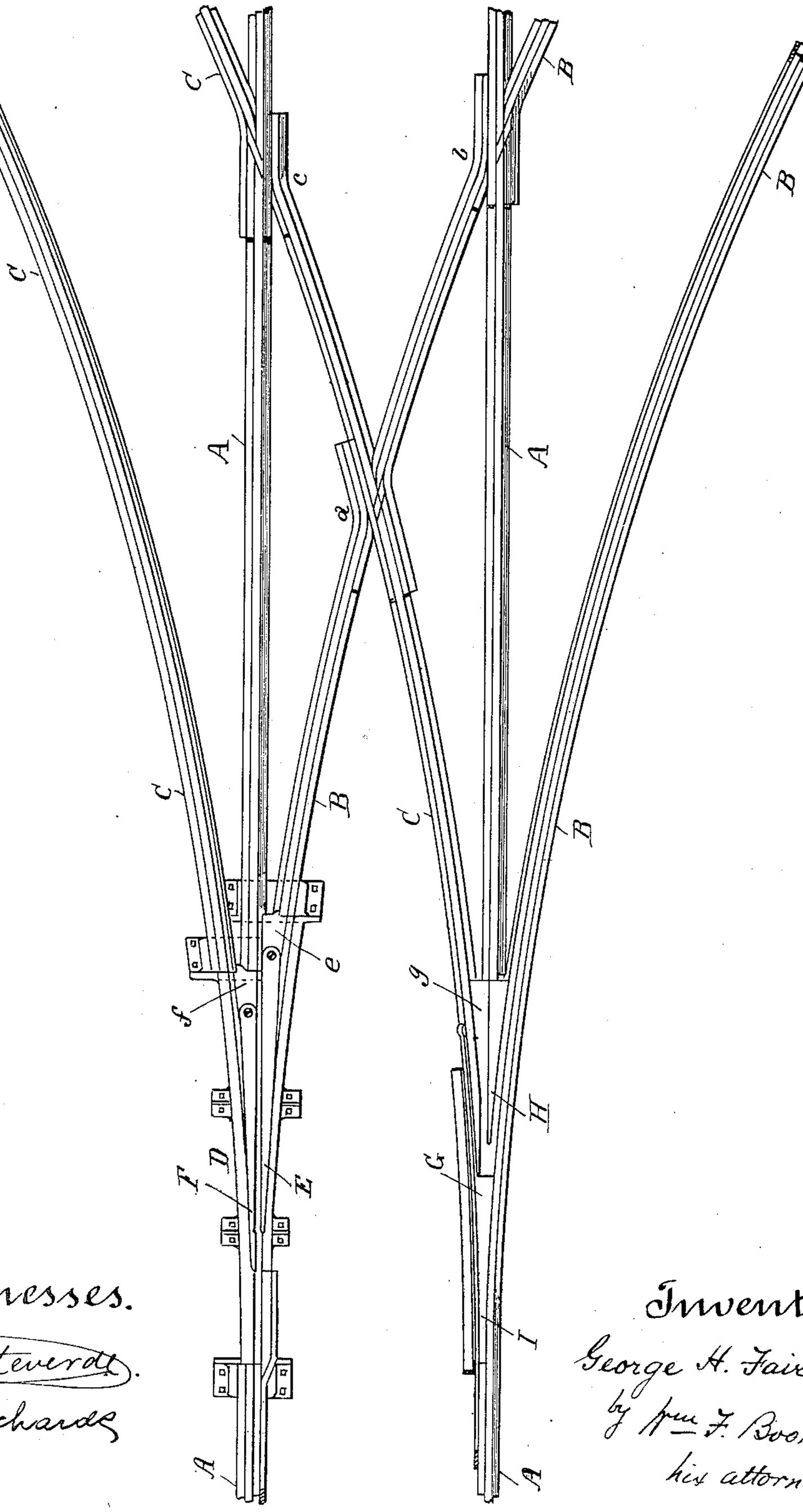
No. 657,099. Patented Sept. 4, 1900.

G. H. FAIRCHILD.

RAILWAY SWITCH.

(Application filed June 22, 1900.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE H. FAIRCHILD, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE MARKET STREET RAILWAY COMPANY, OF SAME PLACE.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 657,099, dated September 4, 1900.

Application filed June 22, 1900. Serial No. 21,133. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. FAIRCHILD, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Railway-Switches; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to railway-switches, and especially to double switches for three-way tracks.

