

No. 767,241.

PATENTED AUG. 9, 1904.

C. H. QUIMBY.
AUTOMATIC RERAILING SWITCH.

APPLICATION FILED MAY 13, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

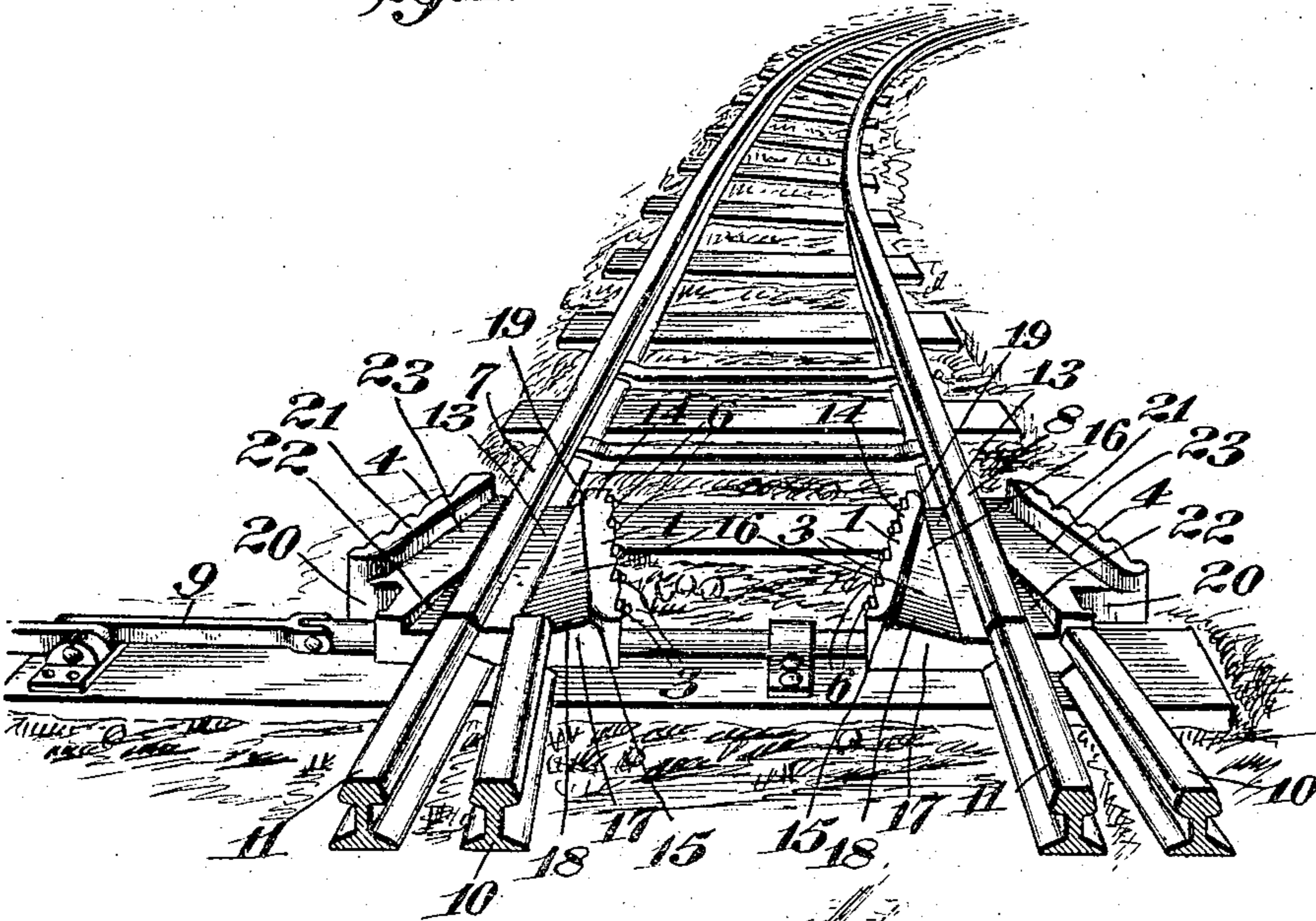
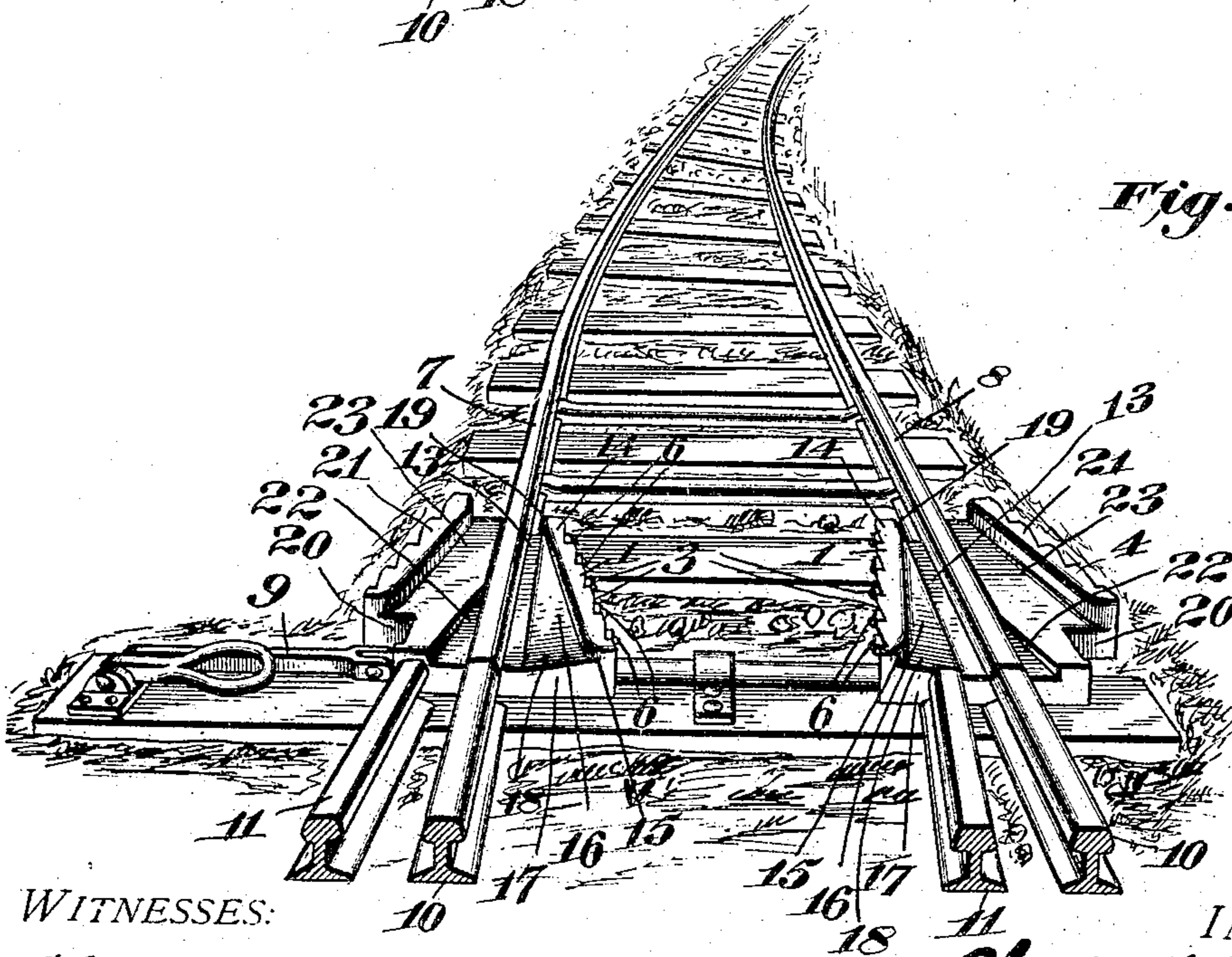


