O. POSTON.

RAILROAD CROSSING.

APPLICATION FILED MAY 27, 1909.

934,836. Patented Sept. 21, 1909.

Fig. 1.

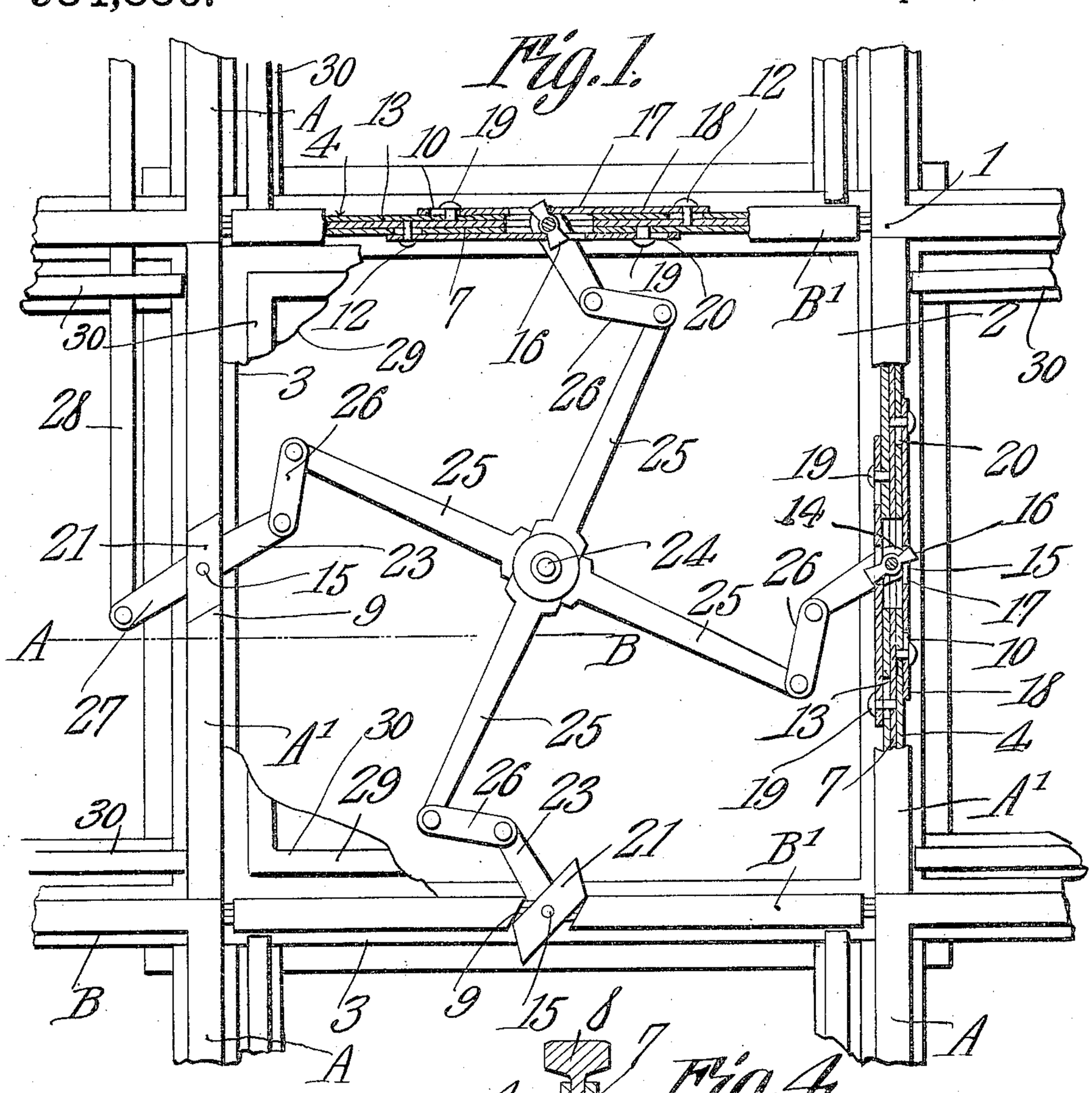

Fig. 4.

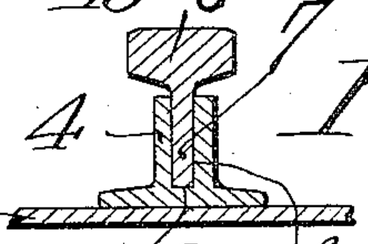

Fig. 2.

