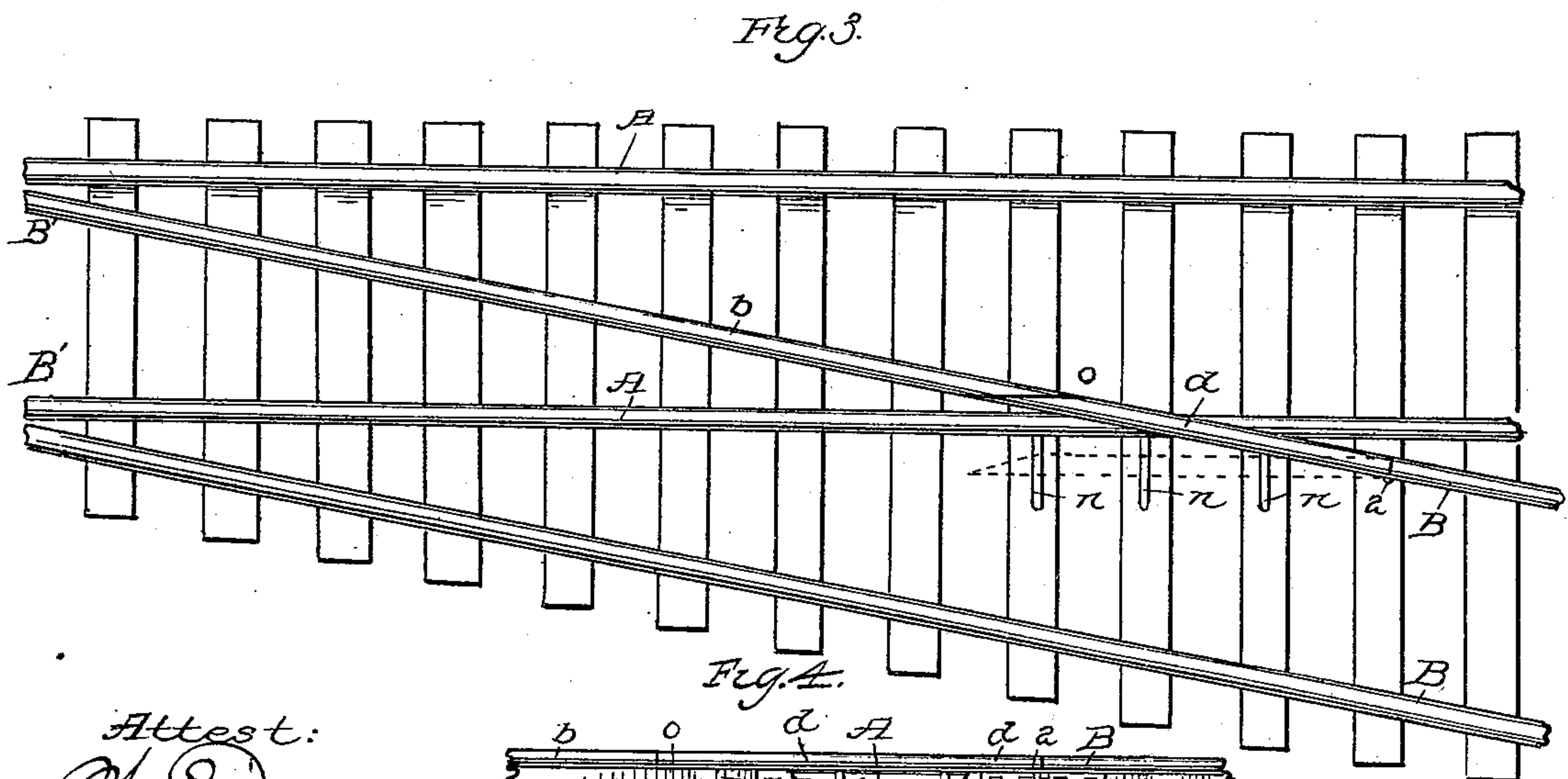
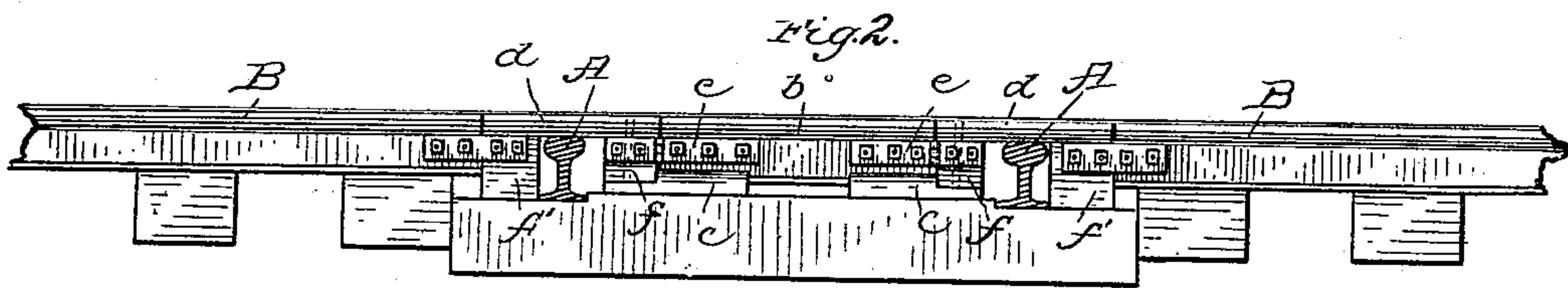
