No. 671,253.

Patented Apr. 2, 1901.

W. WHARTON, JR.

RAILROAD SWITCH.

(Application filed Oct. 25, 1900.)

(No Model.)

2 Sheets—Sheet 1.

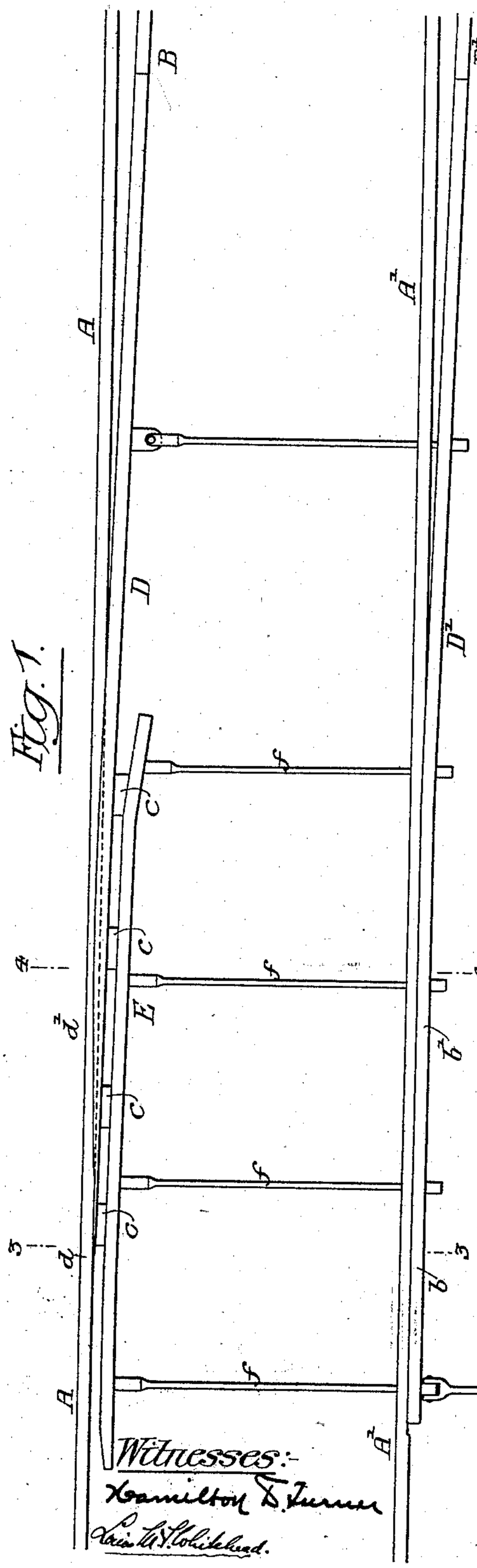

Fig. 1.

