

T. Fogg.

Railroad Switch.

Nº 40, 187.

Patented Oct. 29, 1867.

Fig: 1.

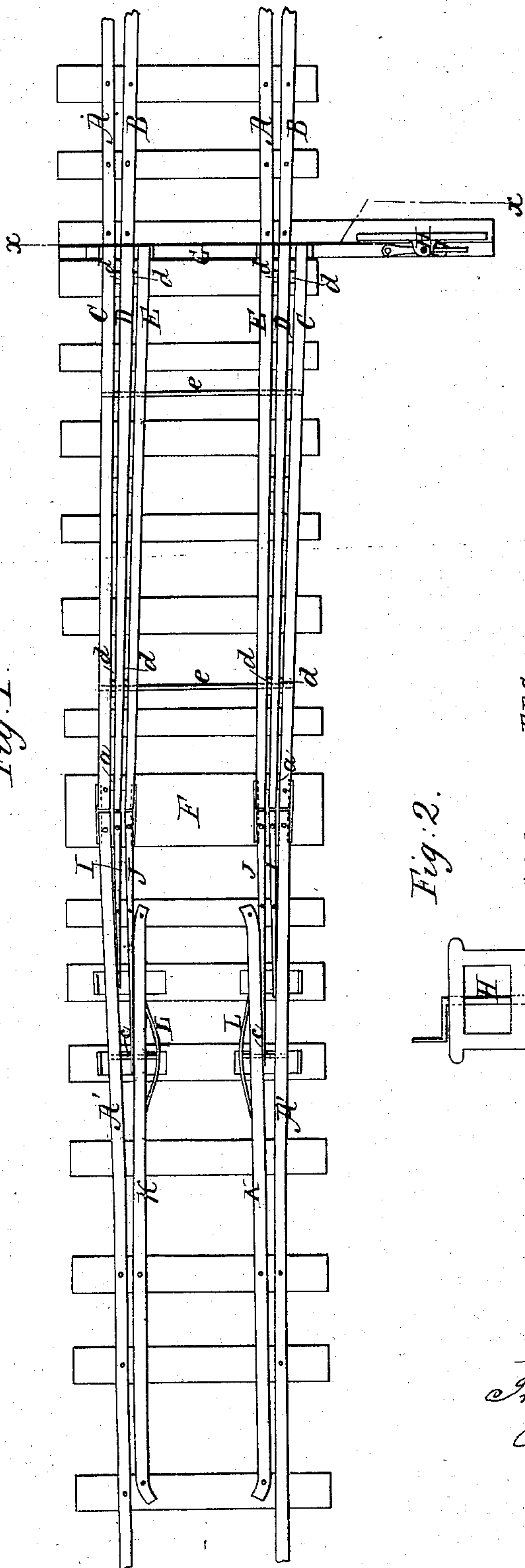
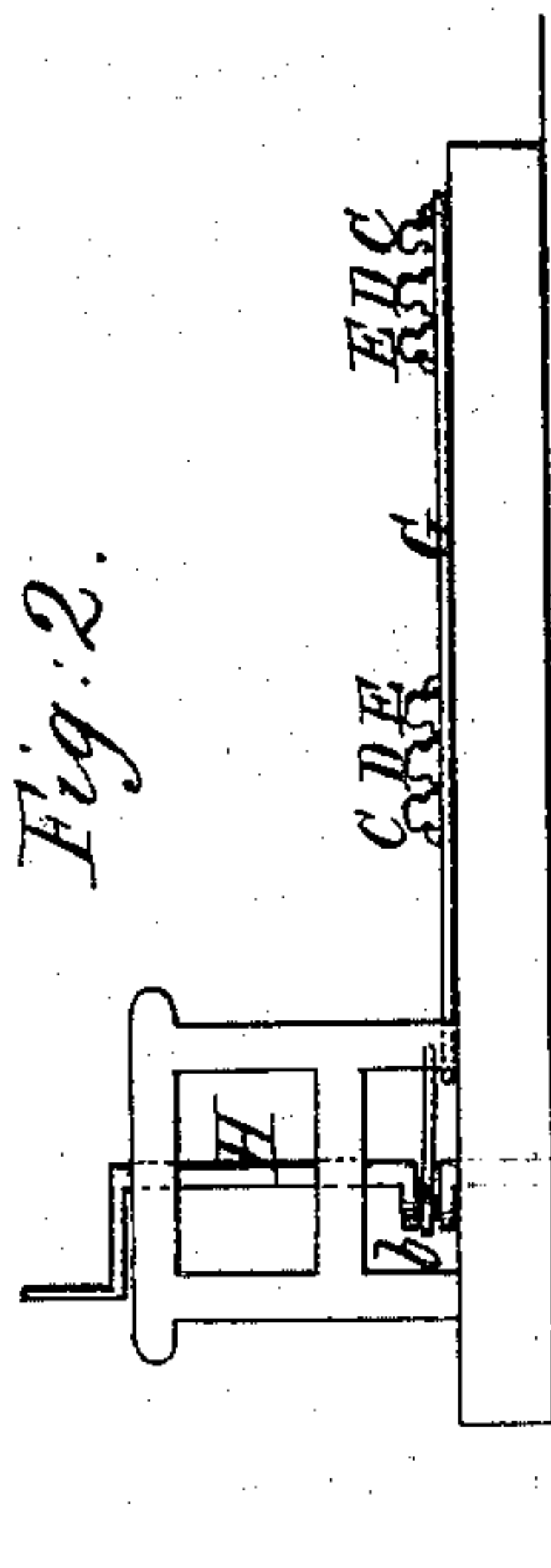
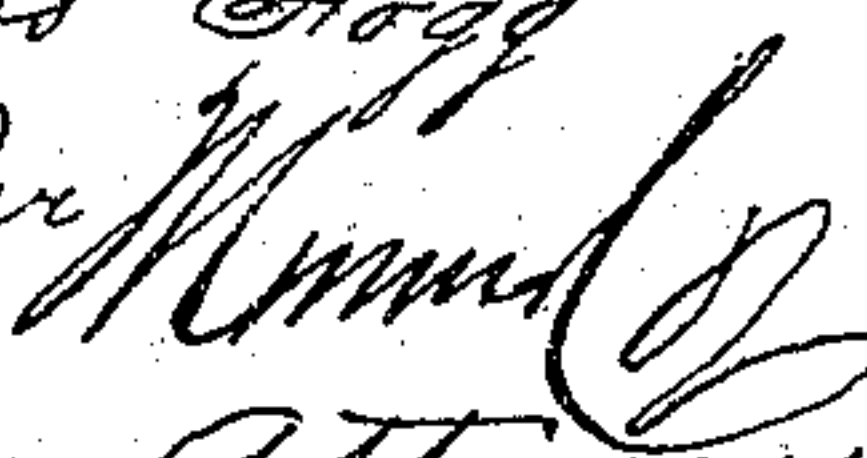


