McLaughlin & Dean,

Railway Switch.

No. 87,351. Patented Mar. 2. 1869.

Fig. 1.

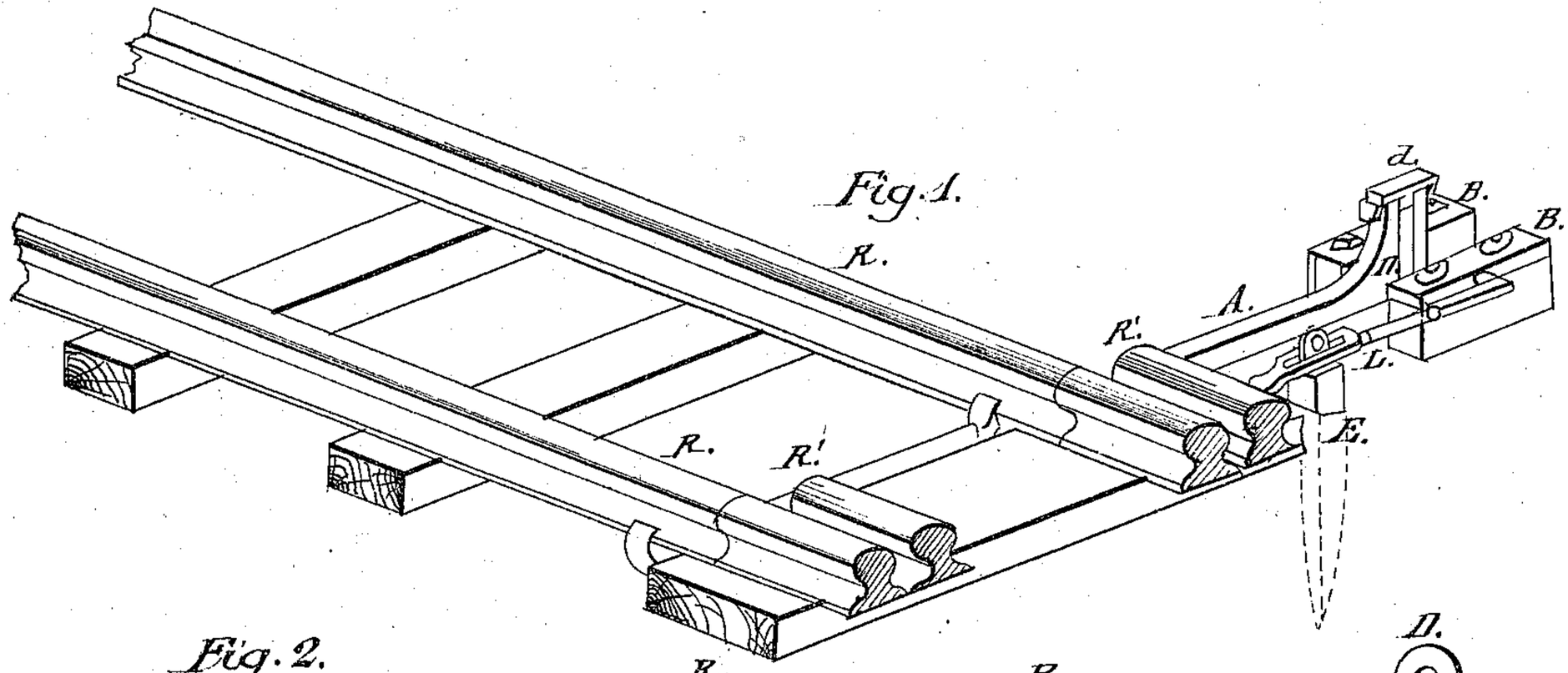


Fig. 2.

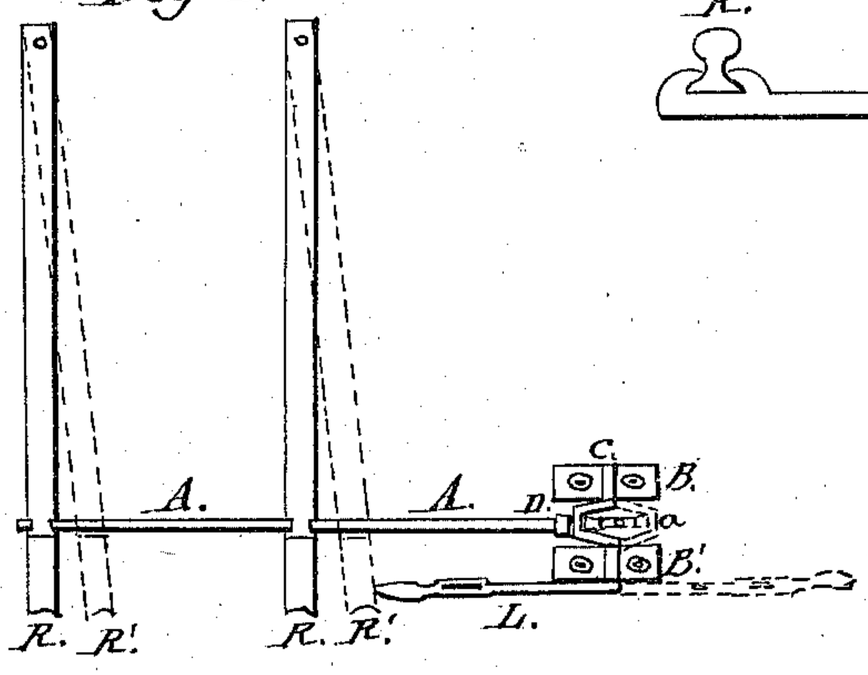


Fig. 3.

