(No Model.)

A. J. RIVER.

RAILWAY SWITCH.

No. 421,518. Patented Feb. 18, 1890.

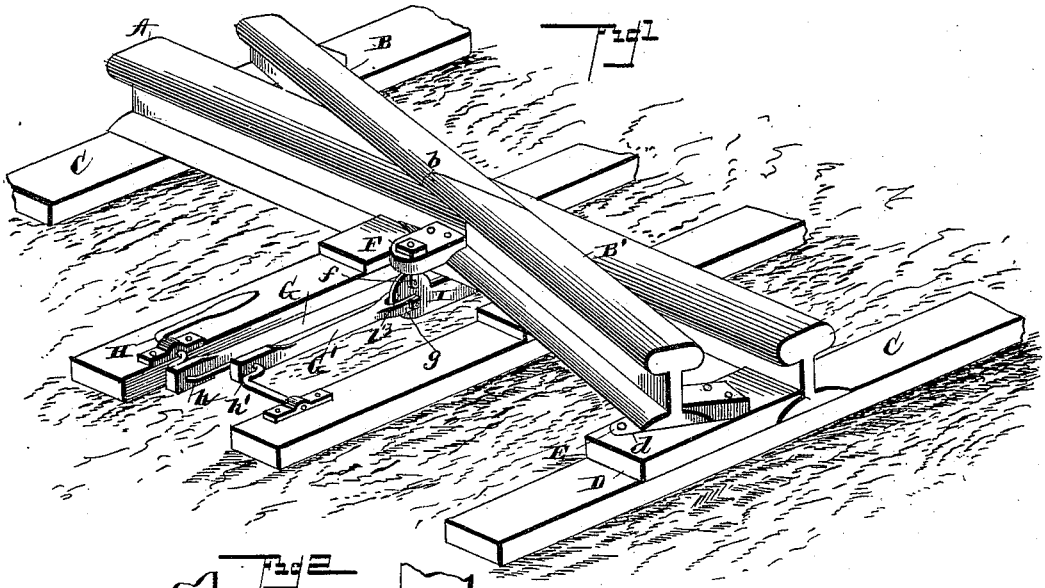

Fig 1.

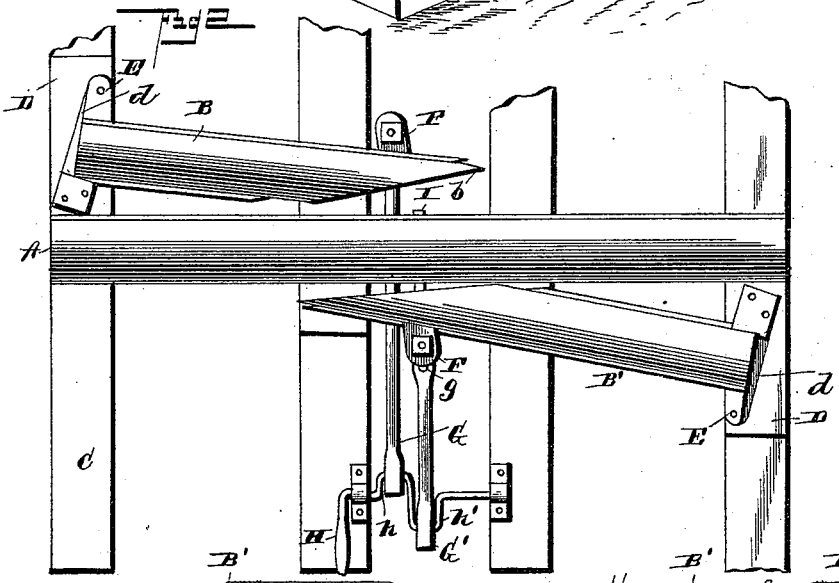

Fig 2.

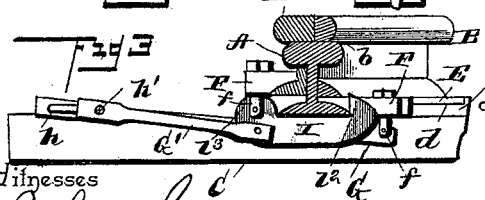

Fig 3.

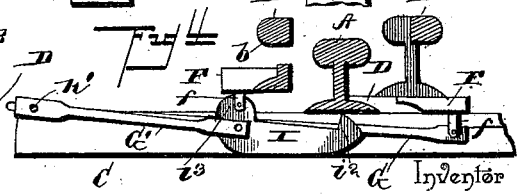

Fig 4.

Witnesses

John Imure

H. J. Riley

Inventor

Amos J. River

By his Attorneys,

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UNITED STATES PATENT OFFICE.