Fig: 2.



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United States Patent Office.

THOMAS FOGG, OF DETROIT, MICHIGAN

Letters Patent No. 70,187, dated October 29, 1867.

IMPROVED RAILROAD 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 I, THOMAS FOGG, of Detroit, in the county of Wayne, and State of Michigan, have invented a new and improved Railroad Switch, and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from all others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

This invention relates to a new and improved railroad switch, and has for its object the prevention of accidents, which not unfrequently occur in consequence of the negligence of switchmen in failing to readjust the switch after moving it out of line with the main track, and in line with a branch track or siding, for a train to pass from the main track upon the branch or siding, and *vice versa*. In the accompanying sheet of drawings—

Figure 1 is a plan or top view of my invention.

Figure 2 a transverse vertical section of the same, taken in the line *x x*, fig. 1.

Similar letters of reference indicate like parts.

A A A' A' represent the rails of a main track, and B B the rails of a branch track or siding. The switch is composed of three rails, C D E, at each side, which are nearly or quite parallel with each other, and which are pivoted at one end, as shown at *a*, or secured to the tie F in such a manner that they may work from a centre, the opposite ends of the switch-rails being secured on a slide-bar, G, which is moved by a crank, *b*, at the lower end of a vertical shaft or arbor, H, shown clearly in fig. 2. The rails A' A' of the main track adjoining the pivoted end of the switch are curved slightly in a longitudinal direction, and said rails A are in line with the outer rails C of the switch, while tongues I J are in line with the rails D E of the switch, as shown clearly in fig. 1. The tongues I are rigid, and also the tongues J, which are longer than I, and are in contact with guard-rails K K, the attenuated ends of the tongues I being in contact with the rails A'. The rails A are allowed to give or yield laterally, and they have rods *c* attached, which pass through the tongues J and guard-rails K, and are connected to springs L, as shown clearly in fig. 1. The switch-rails C D E are secured at the proper distance apart, and prevented from being casually displaced by keys *d*, inserted between them, and rods or bolts *e* passing through the keys and switch-rails, or through the latter alone.

The operation is as follows: When the central switch-rails D D are in line with the main rails A A, a train may pass along on the main track in either direction, the wheels of the cars, when moving in one direction, passing over the short tongues I I upon the rails A' A', and, when moving in the opposite direction, passing from said tongues upon the switch-rails D D. When the switch is adjusted so that the rails D D will be in line with the siding or branch track B B, the cars will pass from the latter upon the rails A' A' in the same manner. In case the switch be carelessly left with its central rails D D in line with the siding or branch track, and a train be moving on the main track in the direction indicated by arrow 1, the wheels of the train will pass upon the rails C E, the left-hand wheels passing from the switch-rail E upon the long tongue J in line with it, the flanges of the wheels passing between J and the opposite guard-rail K, while the right-hand wheels pass from the rail C upon the right-hand rail A', the flanges of said wheels passing between the short tongue I and said rail A'. The flanges of the left-hand wheels press the long tongue J laterally, so that said wheels will be directed on the left-hand rail A', the right-hand rail A' yielding or giving, so as to admit of the flanges of the right-hand wheels passing between I and A', the spring L of said rail bringing it back after flanges of the wheels have passed between I and A'. In the event of a train passing from the branch track upon the switch, when the latter has its central rails D D in line with the rails A of the main track, the wheels of said train will pass upon the rail C at one side of the switch, and upon the rail E at the opposite side, the right-hand wheels of the train passing from the switch-rail upon the long tongue J in line with it, the flanges of said wheel passing between J and the adjoining guard-rail K, and in contact with the adjoining main rail A', while the left-hand wheels pass direct from the switch-rail C; when the short tongue I is in line with it, the flanges of said wheels pressing the left-hand rail A' outward so as to prevent any undue friction in the passage of the flanges between I and A', the spring L of said rail bringing it back after the flanges have passed between I and A'. The rails A' are curved, so that their ends at the pivoted end of the switch will be sufficiently far apart to admit of the application of the tongues I J. Thus it will be seen that the accidents which not unfrequently occur through

the negligence of switchmen will be avoided, and by a very simple means. The invention has been practically tested, and has been found to operate well.

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

The switch, composed of the three rails C D E at each side, in connection with the rigid tongues I J, yielding main rails A' A', and guard-rails K, all arranged to operate in the manner substantially as and for the purpose set forth.

I further claim the combination of the springs L with the rails A' A', when the latter are used in connection with the tongues I J and the switch, substantially as and for the purpose specified.

THOMAS FOGG.

Witnesses:

JAMES LOVE,

EDWARD BEAN.