

H. H. POTTER.
Railway Switches.

No. 144,224.

Patented Nov. 4, 1873.

fig. 1.

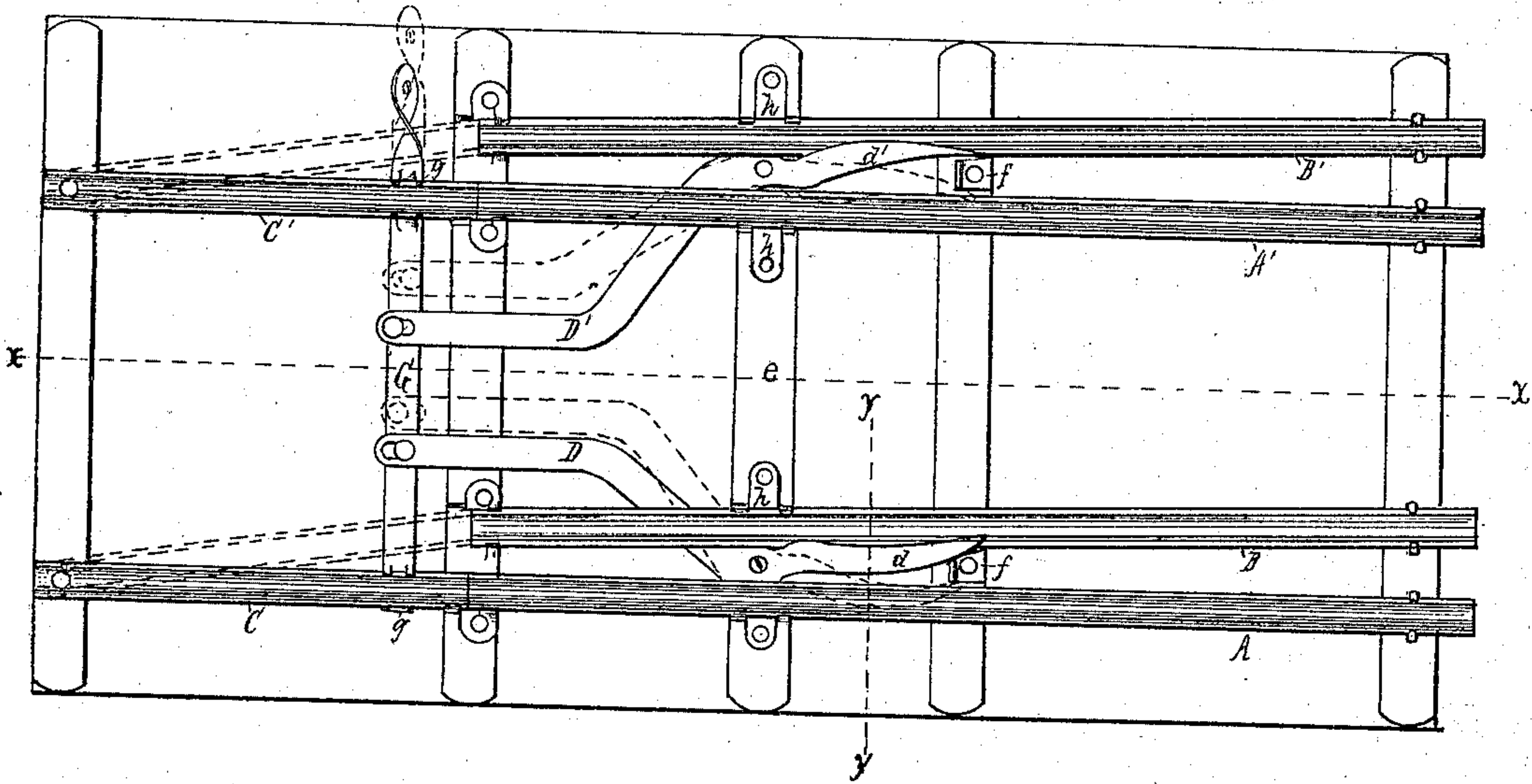


fig. 2.

