

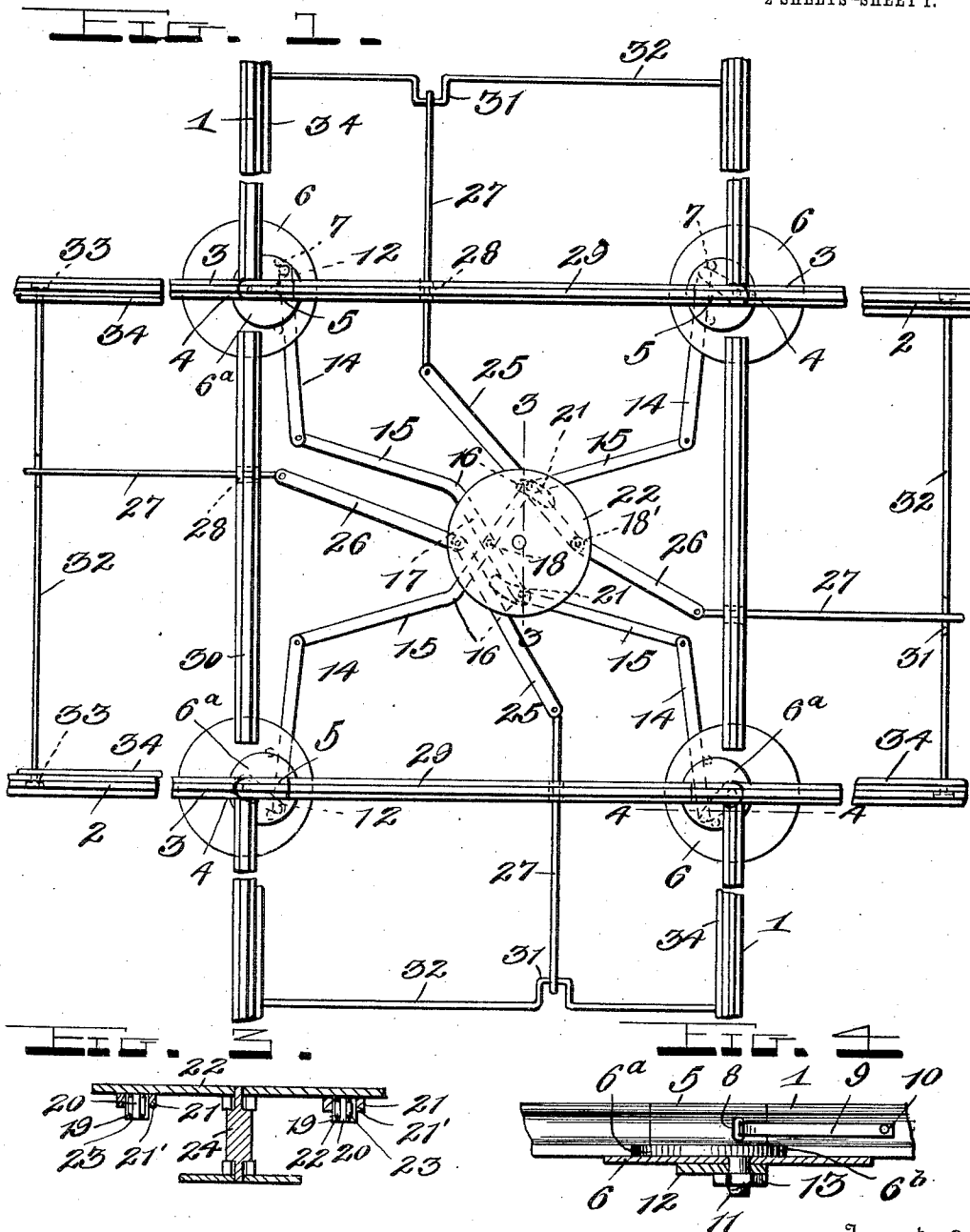
J. L. BRANHAM & H. CAMPBELL.
TRACK CROSSING.

APPLICATION FILED JUNE 21, 1911.

1,049,444.

Patented Jan. 7, 1913.

2 SHEETS—SHEET 1.



Witnesses

Chas. L. Griesbauer.
H. E. Coleman.

