2 Sheets--Sheet 1.

J. WALKER.
Railway-Switch.

No. 164,886.

Patented June 22, 1875.

Fig. 6.

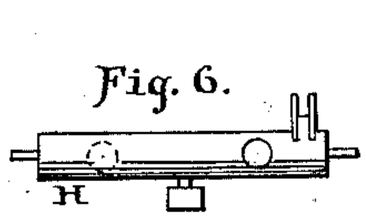


Fig. 2.

Fig. 5.

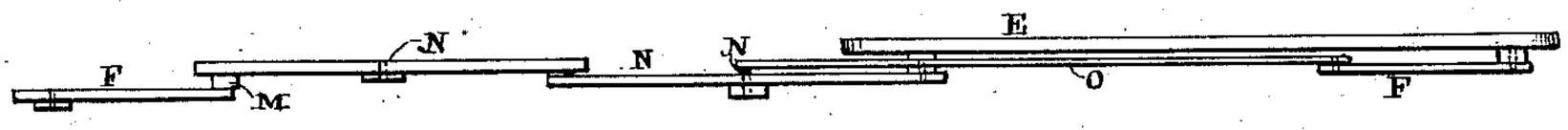


Fig. 1.

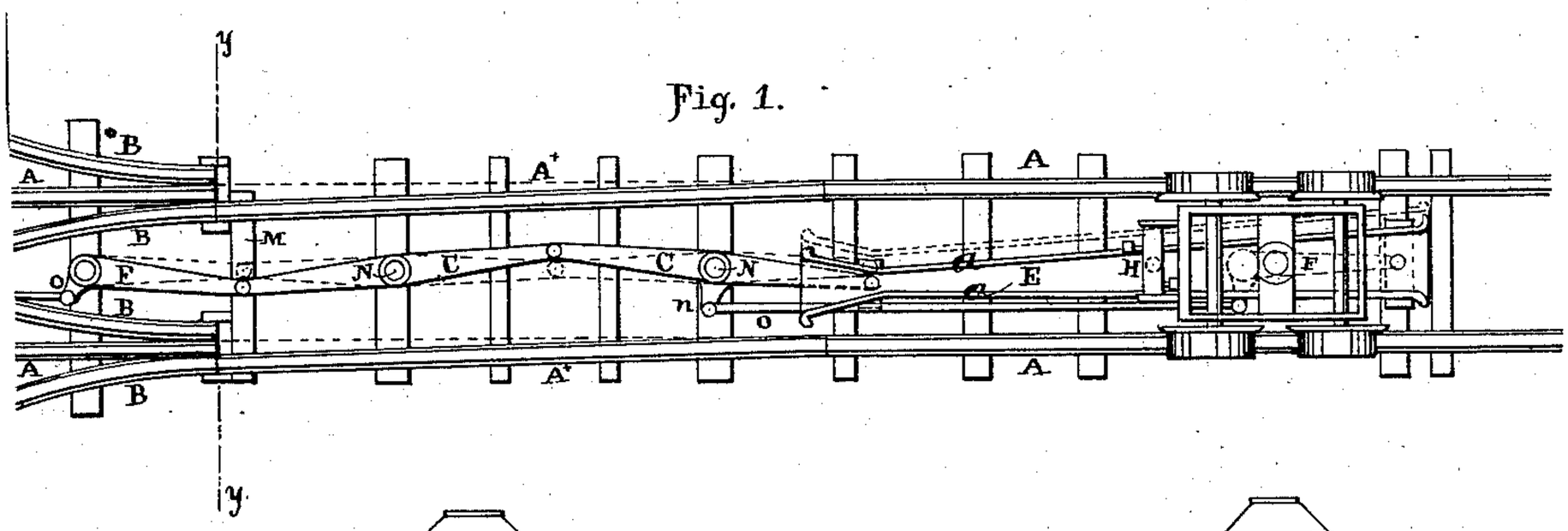


Fig. 4.

