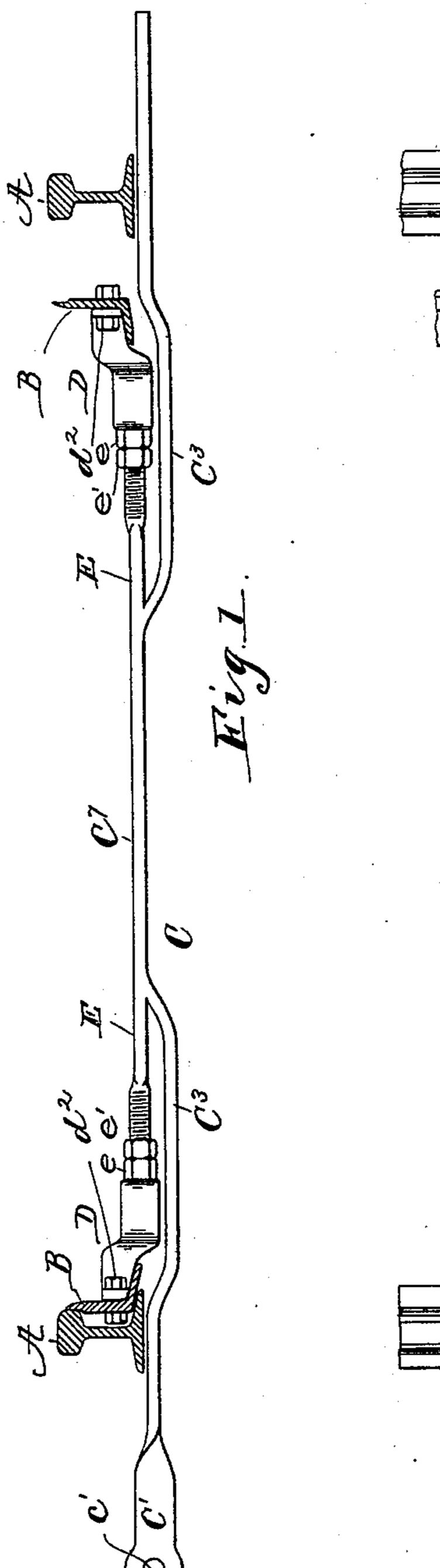
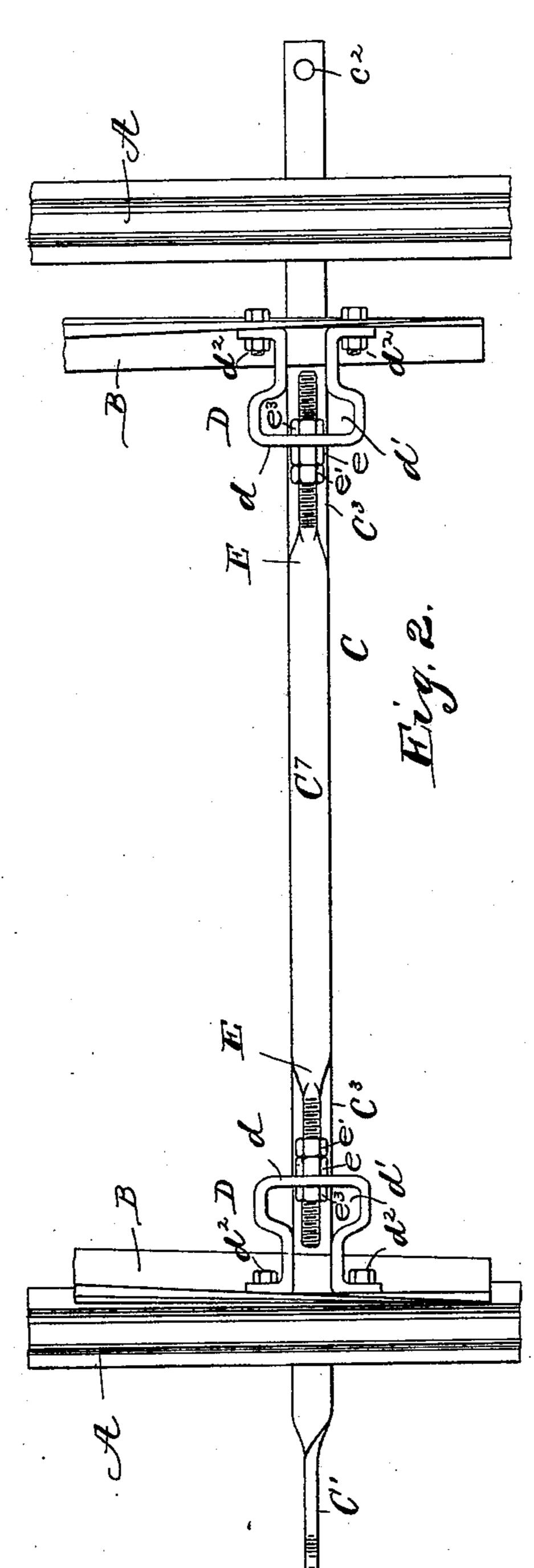
E. B. GREEN. RAILWAY SWITCH.

(Application filed May 31, 1901.)

(No Model.)



WITNESSES: S. Mahlon Unger. John B. Shammer



Edwin Bender Frank BY Ja. Minture

ATTORNEY

UNITED STATES PATENT OFFICE.

EDWIN BENDER GREEN, OF WHITING, INDIANA.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 690,421, dated January 7, 1902.

Application filed May 31, 1901. Serial No. 62,623. (No model.)

