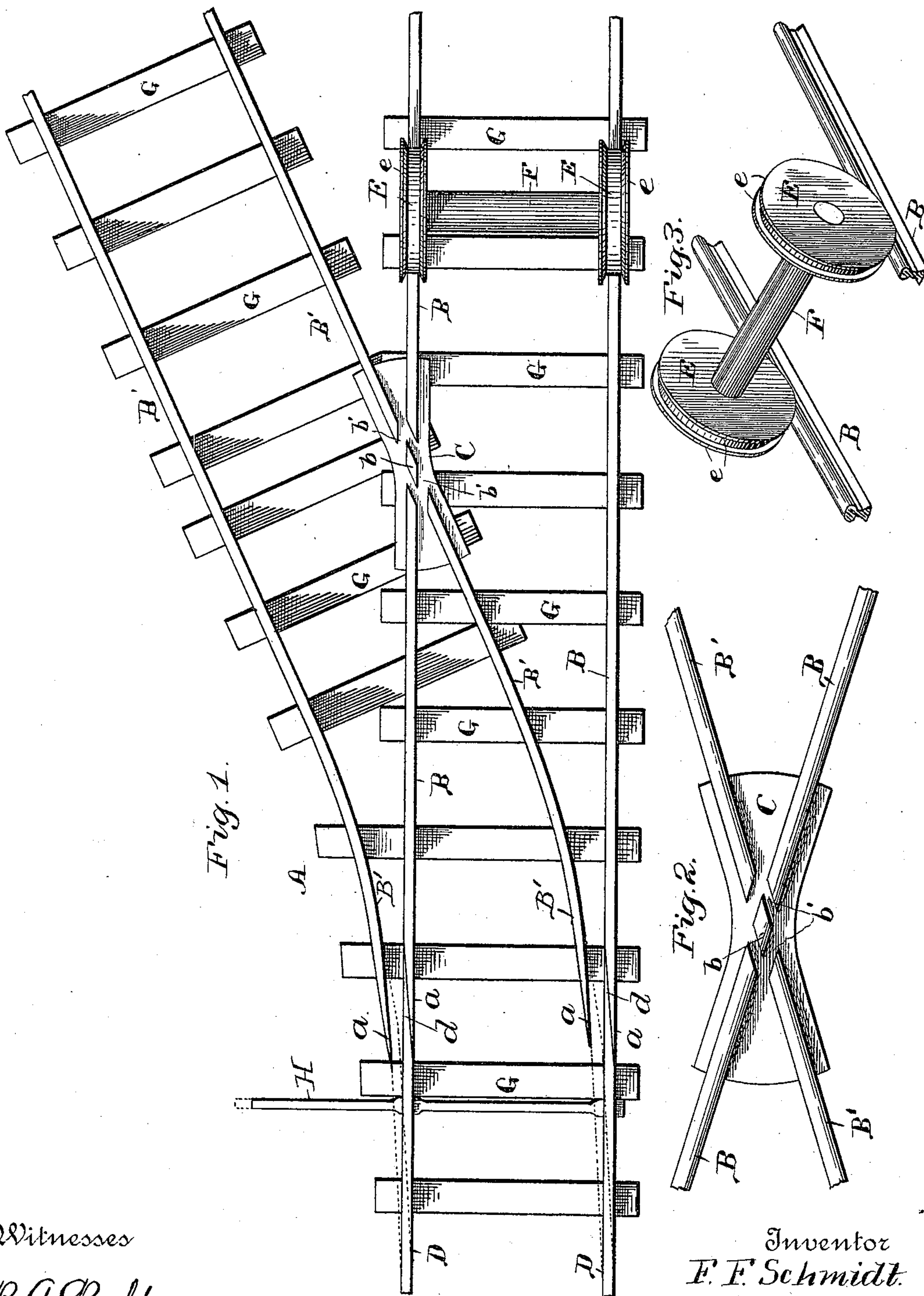


(No Model.)

F. F. SCHMIDT.
RAILWAY SWITCH.

No. 451,076.

Patented Apr. 28, 1891.



Witnesses

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By his Attorneys.

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UNITED STATES PATENT OFFICE.

FRANK F. SCHMIDT, OF KANSAS CITY, MISSOURI.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 451,076, dated April 28, 1891.

Application filed January 18, 1890. Serial No. 337,321. (No model.)

To all whom it may concern:

Be it known that I, FRANK F. SCHMIDT, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Railway-Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in railway-switches; and it consists in the novel construction hereinafter fully set forth and described.

In the drawings, which illustrate the manner of carrying out my invention, Figure 1 is a plan view of a railway-track, showing the wheels which I propose using resting thereon. Fig. 2 is a detail view of the frog with the tracks partly broken off, and Fig. 3 is a detail in perspective of the wheels connected by an ordinary axle.

Referring to the drawings by letter, A represents my invention; B, the main rails resting on suitable ties G and secured thereto in a suitable manner.

B' shows a flange or Y in the road, provided with a suitable switch D for switching the trains from one line to the other.

C is a frog, constructed in the manner illustrated in Fig. 2, having the rails B and B' cut away, leaving a diamond-shaped projection on which the wheels E find a bearing when moving across said frog.

b' shows the cuts in the rails, which form a passage for the flanges e of the wheels E to pass through.

D is the switch heretofore referred to, having the extremities d, which connect with the main track, tapered in such a manner as to rest closely against the rails when they are slid back and forth.

In order that one side of each rail of the switch D may make a close contact with the rails B' and at the same time be flush with the track-rails B when in the proper position, correspondingsides of the ends of branch rails B' are tapered, the planes of their taper being on radii of the center of motion of the corresponding rail of the switch, while the beveled or tapered faces d of the rails of the switch are on such a plane as to form uninterrupted continuance of the rails B when in the proper position, the ends of the main rails B being tapered to correspond thereto. It will thus be seen that only a single side of

the rails of the switch is tapered, and that enlargements on the ends of either of the rails B or B' are unnecessary, thus causing a continuous track of uniform width to be formed. Said wheels E are provided with a suitable flange e on each side, which serves to hold them on the rail, as illustrated in Figs. 1 and 2, but more especially to keep the rails from spreading where curves occur. Where the wheels have only one flange the entire weight of the train is thrown on the outside rail, thereby frequently causing the tracks to spread; but by having the wheels provided with a double flange equal pressure is brought to bear on both rails when turning curves, which heretofore has not been accomplished. This will prevent the tracks from spreading and at the same time prevent the unnecessary wear of the rails. The double-flanged wheel can only be used with a track made in the manner illustrated.

F shows an axle on which said wheels E are mounted. This, however, is to be constructed in any suitable manner, as may be found desirable.

The frog C, heretofore referred to, is constructed in a solid piece, and may be rigidly secured to the ties by suitable bolts or spikes, and the track passing over it being cut away in the manner illustrated forms a clear road or passage for the flanges to pass, which heretofore has not been attained.

H is a suitable lever properly secured to the switch-rails D D for the purpose of shifting them. Said lever H may be provided with the ordinary appliance for operating it.

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

The combination, with two converging lines of rails, of a switch, one of the said lines of rails having the ends of the rails thereof tapered on planes in radii of the centers of motion of the corresponding rails of the switch, the ends of the remaining line of rails and of the switch-rails being beveled each upon a single side, whereby a track of uniform width is obtained, as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK F. SCHMIDT.

Witnesses:

R. A. BALDERSON,
JOHN A. ZERBE.