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

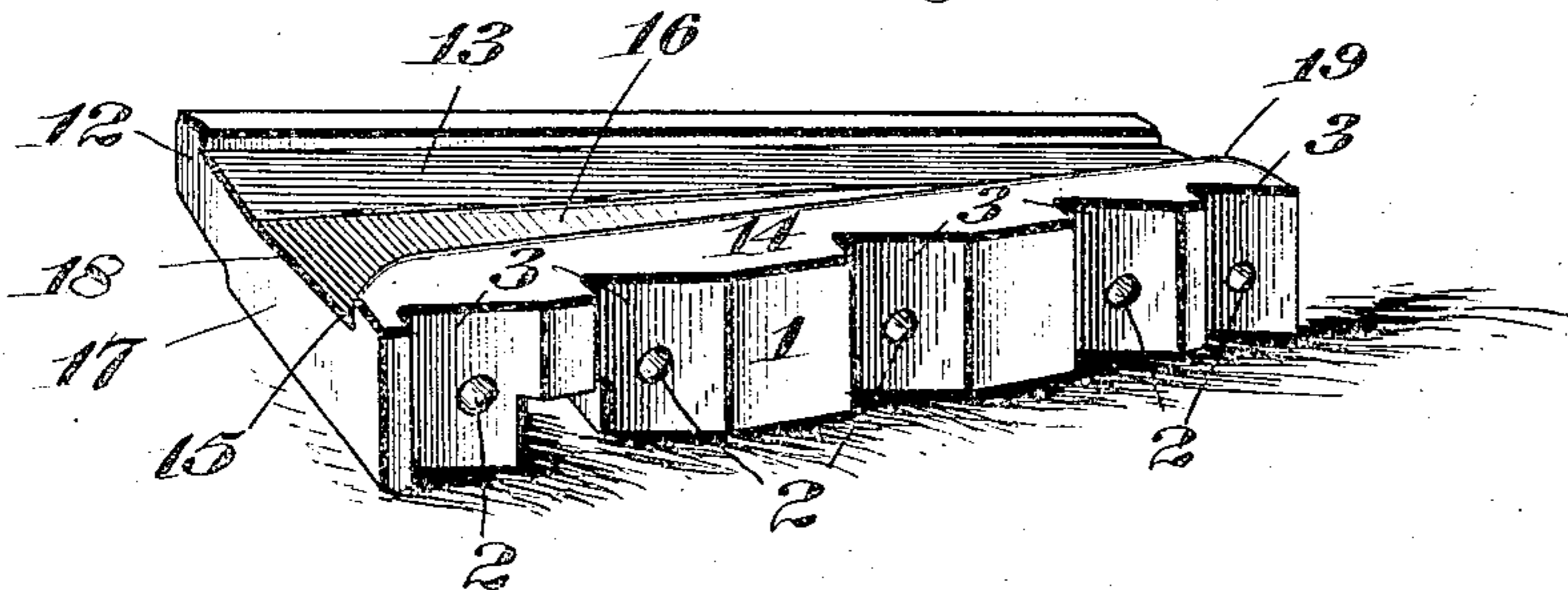


Fig. 4.