Inventors

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and H. Campbell,

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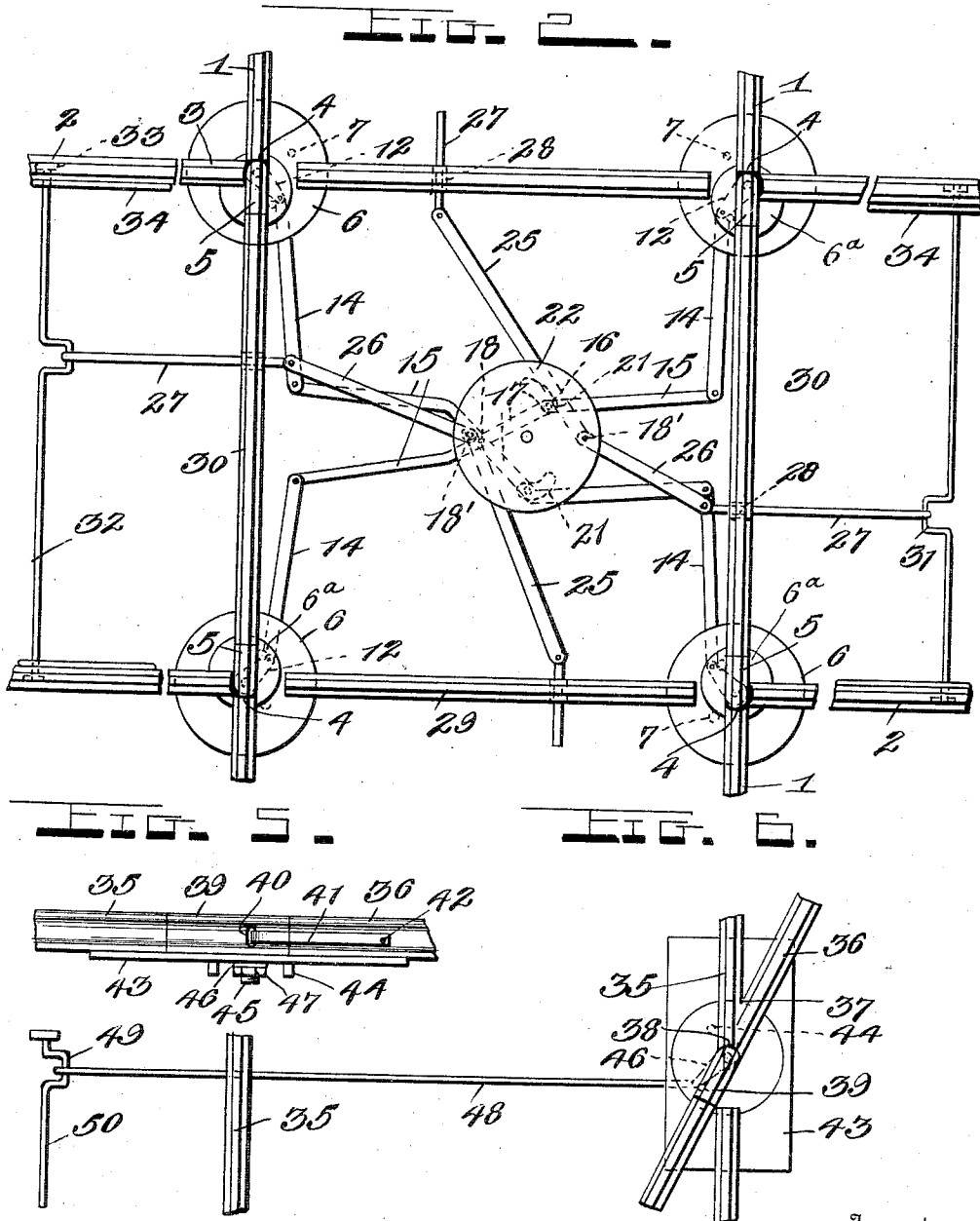
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UNITED STATES PATENT OFFICE.

JAMES L. BRANHAM AND HARRY CAMPBELL, OF SAN JON, NEW MEXICO.

TRACK-CROSSING.

