

F. E. JACOB.
RAILWAY CROSSING.
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935,910.

Patented Oct. 5, 1909.

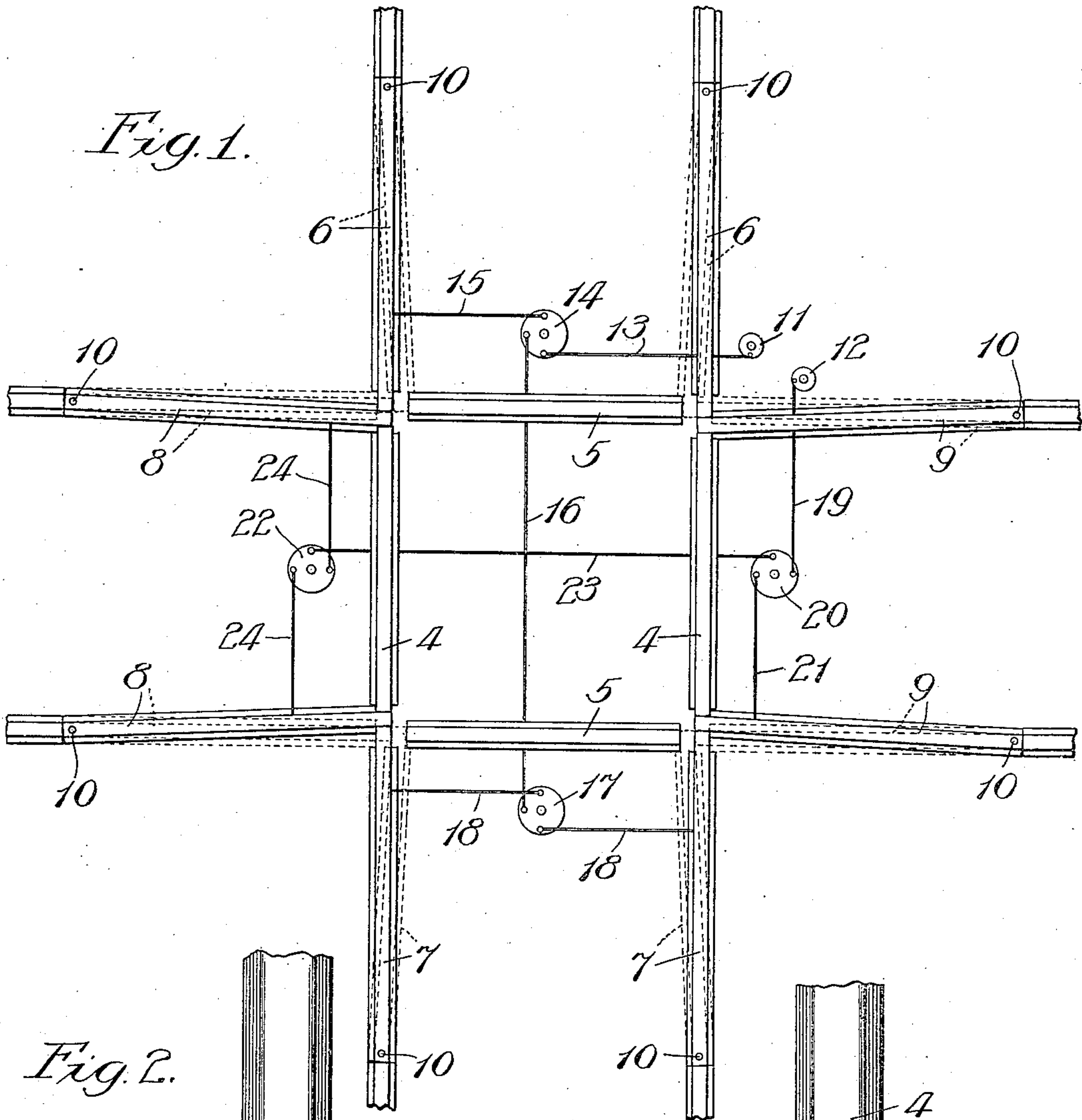


Fig. 2.