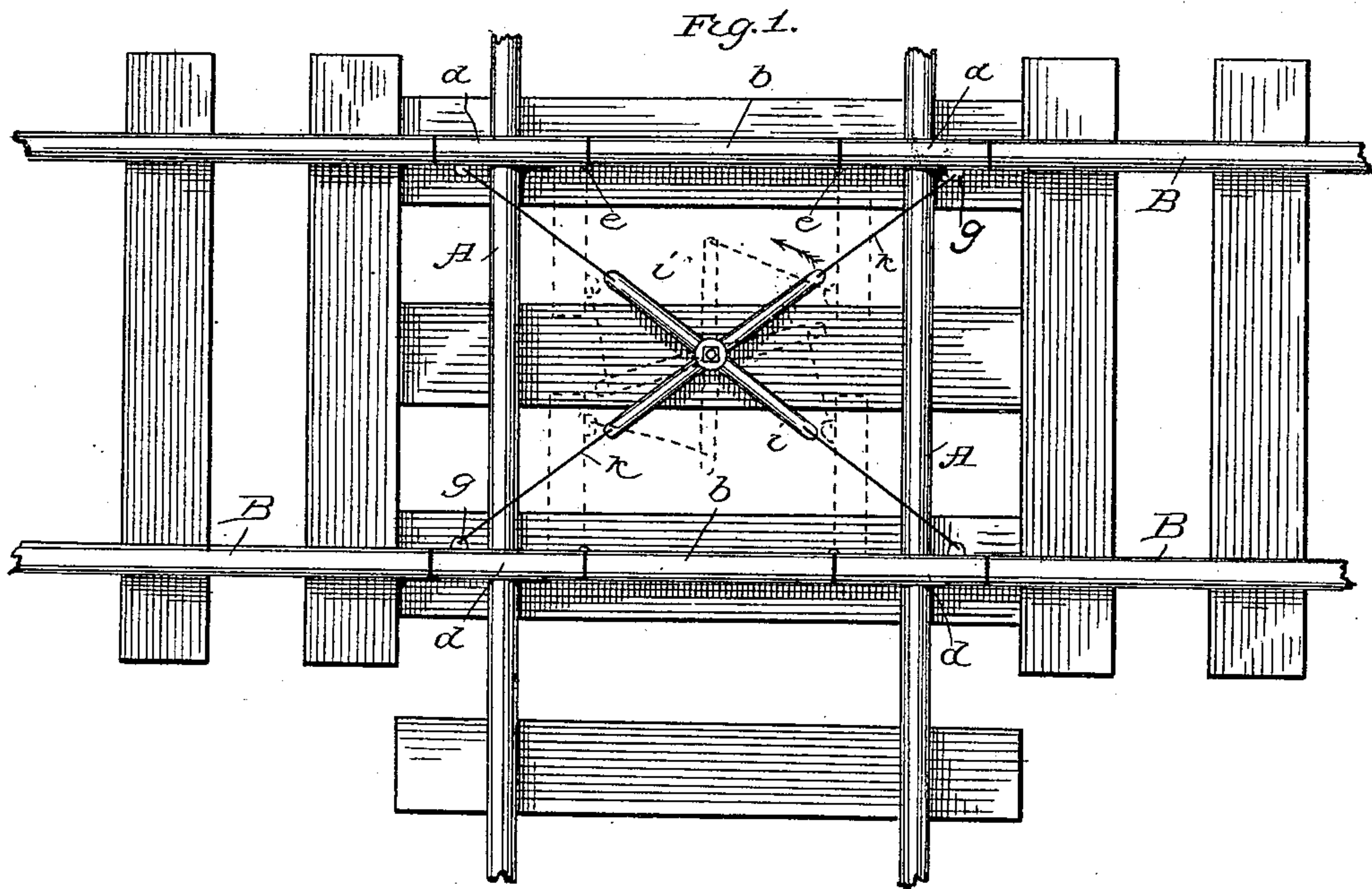