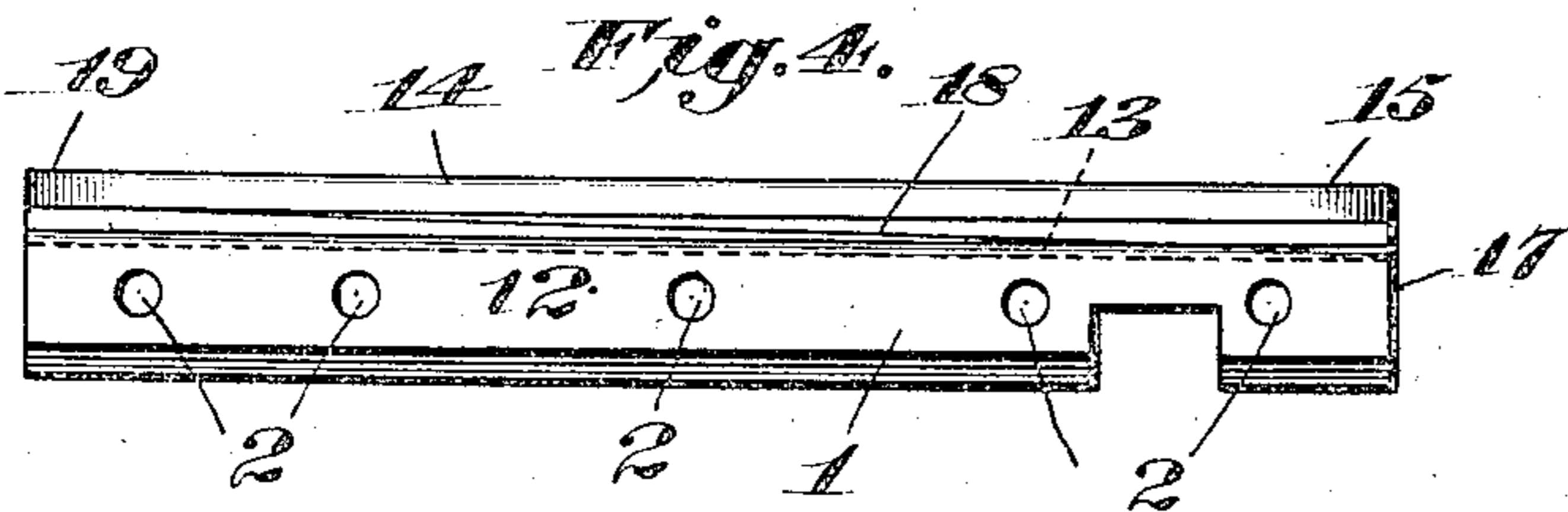


Fig. 5.

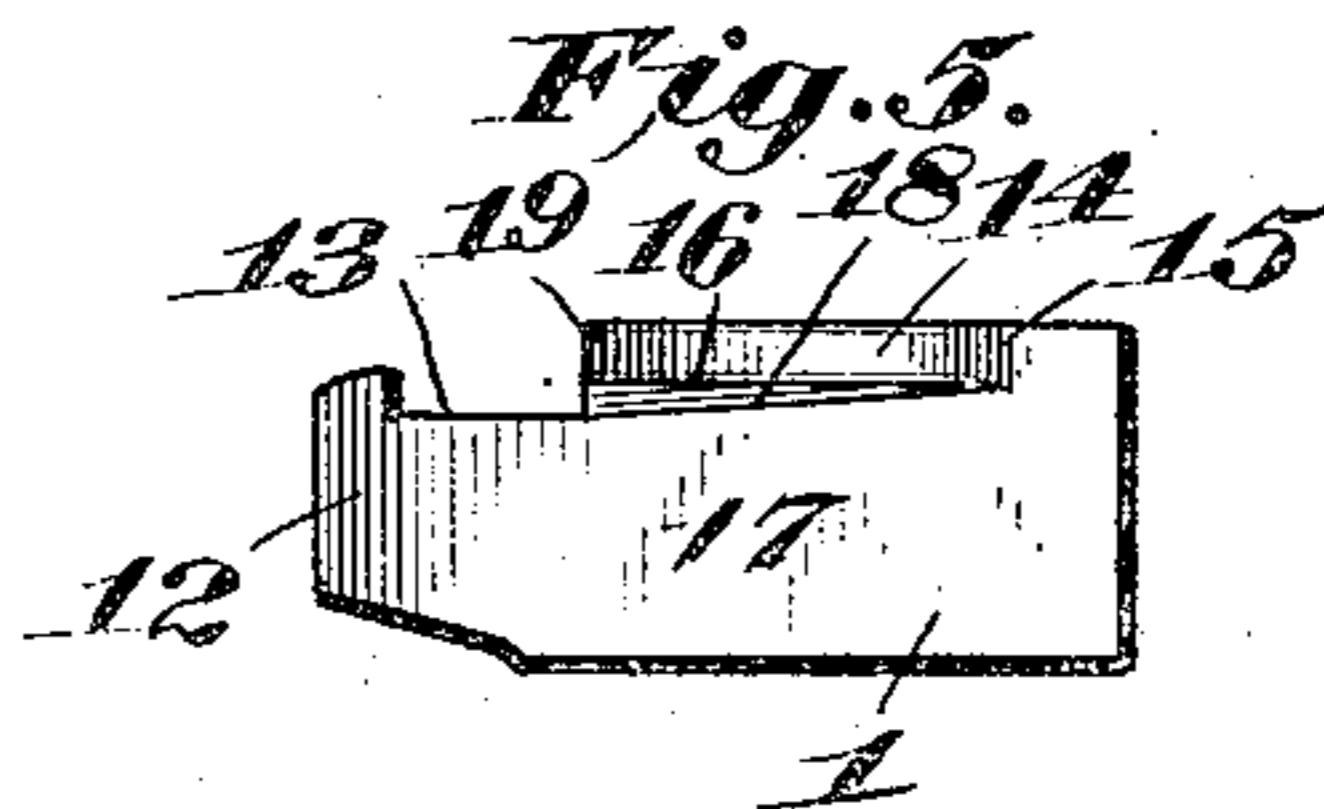


Fig. 6.

