C. C. SHELBY.

Frogs.

No. 157,877. Patented Dec. 15, 1874.

Fig. 1.

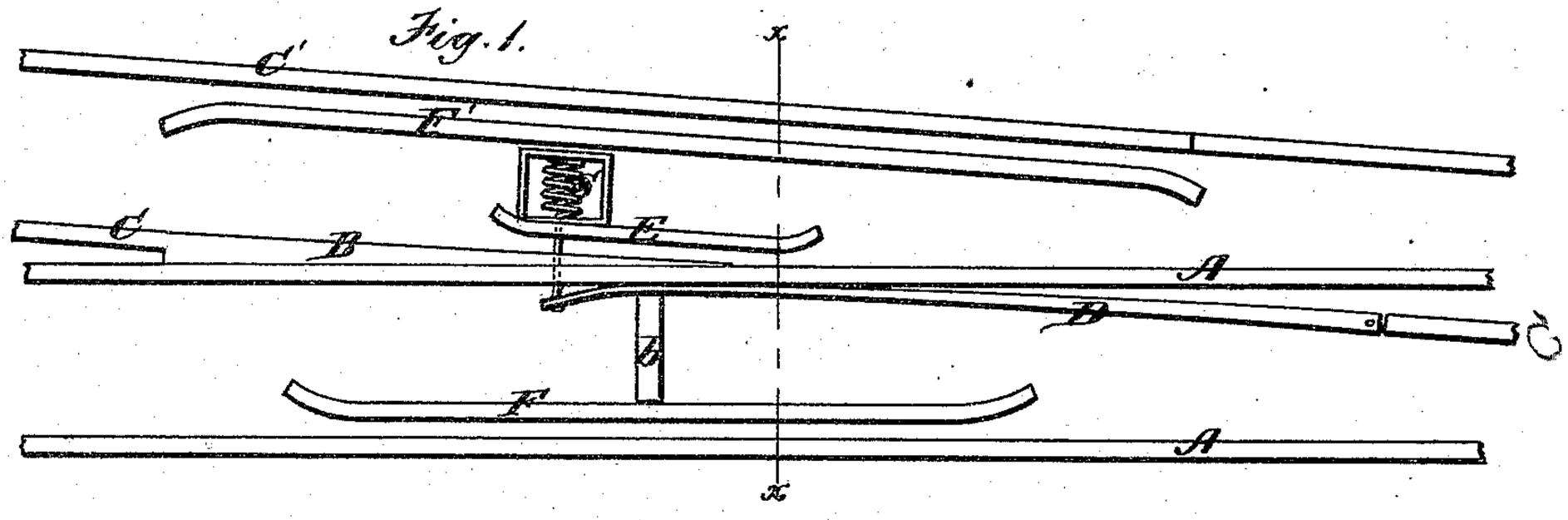

Fig. 2.

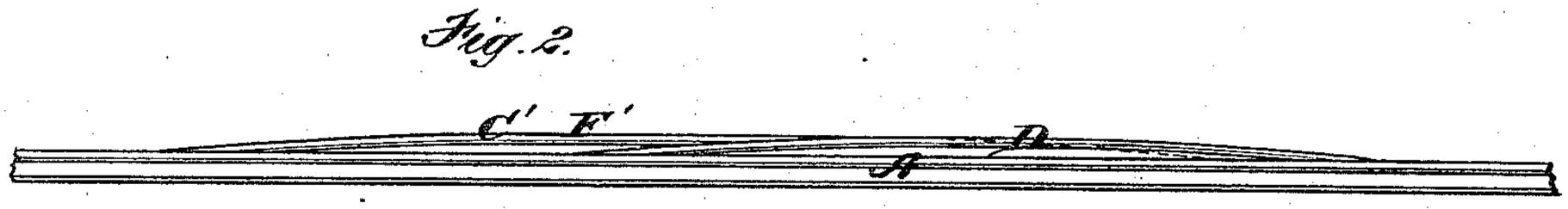

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

CHRISTOPHER C. SHELBY, OF SPRING VALLEY, NEW YORK.

IMPROVEMENT IN FROGS.