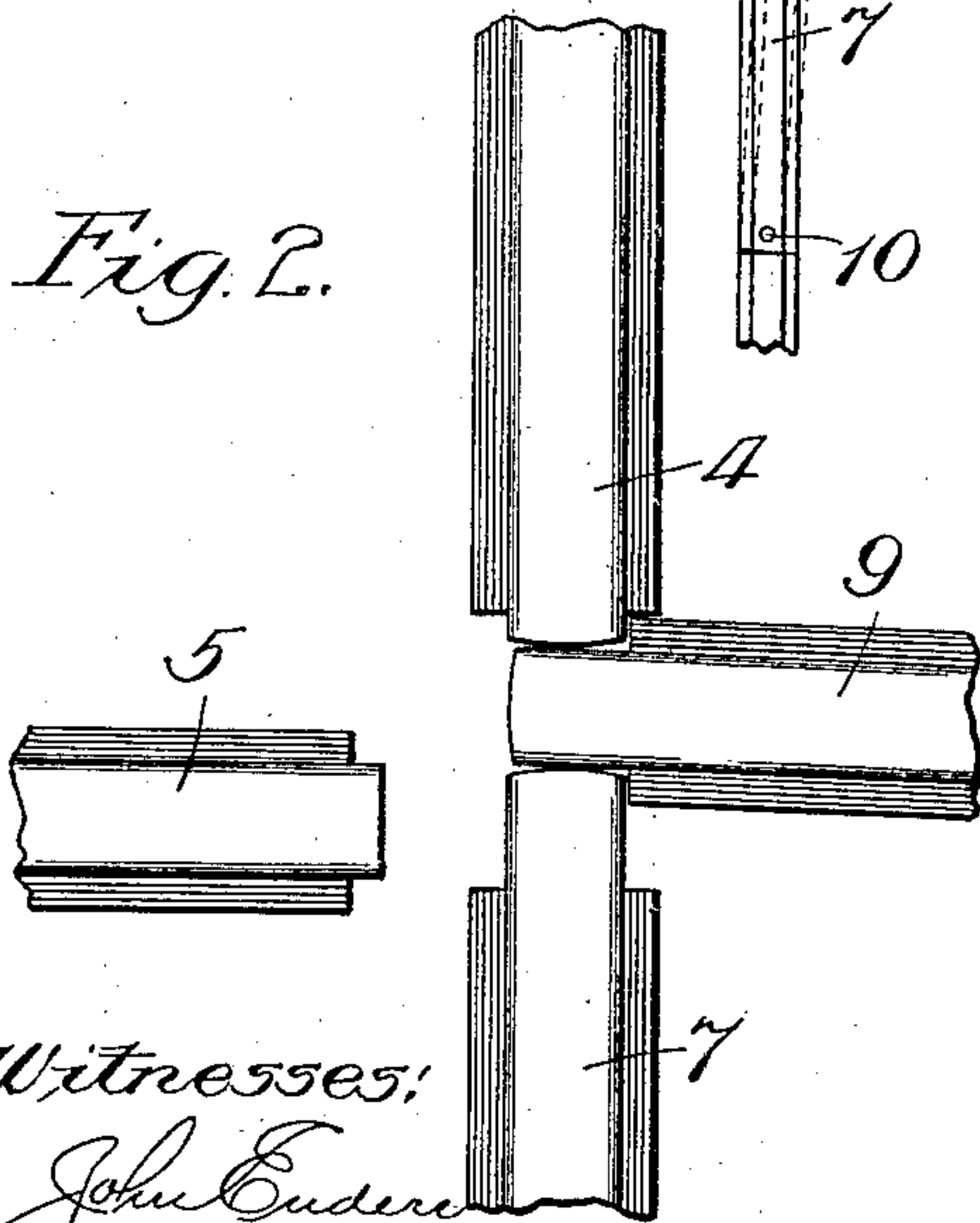
