

D. A. YORK.
RAILWAY SWITCH.

APPLICATION FILED AUG. 24, 1909.

945,147.

Patented Jan. 4, 1910.

2 SHEETS—SHEET 1.

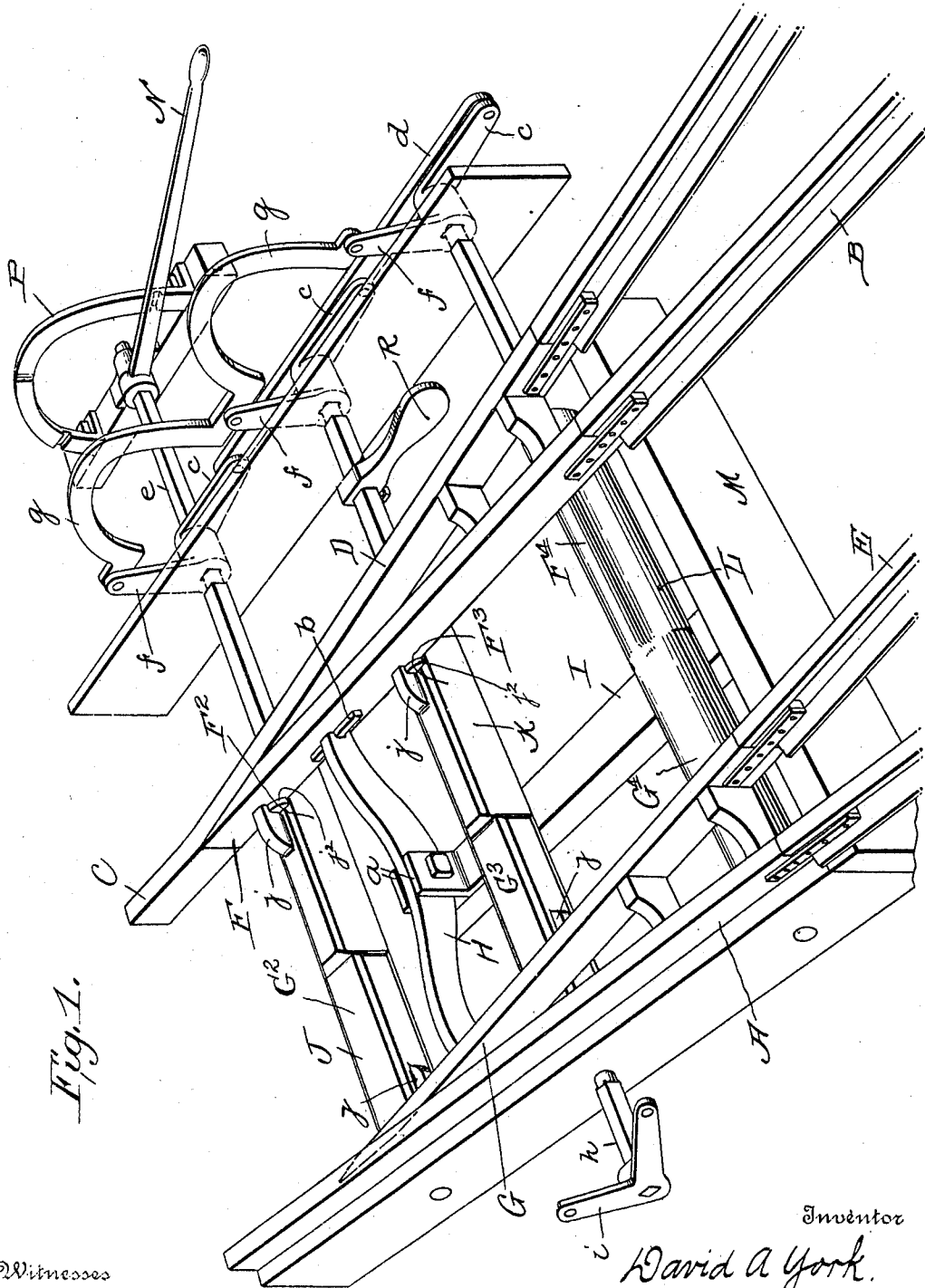


Fig. 1.