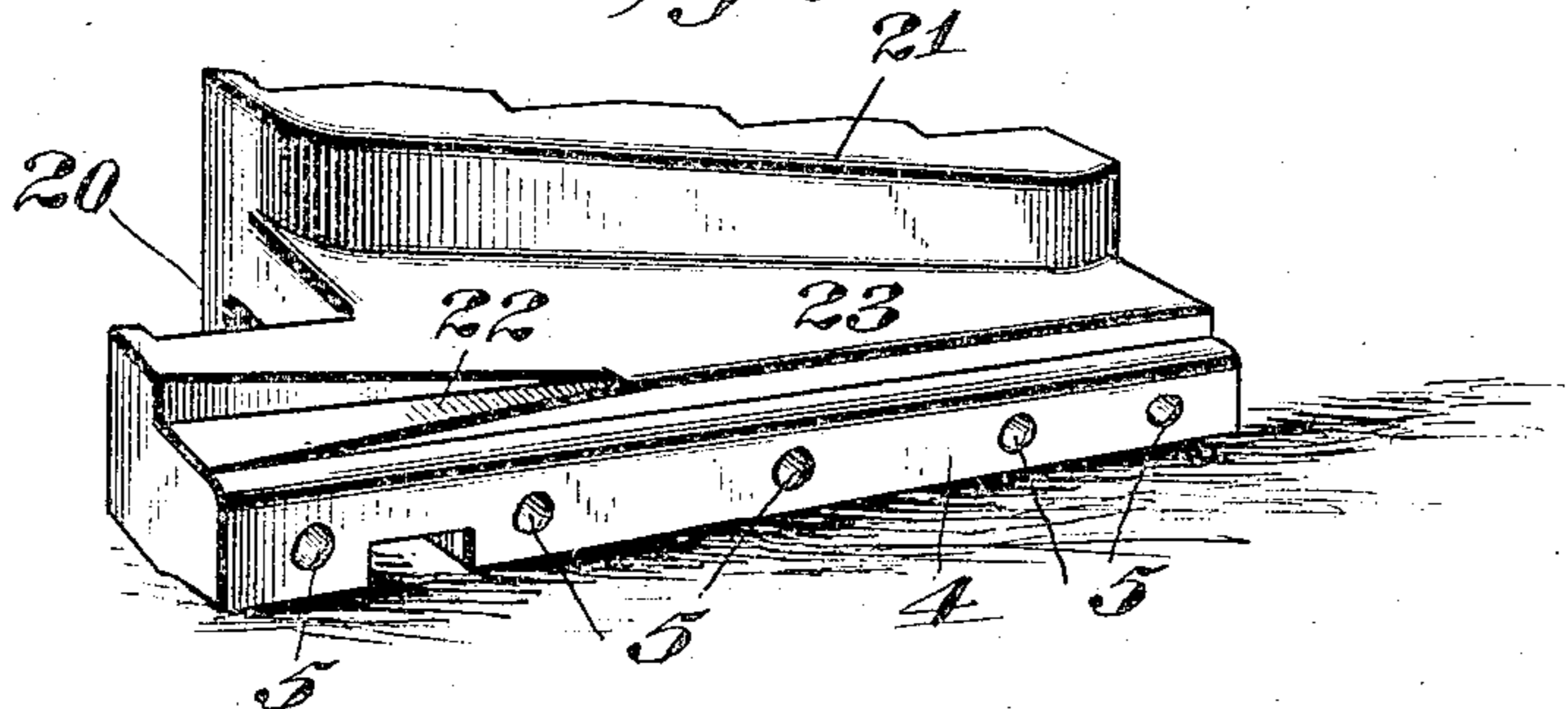


Fig. 7.

