

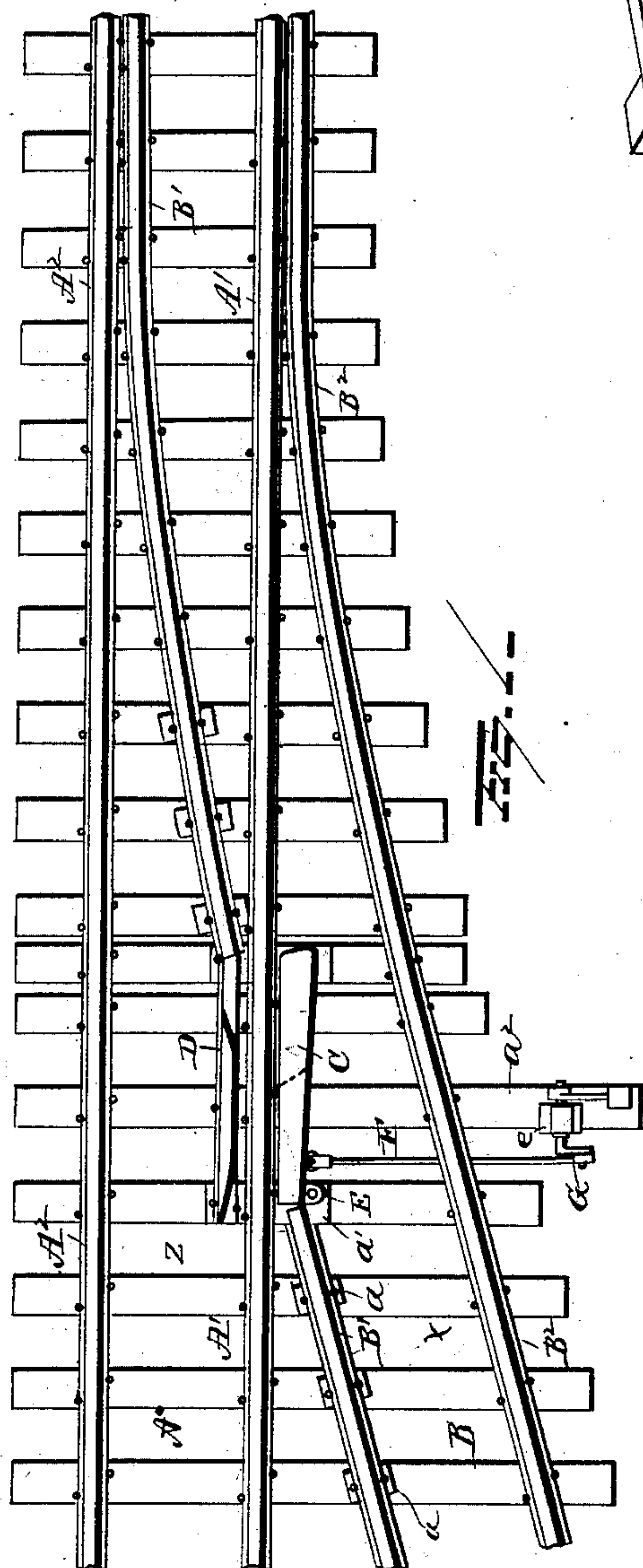
(No Model.)

J. F. HART & C. M. HENDRY.

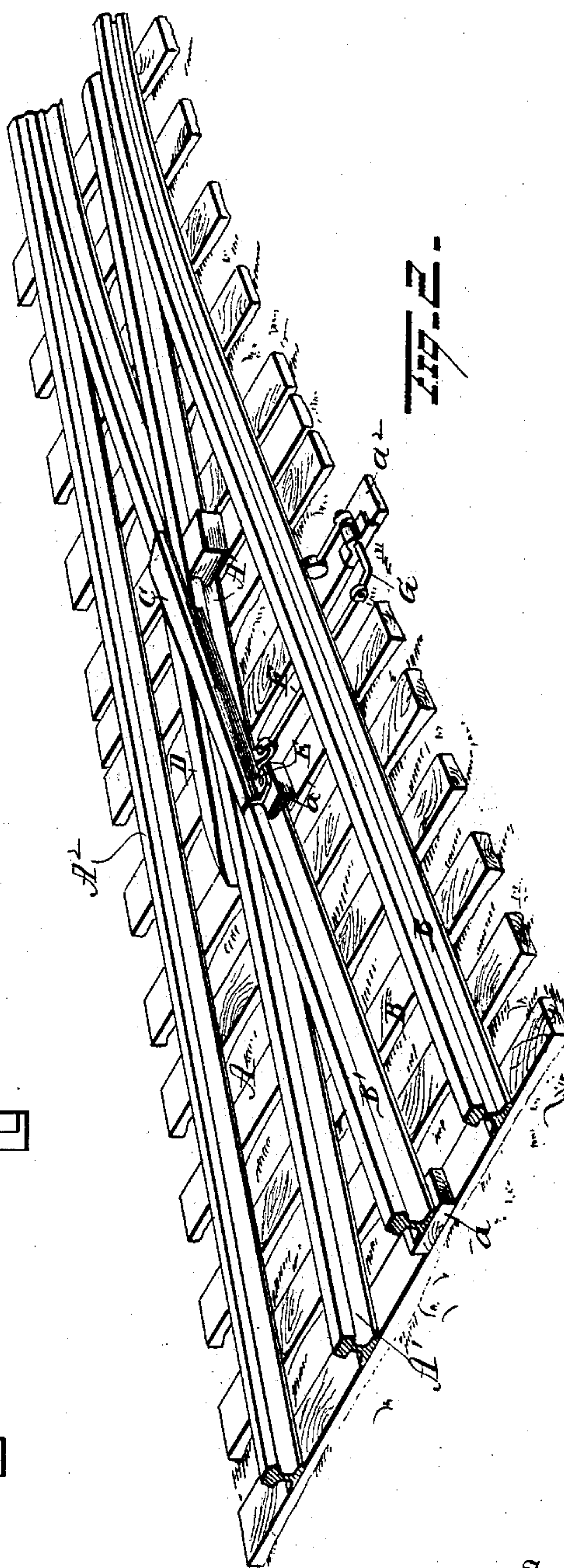
RAILROAD FROG.

