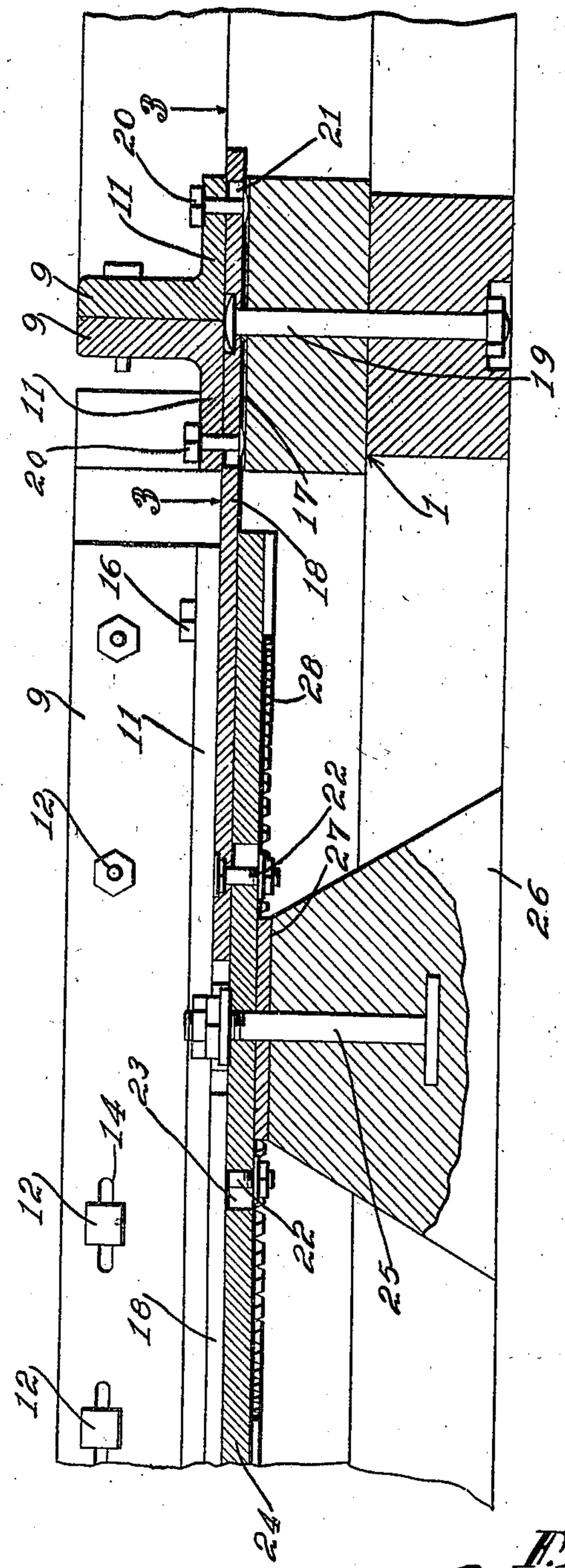

Fig. 2.