1,049,444.

Specification of Letters Patent.

Patented Jan. 7, 1913.

Application filed June 21, 1911. Serial No. 634,409.

To all whom it may concern:

Be it known that we, JAMES L. BRANHAM and HARRY CAMPBELL, citizens of the United States, residing at San Jon, in the county of Quay and State of New Mexico, have invented certain new and useful Improvements in Track-Crossings, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to track-crossings and has for its object to provide at a track-crossing swinging or pivoted members which are adapted to be moved into alinement with the track rails upon which the car is approaching, so as to close the space usually made at the intersection of track-rails and present a continuous traction-surface in order to avoid unnecessary jarring and wear and tear upon the rolling stock and the track. These members are so mounted and provided with operating means as to swing in alinement with the track-rails extending in the different directions.

A further object is to provide a track-crossing of this character which will possess advantages in points of efficiency, durability, is inexpensive of manufacture and at the same time is simple in construction and operation.

With these and other objects in view, the invention consists in the novel features of construction and the combination and arrangement of parts hereinafter described, pointed out in the claims and shown in the accompanying drawings, in which—

Figure 1 is a top plan view, partly in section, showing the pivot members thrown into alinement with the track rails upon which a car is approaching; Fig. 2 is a similar view showing the pivot rails thrown in the opposite direction from that shown in Fig. 1; Fig. 3 is a sectional view on the line 3—3 of Fig. 1; Fig. 4 is a sectional view on the line 4—4 of Fig. 1; Fig. 5 is a side elevation of the continuous rail used for frogs; and Fig. 6 is a plan view of the continuous rail used for frogs.

Referring more particularly to the drawings 1 and 2 indicate two sets of tracks running in opposite directions so they may cross each other at right angles, as illustrated in Fig. 1. The rails of each track are interrupted at the points of crossing, and at each of these points a movable member is located and is designed to be shifted to preserve the continuity of either.

The numeral 3 indicates the angle rail

placed at the intersections of the two sets of tracks. These angle rails 3 are provided with a concave face 4 at the inner end of the angle.

The pivot rails 5 are pivoted in the same horizontal plane as track rails 1 and 2. The base of each pivot is circular and adapted to operate upon a circular steel bearing plate 6, which is to be large enough to extend under the ends of the track rails 1 and 2, said base having the lugs 7 formed on the under side thereof and disposed at each extreme throw of the pivot rails to insure proper alinement of said pivot rails. A circular plate 6^a is formed integral with the base of the pivot rails 5 and having its outer edge disposed in the recess 6^b formed in the ends of the stationary rails. The base of the pivot rails entering notches 6^c in the ends of the fixed rails. Vertical slots 8 are formed in the angle of the pivot rails 5 near the pivoted end thereof adapted to receive the steel straps 9 which are disposed therein and having their free ends secured to the angles of the rails 1 and 2 by means of the bolts 10, thereby forming a hinge for the pivot rails and making the same more rigid. The lugs 11 are formed integral with said pivot rails on the lower side thereof and adapted to be disposed through the bearing plates 6 and connected with the throw levers 12 by means of the jam nuts 13. Other suitable means may be used in place of the jam nut if found desirable.

Pivoted to the outer end of the throw levers 12 are the connecting bars 14 having their other end pivotally connected to the operating levers 15, said levers being bent in opposite directions adjacent each end thereof, as shown at 16, to form the cross arms 17, which are pivotally connected at their center by the pivot pin 18. The levers 15 are operated by means of the wrist pins 20 operating in the slots 21 formed on the underside of the cam wheel 22, said slots being formed by means of the spaced flanges 21'. The wrist pins 21 are secured in a vertically disposed position on the levers 15 provided with the roller bearings 23. The cam wheel 22 is rotatably mounted upon the bearing 24. The cam wheel 22 is rotated by means of the levers 25 and 26 having their inner ends pivotally secured to the outer edge of the cam wheel as shown at 18', the outer ends of said levers being secured to the rods 27 which are disposed through an opening 28 in the angle of the rails 29 and 30. The outer ends of the

rods 27 are secured to the crank arms 31 formed on the shafts 32, said shafts having their ends mounted in the bearings 33 formed in the rails on the tracks 1 and 2.

