

J. F. YOHO, D. O'NEIL & J. L. KIESTER.
RAILWAY SWITCH.

APPLICATION FILED JULY 15, 1909

975,595.

Patented Nov. 15, 1910.

2 SHEETS—SHEET 1.

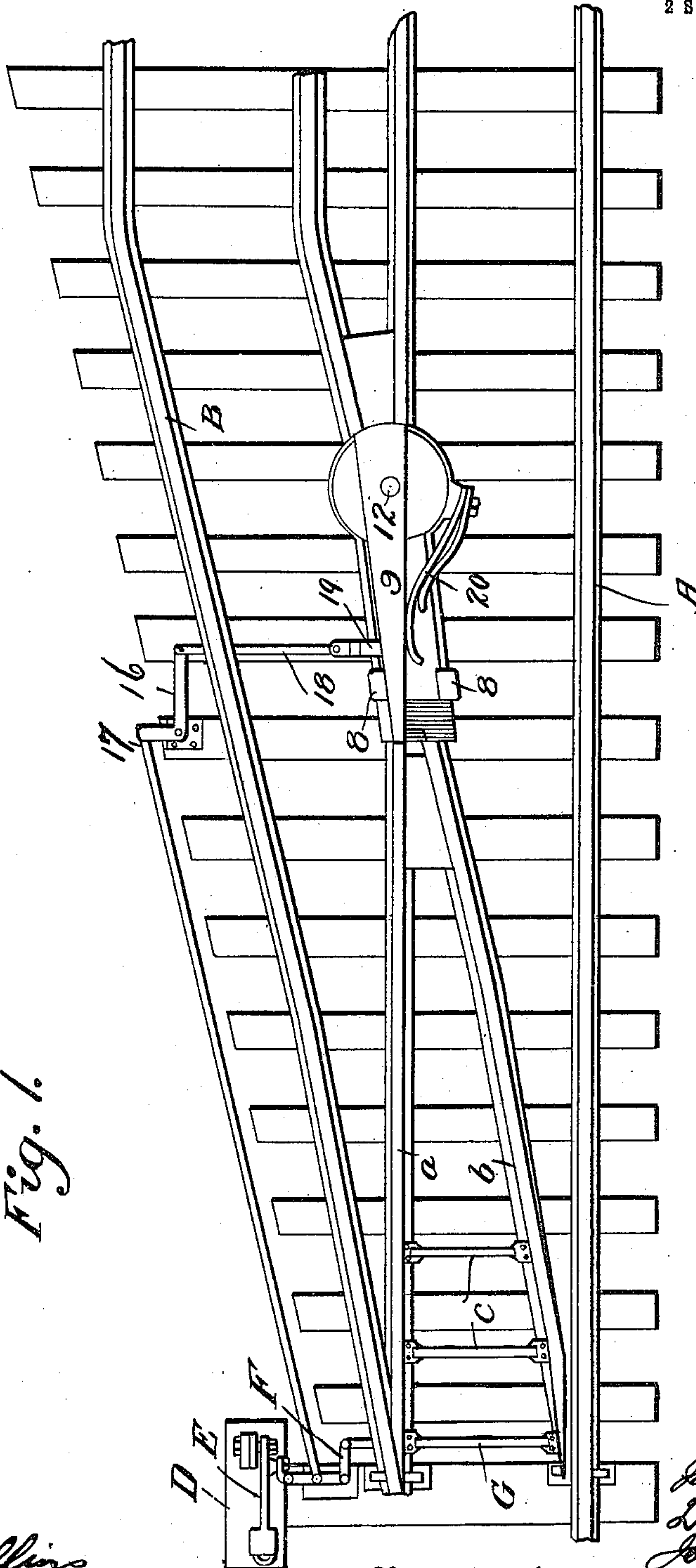


Fig. 1.

Witnesses

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Fig. 2.

