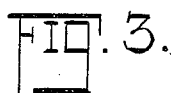
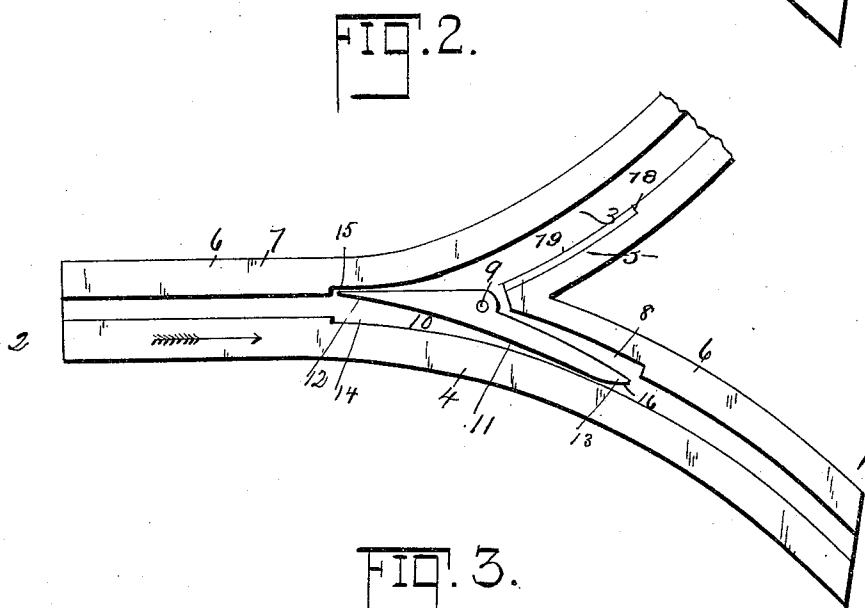
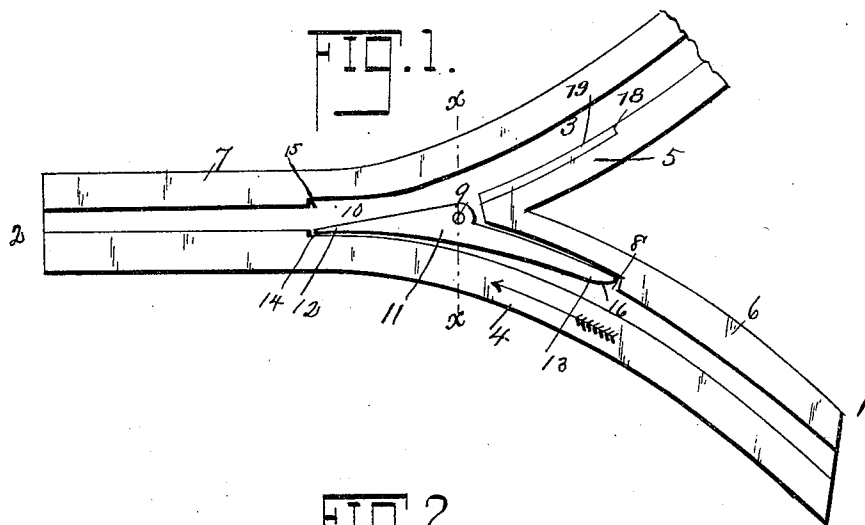


(No Model.)

W. H. DAVIS.
AUTOMATIC SWITCH FOR RAILROADS.

No. 461,495.

Patented Oct. 20, 1891.



WITNESSES:

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WILLIAM HENRY DAVIS, OF EVANSBURG, OHIO.

AUTOMATIC SWITCH FOR RAILROADS.

SPECIFICATION forming part of Letters Patent No. 461,495, dated October 20, 1891.

Application filed February 5, 1891. Serial No. 380,342. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY DAVIS, a citizen of the United States, residing at Evansburg, in the county of Coshocton and State of Ohio, have invented certain new and useful Improvements in Automatic Switches for Railroads; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention has for its object to provide certain new and useful improvements in railroad-switches that will be automatically thrown into the proper position by the passage of a vehicle over the track; and for this purpose it consists in the construction, arrangement, and combination of the several parts of which it is composed, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, in which corresponding parts are designated by corresponding numerals, Figures 1 and 2 are plan views of a switch constructed in accordance with my invention, showing the branch and main tracks open, respectively. Fig 3 is a vertical section of line *xx* of Fig. 1.