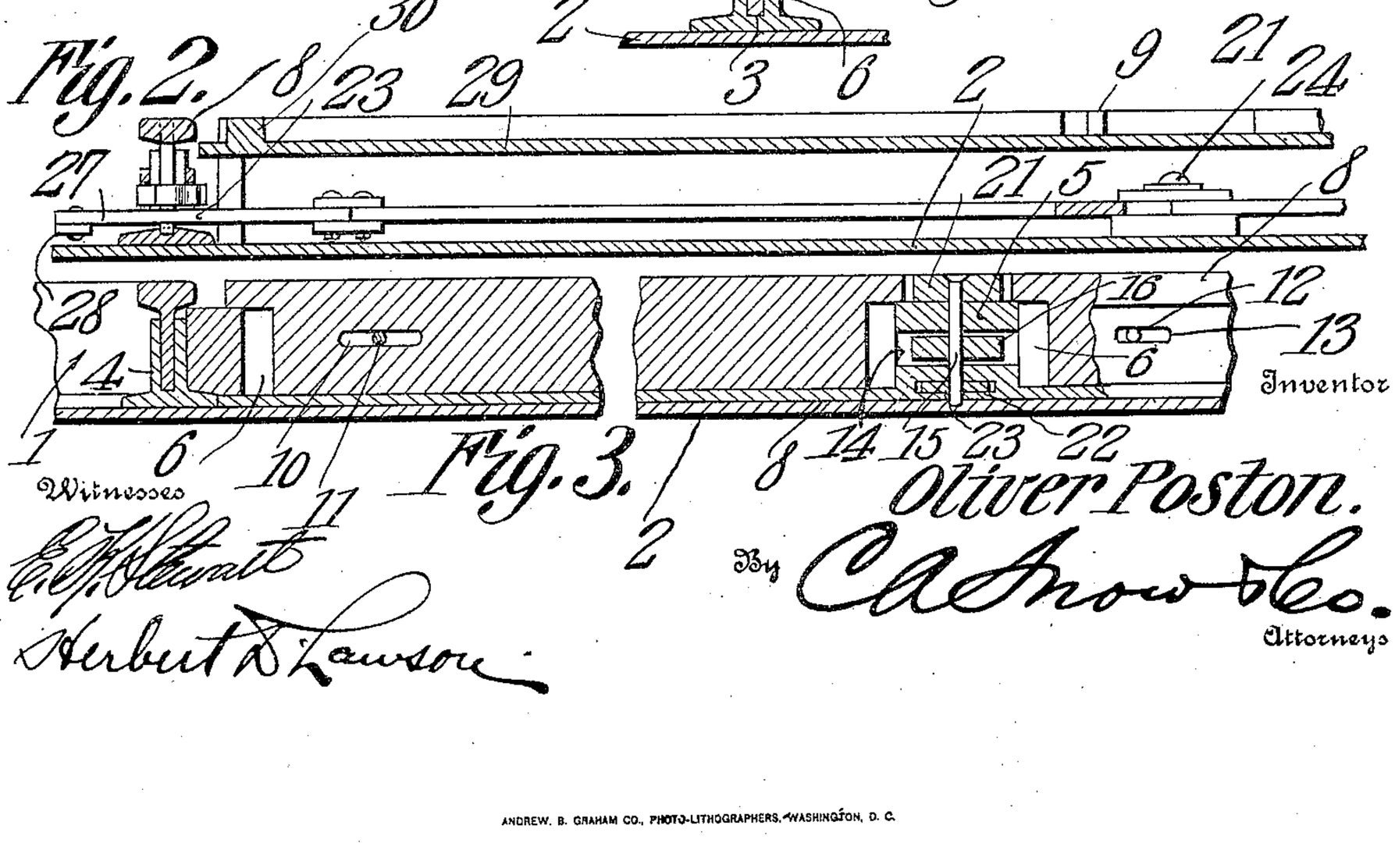

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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RAILROAD-CROSSING.

934,836. Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed May 27, 1909. Serial No. 498,673.

To all whom it may concern:

Be it known that I, OLIVER POSTON, a citizen of the United States, residing at Ashley, in the county of Washington and State of Illinois, have invented a new and useful Railroad-Crossing, of which the following is a specification.

