

W. Wharton, Jr.
R. R. Switch.

No. 93,933.

Patented Aug. 17, 1869.

Fig: 1.

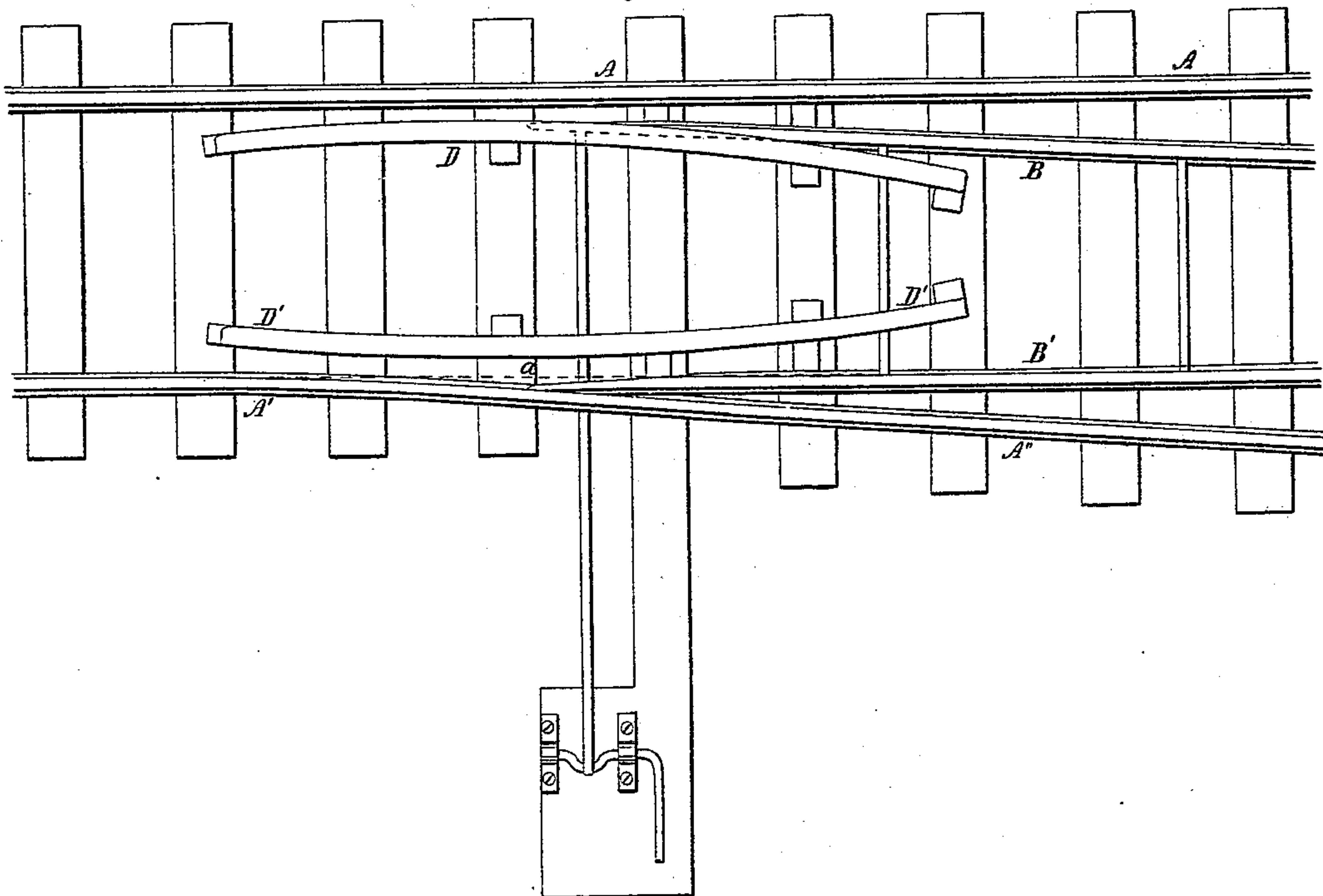
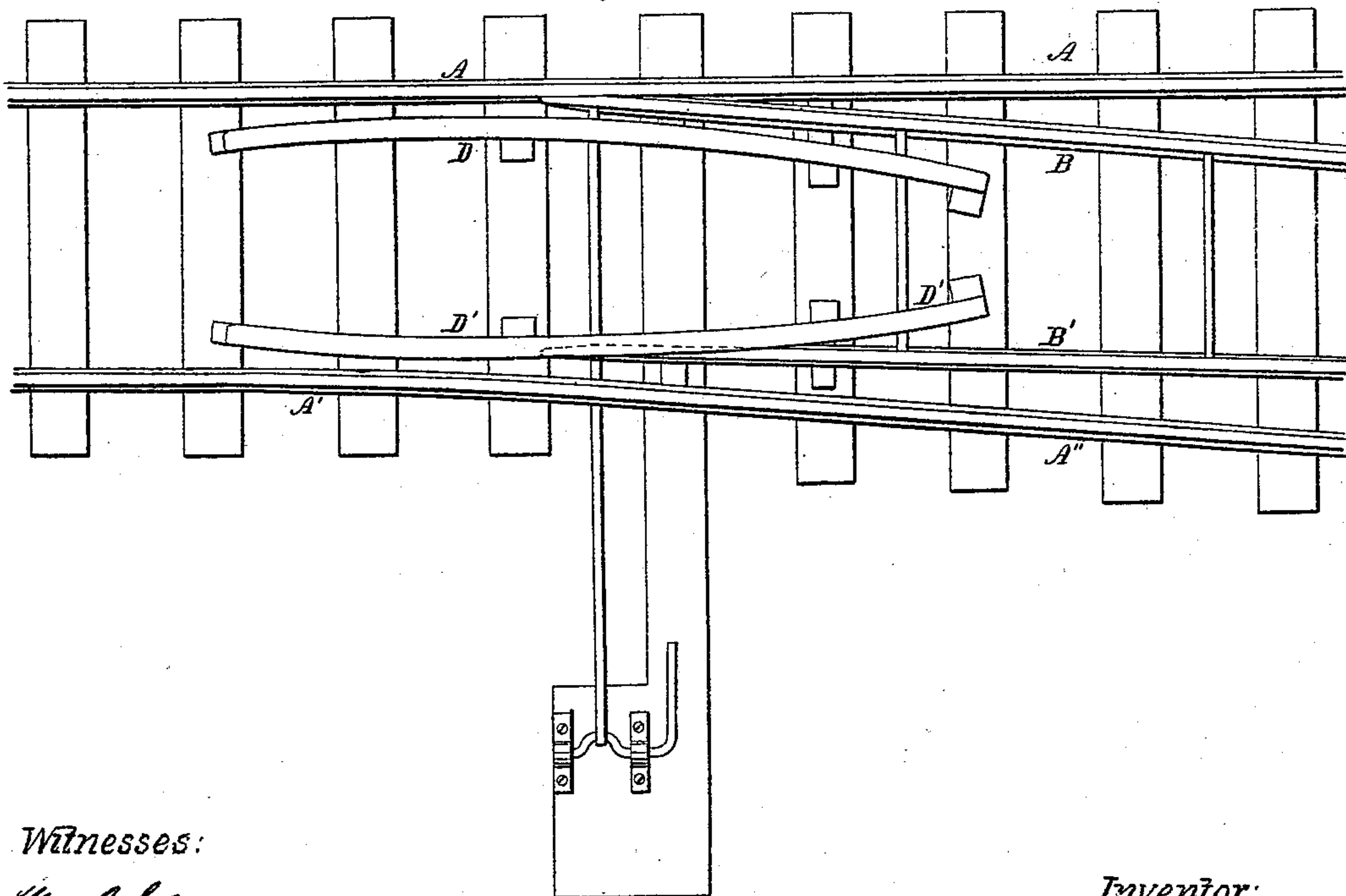


