No. 759,871. PATENTED MAY 17, 1904.

G. M. ERVIN.

UNBROKEN MAIN LINE SWITCH.

APPLICATION FILED AUG. 1, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

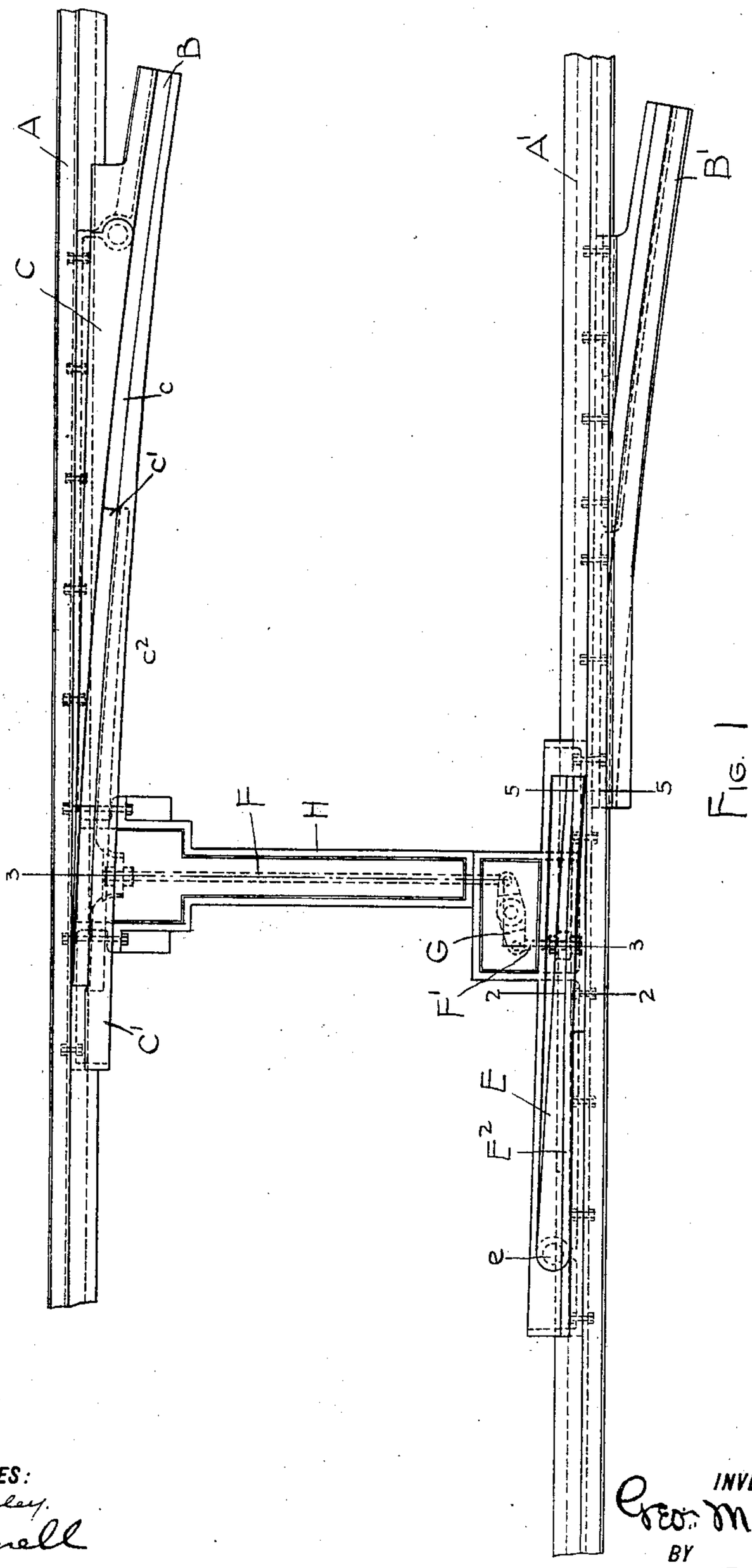

FIG. 1

WITNESSES:
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L. O'Donnell

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BY
Geo. H. Parmelee
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NO MODEL. 2 SHEETS—SHEET 2.

