

H. FITZSIMMONS.

Improvement in Railroad-Switches.

No. 132,460.

Patented Oct. 22, 1872.

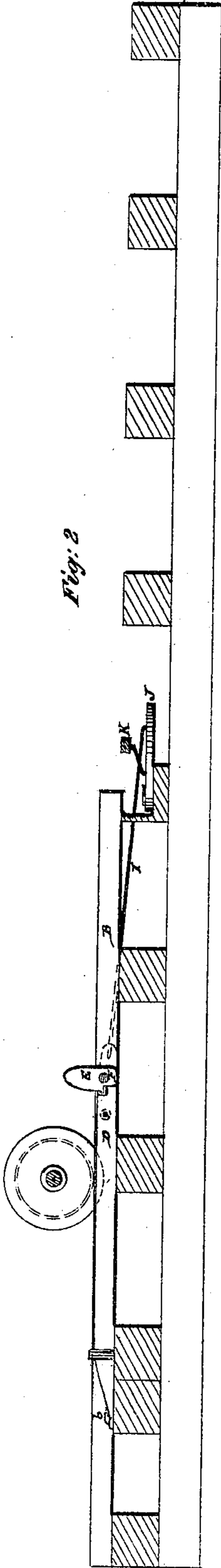


Fig. 2

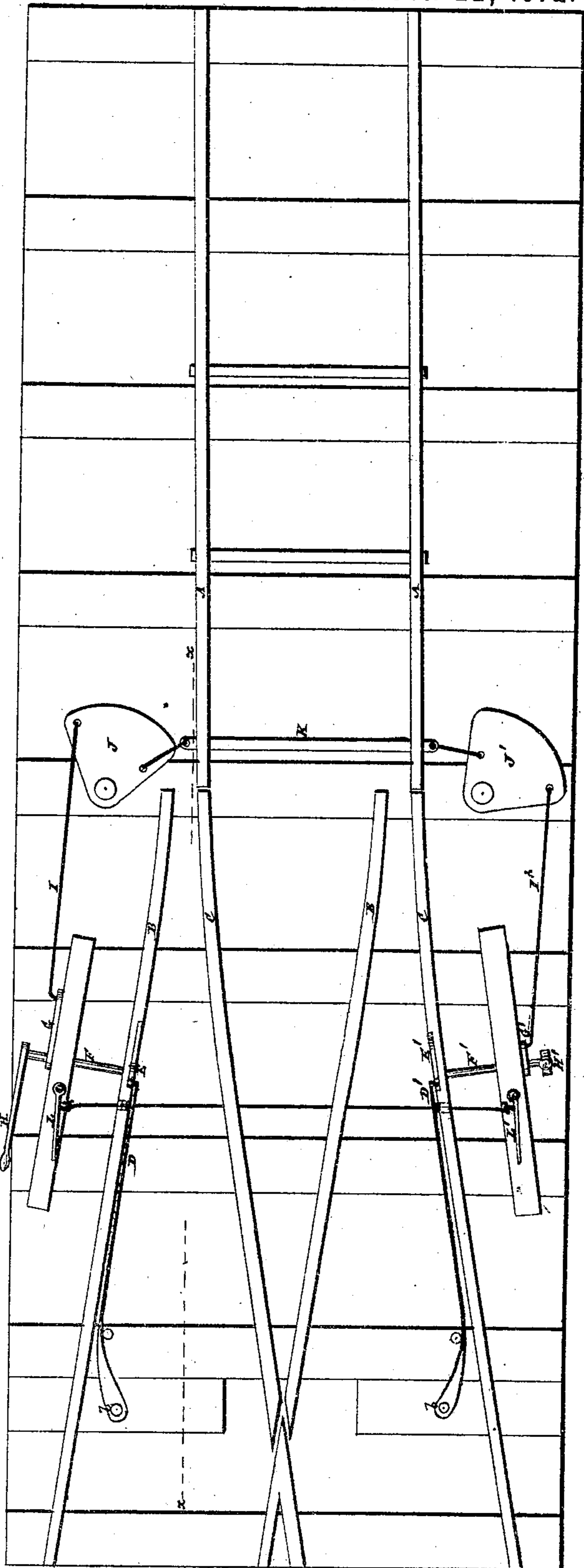


Fig. 1

Witnesses:  
Fred H. H. H.  
J. G. Griswold

Henry Fitzsimmons  
per Brown & Allen  
Attorneys

# UNITED STATES PATENT OFFICE.

HENRY FITZSIMMONS, OF HOUSTON, TEXAS.