AMOS J. RIVER, OF GOSFORD, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JAMES G. KINNARD, OF SAME PLACE.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 421,518, dated February 18, 1890.

Application filed October 9, 1889. Serial No. 326,447. (No model.)

To all whom it may concern:

Be it known that I, AMOS J. RIVER, a citizen of the United States, residing at Gosford, in the county of Armstrong and State of Pennsylvania, have invented a new and useful Railway-Switch, of which the following is a specification.

The invention relates to improvements in railway-switches.

The object of the present invention is to do away with the railway frogs, points, and guide-rails employed at the point where the rail of a side track crosses the main rail and to enable the latter to be continuous and unbroken.

The invention consists in the construction and novel combination of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a side rail constructed in accordance with the invention, showing heads or top flanges of the side rails lapping the main rail. Fig. 2 is a plan view showing the side rails or switch-rails open. Fig. 3 is a transverse sectional view, the parts being in the position shown in Fig. 1. Fig. 4 is a similar view, the parts being as shown in Fig. 2.

Referring by letter to the accompanying drawings, A designates the main rail, which is secured in the ordinary manner to ties C, and B B′ designate switch-rails, which are pivoted on opposite sides of the main rail and have their adjacent ends beveled, and are adapted when aligned to lap the main rail and form a continuous rail crossing the same. The switch-rails B B′ are slightly elevated and have the lower surfaces of their heads or top flanges *b* lying in the same plane as the top of the main rail, and the webs of the switch-rails are cut away a sufficient distance from the adjacent ends, whereby when the switch-rails are moved together their tops *b* will lap and rest upon the main rail, the bottom flanges of the switch-rails being beveled and resting against the web of the main rail between the flanges thereof, thereby providing a continuous side rail crossing the main rail, and enabling the latter to be continuous and dispensing with the necessity of frogs, points, and guard-rails. The switch-rails B B′ rest upon blocks or chairs D, the end ones of which are recessed at *d* to receive plates E, which are secured to the bottoms of the side rail, and are pivoted in the outer ends of the recesses *d* and enable the side or switch rails to be swung toward and away from each other. The adjacent free ends of the switch-rails are provided with blocks F, which have depending ears *f* and the switch-rail B is connected by a rod G with a crank *h* of a lever H, employed to control the switch-rails; and the switch-rail B′ has pivoted in the depending ears *f* of its block a locking lever or hook I, which is connected by a rod G′ to a crank *h′*, which is arranged opposite the crank *h*, whereby when the operating-lever H is turned the switch-rails are carried toward or away from each other, as desired. The locking-lever I is provided at its free end with a hook i^2, which when the switch-rails are drawn together is designed to lie opposite the main rail and the switch-rail B and prevent them accidentally separating, and the locking-lever is provided at the opposite end with an arm i^3, which is pivoted between the ears *f*. The connecting-rod G′ has its end *g* bifurcated and pivoted to the locking lever or hook I at the angle formed by the arm i^3, whereby when the rail B′ is thrown as far over as possible the rod G′ will cause the hook of the locking-lever to rise and remain opposite the main rail and switch-rail B until the operating-lever is turned to return the switch-rails to their open position, when the hook of the locking-lever will be lowered to permit the opening of the switch.

The operating-lever H is designed to be connected with and operated by a main-switch mechanism; but for convenience I have shown it separate from a main switch.

From the foregoing description and the accompanying drawings the construction, operation, and advantages of the invention will readily be seen; and I desire it to be under-

stood that I do not limit myself to the precise details of construction herein shown and described, as I may, without departing from the spirit of the invention, make various minor changes therein.

Having thus described my invention, what I claim is—

1. The combination, with the main rail, of the switch-rails having their top flanges adapted to rest upon the main rail, and the locking lever or hook pivotally connected with one of the switch-rails and being arranged to engage the other switch-rail, substantially as described.

2. The combination of the main rail, the switch-rails pivoted on opposite sides of the main rail and having their top flanges adapted to rest upon the same, the rod G, connected to one of the switch-rails, the locking lever or hook pivoted to the other switch-rail, the rod G′, and the operating-lever, substantially as described.

3. The combination of the main rail, the elevated switch-rails B B′, provided at their adjacent ends with blocks having depending ears, the rod G, connected to the block of the switch-rail B, the locking-lever having at one end a vertical arm pivoted between the ears of the block of the switch-rail B′ and provided at its other end with a hook, the rod G′, connected to said locking-lever, and the operating-lever, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

AMOS J. RIVER.

Witnesses:
F. BOYD,
J. D. DAUGHERTY.