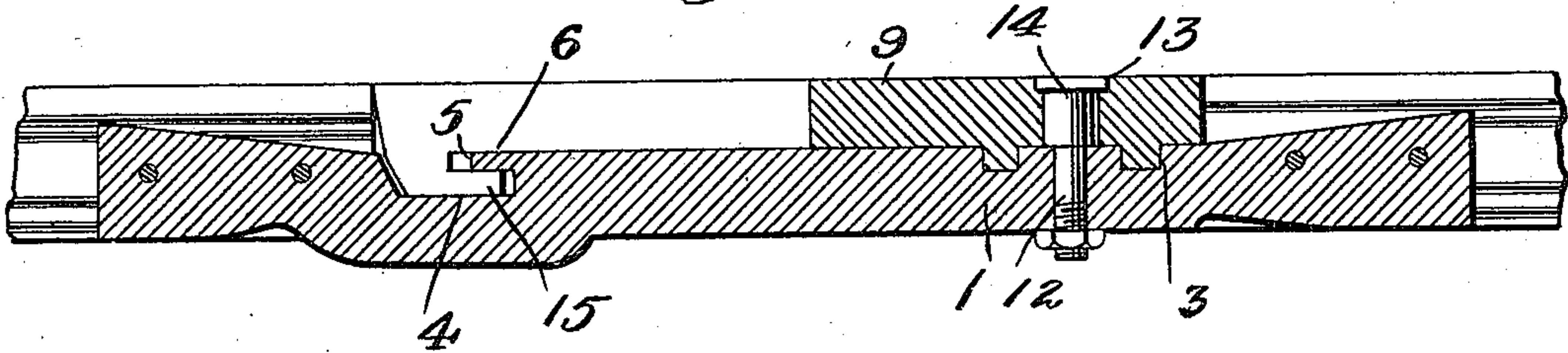


Fig. 3.

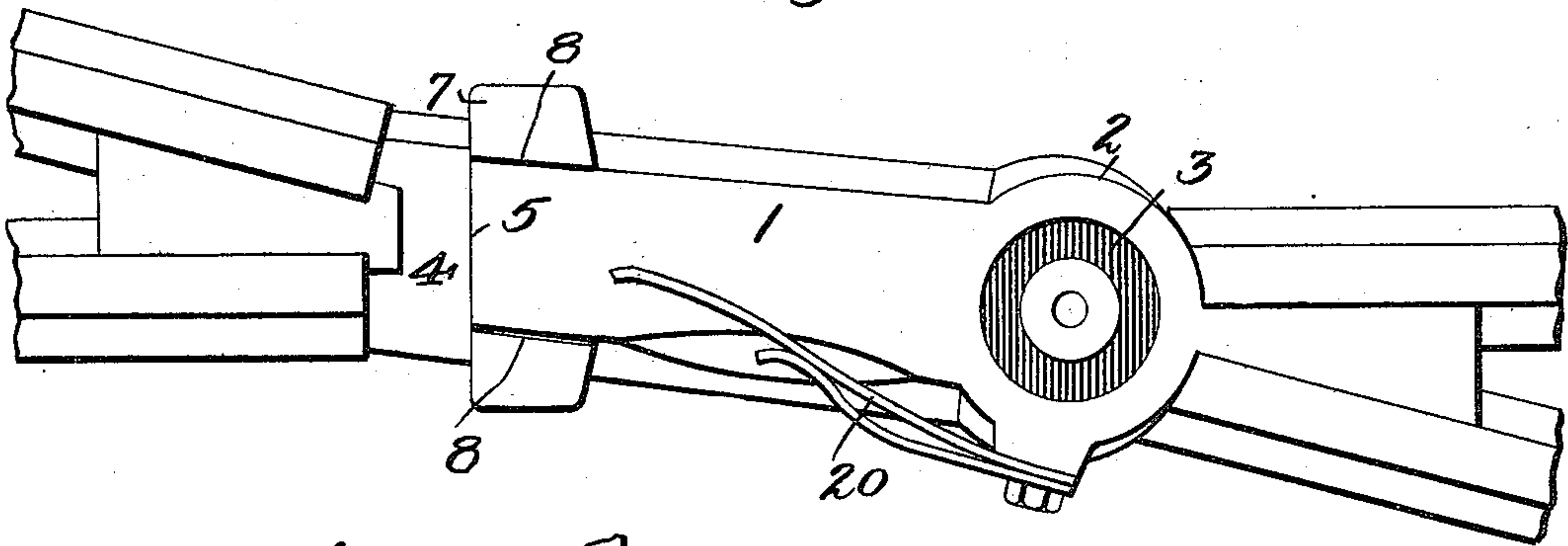


Fig. 4.