(No Model.)

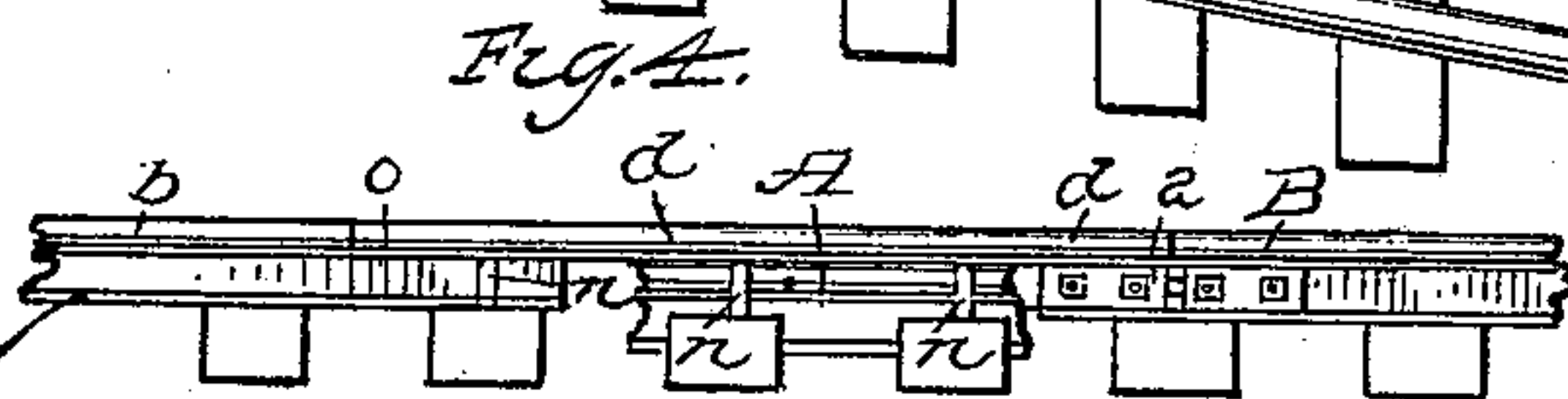
E. E. DWIGHT.
RAILWAY CROSSING.

No. 262,751.

Patented Aug. 15, 1882.



Attest:
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Att'y.

UNITED STATES PATENT OFFICE.

EDWARD E. DWIGHT, OF TOLEDO, OHIO.

RAILWAY-CROSSING.

SPECIFICATION forming part of Letters Patent No. 262,751, dated August 15, 1882.

Application filed April 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWARD E. DWIGHT, of Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Improvement in Railway-Crossings; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to railway crossings and sidings.

The object of the invention is to provide simple and effective means whereby the necessity for cutting the rails may be obviated and a sure and easy passage be provided for the cars either directly or obliquely across the track.

My invention consists principally in the peculiar construction of the bridge-pieces at the junction of the crossing-rails, adapted to be simultaneously moved either to permit passage over one line of track by forming connection with its rails or over the other line of track by leaving it unobstructed. In connection with this principal feature are improved details of construction, all of which are fully set forth hereinafter.

In the accompanying drawings, Figure 1 represents a plan view of an ordinary crossing in which one track crosses another at right angles. Fig. 2 shows a section on line *x x* of Fig. 1. Fig. 3 is a plan view of a siding. Fig. 4 shows a side elevation of the bridging-piece and its connections.

Referring to Fig. 1, *A A* represent the rails of a railway, and *B B* the rails of a track crossing the first. The rails *A A* are of the main track, and are uncut. The track crossing this is composed of pieces, of which *B B* are outside of the main rails and *b b* pieces fixed within the main rails, all forming, in connection with the bridging-pieces, parts of a continuous cross-rail. The ends of the rails *B B* and the whole of the rails *b b* are set with their treads above those of the main-line rails *A A*, preferably about two inches, and the ends of the pieces *b b* are five or six inches distant from the inner faces of the rails *A A*. The ends of the rail-pieces *b b* are set in chairs *c*, the ends of which toward the rails *A* form the bearings for the bridge-pieces *d*. These bridge-pieces are made of the same width as the rail-head, so as to form a continuous rail therewith when they are in place, and they are preferably about

two inches in depth. They are pivoted upon the ends of the pieces *b* preferably by means of a hinged strap, *e*, which is bolted to the web of the rail *B* on the inside, and to a block, *f*, upon which the end of the piece *d* is also bolted. The block *f* rests upon a suitable bed-piece, and may be a part of the chair. This form of hinge permits the square ends of the rail and bridge-piece to abut snugly.

