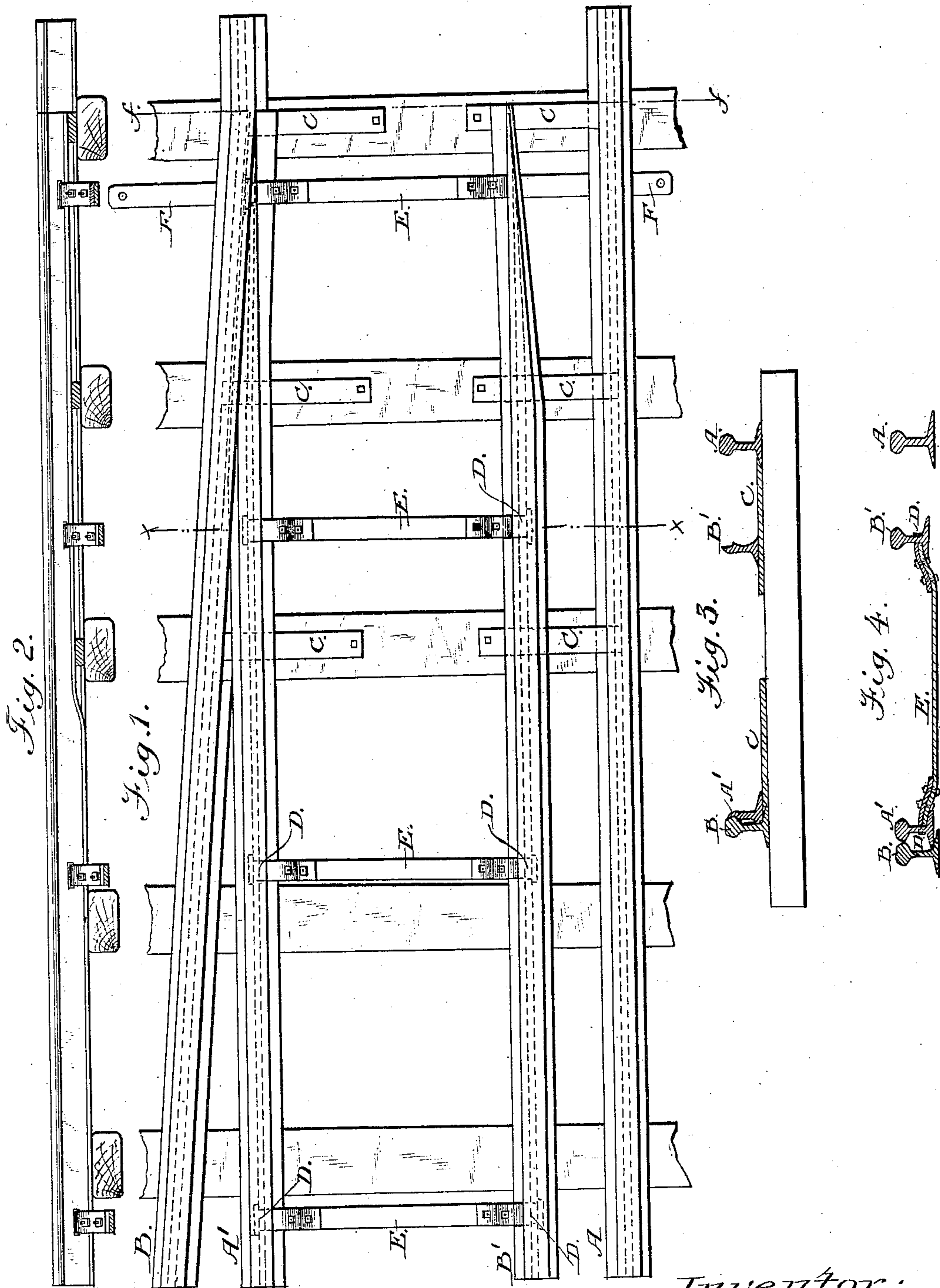


(No Model.)

F. C. WEIR.  
Railroad Switch.

No. 241,260.

Patented May 10, 1881.



Witnesses;

Shallen Fowler,  
H. C. M. C.

Inventor;

Fredrick Weir



# UNITED STATES PATENT OFFICE.

FREDRIC C. WEIR, OF CINCINNATI, OHIO.

## RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 241,260, dated May 10, 1881.

Application filed December 9, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, FREDRIC C. WEIR, a citizen of the United States, of Cincinnati, Hamilton county, State of Ohio, have invented an Improvement in Railroad-Switches, of which the following is a specification.

My invention relates to railway-switches known as "tongue" or "split" switches, the object being to improve and cheapen their construction and operation; and it consists in so forming the movable rails of a tongue or split switch as to permit of the use of a movable rail that can be joined to the other rails of the track with the same sized fish-plates as are used on the other portions of the track, and without the use of step-chairs; also, providing a straight bearing-surface for the bottom, and at the same time avoid the planing off of the under side of the base of the rail to the angle of the flange of the adjoining rail, and producing a double uneven bearing-surface, which is done in many instances; and this is accomplished by the reduction in height of the movable rails from the extreme point to a point about where the head of the switch-rail crosses the path of the flange of the fixed or main-track rails by means of suitable dies, so as to permit of the under side of the base of the movable rail passing over the top of the flange of the main-track rail, and supporting that portion of the movable rail reduced in height on suitable friction-plates.

Figure 1 is a plan of the switch. Fig. 2 is a longitudinal section. Fig. 3 is a cross-section on line *ff*. Fig. 4 is a cross-section on line *XX*.

In the accompanying drawings, A and A' represent the main and one tongue rail forming the main-track rails.

B B' represent the side-track and the tongue rail forming the side-track rails; C, the friction-plates, on which the switch-rails are moved, and also serve the purpose of supporting the tongue-rails on a level with the main rails; D, the T-heads for securing the spacing-bars; E, the spacing-bars; F, the attachments to which the switch-stand is connected.

In place of planing off the under side of the base of the movable rails, so as to permit of using a rail of the uniform height as the main-track rails, I, by means of suitable dies, reduce the height of these rails from the extreme

point to a point about where the head of the movable rail crosses the path of the flange of the fixed rail, sufficient to permit of the flange of the movable rails passing over the top of the flange of the main rails, and then support said movable rails on plates of sufficient thickness placed on each tie to hold the rail up level with the main-track rail, and by so doing obtain the advantage of one straight bearing sufficiently raised above the top of the flange of the main-track rails as to permit of any sand or gravel being swept out of the way by the movement of the rail, and without the possible chance of the movable rail riding on top of it and then raising it out of its position.

In addition to gaining a level bottom-bearing and a rail that can be joined to the other rails without step-chairs or different-sized fish-plates, I also save the labor of planing a long distance on the bottom of the rail and one-half of the same distance on the top of the rail, which will materially reduce the expense of the manufacture of these improved switches.

My method of securing the spacing-bars is by means of pieces of about the same sized material as the spacing-bars themselves, constructed with T-heads, the same being passed through slotted holes in the webs of the rails and joined to the spacing-bars with bolts, as shown at D and E, Fig. 4. The holes for the bolts joining the T-heads and the spacing-bars are made with sufficient draft that when the bolts are drawn into their places the ends of the spacing-bars are drawn solidly up against the webs of the rails, and which at the same time draws the T-heads up against the web on the opposite side, making a rigid fastening, and has for its object to simplify and cheapen their manufacture; also, presenting the advantage that should the bars become bent from any cause they can in a few moments be removed from their place and straightened on the track without resorting to the necessity of sending them to the shop, as is generally the case with the more expensively-constructed jointed bars.

The switch-stand used with this switch may be of the ordinary kind, and therefore needs neither description nor illustration.

Having described my invention, what I claim is—

1. A tongue or split switch the portion of  
whose rails connecting with the fixed track-  
rails are of uniform height therewith, and the  
pointed portions of which are made of less  
5 height in the web than the fixed track-rails, the  
outside flanges of said pointed portions being  
adapted to overlies the flanges on the adjacent  
fixed rails in the operation of the switch, sub-  
stantially as specified.
- 10 2. A switch having its spacing-bars con-  
structed of flat T-heads passed through the

web of the rails from the outside and joined to  
spacing-bars of the proper length by bolts or  
rivets, substantially as shown and specified.

In testimony whereof I have hereunto set 15  
my hand in the presence of two subscribing  
witnesses.

FREDRIC C. WEIR.

Witnesses:

F. J. P. BRACKETT,  
FRANCIS E. MORRIS.