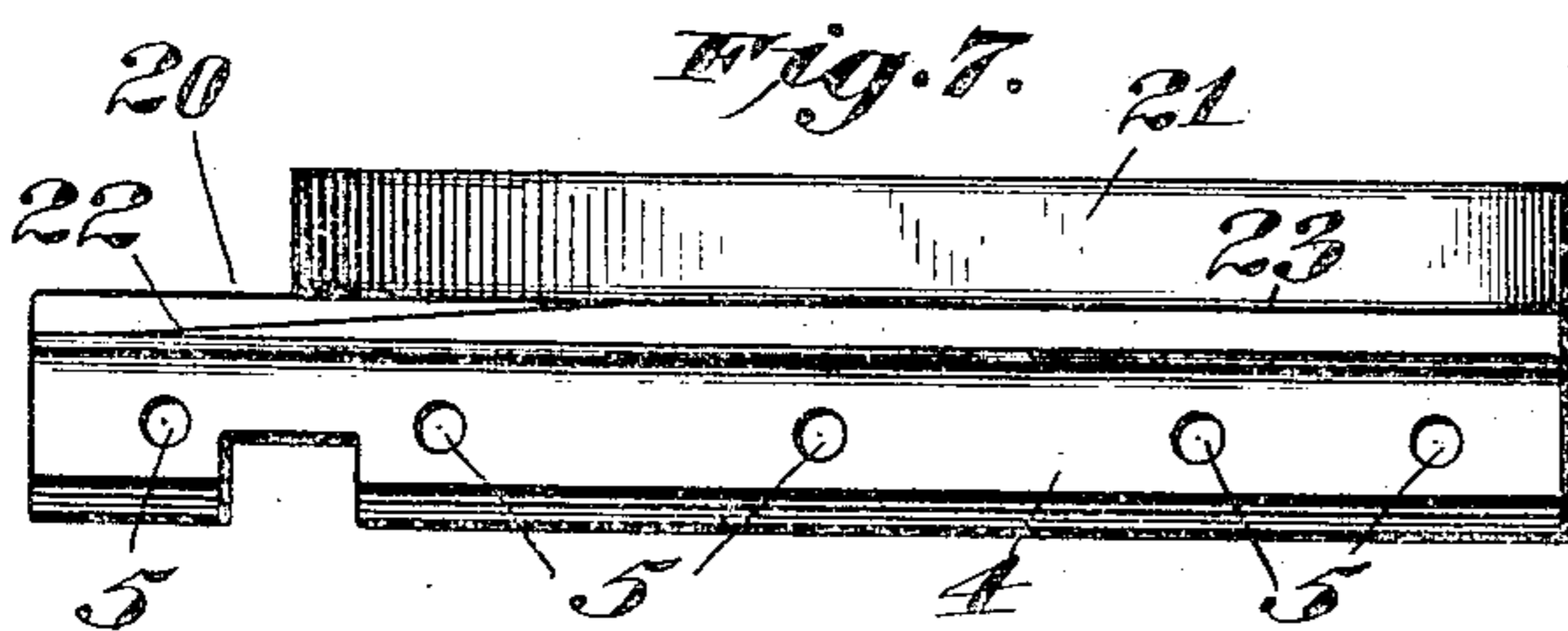
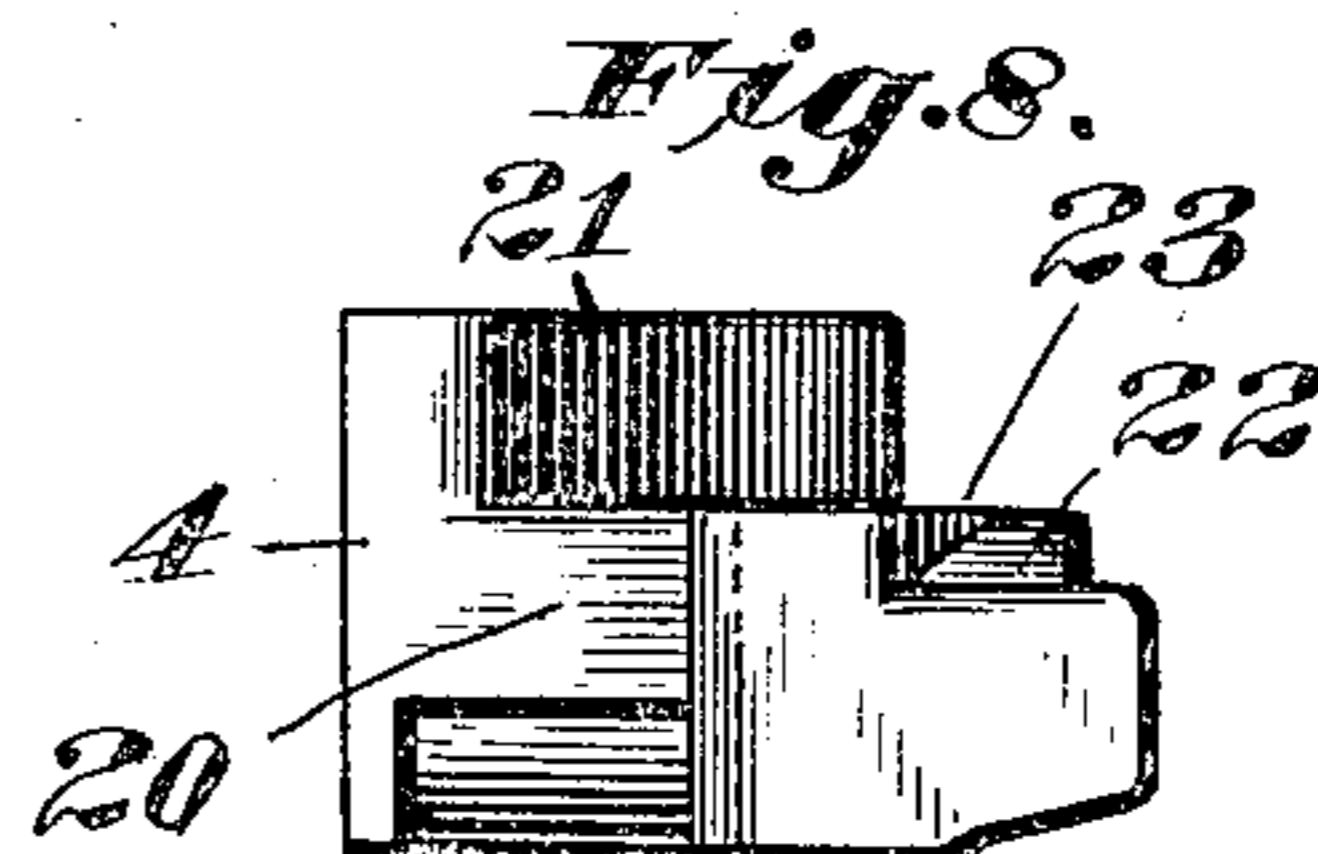