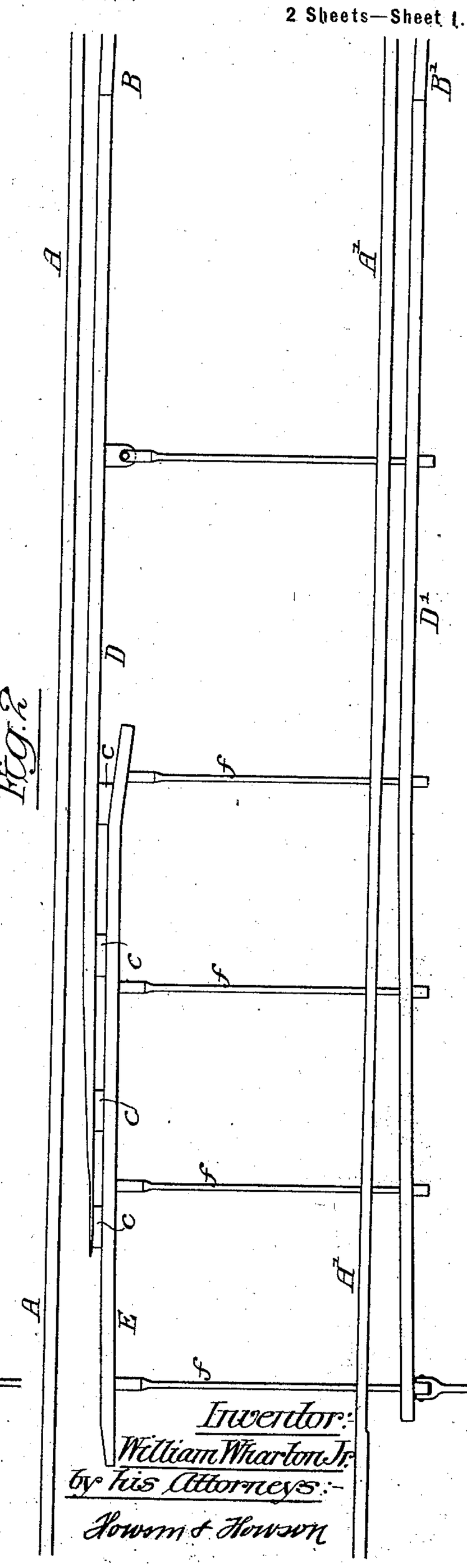

Fig. 2.

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Fig. 4.

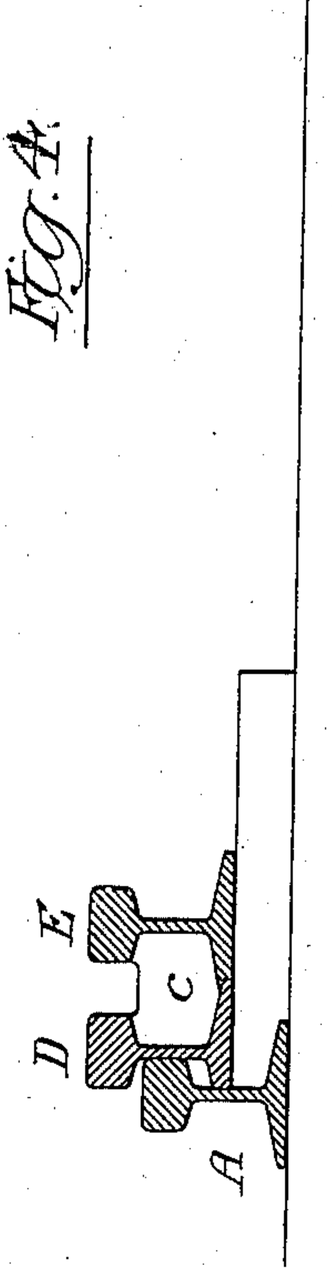


Fig. 3.

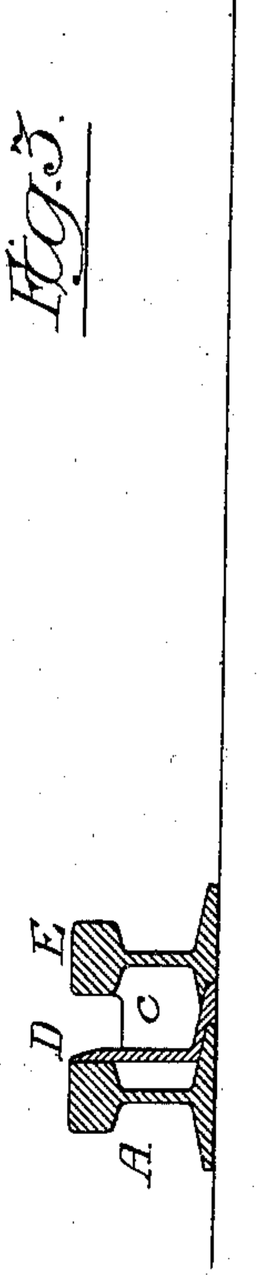
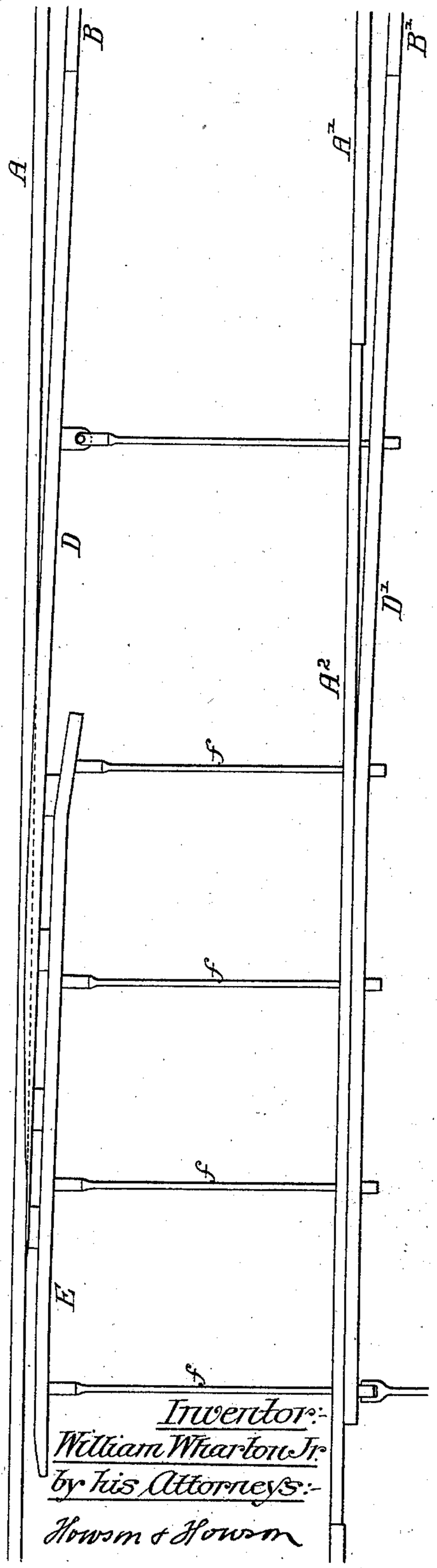