To all whom it may concern:

Be it known that I, EDWIN BENDER GREEN, a citizen of the United States, residing at Whiting, in the county of Lake and State of 5 Indiana, have invented certain new and useful Improvements in Railway-Switches, of which the following is a specification.

My invention relates to what are known as "split switches" for railway-tracks; and the 10 object is to provide a switch-bar in one piece which extends from the hand-lever to and under both of the main rails and having integral auxiliary arms to which the switchrails are adjustably secured, whereby the 15 switch-rails may be made the desired gage and the lost motion due to wear may be taken up with accuracy and ease.

A further object of the invention is to provide a shoe connection between the auxiliary 20 arms of the switch-rod and the split pointrail which will strengthen the latter and afford ready access to the adjusting-nuts on the threaded ends of the said auxiliary arms and which will provide an attachment be-25 tween the arms and point-rail which will be no obstruction to the flange of the car-wheel passing over the rail.

I accomplish the objects of the invention by the mechanism illustrated in the accom-30 panying drawings, in which—

Figure 1 is a side elevation of my improvement in position for use, and Fig. 2 is a plan view of same.

Like letters of reference indicate like parts 35 throughout both views of the drawings.

A A represent the main rails of a railwaytrack, and B B a pair of split rails which are adjusted to and from the main rails. The split rails taper to a thin end, which is brought 40 close against the main rail in order to guide the flanged car-wheel upon the switch-track without obstruction or jar, which would mean the breaking down of the split rail because of its cut-away and weakened condition. It 45 is in order to adjust the split rail that I provide a switch-bar which can be adjusted to any length to make the switch-rails the desired gage. To provide a suitable means for connecting the switch-bar to the split rails, I 50 use the shoes D D. The shoes D D are of like construction, so that a description of one will suffice for both. The shoe D is made I the openings in the ends d of their respective

from heavy strap metal, the ends of which are brought nearly together, causing the intermediate portions to form a loop, with lower 55 edges resting upon the top of the base-flange of the rail. The ends are bolted to the web of the split rail, and the sides of the loop by resting upon the flange of the rail serve as a brace to keep the rail from twisting. The 60 loop is of two widths, the inner portion being narrower than the outer portion. The end dof the loop is parallel with the web of the split rail and is perforated to receive the screwthreaded end of the switch-bar. The outer 65 enlarged end of the loop is represented at d'and is primarily for the purpose of allowing the insertion of the head of a wrench to turn a nut on the threaded end of the switch-bar. It will also be noted, as shown in Fig. 1, that 70 the loop after following the top of the railflange drops below same in order that the attachment of the switch-bar may be below the flange to prevent the upturning of the latter. The ends of the shoe are secured by 75 bolts d^2 to the web of the split rail and by the open-center construction of the shoe form a resilient support for the reduced web of the rail, which strengthens the latter, while permitting the web to be placed in close contact 80 with the rail A.

C represents the switch-rod, which extends under the track and projects at either side thereof. One end, C', is given a quartertwist and has horizontal bolt-hole c' to con- 85 nect with bolt of switch-lever. The opposite end has vertical bolt-hole c^2 also to connect with switch-lever when the latter is of a style requiring vertical instead of horizontal bolthole. This switch-rod is cranked down on 90 each side under the split rails, as shown at C³ C³, and then up again in the middle, so that the horizontal member C⁷ is about on a level with the outer edges of the flanges of the split rails or a little below same.

E and E are branch arms integral with the member C⁷ of the switch-bar and in alinement longitudinally with said member C^7 . The ends of the arms E E are screw-threaded, and upon the threaded ends are screwed a 100 pair of threaded nuts e e' e e', the inner nuts e' being as locks for the adjacent outer nuts e. The ends E E are then projected through

the nuts.

shoes. By screwing the nuts e e in or out the distance between the split rails can be adjusted to a nicety and the adjustment held by screwing the lock-nuts e' e' up tight against the nuts e e. In pressing the split rails against the main rails the pressure is applied through the nuts e e'; but in going the other way to withdraw the split rail I use the nut e^3 on the inside of the shoe. In this case it is not necessary to lock the nut, as the only function is to draw the rail away far enough to allow the flange of the car-wheel to pass between it and the main rail. In fact, a degree of looseness is desired in order to allow play for the swinging split rails.

Having thus fully described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. In combination with a pair of split switch20 rails, open-center shoes rigidly secured to said split rails said shoes having openings through their outer portions, a switch-bar passing under the main rails and having integral screw-threaded branch arms, said arms being inserted through the said openings in the shoes, nuts on the branch arms to regulate the distance between the shoes, and locks to hold

2. In combination with a split switch-rail,

an open-center shoe directly connected to said 30 rail, a switch-bar having integral arms connected with the shoe, and a take-up device.

3. In combination with a pair of splits witch-rails, straps looped to form an open-center shoe rigidly attached to each switch-rail, and 35 a switch-bar adjustably connected to said shoes by means of two take-up devices.

4. In combination with a pair of splits witch-rails, straps looped to form an open-center shoe, said open center being contracted in 40 width at its inner portion, the ends of said straps being bolted to the switch-rails and the outer end of its loop having a bolt-hole, a switch-bar passing under the main rails and having an upwardly-cranked middle portion, integral arms projecting from said middle portion to and through the bolt-holes in the shoes, said arms being screw-threaded, nuts on the threaded arms forming take-up devices and lock-nuts to hold the adjustment 50 of the inner nuts.

In witness whereof I have hereunto set my hand and seal, at Whiting, Indiana, this 21st day of May, A. D. 1901.

EDWIN BENDER GREEN. [L. s.] Witnesses:

JOHN G. ERDLITZ, GALLUS J. BADER.