(No Model.)

H. POLIS.

RAILWAY SWITCH.

No. 529,189. Patented Nov. 13, 1894.

Fig. 1.

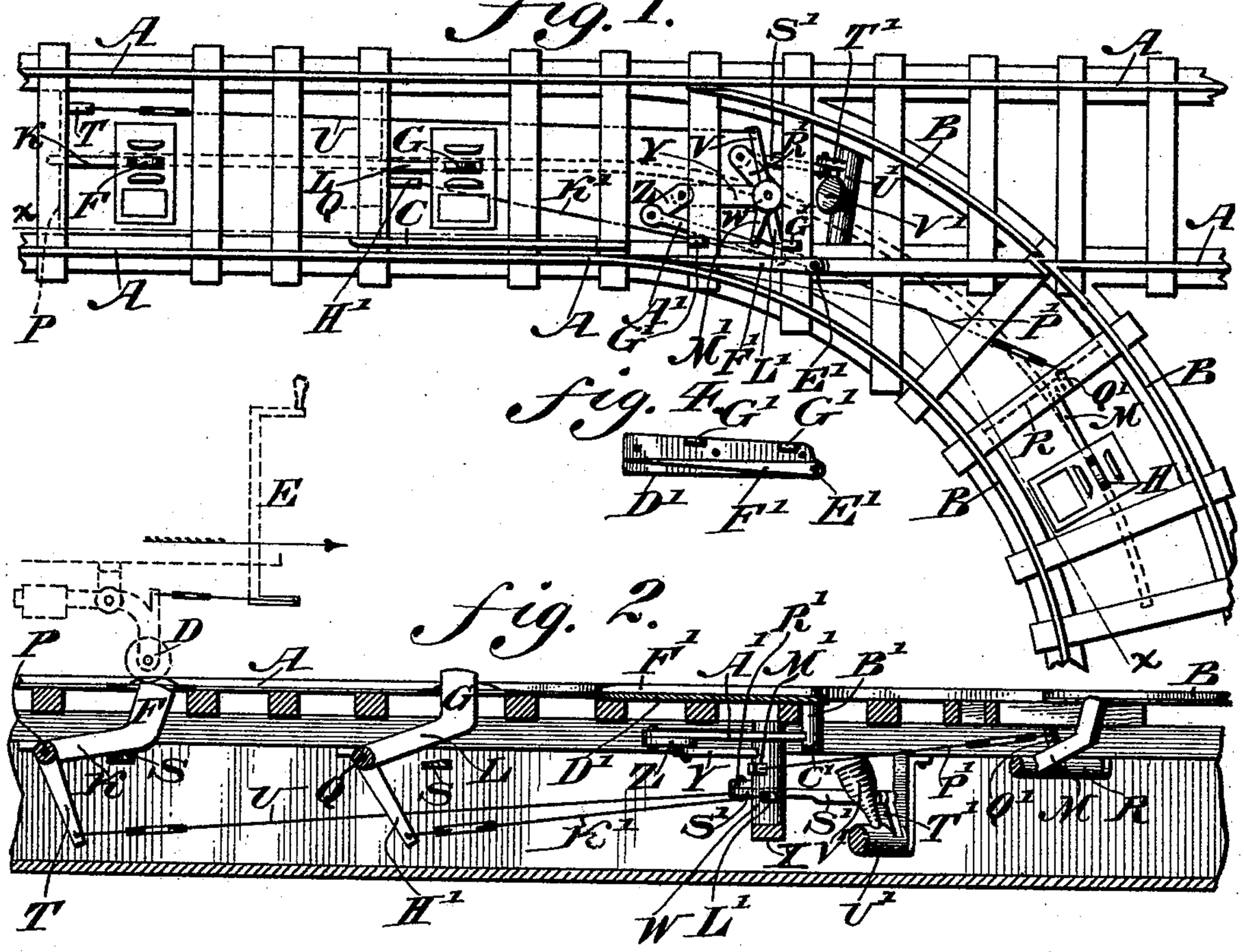
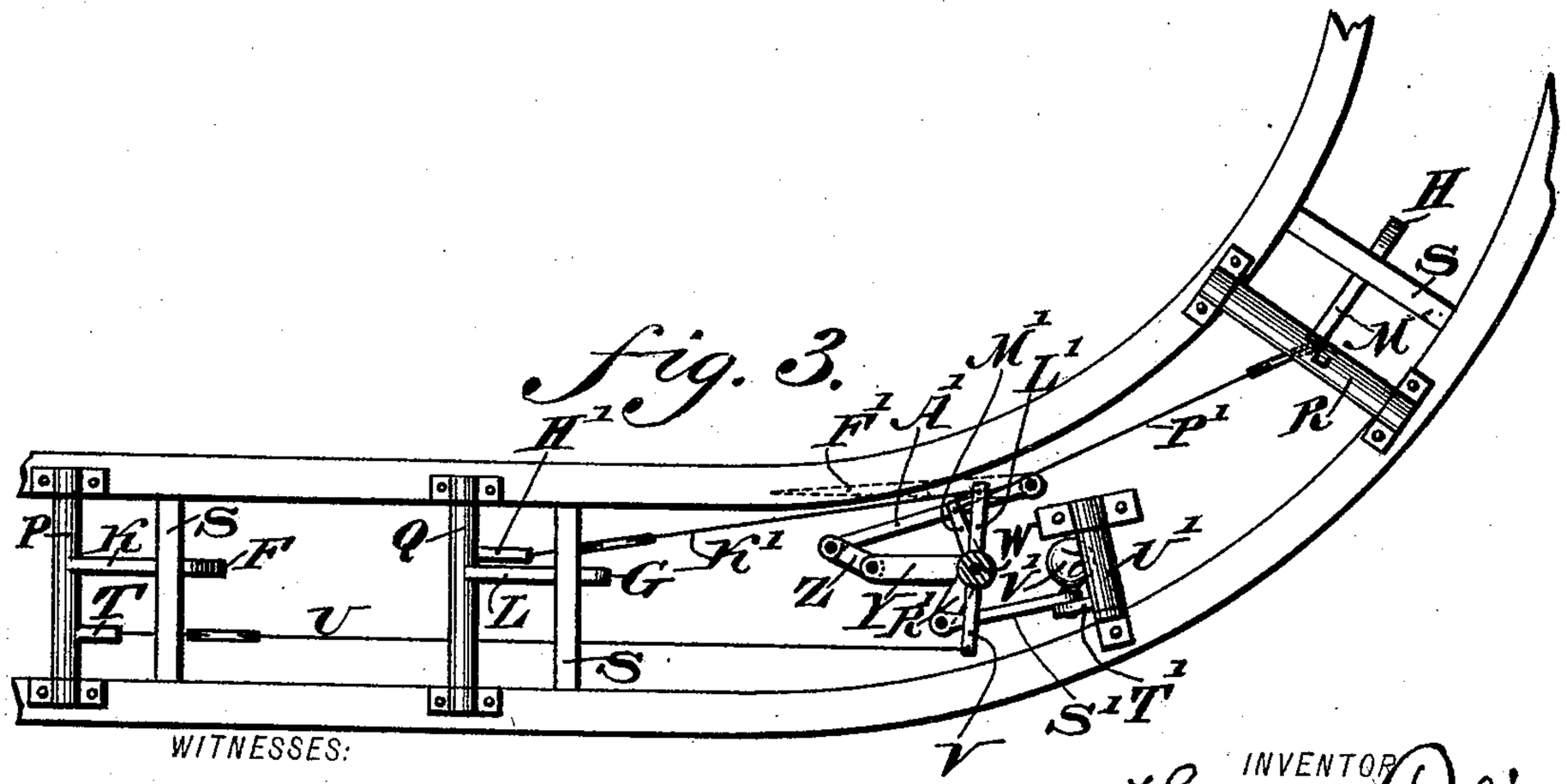