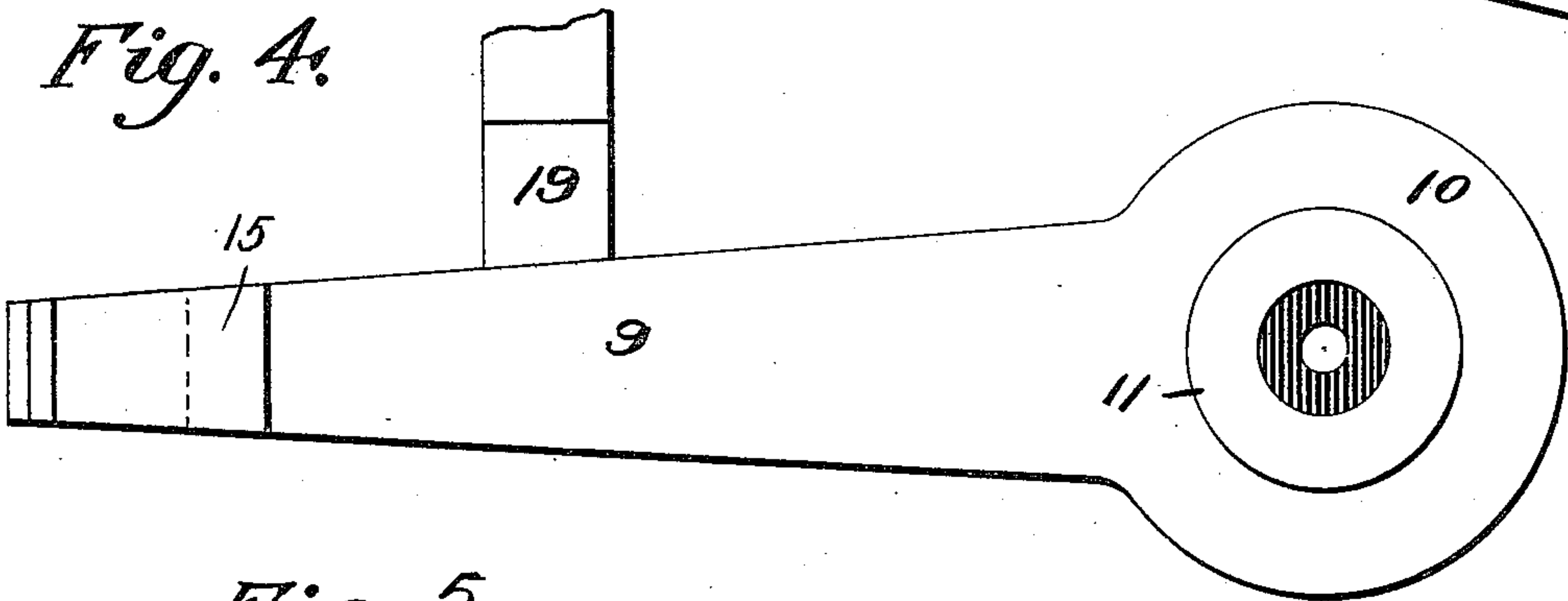
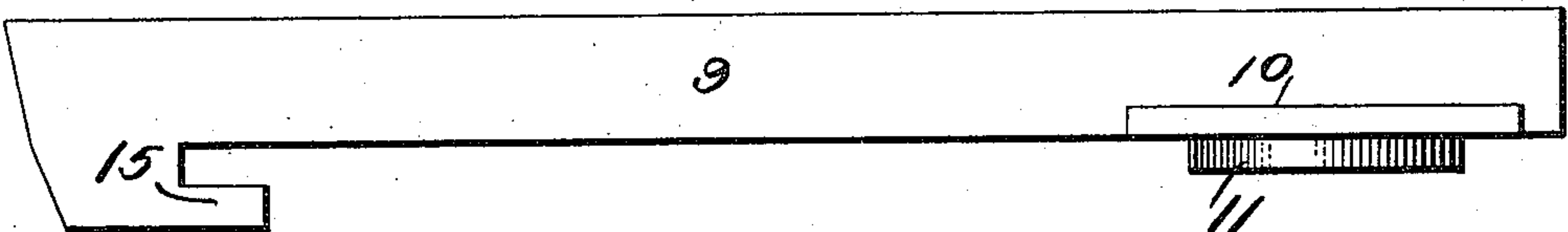


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES F. YOHO AND DANIEL O'NEIL, OF SHARON, AND JAMES LAURENCE KIESTER,
OF KIESTER, PENNSYLVANIA.

RAILWAY-SWITCH.