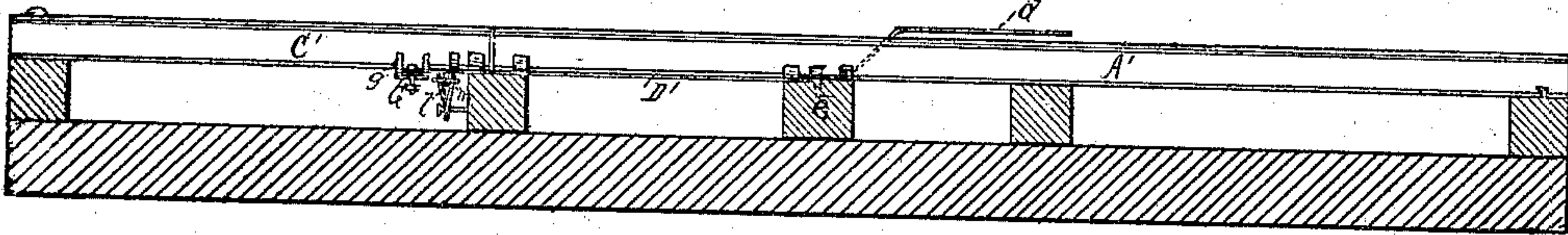
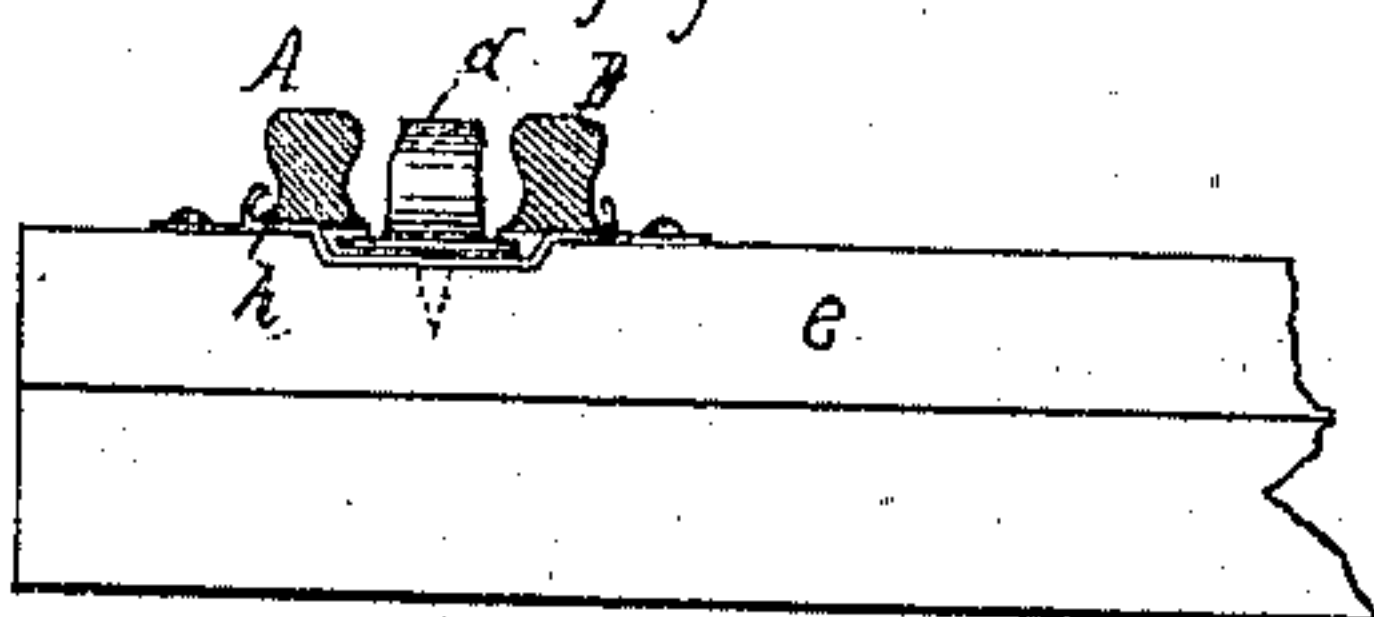


fig. 3.



Witnesses. —

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UNITED STATES PATENT OFFICE.

HENRY H. POTTER, OF STERLINGVILLE, NEW YORK.