Specification forming part of Letters Patent No. **157,877**, dated December 15, 1874; application filed September 21, 1874.

To all whom it may concern:

Be it known that I, CHRISTOPHER C. SHELBY, of Spring Valley, county of Rockland and State of New York, have invented certain new and useful Improvements in Railroad-Crossings; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a top view of my improved track. Fig. 2 is a side elevation of the same; and Fig. 3, a section through line *x x*, Fig. 1.

Similar letters of reference in the accompanying drawings denote the same parts.

The object of my invention is to dispense with the flange-bearing plates in common use for passing from one track to another, which is objectionable because of the jar and wear both to the wheels and track in the passage over the main line; and to this end my invention consists in the employment of a short curved rail elevated above the inner main rail, pivoted at its junction with the inner side rail, and having its free end kept in its normal position in contact with the inner main rail by a spring, and capable of being readily moved aside by the wheels of a train moving in either direction over the main track, in combination with an inner stationary pointed side rail spliced to the inner main rail, a guard-rail, and an outer elevated side rail, by means of which, in connection with a switch, (not shown in the drawing,) the wheels may ride over the elevated rails, and be transferred from the main track to the siding, or the reverse, and the wheels run entirely upon their treads, thereby dispensing with the common flange-bearer.

In the accompanying drawing, A A are the rails of the main track, to the inner rail of which the pointed inner side rail B is bolted or otherwise securely fastened. C C′ are side rails. D is a short rail, pivoted at its junction with the inner side rail C, its free end being connected, by a rod passing through perforations in the inner main rail and the guard-rail E, with a spring, S, preferably located in a covered box, to preserve it from injury, the tension of the spring being exerted to keep the free end of the short rail D constantly in contact with the side face of the inner main rail. The short rail thus constructed will offer no obstruction to the passage of a train in either direction over the main track, the wheels of the train readily moving the free end of the short rail D aside, and the spring operating to bring back the end of the short rail D against the inner main rail after the passage of a train. To insure the return of the free end of the short rail D against the inner main rail in case the spring should be broken or inoperative from any cause, an inclined plane, *b*, is employed, situated near the free end of the short rail D, up which the latter rides when it is moved aside by the wheels of a passing train; and in case the spring should break or become inoperative the gravity of the free end of the short rail would cause it to slide down the inclined plane into its position in contact with the inner main rail. The top face of the short rail D is elevated at its central part above the inner main rail, and gradually inclines to its ends. The top face of the outer side rail C′ has also a curvature similar to the top face of the short rail D, its central portion being elevated with a gradual inclination to its ends. F F′ are guard-rails, the top face of the latter being elevated with a similar curvature with the outside rail C′.

In the operation of my improved track, it will be seen that the short rail D will offer no obstruction to the passage of trains in either direction over the main track, as its free end will readily be moved aside by the passing train, when it will regain its normal position in contact with the inner main rail. In the passage of a car on the siding to the main track one set of wheels of the train will run on the inclined elevated side track C′, the opposite wheels of the train passing over the stationary rail, made up of the inner main rail A and spliced rail B, until the wheels arrive at the short rail D, up the inclination of which they will move, and thence to the switch at the termination of the main track and siding.

By this construction it will be seen that I am enabled entirely to dispense with frogs in passing from one track to another, and thus obviate the jar and wear both to the track

and cars incident to the use of frogs, and that in my construction the wheels will at all times run upon their treads.

I am aware that, in the class of crossings in which the side track crosses the unbroken main track, elevated side rails have been used in connection with a flange-bearer, upon which the flange of a wheel of a passing car impinges; and I therefore lay no claim to such invention, which is objectionable on account of the liability of injury to the flange of the wheel.

I claim as my invention—

The short rail D, the top face of which is elevated above the inner main rail, and pivoted at its junction with the inner side rail A, and its free end kept closed against the inner main rail by a spring, S, in combination with the inner side rail B, pointed at its end and spliced to the inner main rail A, guard-rail E, and elevated outer side rail C′, substantially as described, and for the purposes set forth.

CHRISTOPHER C. SHELBY.

Witnesses:

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