Fig. 8.



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CHARLES H. QUIMBY, OF PHILADELPHIA, PENNSYLVANIA.

AUTOMATIC RERAILING-SWITCH.

SPECIFICATION forming part of Letters Patent No. 767,241, dated August 9, 1904.

Application filed May 13, 1904. Serial No. 207,817. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. QUIMBY, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Rerailing-Switches, of which the following is a specification.

This invention relates to automatic rerailing-switches.

In railroad switch-yards and the yards of industrial concerns it frequently happens that a switch will be left open and engines are derailed by running into an open switch when effecting switching operations, which occasions the loss of considerable time in replacing the engine and cars on the track and causes more or less damage on account of strains and otherwise to the mechanical parts of the engine and cars, also frequently necessitating considerable repairs to the track and switch-rods, and if point-switches are used, especially on sharp curves, they are constantly wearing out and require replacement.

The object of the present invention is the provision of improved and novel devices used at the switch which will automatically cause the wheels to pass onto the track when the engine runs into an open switch; and the invention is especially applicable to stub-switches and makes such type of switch, which is the cheapest form employed, as safe as the split or point switch for purposes of yard switching.

The invention consists of guard members of improved and novel construction applied to the switch-stubs and adapted to automatically accomplish the proper passage of the wheels onto the track when the engine or car runs into a switch which has been carelessly left open.

The invention is not intended to obviate the usual throwing of the switch nor to be ridden over intentionally, and the fact that a jar or jolt of some moment is occasioned in accomplishing the transference of the engine or car to the continuity of rails when running into an open switch makes it undesirable to intentionally use the device, its object more particularly being to cause proper transfer-

ence of the wheels when the switch is carelessly left open.

In the accompanying drawings, Figure 1 illustrates the invention in use, showing the position of the parts when one track is open; Fig. 2, a similar view showing the position of the parts when the other track is left open; Fig. 3, a perspective detail view of one of the inside guards; Fig. 4, a side elevation thereof; Fig. 5, an end view thereof; Fig. 6, a detail perspective of one of the outside guards; Fig. 7, a side view thereof, and Fig. 8 an end view thereof.

Two inside guards and two outside guards, a pair for each stub of the switch, are provided, the inside guards being duplicates, except that they are made "rights" and "lefts," and the outside guards being duplicates, with the same exception.