My invention is adapted for use at the so-called "Y's" of a single track, in which two trains or cars traveling the same branch of the Y in opposite directions pass the switch successively, while the trains or cars of the opposite branch pass the Y at the intervals between the passing of two trains or cars for the first-named branch. In the accompanying drawings I have shown such a Y, and for the sake of clearness shall call and consider the rails of the arm 1 thereof as forming a part of the main track 2, while the arm 3 will be called a "branch," and I have shown the rail 4 as forming a part of the main track 1 2, and a suitable rail 5 forming a part of the branch 3, while guard-rails 6 and 7 are also shown, the former corresponding to and being parallel with the main-track rail 4 and having its one end abutting against or being formed integral with the end of the branch-track rail 5, the latter guard-rail being parallel with that portion of the rail 4 which

forms a part of the main track 2 and with the rail 5 of the branch 3. The end of the main guard-rail 6 is reduced in width by means of the recess 8, formed in its outer face, and has a blunt end. A pivot 9 arises from the floor of the switch-casting in the channel between the main-track rail 4 and branch guard-rail 7, the said pin being contiguous to the end of the branch-track rail 5. The switch-point 11, having the nose 12 and tail 13, is pivoted upon the said pin 9, the radius of curvature of the switch being less than that of the main track, this curvature being such that when the tail 13 of the switch is contained within the recess 8 in the main guard-rail 6 the end of the nose will be contained in the recess 14 in the main-track rail 4, thus opening the branch track, as seen in Fig. 1, while if the end of the nose is in the recess 15 in the guard-rail 7 the tail will project into the channel between the main-track and guard rails 4 and 6, respectively. As the end of the said tail is beveled inward, as at 16, this position of the switch (which is shown in Fig. 2) will not only close the branch track, but will open the main track, as will hereinafter be more fully pointed out.

In order to permit the nose and tail of the switch-point to be made of the least possible width, a shoulder is formed on the inner side of the switch-point, through which shoulder the pivot-pin 9 passes, the said shoulder occupying the space made by cut-off portion of the branch-track rail 5 and guard-rail 6.

Such being the construction of my device, its operation is as follows: The parts being in the position shown in Fig. 1, any number of trains or cars can pass in either direction on the branch track 25 without altering the position of the switch. If, however, a car or train should pass into the Y from the main arm 1 in the direction of the arrow on Fig. 1, the flange of its first wheel would strike the nose of the switch and throw it over into the position shown in Fig. 2, while the flange of the next wheel would strike the beveled face 16 of the tail of the switch and throw the switch back into the position shown in Fig. 1, after which the flange of the same wheels would strike the nose, forcing it again back into the position shown in Fig. 2, and the switch would be left in that position when

the train or car had passed. It is now evident that any train following the said train would actuate the switch by means of its beveled face 16, as already described, while a
 5 train coming in the opposite direction—*i. e.*, in the direction of the arrow in Fig. 2—will be thrown into the main track, and the flange of the wheels thereof will, by striking the tail, throw the switch back into the position shown
 10 in Fig. 1, when other trains for the branch track can pass in both directions.

In order to permit my invention to be used as a right-hand or a left-hand switch at will, I make my branch-track rail of the same con-
 15 tour as the main guard-rail, and fill the recess 18 therein by a block 19, secured in place in any suitable manner, the said block being put in the recess 8 and the tail 13 working in the recess 18 when the switch-casting is re-
 20 versed.

Having thus described my invention, what I claim is—

1. The combination, with the main-track rails, of branch-track rails, a recessed guard-
 25 rail parallel to the main-track rails and having its ends contiguous to the end of the

branch-track rails and blunted, and a switch-point pivoted in front of the blunted end of the said guard-rail, the said switch having a nose and beveled tail and having radius of curvature smaller than that of the main track. 30

2. The combination, with the main-track rails, of recessed branch-track rails, a recessed guard-rail parallel to the main-track rails and having its ends contiguous to the
 35 end of the branch-track rails and blunted, a switch-point having a shoulder opposite its pivoted point reversibly pivoted in front of the blunted end of the said guard-rail and having a nose and a beveled tail-piece, the
 40 radius of curvature of the said switch-point being less than that of the main track, a block fitting the recess in the branch-track rail, and a guard-rail parallel to a portion of the main-track rail and the branch-track rail, as de-
 45 scribed.

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

WILLIAM HENRY DAVIS.

Witnesses:

PIZARRO FELVER.

FREDERICK NOVIS.