It will be understood that the bridge-piece *d* extends across the main rail *A* and rests thereon. Its outer end rests upon the supporting-block *f'*, about three inches in length, which fills the space between the end of the rail *B* and the outer face of the rail *A*, coming up flush with the tread of the latter. The bridge-piece *d* is provided with an ear, *g*, at its outer end. Only one of these bridge-pieces has been described; but it will be understood that there are four, one at each corner of the quadrangle formed by the intersecting rails. In the center of this quadrangle, upon a suitable pivot, are set four arms, *i*, which arms are adapted to rock back and forth in a horizontal plane through a quadrant of a circle, said motion being imparted to them by any suitable intermediate mechanism connected to an ordinary switch-stand or the shaft of a signal-board, or to a lever or shaft especially provided for the purpose, in any of the well-known ways. Upon the ordinary gage of road these arms *i* may be about one foot in length. To the outer end of these arms are pivoted links *k*, connecting them to the ears *g* on the outer ends of the bridge-pieces. The drawings show the bridge-pieces in position in full lines; but when the arms are turned in the direction of the arrow to the position shown in dotted lines they draw the bridge-pieces inward, as represented, so that said bridge-pieces lie parallel with the main rails and give free way for the wheels of a train on the main line. When, however, the bridge-pieces are in the position shown in full lines a train may cross the main line upon the rails *B B*. As these rails rise gradually, the inequality due to their elevation above the surface of the main rails is not perceptible.

In applying my bridge-piece to a siding I use substantially the same form of piece and hinge it to the fixed rail in the same manner. The arrangement of the piece, together with

the position of the rails, is shown in Fig. 3, in which A A represent the rails of the main track, and B B those of the siding, movable points or switches being shown at B' B'. The bridge-rail *d* is pivoted to the rail B at 2, and when not in use as a bridge-rail is swung out in position shown in dotted lines. The piece between the main rails (represented at *b*) is in this case of course placed obliquely, and in order to make the bearing more continuous it is cut obliquely at the end which meets the bridge-piece, the bridge-piece being cut to correspond thereto. A space of about three inches is left between the end of the rail-piece *b* and the inner face of the rail A for the passage of the flange of the wheel. The bridge-piece *d*, when in the position shown in dotted lines, is supported upon suitable ribs, *n n*, which, as they are on the outside of the main track, may extend quite up to the rail A and serve to guide the bridge-rail in its movement over the said rail. The end of the rail B is provided with a suitable bearing, *o*, at its end for the end of the bridge-piece to rest upon when across the main rail; but this bearing *o* must leave a space for the flange between its inclined end and the face of the rail. The bridge-piece in this case may be worked simultaneously with the switch-rails B' B' by means of one of the ordinary connecting mechanisms well known to those skilled in the art.

The rail *b*, as well as that part in line therewith on the outside of the main rail A, is necessarily about two inches higher than the rail A; but, as it is the outer rail of the curve of

the siding, this is rather a convenience than otherwise.

I am aware that the crossing-rail of a siding has been connected to a single rail placed between the main-line tracks and connected thereto by means of a movable bridge-piece, which is adapted to be swung on a pivot either to form the crossing or to leave the main line unobstructed; and this device I do not claim broadly, the same being shown in several patents, among them that of Meredith and Lyon of February 10, 1880.

Having thus described my invention, what I claim is—

1. The described railway-crossing, consisting of the uncut main-line rails A A, the rails B B, placed at an angle thereto, the fixed pieces *b b*, in line with the said rails B B and placed between the rails A A, and bridge-pieces *d*, pivoted between the said rails B *b*, and adapted to be moved simultaneously either to connect the said rails B *b* or to permit unobstructed passage over the rails A A, substantially as described.

2. The combination of the main rails A A, the rail-pieces B B *b b*, the hinged bridge-pieces *d*, the pivoted arms *i*, and the links *k*, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD E. DWIGHT.

Witnesses:

J. H. HYLAND,
DENNIS RIELY.