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3 SHEETS—SHEET 3

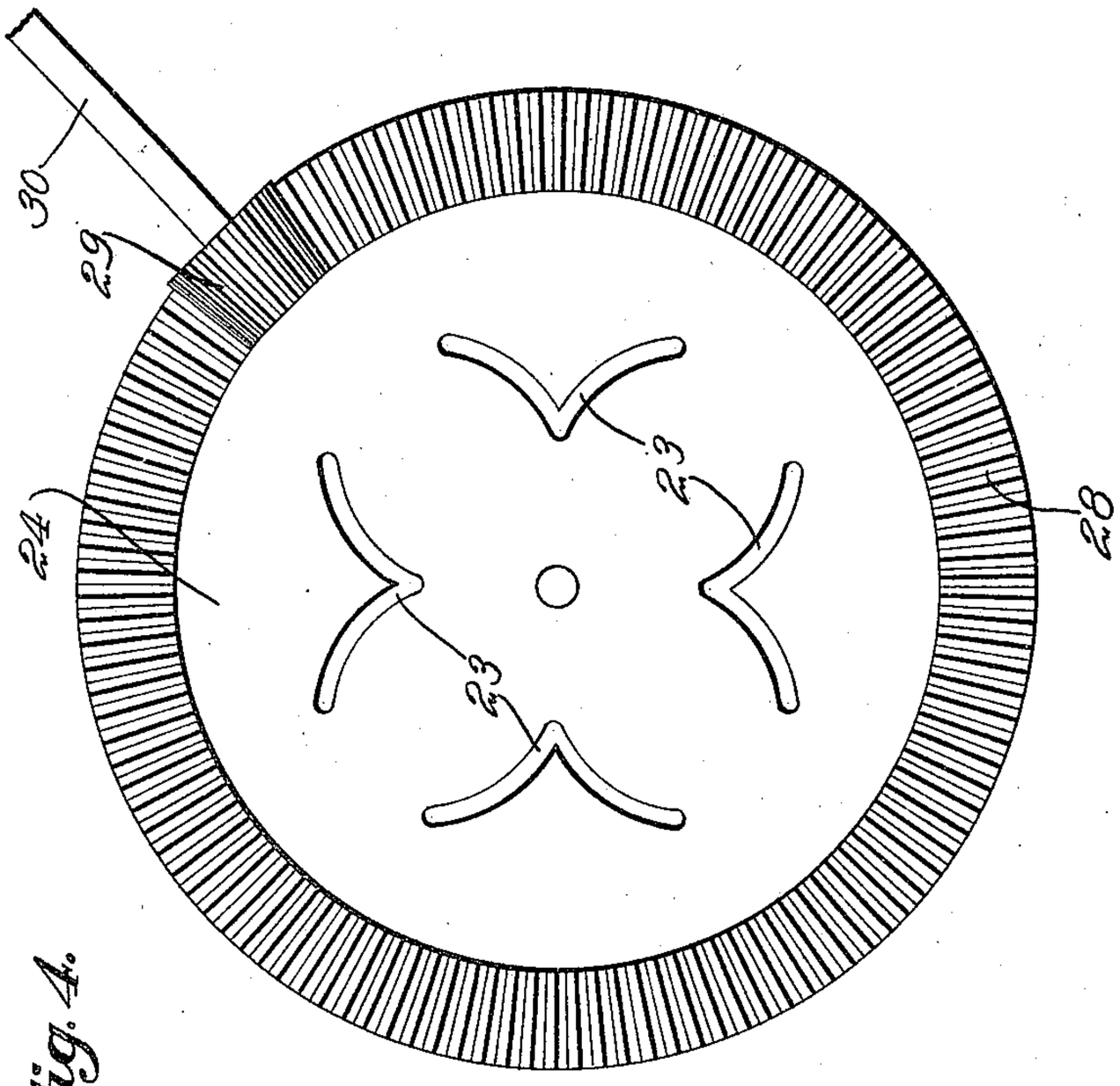

Fig. 4.

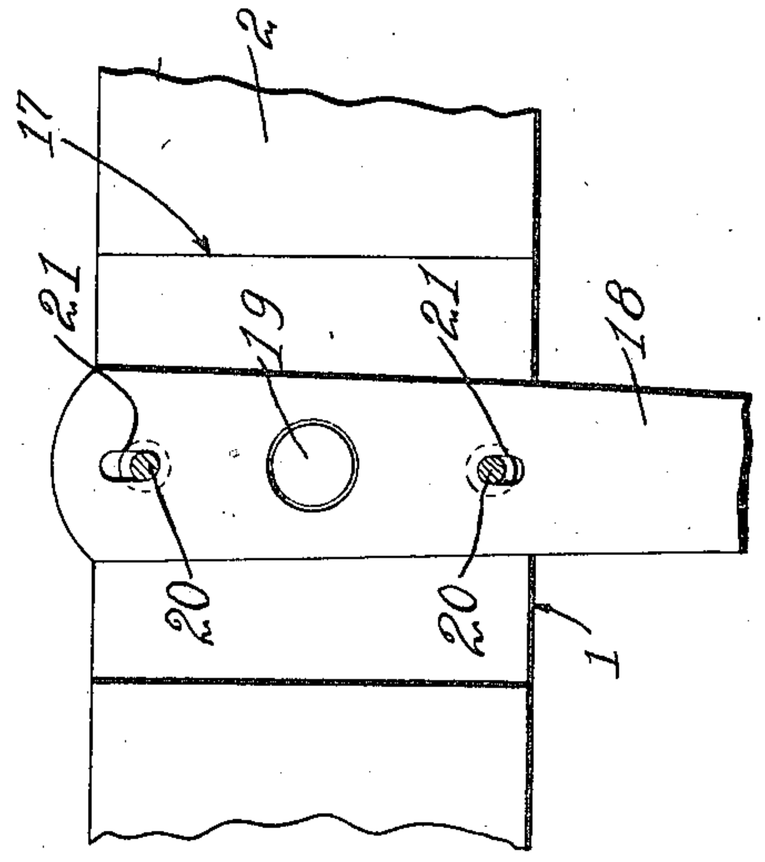

Fig. 3.

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Attorney

Patented Jan. 2, 1923. 1,440,754

UNITED STATES PATENT OFFICE.

FRANK A. WALKER, OF NORMAL, ILLINOIS.

RAILROAD CROSSING.

Application filed May 17, 1922. Serial No. 561,711.

To all whom it may concern:

Be it known that I, FRANK A. WALKER, a citizen of the United States, residing at Normal, in the county of McLean and State of Illinois, have invented a new and useful Railroad Crossing, of which the following is a specification.

This invention aims to provide novel means under the control of an operator whereby a continuous track may be formed, at the place where two tracks cross, thereby avoiding the pounding and consequent deterioration experienced at the intersection of two railway tracks.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention apertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in top plan, a device constructed in accordance with the invention; Figure 2 is a section taken on the line 2—2 of Figure 1; Figure 3 is a fragmental plan showing one of the levers and attendant parts; Figure 4 is a bottom plan view of the rotatable actuating member.