## IMPROVEMENT IN RAILROAD SWITCHES.

Specification forming part of Letters Patent No. **132,460**, dated October 22, 1872.

*To all whom it may concern:*

Be it known that I, HENRY FITZSIMMONS, of Houston, in the county of Harris and State of Texas, have invented a new and useful Improvement in Railway Switches; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents a plan of a railway track with my improved switch applied thereto, and Fig. 2 a longitudinal section at the line *x x*.

Similar letters of reference indicate corresponding parts.

This invention consists in an automatic switch operated by the engine in passing from a double to a single track, substantially as hereinafter described.

A A represent the rails of the switch that connect at their off ends with the single track, and at their inner ends accordingly as the switch is adjusted with one or the other of two sets of rails, B B and C C, of a double track. Arranged along the insides of the one rail B and the one rail C are springs D D', made flaring away from the rails at their one end, where, as at *b b*, they are secured, and extending for a considerable distance along the rails toward the switch. These springs are bent and formed with lips or notches at their free ends to lock with and hold the tongues or levers E E', when the latter—that is, either one at a time—are turned up to occupy an elevated position relatively to the rails B C, to which the springs D D', that thus form spring-catches, are applied. These tongues work within recessed portions of said rails, and are fast to the inner ends of side cross-shafts F F'. They serve, as hereinafter described, to effect the movement of the switch when released from their holding-springs D D'. To the shafts F F' are also attached other levers G G' and handles H H'. The levers G G' are connected, by rods I I', with vertically-pivoted plates J J', or their equivalents, and these in turn are connected with a cross-bar, K, arranged to connect the free or working ends of the switch and to move the latter to the right or to the left for the purpose of putting its rails A A in line with the rails B B

or C C. The tongues or levers E E' and devices connecting them, as described, with the switch, are so arranged that when the one tongue is up the other is down, and vice versa, which arrangement also applies to the handles H H'. The depression of the tongue E shifts the rails A A of the switch into line with the rails B B, and the depression of the tongue E' moves the rails A A into line with the rails C C.

Supposing a train to be moving along the rails B B toward the switch, and the rails A A of the latter to be closed with the rails C C, then the tongue E will be upright, projecting above the one rail B and be locked by the spring D. The flange of the one forward wheel of the engine, as shown in Fig. 2, will first, by reason of the length of the spring, enter in between the latter and its rail, and open or free said spring from the tongue E, so that a suitable projection from the engine striking said tongue, or the tread of one of the foremost pair of wheels pressing down on the same, the switch-rails A A will be shifted into line with the rails B B and be locked by the spring D' shooting into catch with the raised tongue E'. Supposing, on the other hand, the train to be moving along the rails C C toward the switch, the spring D' would be opened and a reverse action or adjustment of the tongues E E' be effected to move the rails A A into line with the rails C C and hold them there. To travel from the switch or single track onto either set of rails of the double track B B C C, the switch is adjusted by hand by means of the handles or levers H H', one of a pair of levers, L L', first being operated to the right or to the left to free the holding-spring D or D' from its tongue E or E'.

What is here claimed, and desired to be secured by Letters Patent, is—

The springs or catches D D' arranged in relation with the rails B C, to which they pertain, as described, in combination with the tongues or levers E E' and mechanism for moving the switch or rails A A thereof, substantially as specified.

HENRY FITZSIMMONS.

Witnesses:

W. H. SLAUGHTER,  
W. SOUTHWICK.