This invention relates to railroad crossings for use at points where tracks intersect, the object of the invention being to provide means whereby the rails of either track can be adjusted whenever desired, so as to prevent pounding by cars passing over the crossing.

Another object is to construct the crossing portions of the rails of each track, of movably connected sections, means being provided whereby the sections of each track can be simultaneously shifted either against or away from the rails of the other track.

A further object is to provide operating mechanism which is simple in construction, easy to operate and which is protected at all times against interference by accumulations of dust, snow, ice, etc.

A further object is to provide simple means whereby the various sections of each rail are actuated in the proper directions, one of said sections being shiftable with relation to the other sections to permit the last mentioned sections to be moved toward each other.

With these and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a view, partly in plan and partly in section, of the crossing, all but one corner portion of the covering or protecting plate being removed. Fig. 2 is an enlarged section on line A—B Fig. 1. Fig. 3 is a view, partly in side elevation and partly in longitudinal section, of a portion of one of the crossing rails. Fig. 4 is a transverse section through one of the crossing rails.

Referring to the figures by characters of reference A, A designate the main rails of one track, and B, B designate the main rails of the other track at a crossing, the adjoining rails A and B coming together at angles as indicated at 1, these angle portions of the rails being mounted upon a base-plate 2. The collapsible crossing rails A′ are interposed between and in alinement with the rails A, while the similar collapsible crossing rails B′ are disposed between and in alinement with the rails B. Each crossing rail consists of a base member 3, riveted or otherwise secured to the plates 2 and having parallel upstanding flanges 4, the ends of which bear against the rails alining with the crossing rail. A partition 5 is arranged upon the center of the base member 3 and between the flanges 4, this partition being either formed integral with the base member and its flanges, or else being separate therefrom and insertible between the flanges. Channels 6 are formed between the flanges 4 at opposite sides of the partition 5 and each of these channels constitutes a guide-way for a web 7 extending downwardly from a rail head 8, said head projecting beyond the end of the web and extending laterally over the flanges 4, one end of the head being so shaped as to fit snugly against the side of the head of the rail A or B against which it is designed to abut, while the other end of the head is cut off obliquely as indicated at 9 in Fig. 1. Each web 7 has a longitudinal slot 10 adjacent one end and through which a guide-pin 11 extends, there being a laterally extending stud 12 upon the other end portion of the web and designed to work within a slot 13 formed longitudinally within one of the flanges 4. The guide-pin 11 is carried by the two flanges.

A slot 14 extends transversely through the partition 5 and the flanges 4. A shaft 15 is journaled within the partition 5 and extends through the center of the slot 14, said shaft having oppositely extending arms 16 movable therewith and disposed within the slot 14. The ends of these arms are designed to project beyond the flanges 4 and to work within slots 17 extending longitudinally within strips 18 which are mounted upon the inner and outer faces of the flanges 4. One of these strips 18 is secured to one of the flanges 4 by means of a stud 19, while the other strip is secured to the other flange 4 in the same manner, the two connecting studs however being located beyond opposite ends of the slot 14 as clearly indicated in Fig. 1. These studs 19 extend through slots 20 which are formed in the strip 18 so that a limited longitudinal movement of each strip is per-

mitted with relation to the flange 4 to which it is attached. The other end of each strip 18 is mounted on one of the studs 12 heretofore referred to and which extends from one of the webs 7, the stud being arranged to travel within a slot 13, such as heretofore mentioned.

The obliquely cut ends of the head 8 are spaced apart at all times, and interposed between them is a filling block 21 designed, when the two heads of the crossing sections are spread apart, to bear against the oblique ends of the head 8 and to aline with said head as indicated at the left of Fig. 1. This filling block is secured to and movable with the shaft 15.

A transverse slot 22 is formed within the inner flange 4 and an arm 23 works within this slot and is secured to the lower end portion of the shaft 15. This arm extends beyond the inner face of said slotted flange.

A rock-shaft 24 is journaled within the middle portion of the base-plate 2 and has four arms 25 radiating therefrom, one of the arms being connected by a link 26 to the arm 23.