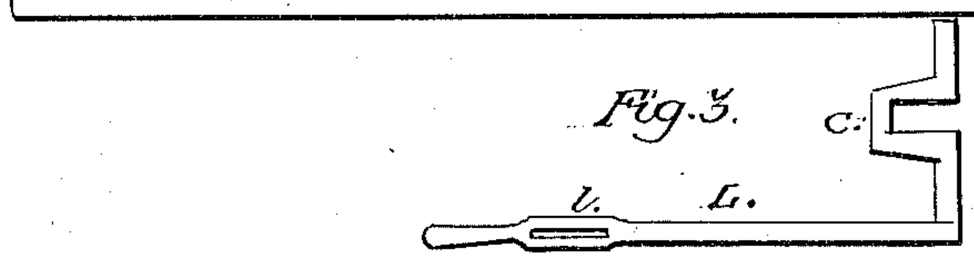
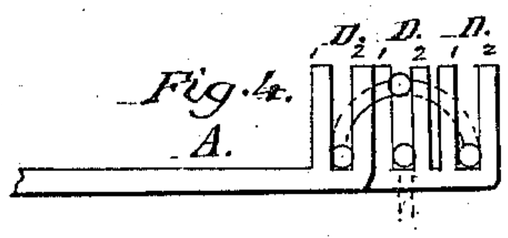


Fig. 4.



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Letters Patent No. 87,351, *dated March* 2, 1869.

IMPROVED RAILWAY-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 we, JOHN McLAUGHLIN and BENJAMIN F. DEAN, of the borough of Columbia, in the State of Pennsylvania, have invented new and useful Improvements on Switches for Railroads; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of an ordinary switch with our improvements in place.

Figures 2 and 4 illustrate the operation.

Figure 3, the switch-rod and ground-lever separated; the crank and journals of a uniform thickness.

The nature of our invention consists in the use of a single rod, without joint-connection, and the manner of confining the crank or tumbler, so as to cause the rod, connected by the usual clamps to the shifting pair of rails, to move in a level or horizontal plane, by means of an ordinary ground-lever, doing away with bolts and screw-nuts, so easily displaced or deranged, resulting, frequently, in serious loss of life and valuable property.

To enable any one skilled in the art to make and use our invention, it is only necessary to refer to our drawings.

In fig. 1 we show the switch-rod A, connected to the shifting pair of rails R R in the ordinary manner.

On the end of this rod, between the boxes or bearings B B′, are two posts, or uprights, D, with a space between them for the reception of the tumbler or crank.

We also show a cap-piece, *d*, secured with a headed screw-bolt and burr, which is, however, unnecessary, as the action will be the same without this cap, as the journals are usually made smaller. This plan is used for cranks now in use.

Fig. 3 shows the same rod, A, terminated by a slot at right angles to the rod, made in a piece or part of the rod, the slot being sufficiently long to receive the tumbler, thrust in and turned down.

We make our box B of a single piece, with a bearing for the journal-part of the crank to be thrust in.

The other box, B′, is necessarily made in two parts, in the ordinary manner, but we fasten the boxes by large-headed screw-bolts, entered from the top, and secured beneath the head-block with a burr and patent washer. This prevents all chance of tampering with the bolts.

Fig. 4 shows an open slot between uprights 1 2, and illustrates the action of the tumbler against the sides within the slot, so as to move the rod in a horizontal plane, as shown at three points 1 2, thus shifting the rails without a tendency to raise the rod from its level position, and so as to require no hinge, spring, or slotted guide-plate and bolts, with screw-nuts exposed above.

E, fig. 1, shows an improvement to secure the ground-lever.

This is made with a slot, for the reception of an eye on a post, which is also provided with a screw-end, for a patent washer and burr under the head-block, and when the lever is in place and locked, there is no tampering with this arrangement; and we verily believe many accidents that have occurred, would have been avoided, had this switch-arrangement been in use.

We have examined various devices having the same object in view, but all, of which we have any knowledge, differ substantially in arrangement and construction.

What we claim as our invention, and desire to secure by Letters Patent, is—

The manner of confining the action of the tumbler or crank C in an open or closed slot, D, formed on or part of the switch-rod A, substantially in the manner shown, for the purpose specified.

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