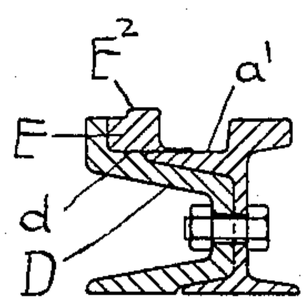

FIG. 2

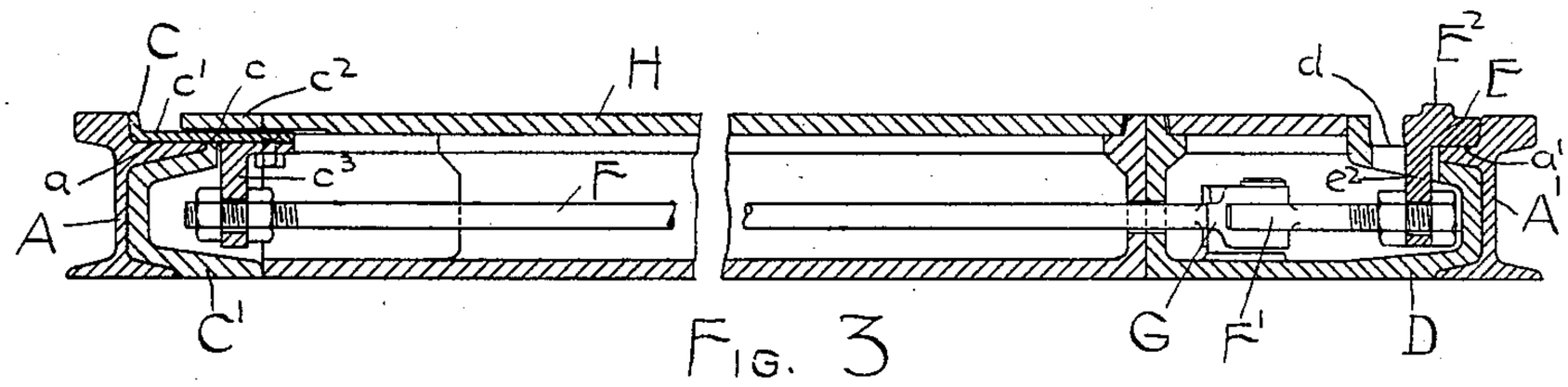

FIG. 3

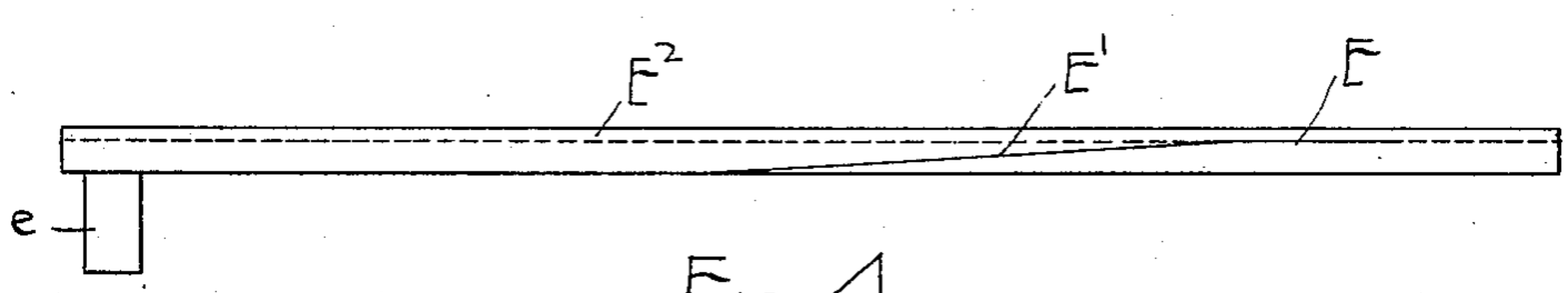

FIG. 4

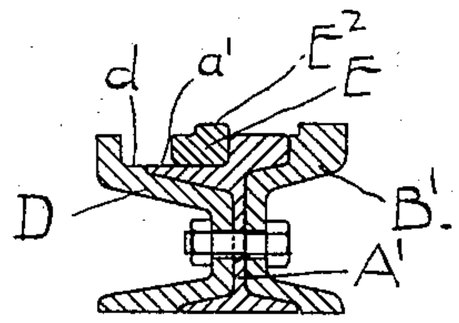

FIG. 5

WITNESSES:
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INVENTOR
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No. 759,871. Patented May 17, 1904.

UNITED STATES PATENT OFFICE.

GEORGE M. ERVIN, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE LORAIN STEEL COMPANY, A CORPORATION OF PENNSYLVANIA.

UNBROKEN-MAIN-LINE SWITCH.

SPECIFICATION forming part of Letters Patent No. 759,871, dated May 17, 1904.

Application filed August 1, 1903. Serial No. 167,891. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. ERVIN, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Unbroken-Main-Line Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has relation to certain new and useful improvements in that class of railway-switches known as "unbroken-main-line switches," and is designed to provide a switch of this type which can be readily assembled and connected in the track and which will not form an obstruction in the street and which is of such construction as not to injure or be injured by miscellaneous street traffic.