It is to be understood of course that the crossing rail heretofore described constitutes one of four which are located between the angles 1 formed by the rails A and B. Each of these crossing rails has an arm 23 which is connected by a link 26 to one of the arms 25, it being apparent therefore that when the shaft 24 is partly rotated, motion will be simultaneously transmitted to all of the arms 23 and the shaft 15 from which they extend. The mechanism is so arranged that when the shaft 24 is partly rotated and the shaft 15 actuated, the arms 16 on two opposed shafts 15 will swing short distances within the slots 17 in strips 18 while the filling blocks 21 swing out of alinement with the adjoining heads 8. During the completion of this turning movement of the shaft and arms, said arms will move against the end walls of the slots 17 and shift the two strips 18 in opposite directions simultaneously, thus causing the webs and heads to which the strips are attached to move toward each other and away from the rails A or B which have been in contact therewith. While this contraction of two of the crossing rails is taking place the shafts 15 of the other two rails are being actuated so as to bring the arms 16 against the end walls of the slots 20 so as to spread the webs and heads apart and to bring the filling blocks 21 into alinement therewith, it being understood that this spreading action results in forcing the heads 8 against the rails A or B alining therewith.

Various means can of course be utilized for actuating the mechanism herein described. It is preferred however to extend an arm 27 from one of the shafts 15 and beyond the outer face of one of the crossing rails, said arm being pivotally connected to an actuating rod 28, which can be operated by means of a lever located in a tower, or at any other suitable point. When a train is, for example, traveling in the direction of the arrow indicated at *a* in Fig. 1 the operator pulls upon the rod 28 so as to cause a partial rotation of the shaft 24 and of all the shafts 15. The crossing rails which aline with the rails A will thus be contracted and drawn away from the rails B, while the other crossing rails will be elongated and moved against the rails A. The train can thus pass over the crossing without pounding. When a train approaches the crossing along the other track it is obviously merely necessary to reverse the foregoing operation, whereupon the track will be readjusted at the crossing so as to cause the parts to assume the positions shown in Fig. 1.

It is of course to be understood that a suitable covering plate 29 may be arranged between the crossing rails and above the shaft 24 and the parts connected thereto, this plate serving to prevent dirt, snow and ice from accumulating between the crossing rails and interfering with the operation of the mechanism.

Guard rails can of course be arranged between the crossing rails, as indicated at 30, and can also be extended between the rails A and between the rails B, although only portions of the rails between the crossing rails have been indicated.

Obviously various changes may be made in the construction and arrangement of the parts without departing from the spirit or sacrificing the advantages of the invention.

What is claimed is:—

1. A railroad crossing including angularly disposed extensible and contractible crossing rails, each of said rails including spaced slidably connected members and an intermediate revoluble member, and means for actuating the members of each crossing rail.

2. A railroad crossing including an extensible and contractible crossing rail consisting of slidably connected alining members, an intermediate revoluble member, and means for simultaneously shifting the slidable members in opposite directions and partly rotating the intermediate member.

3. A railroad crossing including an extensible and contractible crossing rail, said rail consisting of spaced alining slidable sections and an intermediate partly revoluble section, an actuating device, and means operated thereby for simultaneously shifting the slidable sections in opposite directions and moving the partly revoluble sections into or out of alinement therewith.

4. In a railroad crossing a crossing rail consisting of a base member, webs slidably

mounted thereon and having rail heads, slotted devices connected to the respective webs, a spacing section mounted for swinging movement between the heads of the webs, a shaft movable therewith, means extending from the shaft for simultaneously engaging the slotted devices to shift the webs in opposite directions, and means for actuating the shaft.

5. In a railroad crossing a crossing rail consisting of a base section having longitudinal upstanding flanges, spaced webs slidably mounted between the flanges, a revoluble section interposed between the slidable sections, and means for simultaneously shifting the slidable sections apart and moving the revoluble section into alinement therewith.

6. In a railroad crossing a rail consisting of spaced alining slidable sections, a guiding member therefor, an intermediate revoluble section movable into or out of alinement with the slidable sections, and mechanism for shifting the slidable sections in opposite directions simultaneously during the movement of the revoluble section into or out of alinement therewith.

7. In a railroad crossing a rail including a base section having upstanding guide flanges, spacing means interposed between the flanges, there being channels between said spacing means, alining rails having webs slidably mounted within the channels, a revoluble actuating device within the base section and between said sliding rails, means actuated by the shaft for shifting the sliding rails simultaneously toward or away from each other, and an intermediate rail section movable with the shaft into or out of alinement with the slidable rails.

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

OLIVER POSTON.

Witnesses:
Z. A. Malinowski,
John J. Pawlowski.