Fig: 2.



Witnesses:

Wm. A. Stal.
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WILLIAM WHARTON, JR., OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 93,933, dated August 17, 1869.

IMPROVED RAILROAD-SWITCH.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM WHARTON, JR., of Philadelphia, Pennsylvania, have invented an Improvement in Railroad-Switches; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of the combination of switch-rails with overlapping guard-rails, all arranged, in respect to each other, and to the permanent rails of the track, substantially as described hereafter, so as to enable me to dispense with the usual thin, tapering, and objectionable ends of switch-rails; to avoid all wounding of the permanent rails or of the guard-rails, for receiving the ends of switch-rails; and so that the passage of the car-wheels from the main track to the turnout, and *vice versa*, may be gradual and easy, and unaccompanied by strains and shocks.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figures 1 and 2 are plan views of my improved switch, showing the switch-rails in different positions.

A is one of the rails of the main track, and A' the opposite rail, which, by a gradual outward curve, becomes merged into the rail A" of the turnout.

B and B' are the switch-rails, which can be moved to the position shown in fig. 1, or that seen in fig. 2, and

D and D' are the guard-rails, bent inward at each end, as shown in the drawing.

These guard-rails, D and D', are, at their ends, level, or nearly level with the rails of the track; but from the said ends they are gradually inclined upward, so that, toward the middle, they are so far elevated above the switch-rails B and B', as to allow the pointed ends of the same to slide underneath, and be protected by the said guard-rails, as shown by the dotted lines in the drawing, the supports of the said guard-rails D and D' being so arranged as not to interfere with the free reception of the pointed ends of the switch-rails underneath the guard-rails.

It will be evident, therefore, that by this means the guard-rails are not required to be notched in at their sides, to allow the pointed ends of the switch-rails to set into the recess, as is the usual practice, but that the side-bearing afforded by them is continuous, and that they, as well as the main rails, are not wounded or notched.

As seen in fig. 1, the switch-rail B has been moved away from the rail of the main track, and its end is so overlapped by the guard-rail D, that the outer edge of the latter is coincident with the outer edge of the said switch-rail B, at and near the outer end of the same.

The opposite switch-rail B' is, at its outer end, in contact with the inner edge of the rail A', and forms,

with the latter, part of the main track, the guard-rail D being so arranged as to laterally direct the car-wheels in their proper course, as they pass from the rail A' to the switch-rail B', or *vice versa*.

It is important that this transfer of the wheels from the main rail to the switch-rail should be effected gradually, and without jars and shocks.

In order to produce this result, it has been the practice to make the switch-rails with long, tapering, and very thin ends, which are liable to be damaged by passing trains, and, in some cases, it has been the practice to notch the main rails for receiving the switch-rails, an equally objectionable plan, as the wounding of the main rails should in all cases be avoided.

It will be seen, on reference to the drawing, that the switch-rails, although having tapering ends, terminate abruptly, or in comparatively blunt points.

This leaves a vacancy, as indicated by the red line a, fig. 1, at the junction of the switch-rail B' and the rail A'; in other words, the inner edge of the latter rail does not form a direct continuation of the inner edge of the rail B', owing to the comparatively blunt end of the latter; but the outer edge of the guard-rail D is so arranged, and so controls the cars laterally, that the flanges of the wheels, passing from the rail A' on to the switch-rail, are unaffected by the above-mentioned vacancy, and the treads of the wheels pass from one rail to the other without any shock or jar.

As the guard-rail D overlaps the pointed end of the opposite switch-rail B in the manner described, the said switch-rail is so entirely out of the way, that it cannot possibly interfere with the functions of the said guard-rail.

It will be evident that the above remarks will apply to the rails, when arranged for the siding, as shown in fig. 2, and that, by my improvement, I dispense with the usual but objectionable thin tapering rails, avoid all wounding of the main rails, or of the guard-rails, to receive the ends of switch-rails, and at the same time insure the gradual and easy passage of the car-wheels from the main track on to the turnout, and *vice versa*.

I claim as my invention, and desire to secure by Letters Patent—

The combination of the switch-rails B and B' with the overlapping guard-rails D and D', when arranged in respect to each other, and to the permanent rails, substantially as and for the purpose set forth.

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

WM. WHARTON, JR.

Witnesses:

JOHN WHITE,
HARRY SMITH.