With these objects in view my invention consists in the novel construction, combination, and arrangement of parts, all as hereinafter described, and pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a switch embodying my invention; Fig. 2, a section on the line 2 2 of Fig. 1, but with the movable member or tongue thrown to its other position; and Fig. 3 is a section taken on the lines 3 3 of Fig. 1. Fig. 4 is a detail side view of one of the tongues detached, and Fig. 5 is a section on the line 5 5 of Fig. 1.

The letters A A′ designate the unbroken-main-line rails, and B B′ the rails of the branch track or turnout.

C is a tongue-switch which is placed in the outer rail B of the branch track. This switch is preferably but not necessarily of the construction shown and described in my pending application, Serial No. 161,866. It consists of a casting C′, secured to the inner side of the rail A, having the arm B, which forms part of the branch-track rail, and formed with a floor portion *c*, which is level with the tram *a* of said rail, thereby forming a bed for the tongue C. This tongue is a slender tongue, arranged when in its normal position to give a full-width and unobstructed flangeway for the main track. It is reinforced by a base-flange *c′* at its curved side, to receive which the guard portion c^2 of the casting C′ is undercut and recessed.

D is a casting which is secured to the inner side of the rail A′ and is formed with a floor portion *d* level with the tram *a′* of said rail. E is a movable member or tongue which is pivoted to the said casting at *e*. This tongue is formed with the lateral lifting flange or riser E′, adapted to raise the wheel-flanges to the level of the head of the rail A′, said flange or riser running out at about the point where it comes to such level. The tongue is also formed with a guard portion E^2.

D′ is a back-stop or guard-flange on the casting D.

The two tongues C and E are pivoted at opposite ends, so that their point portions extend past each other, tongue E being set sufficiently in advance of the tongue C to cause the car-wheels to be raised to the level of the head of the rail A′ before the tongue C begins to deflect the wheels laterally. Tongue C has a depending lug c^3 attached thereto at a point inside of the main rail A, and this lug is engaged by a transverse connecting-rod F. Tongue E has a depending lug *e′*, which is engaged by a rod F′. The two rods F and F′ are connected to opposite arms of a short lever G, whereby movement of the two tongues will be in opposite directions.

The only cut which it is necessary to make in the main rails in order to connect up this switch is a small notch in the tram of rail A′ for the depending lug e^2, and even this may be avoided by offsetting said lug inwardly. The connecting-rods are preferably incased in a suitable boxing, such as shown at H.

I do not in this application claim, broadly, in an unbroken-main-line switch the combination, with a deflecting-tongue at the outer side of the branch track, of a lifting-tongue at the inner side of the same, as such combination is claimed in my copending application, Serial No. 167,890. I do not, however, wish to be limited herein to the details of construction and arrangement which I have herein shown and described, as various changes may be made therein without departing from the

spirit and scope of my invention as it is defined in and by the following claims.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an unbroken-main-line switch, the combination with a deflecting-tongue at the outer side of the switch, of a lifting-tongue at the inner side of said switch and movable to and from the head of the adjacent main rail from the inner side of the same.

2. In an unbroken-main-line switch, the combination with a deflecting-tongue at the outer side of the switch, of a lifting-tongue at the inner side of said switch and movable to and from the head of the adjacent main rail from the inner side of the same, and means for moving said switches in opposite directions in unison.

3. In an unbroken-main-line switch, a casting secured to the inner side of the main rail and having a floor level with the tram of said rail, and a tongue pivoted to said casting at the end portion distant from the branch-track-rail connection and movable toward and away from said rail, said tongue having a lifting flange or riser at its outer side.

4. In an unbroken-main-line switch, the combination with a main rail, of a casting secured to the inner side of the same, a tongue pivoted to said casting and having a lifting-flange rising to the level of the head of said rail, and a pivoted deflecting-tongue at the opposite side of the track.

5. In an unbroken-main-line switch, the combination with the main-line rails, and the branch-track rails, of the two movable members or tongues pivoted at opposite ends and connected across the track to work in unison.

6. In an unbroken-main-line switch, the combination with a deflecting-tongue at one side of the track, of a lifting-tongue at the opposite side of the track, said tongues being pivoted at opposite ends and the lifting-tongue being set in advance of the deflecting-tongue.

7. In an unbroken-main-line switch, the combination with a deflecting-tongue at one side of the track, of a lifting-tongue at the opposite side of the track, said tongues being pivoted at opposite ends and the lifting-tongue being set in advance of the deflecting-tongue, and transverse connections between said tongues whereby they may be moved simultaneously in opposite directions.

In testimony whereof I have affixed my signature in presence of two witnesses.

GEO. M. ERVIN.

Witnesses:

LORETTO O'CONNELL,

H. W. SMITH.