

Bradt & Hayes.

Railroad Switch.

N^o 55,456.

Fig: 1.

Patented Jun. 12, 1866.

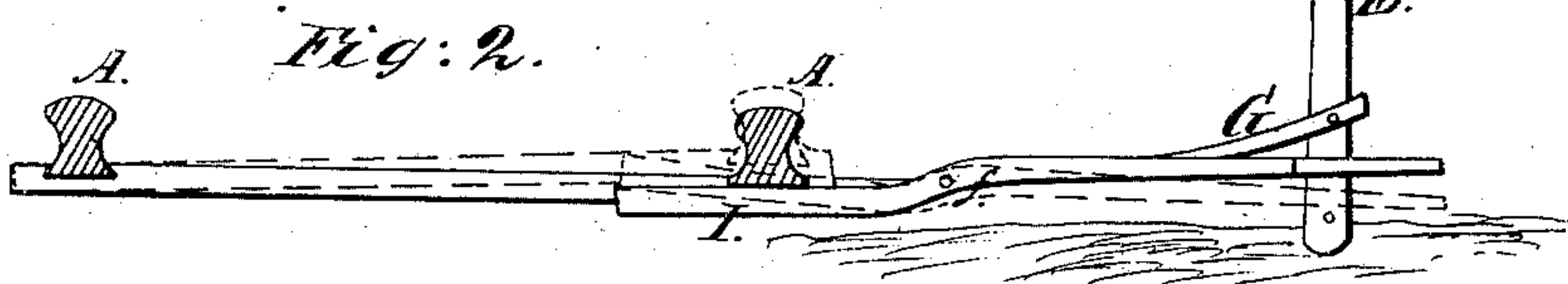
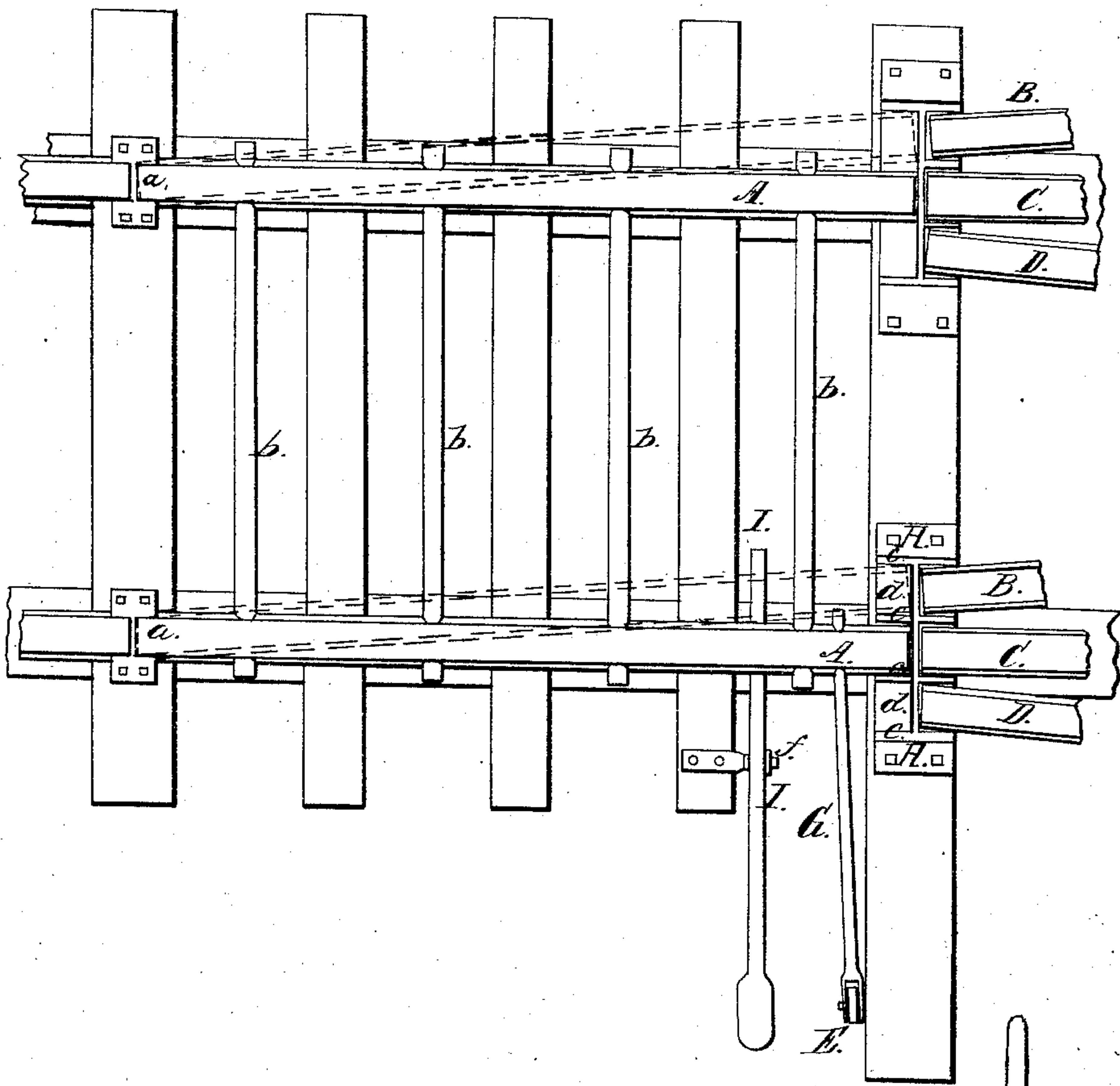
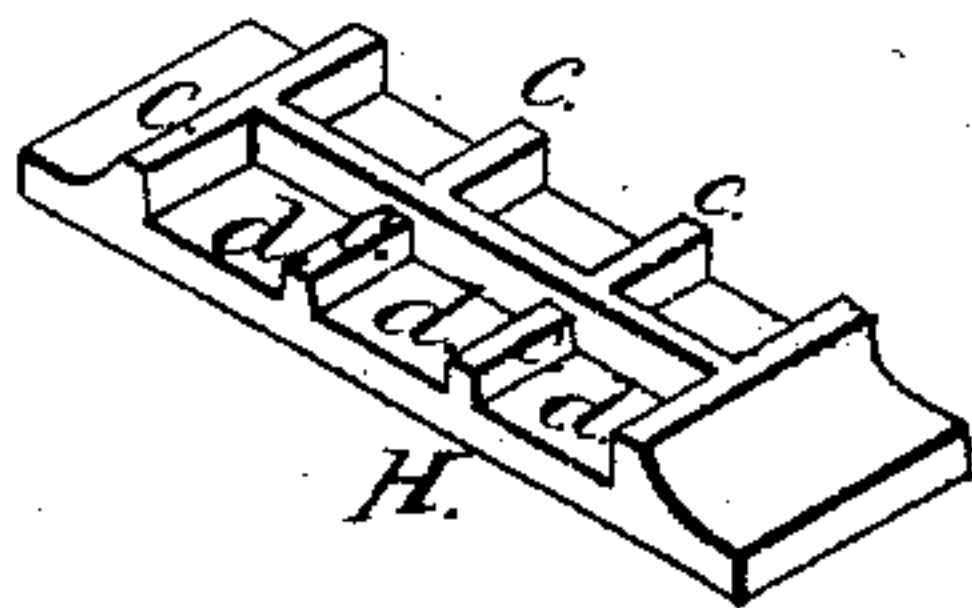