It consists in the novel arrangement, construction, and combination of the tracks, the switch-tongues, and the mates, which I shall hereinafter fully describe, together with the objects of the invention.

Referring to the accompanying drawing, the figure is a plan of my switch.

A is the main or straight track, B is the right-branch track, and C is the left branch track. The two branches spring from the main or straight track at or very near the same line, and their curves or inclines are uniform, whereby the frogs *a*, *b*, and *c*, where the outer rails of the two branch tracks cross each other and where these cross the main or straight track, are relatively located to the best advantage both for paving and for the use of connection-rails sufficiently long for proper handling and secure joints. The uniform or approximately-uniform inclines or curves of the branches throw the frog *a* at or near the middle between the rails of the straight track, thereby leaving enough space on each side for proper paving, and as the curves of the branches need not be compounded to suit the street room or space available they can be made sufficiently long to throw the frogs far enough away from the switch tongues and mates to enable connection-rails of desirable length to be used.

D is the switch-casting. This is made wide enough to carry two switch-tongues. One of these, E, with its heel-piece *e*, is let into the outside rail of the right branch track, and the other, F, is let into the inside rail of the left branch track by its heel-piece *f*. The two switch-tongues are placed side by side and occupy corresponding positions with relation to their distance from the line from which the two branches spring. If the branches spring from the same line, the tongues will lie between the same vertical planes. If the branches spring from nearly the same line, as I have here shown, the tongues will correspondingly slightly overlap in their length.

G is the switch-mate, having a construction to supplement the functions of the switch-casting and its tongues. It has a cast-iron separator *g*, with steel point H, and a forged-steel filling-piece and riser I.

It is usual in double switches for three-way tracks to locate the switch-tongue and mate of one branch considerably in advance of the tongue and mate of the other branch, the switch-tongues being in opposite sides of the two branches, and said branches spring from considerably-different points or lines in order to provide room for the tongues and mates. This want of uniformity in the curves of the branches renders it necessary in many situations to compound the curve, and it also throws the frogs into such unequal relative positions that paving is difficult, and such short lengths of connection-rails must be used that they cannot be handled and secured satisfactorily; but with the construction I show of uniform or approximately-uniform branches and the juxtaposition of the switch-tongues with correspondingly-located mates these disadvantages are overcome, as I have heretofore stated.

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

1. A double switch for three-way tracks, consisting of a main or straight track, branch tracks springing from the same, or approximately the same, line, independent switch-tongues, one for each branch, lying in juxtaposition between the same, or approximately the same, vertical planes, and a suitable and correspondingly-located mate in the other side of said branches.

2. A double switch for three-way tracks, consisting of a main or straight track, branch tracks springing from the same, or approximately the same, line, and having uniform curves on opposite sides of the main or straight track, independent switch-tongues, one for each branch, lying in juxtaposition between the same or approximately the same,

vertical planes, and a suitable and correspondingly-located mate in the other side of said branches.

3. A double switch for three-way tracks, consisting of a main or straight track, branch tracks therefrom, independent switch-tongues, one tongue being in the outside rail of one branch and the other tongue in the inside rail of the other branch, and a suitable mate in the other side of said branches.

4. A double switch for three-way tracks, consisting of a main or straight track, branch tracks springing from the same, or approximately the same, line, independent switch-tongues, one tongue being in the outside rail of one branch and the other tongue in the inside rail of the other branch, said tongues lying in juxtaposition between the same, or approximately the same, vertical planes, and a suitable and correspondingly-located mate in the other side of said branches.

5. A double switch for three-way tracks, consisting of a main or straight track, branch tracks springing from the same, or approximately the same, line, and having uniform curves on opposite sides of the main or straight track, independent switch-tongues, one tongue being in the outside rail of one branch and the other tongue in the inside rail of the other branch, said tongues lying in juxtaposition between the same, or approximately the same, vertical planes, and a suitable and correspondingly-located mate in the other side of said branches.

6. A double switch for three-way tracks, consisting of a main or straight track, branch tracks springing from the same, or approximately the same, line, a switch-casting carrying independent switch-tongues, one tongue for each branch, said tongues lying in juxtaposition between the same, or approximately the same, vertical planes, and a suitable and correspondingly-located mate in the other side of the branches.

In witness whereof I have hereunto set my hand.

GEORGE H. FAIRCHILD.

Witnesses:

GEORGE B. WILLCUTT,

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