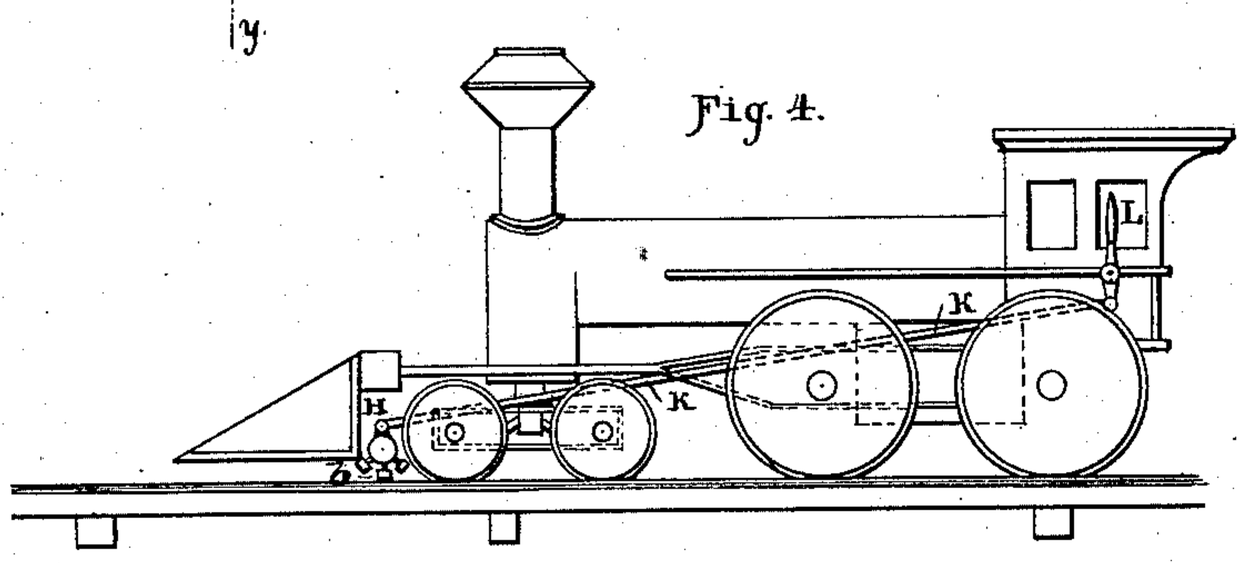
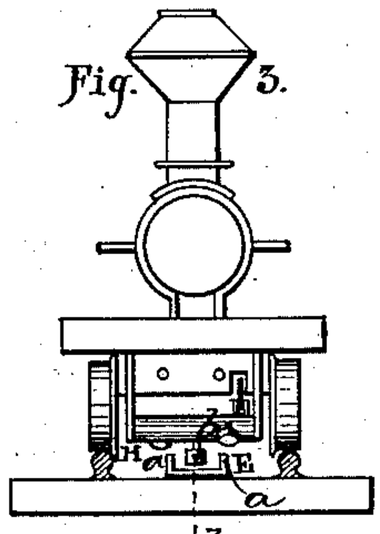


Fig. 3.



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2 Sheets--Sheet 2.

J. WALKER.

Railway-Switch.

No. 164,886. Patented June 22, 1875.

Fig. 8.

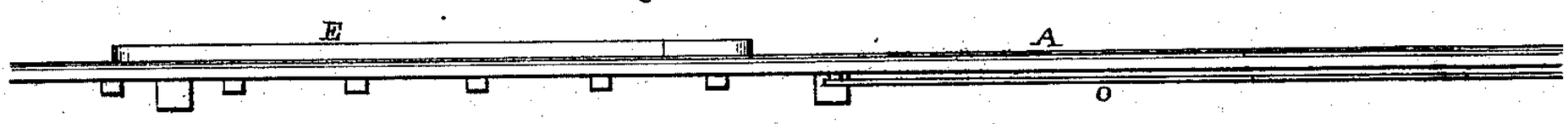


Fig. 7.

