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A NEW SWITCH CONTROLLER.

The frequently recurring accidents caused by misplaced switches have suggested a field for invention, to which—especially since several notable accidents due entirely to this cause—inventors have turned their attention, and with considerable activity have produced devices for avoiding these accidents. Perhaps the simplest of these devices is the switch controller shown in the accompanying engravings, and recently patented by Mr. Henry Greenway, of Brooklyn, N. Y.

In this apparatus the entire management of the switches is placed in the hands of the engineer, who controls them by means of a simple lever in the cab of the engine. So far as the fittings of the engine are concerned they are of the simplest character. A lever in the cab, which is provided with a curved rack and detent much like the reversing lever of the engine, is connected by a rod with a lever at the upper end of a short vertical shaft, journaled in suitable boxes in the cross piece of the pilot truck. To the lower end of the vertical shaft is secured a lever, A, whose forward end is tapered and somewhat rounded, while its rear end is shorter and thicker. This lever the inventor calls a rudder.

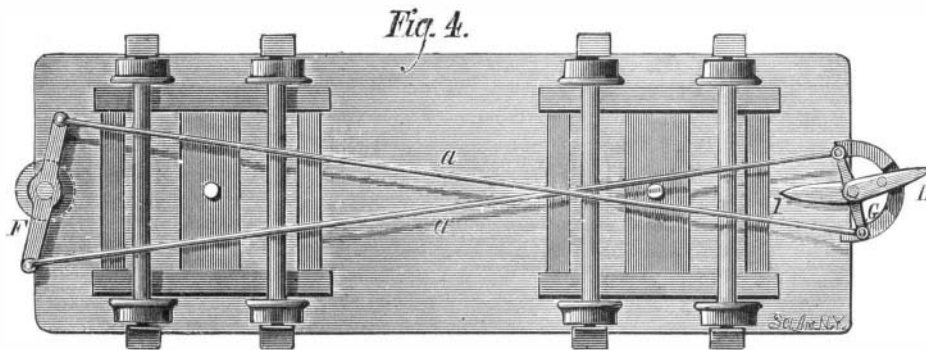
The track, the arrangement of which is also very simple, is shown in plan in Fig. 2. E E are the branch rails, and

E' E' the rails of the main track. The movable switch rails, D D', are pivoted at the frog and connected so that they move together. Between the switch rails there are two levers, B C, which are pivoted to the tie beams and jointed together. The lever, B, is connected with the movable switch rails, and

termines the direction to be taken by the locomotive by moving the switch rails to the right or left through the levers, C B. The tender is fitted with a contrivance similar to that on the engine, so that when the engine runs with the tender ahead, the switch may be operated equally as well. The