Fig. 2.

Fig. 3.



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HORACE POLIS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO LAWRENCE F. MOONEY, OF SAME PLACE.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 529,189, dated November 13, 1894.

Application filed April 16, 1894. Serial No. 507,670. (No model.)

To all whom it may concern:

Be it known that I, HORACE POLIS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Railway-Switches, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of improvements in railway switches, and my object is to provide means whereby a switch may be moved relatively to a main track or turn-off or siding, by means of the engagement of some part of the car with a suitable portion of the switch-actuating mechanism, all as will be hereinafter set forth.

Figure 1 represents a plan view of a main track and a turn-off equipped with a switch-actuating mechanism embodying my invention. Fig. 2 represents a section through the same on the line *x*, *x*. Fig. 3 represents a bottom view of the switch-actuating mechanism. Fig. 4 represents a detached view of the switch block and switch on an enlarged scale.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings: A designates the main track, and B designates the turn-off or siding.

C designates a guard rail.

D designates a roller on a weighted arm which is mounted on the car, and connected with means E, under the control of the driver or engineer of the same, so that it may be or may not be engaged with the heads F, G, or H, of the arms K, L, and M, which are suitably attached to the rock shafts P, Q, and R, which are suitably journaled below the tracks.

S designates stops, which limit the downward motion of the arms K, L, and M.

T designates an arm projecting from the rock shaft P, to which is attached one end of a connection U, the other end being attached to the arm V, which is secured to the post W, which is journaled in bearings X above and below, so that it can freely turn therein.

Y designates another arm suitably attached to the post W, to which is pivotally secured the link Z, which has pivoted to itself the rod A′, which is suitably attached to the upright B′, which is journaled at one end in a suitable support C′, the other end having a pivot E′ which is journaled in and extends up through the plate D′, to the end of which pivot is pinned or otherwise secured the switch or switch rail F′, so that any movement given to the upright B′, will be imparted to the switch F′. The plate D′ is provided with the stop G′, which limits the movement of the switch in one direction, its movement in the other direction being limited by the inner rail of the siding.

H′ designates an arm which is attached to the rock shaft Q, and which has attached to one end thereof, the connection K′, which leads to the arm L′ which is suitably attached to the post W. A third arm M′ is attached to the post W, which has a connection P′ leading to the arm Q′, which is attached to the rock shaft R, which also carries the arm M, which is provided with the head H. The post W has also another arm R′ attached thereto, to which is pivotally connected one end of the link S′, whose other end is pivoted to the arm T′, which is attached to the rock shaft U′, which carries the counter balance V′.

The operation is as follows: Assume the parts to be in the positions shown. If the driver or engineer of the car, which is traveling on the main track, in the direction of the arrow, wishes to run on to the siding B, he lowers the wheel D, so that it engages the head G. The depression of the head G moves the arm H′ to the left, and exerts a pull on the connection K′, which causes a movement of the post W, arm Y, and connections Z and A′ and post B′ thereby moving the switch F′ against the stop G′, so that the car can then run upon the siding. Just before the car reaches the head H, if the driver drops the wheel D, so as to depress the said head H, it is evident that a pull will be exerted upon the connection P′, contrary to the direction of the pull exerted by the connection K′, and by the intervening mechanism the switch will be returned to the position shown in Fig. 1. Should however the driver forget to depress the head H, leaving the switch set for the siding, and it be desired to run the next car straight along the main line, all that is necessary is to depress the head F by means of the roller D, whereby a pull will be exerted on the connection U and

the arm V, and by means of the intervening mechanism, the switch will assume the position shown in Fig. 1. It will thus be seen that a depression of either of the heads F or H sets the switch for the main track, while a depression of the intermediate head G sets it for the siding. The counter-balance V′ serves to assist and steady the motion of the post W.

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

1. A main track and a siding, a switch rail, two rock shafts journaled below said main track and having arms provided with heads adapted to be engaged by a pendent roller on a car on said track, a vertical post suitably journaled and having an arm connected with an arm on one of said shafts, an upright having a pivot at one end connected with said switch rail, a rod attached to said upright, a link connected with said rod and to an arm on said post, and a connection between said post and the other shaft, said parts being combined substantially as described.

2. A main track with a siding, a switch rail, rock shafts below said tracks having arms with heads, a vertical post suitably journaled and having an arm connected with one of said shafts, an upright suitably journaled and connected with said post and with said switch rail, a plate having a stop limiting the movements of said switch rail, connections between said post and said rock shafts, stops limiting the movement of said rock shafts, a rocking shaft below the siding having an arm with a head, and connections for said shaft and vertical post, said parts being combined substantially as described.

3. The rock shafts P and Q, suitably mounted below a main track, the arms K and L attached to said shafts, and having the heads F and G, the arm T projecting from the rock shaft P, the post W suitably journaled, the arm V attached to said post W, the connection U for said arms T and Y, the switch F″, the upright B′ having the pivot E secured to said switch, the arm Y attached to said post W and connections between said arm Y and upright B′, said parts being combined substantially as described.

4. A main track with a siding, a switch rail, rock shafts journaled below said tracks having arms with heads thereon, a rotatable post having connections with two of said shafts, a rotatable upright having connections with said post, a stationary plate with a stop thereon, and a pivot in said plate connected with said upright and switch, said parts being combined substantially as described.

5. A switch for a main line and turn-off, attached to the post or upright B′, said post being suitably supported and having connections A′, Z and Y, to a second post W, and connections therefrom to the heads F, G, and H, whereby a depression of said heads will move the switch, said parts being combined substantially as described.

6. A main track with a siding, a switch rail, rock shafts below said track and siding having arms with heads thereon, a rotatable post connected with each of said rock shafts, a rotatable upright connected with said post and switch rail, and a rock shaft carrying a counter balance and having an arm, connected with an arm on said post, said parts being combined substantially as described.

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Witnesses:
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