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM WHARTON, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO WILLIAM WHARTON, JR., & COMPANY, INCORPORATED, OF SAME PLACE.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 671,253, dated April 2, 1901.

Application filed October 25, 1900. Serial No. 34,371. (No model.)

To all whom it may concern.

Be it known that I, WILLIAM WHARTON, Jr., a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Railroad-Switches, of which the following is a specification.

My invention relates to certain improvements in railroad-switches of the type in which the track of the main line is unbroken.

My invention relates to certain improvements in the switches with unbroken main-track rails shown and described in the patents granted to me October 8, 1867, No. 69,599, and February 8, 1887, No. 357,438, in which is shown and described a guard-rail attached to and movable with the pointed switch-rail, also an elevating-rail movable therewith.

The object of my invention is to insure the transfer of a car from the siding or turnout rails to the rails of the main track, and I accomplish this object by extending this guard-rail a considerable distance beyond the end of the pointed switch-rail and making this extended guard-rail a part of a movable structure.

In the accompanying drawings, Figure 1 is a diagram plan view illustrating my improved railroad-switch, showing the switch thrown over in contact with the rails of the main line. Fig. 2 is a view similar to Fig. 1, excepting that the switch-rails are moved away from the main-line rails. Fig. 3 is an enlarged section on the line 3 3, Fig. 1. Fig. 4 is an enlarged section on the line 4 4, Fig. 1; and Fig. 5 is a view of a modification.

A A′ are the permanent rails of the main track. B B′ are the rails of the siding or turnout. D D′ are the switch-rails, and E is the extended guard-rail.

The pointed switch-rail D from its end *d* to the line *d′* is upwardly inclined, so as to carry the wheels of the car up to the elevated portion of the rail, and for a portion of its length has its head overlapping the main-line rail A, as clearly shown in Fig. 1 and in the cross-section, Fig. 4. This overlapping of that rail has for many years been common in switch structures of this type.

Adjacent to the pointed rail is the guard-rail E, and between this guard-rail and the pointed rail are spacing-blocks *c*, and the two rails D and E are secured together by bolts or other suitable fastenings. It will be noticed that the guard-rail E extends a considerable distance beyond the point or end *d* of the switch-rail D, and that when in the position shown in Fig. 1 that portion of the guard-rail extending beyond the point of the switch-rail D is parallel with the main-line rail A. This extension of the guard-rail beyond the end or point of the switch-rail D insures the proper transfer of the car-wheels from the siding or turnout rail to the rails of the main track.

The upper surface of that portion of the guard-rail E which is attached to the pointed rail D is preferably made to conform with the varying heights of the upper surface of the rail D, and the upper surface of that portion of the guard-rail E which extends beyond the point of the switch-rail D is preferably made of the same height as the upper surface of the main-track rail A.