Witnesses

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By

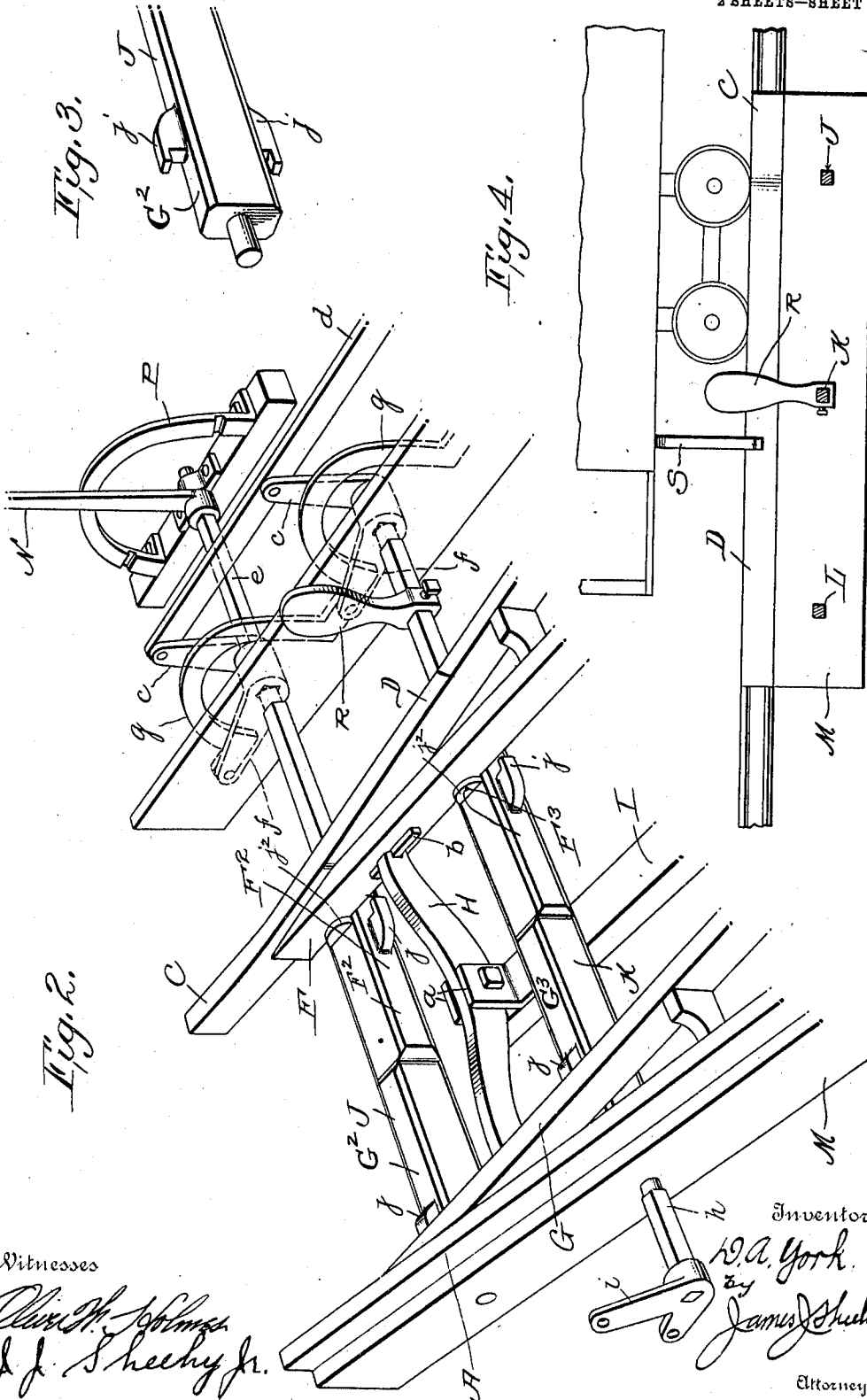
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UNITED STATES PATENT OFFICE.

DAVID A. YORK, OF NORTHGROVE, INDIANA, ASSIGNOR OF TWO-FIFTHS TO DANIEL L. SHENEMAN, OF NORTHGROVE, INDIANA.

RAILWAY-SWITCH.

945,147.

Specification of Letters Patent.

Patented Jan. 4, 1910.

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To all whom it may concern:

Be it known that I, DAVID A. YORK, a citizen of the United States, residing at Northgrove, in the county of Miami and State of Indiana, have invented new and useful Improvements in Railway-Switches, of which the following is a specification.

My invention relates to railway switches; and it consists in the peculiar and advantageous switch, hereinafter described and claimed, constructed with a view of working under all conditions, and of tending to assume and remain in "clear main track position" after a train passes either into or out of the siding.

In the drawings, accompanying and forming part of this specification: Figure 1 is a general view showing my novel switch as arranged for a clear main track. Fig. 2 is a similar view showing the switch set for a siding—i. e., in position for a train to pass into or out of the siding. Fig. 3 is a detail perspective view of a portion of one of the transverse shafts hereinafter referred to. Fig. 4 is a diagrammatic view showing the use of a tappet to restore the switch to "clear main track" position.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A, B and C are fixed main track rails of conventional or any other construction consonant with the purpose of my invention.

D is a fixed siding or turn-out rail into which the rail C merges.

E is a fixed siding or turn-out rail which terminates at a point adjacent the rail A.