5 Mounted on the shafts 32 adjacent the rails are the trips 34, which are adapted to be engaged by the flange of the car wheels and rotate the shafts 32 operating the rods 27 which in turn rotate the cam wheel 22 to throw the pivot rails 5 into direct alignment with the track on which the car is approaching.

In Fig. 6 is shown how the pivoted rail can be used to a great advantage on 15 switches. The numeral 35 indicates the rails of the main track and 36 one rail of the switch. The angle rail 37 is placed at the intersection of the switch rail and one of the main rails, said rail having a concave surface 38 in its end adapted to receive the convex end of the pivot rail 39. The pivot rail 39 is provided with a vertically disposed slot 40 formed in the angle of the rail, adapted to receive a steel strap 41 disposed therethrough and having its free ends secured to the rails by means of the bolts 42. A steel bearing plate 43 is disposed beneath the pivot rail 39 and is to extend under the ends of the main and 30 switch rails, said plate having a struck-up lug 44 formed therein at each extreme throw of the pivot rail to insure proper alinement of the same with the main or switch rails. The pivot rail 39 is provided with a circular lug 45 formed on the lower side thereof adapted to be disposed through an opening in the plate 43 and is connected to the throw lever 46 by means of the jam nut 47. Pivotaly secured to the outer end of the 40 throw lever 46 is the connecting rod 48, having its other end secured to the crank arm 49 on the shaft 50, said shaft being suitable to the switch throwing lever.

The operation of the continuous rail 45 crossing will be readily apparent from the following description taken in connection with the drawings. Supposing that a train or car is approaching on the track 1 and traveling in the direction, as indicated by 50 the arrow in Fig. 1, the flanges of the wheels strike the trips 34 pressing them downwardly, rotating the shaft 32, which in turn through the rod 27 and lever 25 will rotate the cam wheel 22. The rotation of 55 the cam wheel 22 will cause the levers 15 to be thrown in the position shown in Fig. 2 which throws the pivot rails 5 into alinement with the rails of track 1. The levers 15 are operated by means of the wrist pins 60 20 operating in the slots 21.

From the foregoing description it is obvious that all of the moving parts move simultaneously when any one of the trips

34 is depressed and that the pivoted rails 5 will remain in the position in which they 65 are placed until a car approaches upon track 2 which extends transversely to the track with which they are alined, when they will, as above described, be swung into alinement with the track upon which the car is 70 approaching.

While we have shown and described the preferred construction of our invention, it will be obvious that various changes in the details of construction and in the proportions may be resorted to for successfully 75 carrying the invention into practice without sacrificing any of the essential features or departing from the advantages thereof.

Having thus described the invention what 80 is claimed is:—

1. A track-crossing comprising intersecting track rails, a pivot rail pivoted in alinement with said rails, a cam wheel rotatably 85 mounted between said track rails, operating levers operatively connecting said cam wheel with the pivot rail, spaced flanges formed on the lower side of said cam wheel providing a slot, a vertically disposed roller bearing wrist pin secured to said operating 90 levers and adapted to operate in said slot, a shaft rotatably mounted in the angles of said track rails, means for operatively connecting said shaft to said cam wheel, and trips mounted on said shaft adjacent the 95 rails to be operated by the flanges of an approaching car.

2. A track crossing comprising intersecting track rails, a pivot rail pivoted in alinement with said track rails, a bearing plate 100 for said pivot rail, lugs formed on said plate at each extreme throw of the pivot rail, a lug formed on the under side of said pivot rail adapted to be disposed through said bearing plate, a connecting bar secured to 105 said lug, a rotatably mounted cam wheel, operating levers connected with said bar and adapted to be operated by the rotation of said cam wheel and means operated by an approaching car for rotating said cam 110 wheel.

3. In combination with a track crossing comprising intersecting track rails, of a pivot rail pivoted in alinement with said track rails and having a vertically disposed 115 slot formed in the angle thereof, and a steel strap disposed in said slot and having its ends secured to the track rails.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses. 120

JAMES L. BRANHAM.
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Witnesses:

H. B. HORNE,
C. L. OWEN.