No. 375,627.

Patented Dec. 27, 1887.



Witnesses
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V. E. Hodges.



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UNITED STATES PATENT OFFICE.

JAMES F. HART AND CHARLES M. HENDRY, OF UNION POINT, GEORGIA.

RAILROAD-FROG.

SPECIFICATION forming part of Letters Patent No. 375,627, dated December 27, 1887.

Application filed July 2, 1887. Serial No. 243,280. (No model.)

To all whom it may concern:

Be it known that we, JAMES F. HART and CHARLES M. HENDRY, of Union Point, in the county of Greene and State of Georgia, have
5 invented certain new and useful Improvements in Railroad-Frogs; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as
10 it appertains to make and use the same.

Our invention relates to an improvement in frogs for railroads, the object of the same being to construct a frog-rail that will be simple in its construction and one that will keep the
15 main line solid at the point of crossing by the side track, thus doing away with the frog that cuts the main line in two, so that a train passing said point of crossing will perceive no difference in the track.

20 A further object is to provide a frog-rail that can be operated either by the hand or train.

With these ends in view our invention consists in certain features of construction and combinations of parts, as will be hereinafter
25 described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of a main track and siding with our improved frog secured thereto in open adjustment, showing the continuous main track.
30 Fig. 2 is a view of the same with the improved frog closed to the main line, showing the siding in the form of a continuous track.

A represents the main track, consisting of the rails A' A²; B, the siding, also consisting
35 of two rails, B' B², one rail of which, B', is slightly raised a short distance above the rail A' of the main track by blocks *a*, made of wood or metal.

C is a frog-rail, made slightly broader at
40 its front end and cut away under its front end, so as to pass over the rail A', and rests on a supplemental track-section, D, which latter is also raised to a level with the rail B' by blocks, and is cut away slightly near the track B' of
45 the siding to allow the frog-rail a firm bearing-seat. The frog-rail C is cut away on its under surface, leaving an angular-shaped end intact for the purpose of forming an additional bearing-surface for the frog-rail against the
50 main track when open to the siding, and furthermore is beveled along this cut-away por-

tion, so that should the rails A', from any cause whatever, become higher, the frog-rail by reason of said beveled edge would rise over it.

The supplemental track-section D is tapered
55 back from the part cut away for the frog-rail C to its rear end until it comes level with the rails A', so that should anything drop or slide upon the rails of the track it would meet with no obstruction, for, on account of the gradual
60 rise of the supplemental track-section D and rails G and B, it would gradually pass over them. This frog-rail is still further provided on the angular-shaped end of its under face
65 with a laterally-projecting metallic arm, E, rigidly secured thereto and pivoted to the blocks *a*, which support the rail B'.

A pitman, F, made of metal, is attached to the frog in any well-known and approved manner, and operates said frog-rail by its connection with the crank end of an operating-rod,
70 G, which latter is connected by means of the rod G with the switch-stand, said rod being secured to continuations of the cross-ties *a*² by suitable fastenings, *e e*'.

The operation of our improved frog-rail is as follows: The main track A is normally open, but when the frog-rail C is used it is closed. Now, should a train coming from a point indicated in the drawings, as X, find the
80 frog-rail closed—that is, find the main track open—it would not be necessary for it to stop, as the flanges of the wheels of the train, coming in contact with the frog-rail, would open it, and thereby allow it to continue on until coming on the main line. Again, suppose a train indicated in the drawings as coming from Z wanted to continue on the main track, and finds said main track closed by the frog-rail. Here, again, it would not be necessary for it to
85 stop, but continue on until the flanges of the wheels of the train, coming in contact with the frog-rail, would throw it aside, thereby opening the main line.

As a modification, a spring might be used
95 in connection with the pitman and be so arranged that should the switch be changed, throwing the main line open and clear, and a train on the siding should start out, the frog-rail, by reason of the spring in the pitman F,
100 when the flanges of the wheels should come in contact with it, would be forced over so as to

allow the train to pass out, and as soon as relieved of the pressure of the train the spring would draw it back, thereby leaving the main line open and clear.

5 It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of our invention; hence we do not wish to limit ourselves strictly to
10 the exact construction herein set forth; but,

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

15 1. In a railway-frog, the combination, with a main track and siding and a frog-rail having a portion of its lower face cut away, of a supplemental rail adapted to form a bearing on which the frog-rail rests when the latter is closed to the main line, and provided with a
20 rigid shoulder forming a stop for limiting the

movement of the frog-rail, substantially as set forth.

2. In a railway-frog, the combination, with a main track and siding and a frog-rail having a beveled lower face, of a supplemental 25 rail adapted to form a bearing on which the lower face of the frog-rail rests when the latter is closed to the main line, and provided with a rigid shoulder forming a stop for limiting the movement of the frog, substantially as set 30 forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

JAMES F. HART.
CHARLES M. HENDRY.

Witnesses:

J. H. ENGLISH,
JOEL F. THORNTON.