IMPROVEMENT IN RAILWAY-SWITCHES.

Specification forming part of Letters Patent No. **144,224**, dated November 4, 1873; application filed September 25, 1873.

To all whom it may concern:

Be it known that I, HENRY H. POTTER, of Sterlingville, county of Jefferson and State of New York, have invented certain new and useful Improvements in Railroad - Switches, of which the following is a specification:

My invention relates to certain improvements in railroad-switches, whereby all liability of a train leaving the track by reason of misplacement of the switch is effectually prevented. The invention consists in a lever pivoted to one of the cross-ties which support the rails of the main track, so that one of its arms engages with the flange of the foremost wheel of a passing train, the other arm being connected with a bar attached to the switch-rails. The invention consists, further, in the peculiar construction and arrangement of the lever, whereby it may be readily applied to any track already laid without any alteration or removal of the rails, said lever being curved downward for a portion of one arm, so as to pass under the rails of the main track, and having its fulcrum in a depression in the chair or in the cross-tie between the rail of the main track and the rail of the siding.

In the accompanying drawing, Figure 1 is a plan view of my invention. Fig. 2 is a longitudinal vertical section taken in the line *x x*, Fig. 1. Fig. 3 is a transverse vertical section taken in the line *y y*, Fig. 1.

A A' represent the rails of the main track, B B' the rails of the siding, and C C' the switch-rails, all of which are secured to the cross-ties in the usual manner, except that the switch-rails are pivoted more loosely than is usually the case, in order to admit of a slight vertical play to the free ends. D is a lever, having its fulcrum on one of the cross-ties *e*, between the rails A B; and D' is a similar lever, similarly placed between the rails A' B'. One arm of each lever is curved upward to a level with the upper surface of the rails, and rests upon a projection, *f*, extending up from the tie, so as to prevent its being bent down out of place, and is tapered off to a point, as shown at *d d'*, to allow the flange of the foremost wheel of a

passing train to enter between it and the rail. The opposite arm of each lever is pivoted to a rod or bar, G, which connects the switch-rails with each other. The levers D D' are pivoted in depressions formed in chairs *h* made for the purpose, and the portions of the levers near their fulcrums are curved down, so as to pass under the rails A' B.

By this construction and arrangement the levers may be readily applied to any track already laid, without any alteration or removal of the rails, by simply removing two of the chairs and replacing them by two of the chairs *h*.

The rod or bar G is attached to the switch-rails C C' by means of lugs *g* turned up from said bar, and clamping the base flanges of said rails, as shown in Figs. 1 and 2.

In adjusting the switch from the main track to the siding, or vice versa, the rails are lifted from one point to the other, instead of sliding along in a horizontal plane. To the bar G or the rails C C', whichever may be preferred, are attached lugs *l*, projecting downward, each lug being formed in one piece, with a plate which has its ends turned up, so as to clamp the bar or the rails. The lugs *l* are pivoted to the upper ends of short bars *m*, which have their lower ends pivoted to the tie, as shown in Fig. 2.

When the parts are in the position shown in full lines in Figs. 1 and 2, and a train on the siding B B' is moving toward the switch, the flange of the foremost wheel enters between the point *d'* and the rail B', and forces the point of the lever away from the rail and the opposite end in an opposite direction, and, by means of the bar G, lugs *g g'*, and bars *m*, lifting the switch-rails, and throwing them in contact with the ends of the rails B B', as shown in dotted lines. When in such position, a train on the main track A A' acts upon the point *d* of the opposite lever, and throws the rails back to their former position. By thus lifting the rails instead of sliding them, their contact with either the main track or the siding is rendered certain, as it is impossible for

them to occupy a position between those points, on account of their weight, which must throw them to one side or the other.

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

The levers D D', formed with the points *d* *d'*, pivoted in depressions in the chairs *h*, curved so as to pass under the rails A' B, and having their ends attached to the bar G, sub-

stantially as and for the purpose shown and described.

In testimony that I claim the foregoing as my invention I hereunto affix my signature this 25th day of September, 1873.

HENRY H. POTTER.

Witnesses:

W. K. DU HAMEL,
IRVING WALLACE.