Fig: 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSEPH BRADT, OF AVON, AND JAMES HAYES, OF ROCHESTER, NEW YORK.

IMPROVED RAILROAD-SWITCH.

Specification forming part of Letters Patent No. 55,456, dated June 12, 1866; antedated March 6, 1866.

To all whom it may concern:

Be it known that we, JOSEPH BRADT, of Avon, in the county of Livingston and State of New York, and JAMES HAYES, of Rochester, county of Monroe and State aforesaid, have invented a new and useful Improvement in Switch Arrangements for Railroads; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a plan of our improved arrangement; Fig. 2, a diagram representing an elevation of the switch-rails, the switch, and the tread-lever; Fig. 3, a perspective view of one of the ribbed chairs.

Like letters of reference indicate corresponding parts in all the figures.

In ordinary switch arrangements the ends of the switch-rails are connected with the switch-lever by a rod, and the chair over which the said rails slide, to match with the diverging tracks, is plane and smooth. The great difficulty with this arrangement is that the train, striking the rails in a slightly angular direction, causes great drawing strain upon the connecting-rod, which is the only thing that holds them in place. The strain is frequently so great that the rod tears loose from the switch-lever or breaks; or, if this is not the case, the tension is so great as to stretch the parts, so that the rails do not perfectly match. Many accidents from this single cause are constantly occurring.

It is the object of our improvement to remedy this difficulty; and our invention consists in the combination of a ribbed chair and a tread-lever with the switch arrangement, in such a manner that the ends of the switch-rails will be held in place at any position without drawing upon the connecting-rod, but at the same time may be released to be moved to a different portion by simply depressing the tread-lever.

As represented in the drawings, A A indicate the switch-rails, turning upon the ends *a a* and connected by the usual bars *b b*. B C D indicate the diverging tracks. E indicates the switch-lever, and G the connecting-rod by which the rails are operated laterally. The arrangement of these parts is the same as is in use on all railroads.

One or both of the chairs H are provided with ribs *c c* at suitable distance apart, which thus form seats *d d* for the ends of the rails to rest in.

Under the end of one or both of the switch-rails is situated a lever, I, pivoted at *f* in such a manner that when depressed it will elevate the end of the rail or rails above the ribs *c*, as shown in red lines, Fig. 2. Under ordinary circumstances but one of the chairs is ribbed, the other being plain, in which case the simple lever shown in Fig. 1 is sufficient. Where, however, it is necessary to hold both rails, both chairs are made ribbed, and the tread-lever is made to lift both rails simultaneously.

The action of this arrangement is obvious. When the switch is to be changed the lever I is first depressed by the foot, so as to raise the ends of the rails above the ribs of the chair, and the latter are then thrown into any position by means of the switch, in the usual manner.

The advantages secured are that the strain is removed entirely from the connecting-rod G, for the ends rest in the seats *d d*, and cannot be displaced, while at the same time the use of the lever I enables the rails to be elevated, so that the switch can be changed as easily as in the ordinary arrangement.

This improvement will obviate many accidents that occur now by the breakage of the connecting-rod, for, even if the rod gives away, the ends of the rails cannot escape.

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

The combination of the lifting tread-lever I with the ribbed chair or chairs H, having seats *d d d*, which correspond in number and position with the several diverging rails B C D, when arranged in connection with the ordinary switch-lever E and connecting rod G, substantially as and for the purpose herein specified.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

JOSEPH BRADT.
JAMES HAYES.

Witnesses:

ADAM RAY,
THOS. CONNERS.