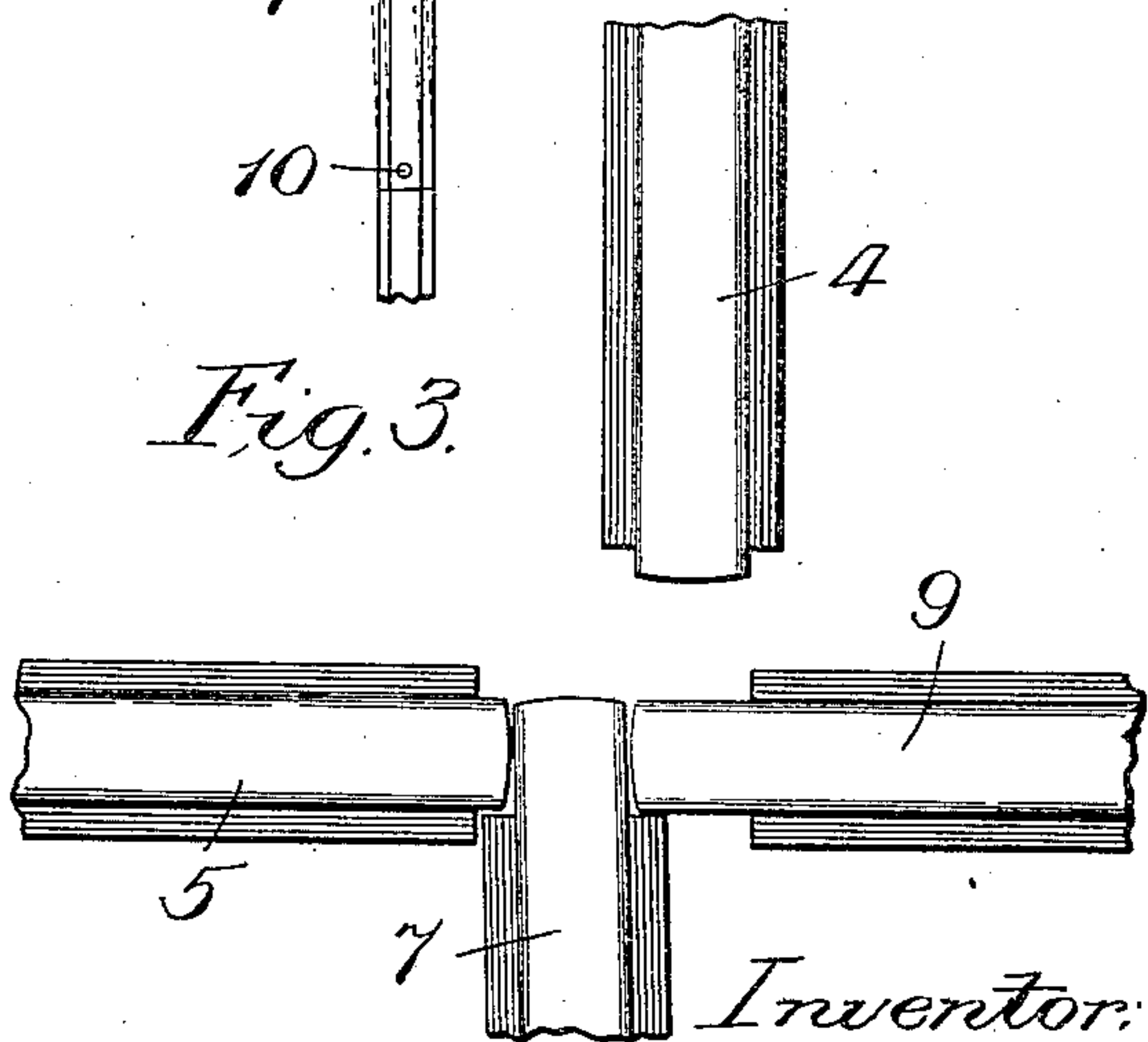