F is a switch rail abutting at its heel against the end of rail B and connected with said rail B in such manner that it (the switch rail F) is capable of swinging or otherwise suitably moving vertically, and G is a similarly movable switch rail having its heel abutting against and connected with the end of the rail E. It follows from the foregoing that the beveled ends of the switch rails F and G are adapted to wipe up and down at the inner sides of the main track rails A and C, respectively, and that, therefore, snow or ice, sand or gravel cannot prevent or interfere with the movements of said switch rails in opposite directions or up and down.

My invention contemplates moving the rail F up and the rail G down, and vice

versa, simultaneously, and in order to assure said simultaneous reverse movements and at the same time brace the said rails F and G, I provide a transverse, vertically-swinging lever H, fulcrumed between standards *a* rising from a fixed bar I, and connected at its ends with the rails; the latter connection being preferably effected by bifurcating the ends of the transverse lever and disposing lugs *b* on the inner sides of the rails in the said bifurcations. To effect the described movements of the switch rails F and G, I provide the three transverse shafts J, K and L, arranged under the switch rails, and journaled in suitable bearings in a base frame M. At one side of the turn-out, the said shafts J, K and L are provided with cranks *c*, and the several cranks *c* are connected together through the medium of a longitudinal bar *d* in order to assure the several shafts turning or rolling synchronously. It will also be here noted that the shaft J is longer than the other two, and is provided on its extended portion *e* with a hand lever N adapted to be adjustably fixed in three positions with respect to a fixed stand P; and it will further be noted that the shafts J, K and L have cranks *f*, disposed at right angles to the cranks *c* and connected together by a brace bar *g* which supplements the before mentioned connecting bar *d*.

The shaft K is provided at the opposite side of the turn-out, with reference to the lever N and stand P, with an extended portion *h* on which is a crank *i* designed to be connected with means (not shown) through the medium of which the shafts may be turned by a person stationed at a distance from the turn-out.

Fixed by a set screw or other suitable means on a portion of one of the transverse shafts, preferably the shaft K, is an arm R, designed to be engaged and moved by a tappet S on a caboose or last car of a train passing into or out of the siding, this to restore the switch to its "clear main track" condition subsequent to the passage of the said train. See Fig. 4.

The shaft J is provided with oppositely disposed eccentric portions F^2 G^2 arranged under and adapted to raise the rails F, G, respectively, and the shaft K is provided with eccentric portions F^3 and G^3 similarly arranged under the rails F and G. It will also be noticed that the shafts J and K have

lugs j which serve, by bearing against the inner sides of the switch rails F and G, to prevent lateral play of said switch rails, and by engaging lugs j^2 on the rails to hold same down on the eccentric portions. The shaft L is also provided with oppositely-disposed eccentric portions F^4 G^4 , but because of the proximity of said shaft L to the heels of the switch rails, said eccentric portions are so slight that the shaft is almost circular in cross-section, and hence serves largely as a support or rest for the switch rails.

It will be gathered from the foregoing that when the shafts J, K and L are turned, one of the switch rails will be positively raised by the eccentric portions below the same, and the other switch rail will be positively lowered through the medium of the transverse lever H. It will also be gathered that when the switch is set for the siding the lever N and the arm R will stand upright so that movement of either lever or arm in either direction will restore the switch to its "clear main track" condition.

When the switch is to be thrown by means of the tappet S on a car or locomotive of a train moving into or out of the siding, the tappet is lowered from the car or locomotive in such position as to throw the switch through the medium of the arm R just as the last wheels of the train clear the switch. It will be understood, of course, that when the switch is to be thrown through the medium of the tappet S and the arm R, the lever N will be free to move with respect to the stand P.

In addition to the practical advantages hereinbefore ascribed to my novel switch, it will be noted that the same is simple and inexpensive in construction and is well adapted to withstand the rough usage and exposure to which railway switches are ordinarily subjected.

The construction herein illustrated and described constitutes the best practical em-

bodiment of my invention that I have as yet devised, but it is obvious that in the future practice of the invention such changes or modifications may be made as do not involve departure from the scope of my invention, as claimed.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

The combination in a railway switch, of a base frame, fixed main track and siding or turn out rails, switch rails movable up and down alongside the fixed rails and having lugs j^2 on their inner sides, transverse shafts journaled in said base frame and having oppositely disposed cranks and also having oppositely disposed eccentric portions arranged under and supporting the switch rails and adapted to raise the same and further having lugs adapted to bear against the inner sides of the switch rails and to engage the lugs j^2 on the rails to hold the same down on the eccentric portions, a longitudinal bar connecting the similarly disposed cranks of the several shafts, a longitudinal bar connecting the other cranks of said shafts, a transverse, vertically movable lever fulcrumed at an intermediate point of its length and connecting the switch rails to move one of said rails down when the other is moved up, a hand lever fixed directly on a portion of one transverse shaft, and an arm fixed directly on a portion of another transverse shaft and adapted when struck by a moving tappet to turn the shaft; the said arm being relatively arranged to extend upward when the switch is set for a siding.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

DAVID A. YORK.

Witnesses:

JOHN R. THORIN,
LEE WERTS.