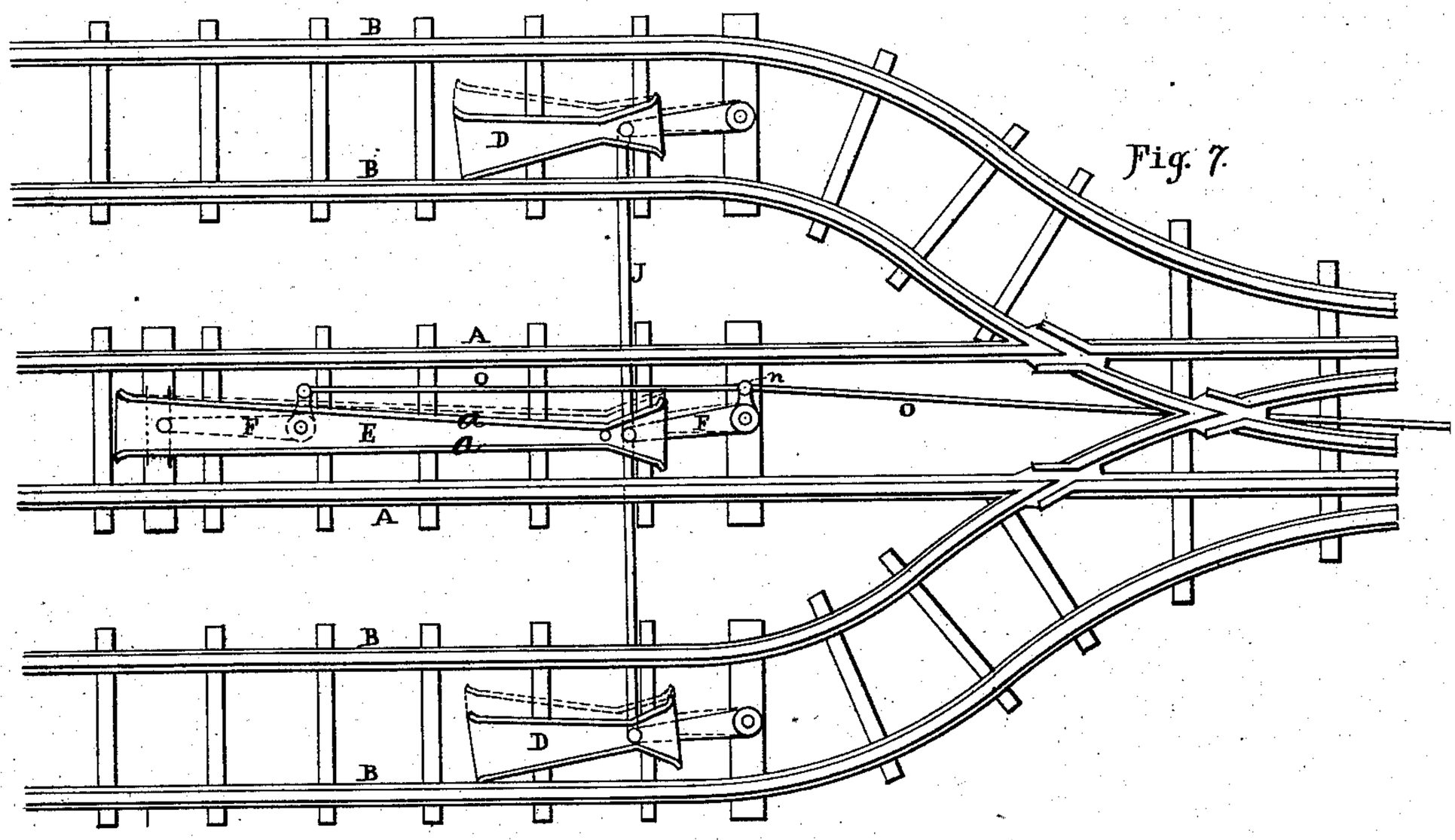
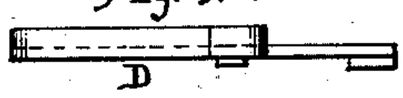


Fig. 9.