Fig. 3.



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UNITED STATES PATENT OFFICE.

FRANK E. JACOB, OF CHICAGO, ILLINOIS.

RAILWAY-CROSSING.

935,910.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK E. JACOB, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Railway-Crossings, of which the following is a specification.

My object is to provide certain improvements in the construction of railway crossings, whereby the running rails are rendered practically continuous for the track in use, thus avoiding the gaps or breaks in such rails, usual at crossings, with the resultant pounding and jarring of the rolling stock and attendant noise and discomfort in travel.

In the accompanying drawing—Figure 1 is a broken view of a crossing constructed with my improvements, a means for adjusting the movable rails being shown merely for purposes of illustration; and Figs. 2 and 3, enlarged broken views showing the two positions of the movable rails.

The crossing-rails 4, 4 and 5, 5 are fixed and may extend at the desired angle with reference to each other. They extend short of the ends of the track-rails leading thereto, a distance approximating the width of the heads of the rails. The set of track-rails 6, 7, leading to and from the crossing-rails 4, and the set of track-rails 8, 9, leading to and from the crossing-rails 5, are pivoted respectively at the points 10, as indicated, to swing in the horizontal plane, and the ends of their heads extend approximately to the inner edges of the heads of the adjacent crossing-rails at right angles thereto. Thus, when the movable rails are swung to the position indicated by full lines in Fig. 1, the set of rails 6, 7 are in line with the crossing-rails 4, 4 and the end portions of the set of rails 8, 9 fill, or substantially fill, the gaps between the ends of the rails 4, 6 and 4, 7. This results in a practically continuous track from the rails 6 to 7 without any appreciable break. When the movable rails are adjusted as indicated by dotted lines in Fig. 1, the rails 8, 9 are in line with the crossing-rails 5, 5 and the gaps are filled by the end portions of the rails 6, 7 thereby rendering the track between the rails 8, 9 practically continuous.

For purposes of illustration I show in Fig. 1 means for changing the crossing.

11 and 12 are switch-stands, or sections of the same switch-stand, which may be oper-

ated locally or from a switch-tower, as preferred. A lever or disk of the switch-stand 11 is eccentrically connected with a thrust rod 13 connected between its ends to the adjacent rail 6 and at its opposite end to a rotary disk or bell-crank lever 14. The said disk is eccentrically connected at its opposite side with one end of a thrust-rod 15 which, at its opposite end, is connected with the other rail 6. A rod 16 connects the disk 14 with a similar disk or bell-crank lever 17 which, in turn, is eccentrically connected through the thrust-rods 18, 18 with the rails 7. The switch-stand 12 has a disk or lever with which a rod 19 is connected at one end, the rod being connected at its opposite end with a disk or bell-crank lever 20. Between its ends the rod 19 engages the adjacent track-rail 9 and a rod 21 connects the disk 20 with the other track-rail 9. Extending from the disk 20 to a disk 22 is a rod 23, the disk 22 being connected with the rails 8 by means of rods 24. It will be understood from the illustration that, in the turning of the switch-stand 11 in one direction, the rod 13 is thrust to turn the disk 14 and swing the rails 6 toward each other out of alinement with the crossing-rails 4 and, through the connections 16, 17, swing the rails 7 toward each other out of alinement with the crossing-rails 4. The extreme end portions of the rails 6, 7 are thus caused to form gap-filling extensions at opposite ends of the crossing-rails 5. Turning of the switch-stand 12 in one direction, it will be understood, turns the disks 20, 22 and causes the rails 9, 8 to be moved in the direction away from each other into alinement with the crossing-rails 5 in which position they abut more or less closely against the outer sides of the end-portions of the rails 6, 7. These operations of the switch-stands, therefore, cause closing of the track through the rails 8, 5, 9 for the passage of trains and the closing of gaps between the rails 8, 5 and 9, 5. A reverse movement given to the switch-stands 11, 12 closes the crossing through the rails 6, 4, 7 for the passage of trains in that direction and the filling of gaps between the ends of the rails 6, 4 and 7, 4.

In the drawings I have shown the crossing constructed only with running-rails, but it is to be understood that guard-rails and other features usually provided at crossings may be employed.

The construction shown and described may

obviously be varied as to details without departing from the spirit of my invention as defined by the claims.

What I claim as new and desire to secure
5 by Letters Patent is—

1. In a railway-crossing, the combination
with the crossing-rails, of sets of track-rails
adjustable alternately into and out of aline-
ment with the crossing-rails, the end por-
10 tions of said track-rails out of such aline-
ment serving to bridge gaps between the
other rails, in such alinement, and the cross-
ing-rails with which they aline.

2. In a railway-crossing, the combination
15 with stationary crossing-rails, of sets of hori-
zontally swinging track-rails adjustable al-
ternately into and out of alinement with the
crossing-rails, the end portions of said track

rails out of such alinement serving to bridge
gaps between the other rails, in such aline- 20
ment, and the crossing-rails with which they
aline.

3. In a railway-crossing, the combination
with the crossing-rails, of sets of track-rails
adjustable alternately into and out of aline- 25
ment with the crossing-rails, the end por-
tions of said track-rails out of such aline-
ment serving to bridge gaps between the
other rails, in such alinement, and the cross-
ing-rails with which they aline, and means 30
for simultaneously adjusting the rails of
each set.

FRANK E. JACOB.

In presence of—

K. M. CORNWALL,
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