The device forming the subject matter of this application contemplates the use of a foundation, denoted generally by the numeral 1, and, ordinarily, made up of ties and stringers. The foundation 1 need not be described in detail, because it will be changed to suit local conditions, and because the make-up of the foundation is a matter of interest to a railroad carpenter, rather than to an inventor. Supporting plates 2, ordinarily made of metal, are superposed on the foundation 1. The plates 2 support the main rails 3 of a track 4, and support, also the main rails of a track 5, the track 5 intersecting the track 4. Angle rails 6 are common to the tracks 4 and 5 and are supported on the plates 2. The ends of the angle rails 6 are halved as shown at 7 into the ends of the main rail and are connected thereto by securing elements 8, the construction being such that expansion and contraction may be taken care of, a practically continuous joint being afforded, nevertheless.

The device includes auxiliary rails 9 disposed in pairs, the pairs of auxiliary rails 9 being alined with the main rails of the tracks 4 and 5. The auxiliary rails 9 are beveled and overlapped as shown at 10, each auxiliary rail having a base flange 11. Each auxiliary rail 9 carries connections 12 movable in slots 14 formed in the adjacent auxiliary rail, as shown in Figure 2. Elongated slots 15 are fashioned in the flanges 11 of the auxiliary rails 9. Securing devices 16 pass through the slots 15 of the flanges 11 and connect the auxiliary rails 9 to the plates 2, as shown in Figure 2, for longitudinal movement, as indicated in Figure 1.

As depicted in Figure 3, and as denoted by the numeral 17, the plates 2 are cut away to receive levers 18, fulcrumed intermediate their ends, as at 19 on the foundation 1. The levers 18 carry pivot elements 20, located on opposite sides of the fulcra 19 of the levers, the pivot elements being mounted in the flanges 11 of the auxiliary rails 9. The plates 2 are provided with openings 21, receiving the pivot elements 20 and permitting movement of the pivot elements with respect to the plates 2, when the levers 18 are swung on their fulcra 19. The levers 18 are supplied adjacent to their inner ends with projections 22, which may be in the form of bolts.

The projections 22 on the inner ends of the levers 18 are received in approximately V-shaped cam slots 23 in a rotatable member 24 journaled on a spindle 25 carried by a pedestal 26 a spacer 27 being interposed between the pedestal 26 and the rotatable member 24, as depicted in Figure 2 of the drawings. At its lower surface and adjacent to its periphery, the rotatable actuating member 24 is supplied with a gear ring 28 meshing into a pinion 29 mounted on a shaft 30 journaled for rotation in the foundation 1 or supported in any other suitable way.

In practical operation, when rotation is imparted to the shaft 30, the pinion 21, cooperating with the gear ring 28, will rotate the member 24. When the member 24 is rotated, the levers 18 will be swung on their fulcra 19 in view of the fact that the projections 22 at the inner ends of the levers are received in the cam slots 23. When the levers 18 are swung, motion will be trans-

mitted by the pivot elements 20 to the auxiliary rails 9, the auxiliary rails moving endwise. When the rails 9 move endwise, they cooperate with the angle rails 6, there being no spaces left between the ends of the auxiliary rails and the angle rails. In this way, the operator may make the track 4 continuous, at the crossing, or make the track 5 continuous at the crossing, to accommodate the traffic. It is obvious that, due to the construction above outlined, there will be no wide or open joints at the crossing, and the crossing will not be pounded down out of grade, it being a matter of common knowledge that one of the most complicated problems met with in the maintenance of a right-of-way is connected with a proper keeping up of the crossings.

Having thus described the invention, what is claimed is:—

1. In a railway crossing, intersecting tracks including main rails; pairs of auxiliary rails cooperating with the main rails and mounted for relative longitudinal movement; levers and fulcra therefor, the outer ends of the levers being connected to the auxiliary rails; a member journaled for rotation; means for rotating said member; and means for connecting the inner ends of the levers operatively with said member.

2. In a railway crossing, intersecting tracks including main rails; pairs of auxiliary rails cooperating with the main rails and mounted for relative longitudinal movement; levers and fulcra therefor; means for connecting the outer ends of the levers with the auxiliary rails; a member supported for rotation and having cams engaged with the inner ends of the levers; and means for rotating said member.

3. In a railway crossing, intersecting main tracks including main rails; pairs of auxiliary rails cooperating with the main rails and mounted for relative longitudinal movement; levers and fulcra therefor; means for connecting the outer ends of the levers with the auxiliary rails; a member supported for rotation and provided with a gear, the rotatable member having cams, the inner ends of the levers having means for cooperating with the cams; a shaft supported for rotation; and a pinion on the shaft, the pinion meshing with the gear on the rotatable member.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FRANK A. WALKER.

Witnesses:
ALMA A. LUTHER,
J. D. CUNNINGHAM.