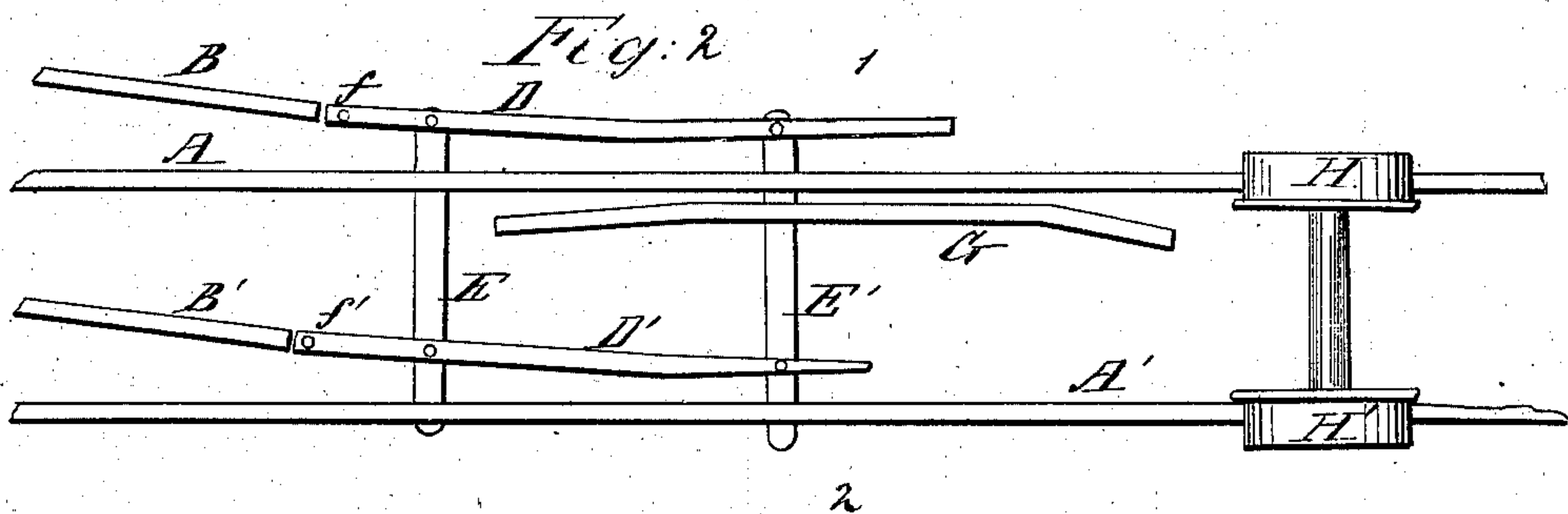
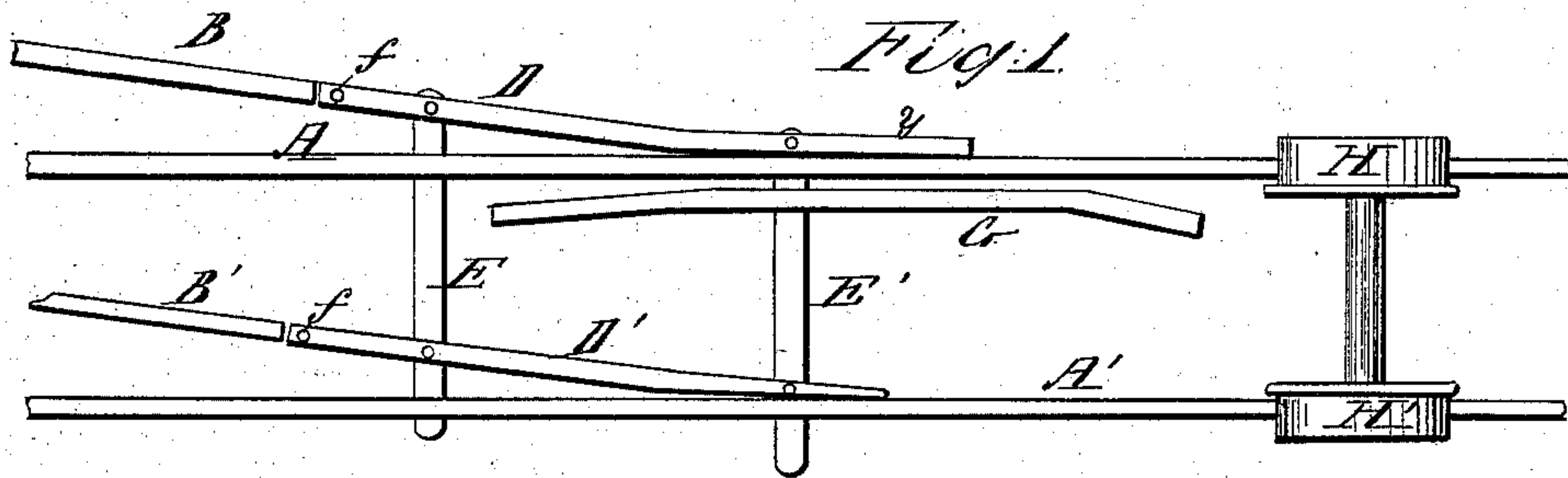


W. Wharton, Jr.

Railroad Switch,

N^o. 48,470.