975,595.

Specification of Letters Patent.

Patented Nov. 15, 1910.

Application filed July 15, 1909. Serial No. 507,812.

To all whom it may concern:

Be it known that we, JAMES F. YOHO and DANIEL O'NEIL, residing at Sharon, in the county of Mercer and State of Pennsylvania, and JAMES LAURENCE KIESTER, residing at Kiester, Butler county, Pennsylvania, all of whom are citizens of the United States, have invented certain new and useful Improvements in Railway-Switches, of which the following is a specification.

Our invention relates to frogs for railway switches and especially to the construction of the frog point and has for its object the provision of a frog point that is simple in construction, reasonable in cost of manufacture and so constructed that should the point be worn or broken it can be renewed or replaced quickly without necessitating tearing up the track.

Our invention will be described in detail hereinafter and illustrated in the accompanying drawings in which—

Figure 1 is a plan view of a section of track showing our improved frog point in position, Fig. 2, a central longitudinal sectional view of the frog plate with the frog point in position, Fig. 3, a top view of the base plate with the frog point removed, Fig. 4, a bottom plan view of the frog point, Fig. 5, a side view of the frog point.

In the drawings similar reference characters indicate corresponding parts in the several views.

A indicates the main line track, and B the turn out or siding, the inner rails of the two tracks being mounted to swing so as to open or close the main line or siding as desired, the ends of the movable rails, indicated at *a* and *b*, respectively, being secured together for simultaneous movement by means of rods C.

D indicates the switch stand having the switch lever E operatively secured to one arm of bell-crank lever F while its other arm is secured to the movable rails *a* and *b* by means of a rod G.

Our invention also contemplates an improved construction of frog at the crossing of the rails *a* and *b* which will now be specifically described.

The base plate 1 of our improved frog has a circular bearing 2 at one end with an annular groove 3 therein while its other end is cut away as shown at 4 to form a shoulder

5 which is formed with an undercut elongated slot 6. The sides of the base 1 are extended laterally at each side of the shoulder 5 as shown at 7 and have lugs or projections 8 extending upwardly therefrom to form stops to limit the swing of the frog point to be hereinafter described.

The frog point 9 is formed with a circular bearing 10 on its heel that seats on bearing 2 and is formed with an annular bead or projection 11 that seats in annular groove 3 in the base, the point 9 being pivotally mounted on the base by means of a pin or bolt 12 secured through the base 1 and point 9 centrally of the bearings 2 and 10 and groove 3 and annular bead 11. The head of the pin or bolt 12 is counter sunk as shown at 13 and formed with an enlarged portion 14 immediately below the shoulder to form the wear surface for the frog point.

The toe of the point 9 is formed with a rearwardly extending hook 15 on its under side that engages the undercut slot 6 in shoulder 5 and serves to hold the point down in position, the lugs or projections 8 by engaging the sides of the switch point serve to limit its swing so that it is in alinement with the main track or siding as the case may be.

16 indicates a bell-crank lever suitably mounted adjacent to the siding B and having one arm connected to bell-crank lever F by means of rod 17, and its other arm connected by means of rod 18 with ear 19 extending laterally from the point 9.

20 indicates a spring secured to the side of base 1 and engaging the side of point 9 and normally tending to move the point 9 so that the main line is open.

Having thus described our invention what we claim is—

1. In a railway switch, a frog consisting of a base plate having an annular bearing groove in one end and its other end cut away to form a shoulder, an undercut groove in said shoulder, a frog point mounted on said plate, an annular bead on the under side of one end of the point and engaging the annular groove aforesaid, a hook on the underside of its other end and engaging the undercut groove aforesaid, and a spring secured to the base plate and engaging the frog point to hold it normally in position.

2. In a railway switch, a frog consisting

of a base plate having a circular bearing at one end with an annular groove therein, the other end of the base plate cut away to form a shoulder, said shoulder provided with
5 an undercut groove therein, a frog point having a circular bearing surface to engage the bearing surface on the base, an annular bead on the underside of the frog point and engaging said annular groove, a pivot pin
10 secured through said frog point and base centrally of the annular groove and bead, the free end of the frog point having a hook to engage the undercut groove in the shoulder, and a leaf spring secured to the base

plate and engaging the frog point to hold it normally in position. 15

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

JAMES F. YOHO.

DANIEL O'NEIL.

JAMES LAURENCE KIESTER.

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