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UNITED STATES PATENT OFFICE.

JESSE WALKER, OF VINCENNES, INDIANA.

IMPROVEMENT IN RAILWAY-SWITCHES.

Specification forming part of Letters Patent No. **164,886**, dated June 22, 1875; application filed February 8, 1875.

To all whom it may concern:

Be it known that I, JESSE WALKER, of Vincennes, in the county of Knox and State of Indiana, have invented certain new and useful Improvements in Railway-Switches; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the construction and arrangement of a railroad-switch, to be operated by the engineer from the locomotive, as will be hereinafter more fully set forth.

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

Figure 1 is a plan view of a part of the track and locomotive embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a transverse section through the line *w w*, Fig. 2. Fig. 4 is an enlarged side view of a locomotive with the switch-operating mechanism attached thereto. Fig. 5 is a side view of the mechanism immediately connected with the switch-rails. Fig. 6 is a plan view of the rocker-shaft on the locomotive. Figs. 7 and 8 are plan views of another portion of the track, contiguous to the part shown in Figs. 1 and 2. Fig. 9 is a side view of the clutch and lever-bars as used on the side track.

A A are the rails of the main track; B B, the rails of the side track, and $A^{\times}$ $A^{\times}$, the switch-rails in position for going on the side track. The movable ends of the switch-rails $A^{\times}$ $A^{\times}$ are connected and moved by a sliding bar, M.

Between each set of main rails A, on each side of the movable switch-rails $A^{\times}$, is located a plate, E, having upward projecting flanges *a a* along its edges, which run in an inclined position, so as to be closer together at the end nearest the switch-bars than at the farthest from it. At the narrowest end of the plate E the flanges *a a* again diverge outward, the whole forming what I call a divergent clutch-bar or clutch-plate, for operating the switch-rails. Each of these clutch-bars is pivoted to two elbow-levers, F F, which are pivoted at their angles to ties underneath, and are connected by a link or rod, O. These elbow-levers are, by suitable intermediate levers C C, connected to the sliding bar M, so that by the lateral movement of the divergent clutch-bar, the switch-rails may be moved from connection with the main rails to connect with the side rails either to the right or left of the main track.

Between the rails of the side track is a a small clutch, D, connected, by a rod, J, with the divergent clutch-bar E between the rails of the main track, so as to operate the switch when coming from either side track.

On the locomotive, in rear of the cow-catcher and in front of the front truck, is placed a cross-shaft, H, in suitable bearings, on which are three studs, with friction-rollers *b b* set at equal distances apart, but at different angles on the shaft, so that, by turning the shaft in its bearings, either stud may be brought vertically downward. From the shaft H projects an arm, to which is pivoted a rod or bar, K, connecting with a lever, L, within or at the side of the cab of the locomotive, so that the engineer can at any time turn the shaft H to bring either of the studs, with its roller *b*, in position to operate on the divergent clutch-bar by means of the flanges *a* thereon, so as to set the switch as required.

A similar clutch-bar is used beyond the frog where the rails cross each other, said clutch to be also connected with the slide-bar M at the movable end of the switch-rails, to make the connection complete. With this device the engineer on the passing train can operate the switch, dispensing with the use of a switchman.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the main rails A, side rails B, and switch-rails $A^{\times}$, of the divergent clutch-bar E, having side flanges *a a*,

as described, elbow-levers F F, connecting-bar O, levers C C, and sliding bar M, all constructed and arranged substantially as and for the purposes herein set forth.

2. The combination of the shaft H, with studs and rollers *b b*, set at varying angles, the connecting-rod K and lever L, all arranged on a locomotive to operate the divergence clutch-bars, as and for the purposes set forth.

JESSE WALKER.

Witnesses:

GEORGE LINTHWAITE,

DAVID BUCK.