Patented June 27, 1865.



Witnesses.

Wm. Albert Steel
Charles Howson

Fig. 3
A' D G A D

Inventor

Wm. Wharton Jr.
By his Atty.
J. Howson

UNITED STATES PATENT OFFICE.

WM. WHARTON, JR., OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. 48,470, dated June 27, 1865.

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, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a certain arrangement of rails and a movable switch, constructed in the peculiar manner fully described hereinafter, for the purpose of transferring cars from the main track to a turn-out without wounding or disturbing the continuity or permanency of the rails of the said main track.

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.

On reference to the accompanying drawings, which form a part of this specification, Figures 1 and 2 are plan views of my improved railroad-switch; and Fig. 3, a transverse section on the line 1 2, Fig. 2.

A and A' are the two permanent rails of the main track—that is to say, the rails which the locomotives and cars for conducting the main transportation of the line have to traverse—and B and B' are the two rails of the turn-out which cars have occasionally to traverse for local traffic.

D and D' are the two rails which form the switch, the rail D being fastened at the point *f*, so as to form a continuation of the rail B, and the rail D' fastened at the point *f'*, so as to be a continuation of the rail B'. The two rail D and D', which form the switch, are connected together by bars E and E', passing under the rails of the main track, or are otherwise so connected that they must move simultaneously.

G is a guard-rail, situated at such a distance from the permanent rail A that the flanges of the wheels can pass freely between the two, this guard-rail being bent or inclined at both ends toward the center of the track, as illustrated in the drawings.

The rail D is so curved or inclined laterally toward the end that it can be brought in contact with the rail A in the manner illustrated in Fig. 1, and the rail D' is gradually reduced

in width toward the end, where it terminates in a comparatively sharp point.

The rails A and A' of the main track and the rail D' of the switch are of the same height; but the guard-rail G should be somewhat higher than the last-mentioned rails, and the rail D of the switch is at its end of the same height as the rail A, but gradually increases in height from the said end to about the point *y*, from which point the rail is continued at a uniform level to a suitable distance, and then, if desired, may be gradually decreased in height until it is of the same altitude as the rail D'. When the switch is in the position illustrated in Fig. 2 the wheels of the cars will traverse the permanent rails A and A' of the main track without coming in contact with the rails of the switch. When the cars, however, have to be transferred from the main track to the turn-out, the switch is moved to the position illustrated in Fig. 1, in which case the wheels H and H' of the car backed in the direction of the arrow will pass from the main track to the turn-out, for as the wheel H approaches the end of the rail D its flange passes between the guard-rail G and the rail A, thereby so confining the wheel laterally that the outer portion of its tread must of necessity pass onto the inclined end of the rail D of the switch, and as the wheel continues to move in the direction of the arrow it must pass up the inclined plane of the rail D, which is so far elevated above the rail A that the flange of the wheel must be raised above and free from contact with the rail A—in other words, that the wheel H escapes from the control of the rail A. When the wheel H has been thus elevated above the rail A the flange of the opposite wheel, H', comes in contact with the inner edge of the tapering portion of the rail D', which guides the wheels onto the turn-out.

It will be evident that the rails D and D' of the switch present no impediment to the free movement of the cars in a direction contrary to that pointed out by the arrows, for the wheels must move them away from the permanent rails of the main track, should the attendants neglect to restore the switch to the position seen in Fig. 2.

Many different switches have been adopted for causing railroad-cars to pass from the main

track to a turn-out—for instance, the permanent continuity of the main track has been interrupted by converting a portion of the rails into a movable switch, and in other cases the switches are such as to demand the cutting through, and consequently injuring, of one of the main rails for the purpose of permitting the flanges of the wheels to cross it. My object has been to avoid this disturbance of the integrity of the main rails, the permanence and solidity of which has always been considered a desideratum by the most experienced engineers. It will be evident without further description of my invention that its adoption will insure the attainment of this important end.

It should be understood that the track above alluded to as a "turn-out" is not intended to be one repeatedly traversed by locomotives and trains of cars at a high rate of speed, but such a track as may be necessary for local traffic and for the passage of cars to manufactories, mines, &c., where the transfer of the cars may be accomplished at a moderate speed.

It should also be understood that although it is advisable to use the guard-rail G, the latter is not indispensable.

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

The combination of the permanent rails A and A' of the main track, the permanent rails B and B' of the turn-out, and the rails D and D', composing the movable switch and forming continuations of the permanent rails of the said turn-out, when the rail D is so inclined that will it raise the wheels on one side of a car above the permanent rail A of the main track prior to the wheels being guided laterally by the tapering rail D' or its equivalent, all substantially as set forth.

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

WM. WHARTON, JR.

Witnesses:

CHAS. B. PRICE,
CHARLES E. FOSTER.