The inside guards are shown at 1, each consisting of a casting of general triangular form having transverse bolt-holes 2 and notched portions 3 on their outer faces. In the outside guards 4 similar bolt-holes 5 are provided, and corresponding bolt-holes are drilled through the web of the rail, and bolts 6 bolt the inside guard to the outside guard through the bolt-holes in the rail in each instance, so that as each switch-stub 7 or 8 moves it carries with it its set or pair of guards, all four guards moving when the switch is thrown by any suitable switch-thrower 9 which may be employed.

Reference is first made to the construction of the inside guards, which are shown in detail in Figs. 3, 4, and 5. These guards each have their broader ends located toward the track-rails 10 and 11. They have a lip 12, which rests on the base of the rail-stub 7 or 8, which has a groove 13 to permit proper passage of the flanges of the wheels. Looking in the direction of Figs. 1 and 2, each inside guard has a flange 14, which converges toward the far end of the switch-stub, the near end of the flange 14 being provided with a flared portion 15 to facilitate the passage of the flange onto the guard, and the bottom 16 of the guard, at the near end 17 thereof, slopes down toward the switch-stub, as shown at 18, and then slants upwardly to its far end 19 in

order that the flanges of the wheels may be guided up toward the head or crest of the switch-stub.

The outside guards are of general triangular shape, with their larger ends nearer the observer in Figs. 1 and 2, and they are cut out at 20 for clamping of the switch-bar thereto. These outside guards are provided with outside flanges 21, which converge toward the far ends of the switch-stubs in Figs. 1 and 2, and at the near ends of said guards there are provided the inclines 22, leading up to the bottom 23 of the guard, which is substantially on a level with the top of the stub 7 or 8.

Referring to Fig. 1, the track-rails 10 are here open to the switch, and if the engine or car were moving on these rails toward the switch it would run off the ends of said rails if the switch were set as shown. The switch being provided with my improved guards, the flange of the wheel—on the right-hand side, for instance—would strike the slope 22 and ride thereupon to the bottom 23 to a level with the top of the rail, and as the wheel proceeded it would be pushed over by the flange 21 until it finally dropped to its correct place on the rail-stub 8. At the same time the wheel on the left-hand rail 10 rides onto the sloping portion 18 and thence onto the bottom 16 and is pushed toward the rail-stub 7 by the flange 14 and easily assumes its position on the stub 7. It will be understood that the flanges 14 are not close enough to the rail-stubs 7 and 8 to interfere with the passage of the wheels coming along the stubs 7 and 8 toward the observer in Figs. 1 and 2. If the track-rails 11 are in the position shown in Fig. 2 and an engine or car is approaching the switch on said rails 11, the flange of the wheel on the right-hand rail 11 strikes the slope 18 and is crowded toward the right by the flange 14. The flange on the wheel of the left-hand rail 11 rides up the slope 22 and is forced across the top of the stub 7 by the flange 21.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a rerailing device for switches, the combination with switch points or stubs, of inside guards connected to the switch points or stubs, outside guards connected to the switch points or stubs, guiding means on the inside guards to direct the wheel-flanges toward the switch-stubs, and guiding means on the outside guards to direct the wheels to the tops of the switch stubs or points to cause them to drop over the said stubs or points.

2. In a rerailing device for switches, the combination with switch stubs or points, of inside guards connected to the switch stubs or points and having flanges converging toward the switch stubs or points to direct the wheel-flanges toward said stubs or points, and outside guards secured to said switch stubs or points and having flanges converging toward the switch stubs or points and also having means to cause the wheels to ride up to the heads of the stubs or points and be directed across the heads of said switch stubs or points.

3. In a rerailing device for switches, the combination with rail stubs or points, of inside guards secured thereto having sloping bottoms to receive the wheel-flanges and also provided with flanges which converge toward the rail stubs or points, whereby the wheel-flanges are directed toward the rail stubs or points, and outside guards secured to the rail stubs or points and having bottoms to guide the wheel-flanges up to the heads of the rails and provided with flanges which converge toward said stubs or points which are adapted to crowd the wheels onto the top of the stub or point and cause the wheels to pass across the stub or point.

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

CHARLES H. QUIMBY

Witnesses:

CHARLES S. WAGONER,
HERBERT E. PERKINS.