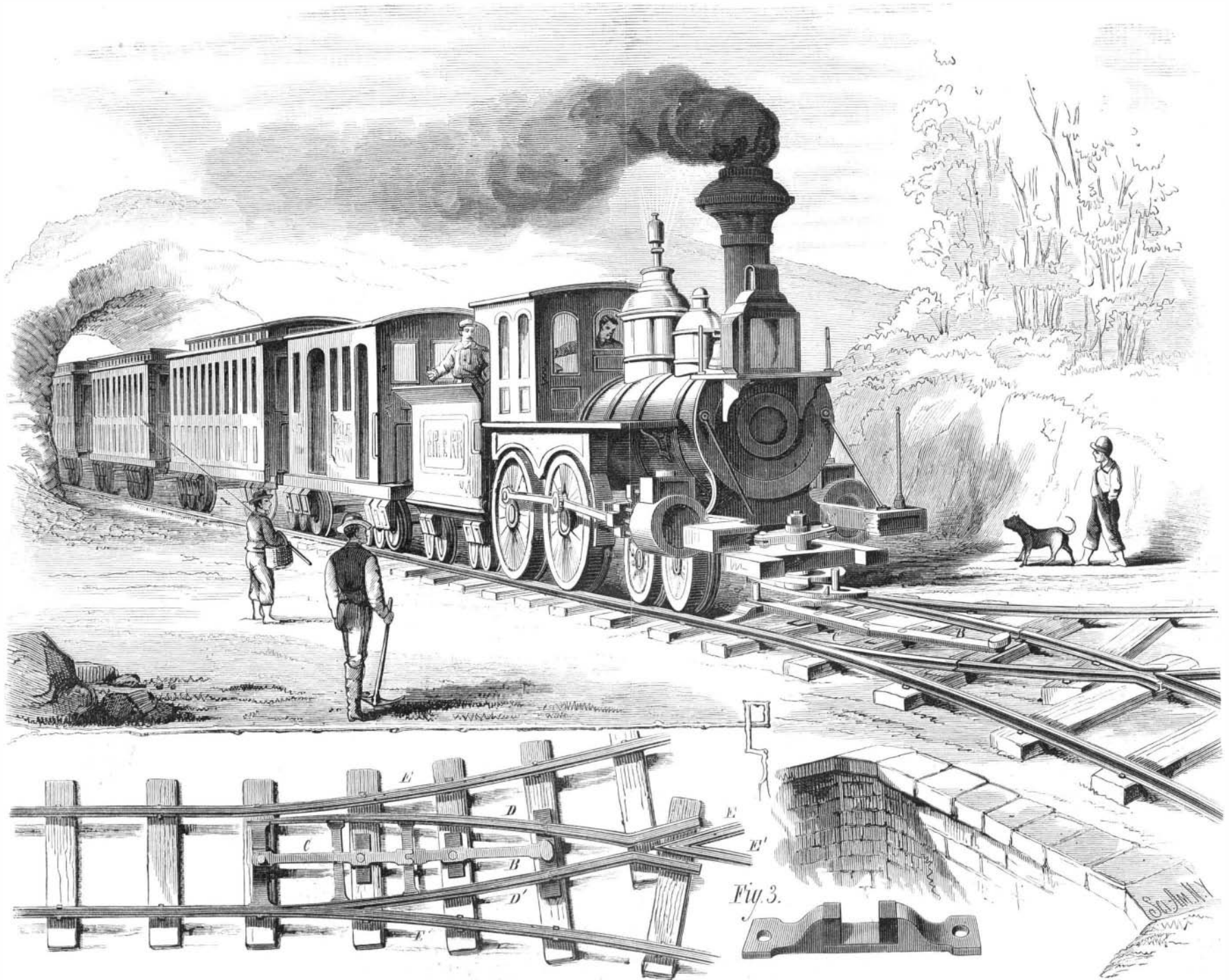
arrangement of the levers, rods, and the rudder is shown in the inverted plan view, Fig. 4. F is a lever at the forward end of the tender, which is connected with the rudder lever, G, by two rods, a. In this case the rudder has a movable portion, H, and a fixed portion, I. It will be seen that the entire control of the switch is in the hands of the engineer, who has more anxiety as to the safety of his engine and train than any one else could have. It is the belief of the inventor that switch tenders under the existing systems have either too much or too little to do. Having too much, he is liable to become confused; having too little, he is liable to become negligent. In all motors, with the exception of the locomotive, the power of guiding has been

vested in the driver or pilot. Mr. Greenway has attempted to give locomotive engineers the same power, so that there should be no mistakes as to the direction to be taken by the engine. Mr. Greenway has a very pretty working steam model for exhibiting his invention at his office, No. 34 Park Row, room 30, New York city.



GREENWAY'S SWITCH CONTROLLER.

the lever, C, extends into a notched buffer block placed on one of the ties midway between the rails of the main track. At this point in the lever, C, a stud stands up high enough to be engaged by the rudder, A, as the pilot truck of the locomotive approaches the switch. Moving the rudder, A, one way or the other by means of the lever in the cab, de-



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