The outside elevating-rail D′ bears against the main-line rail A′, and the head of this rail A′ is narrowed or recessed on its outer side for a certain distance to allow the outside elevating-rail D′ to be moved more nearly into the path of car-wheels traversing the switch, so that when the switch structure is in the position shown in Fig. 1 the car-wheels will be more surely transferred from the main-line rail to the siding-rail or from the siding-rail to the main-line rail. Instead of cutting away or recessing the main rail the same result will be obtained by using in the main track at that place a rail A^2, rolled with a head narrower than the head of the other main-track rails, as shown in Fig. 5, the effect in both instances being that the car-wheels will have more of their tread-surface extending outside of the main rail and available for bearing upon the switch-rail D′ than would be the case if the head of the main rail at that place was of the normal width.

I extend the outside elevating-rail D′ beyond the end of the switch-point rail D and preferably to a point near the end of the guard-rail E, and I connect the guard-rail to the outside elevating-rail by tie-rods *f*, so that

by this construction the outer end of the guard-rail E is supported laterally by the extension of the outside elevating-rail D′.

The upper surface of the head of the outside elevating-rail D′ at its movable end and for a certain distance therefrom is level with the upper surface of the head of the main-line rail A′, but from about a point *b* to about a point *b′* it is upwardly inclined, and the remaining length of the rail is elevated above the surface of the main-line rail. This construction is clearly shown in the sectional views, Figs. 3 and 4.

I do not claim, broadly, in conjunction with unbroken main-line switches, a guard-rail secured to and movable with the pointed switch-rail, as this is clearly illustrated and described in the patents above mentioned granted to me on October 8, 1867, and February 8, 1887, nor do I claim the inclined elevation of the pointed switch-rail and the inclined elevation of the outside elevating-rail in combination with such a guard-rail, as this construction is clearly described in Patent No. 110,808, granted to me January 3, 1871.

I claim as my invention—

1. The combination in a railroad-switch, of the unbroken main-track rails, the siding or turnout rails and a movable switch structure consisting of an outside elevating-rail and a pointed rail having a guard-rail alongside of and attached thereto; the said guard-rail extending beyond the pointed end of the pointed rail, and its extension being arranged to guide a car-wheel after it leaves the said pointed end, substantially as described.

2. The combination in a railroad-switch, of the unbroken main-track rails, the rails of the siding or turnout and a movable switch structure consisting of an outside elevating-rail and a pointed rail upwardly inclined having a guard-rail alongside of and attached thereto; the said guard-rail extending beyond the pointed end of the pointed rail, and its extension being arranged to guide a car-wheel after it leaves the said pointed end, substantially as described.

3. The combination in a railroad-switch, of the unbroken main-track rails, the siding or turnout rails and a movable switch structure consisting of a pointed rail, a guard-rail attached thereto extending beyond its pointed end, and arranged to guide a car-wheel after it leaves the said pointed end, and an outside elevating-rail also extending beyond the pointed end of the pointed rail and connected to the outer end of the guard-rail whereby the outer end of the guard-rail is laterally supported, substantially as described.

4. The combination in a railroad-switch, of the unbroken main-track rails, the siding or turnout rails and a movable switch structure consisting of an outside elevating-rail, a pointed rail and a guard-rail alongside of and attached to the pointed rail and extending beyond the point thereof, the extension of the said guard-rail being parallel with the main-track rails when the switch is set for the siding, substantially as described.

5. The combination in a railroad-switch, of the unbroken main-track rails, the rails of the siding or turnout and a movable switch structure consisting of an outside elevating-rail, a pointed rail and a guard-rail alongside of and attached to the pointed rail; a portion of the head of one of the main-track rails being cut away or recessed on its outer side for the reception of the outside elevating-rail, substantially as described.

6. The combination in a railroad-switch, of the unbroken main-track rails, the rails of the siding or turnout and a movable switch structure consisting of an outside elevating-rail, a pointed rail and a guard-rail alongside of and attached to the pointed rail and extending beyond its pointed end; a portion of the head of one of the main-track rails being cut away or recessed on its outer side for the reception of the outside elevating-rail, substantially as described.

7. The combination in a railroad-switch, of the unbroken main-track rails, the rails of the siding or turnout and a movable switch structure consisting of an outside elevating-rail, a pointed rail upwardly inclined having its upper surface for a portion of its length overlapping the head of the adjacent main rail when the switch is set for the siding, and a guard-rail attached to the pointed rail and extending beyond the pointed end thereof, its extension being arranged to guide the wheel of a car after it leaves the said pointed end, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM WHARTON, JR.

Witnesses:

WILL. A. BARR,

JOS. H. KLEIN.