

W. D. WOODWARD.

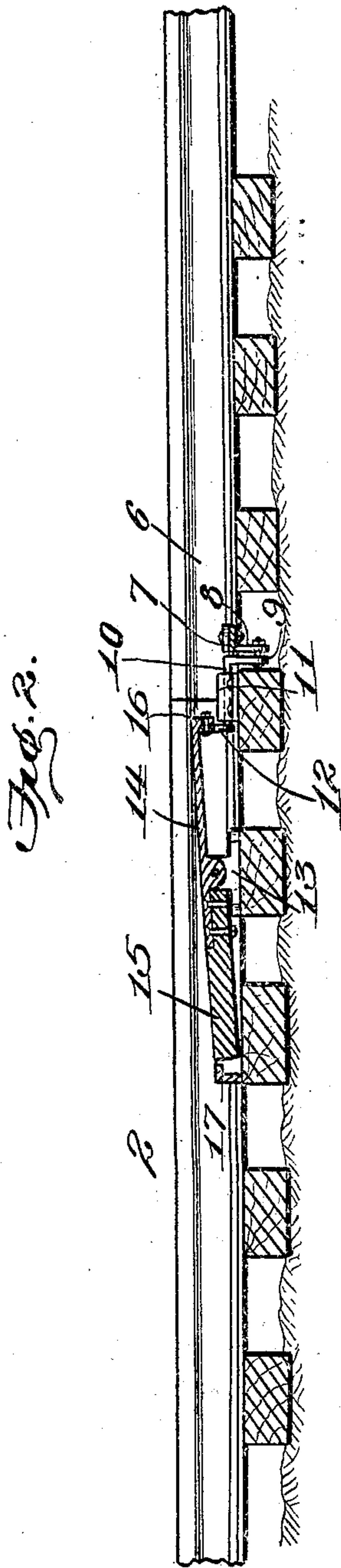
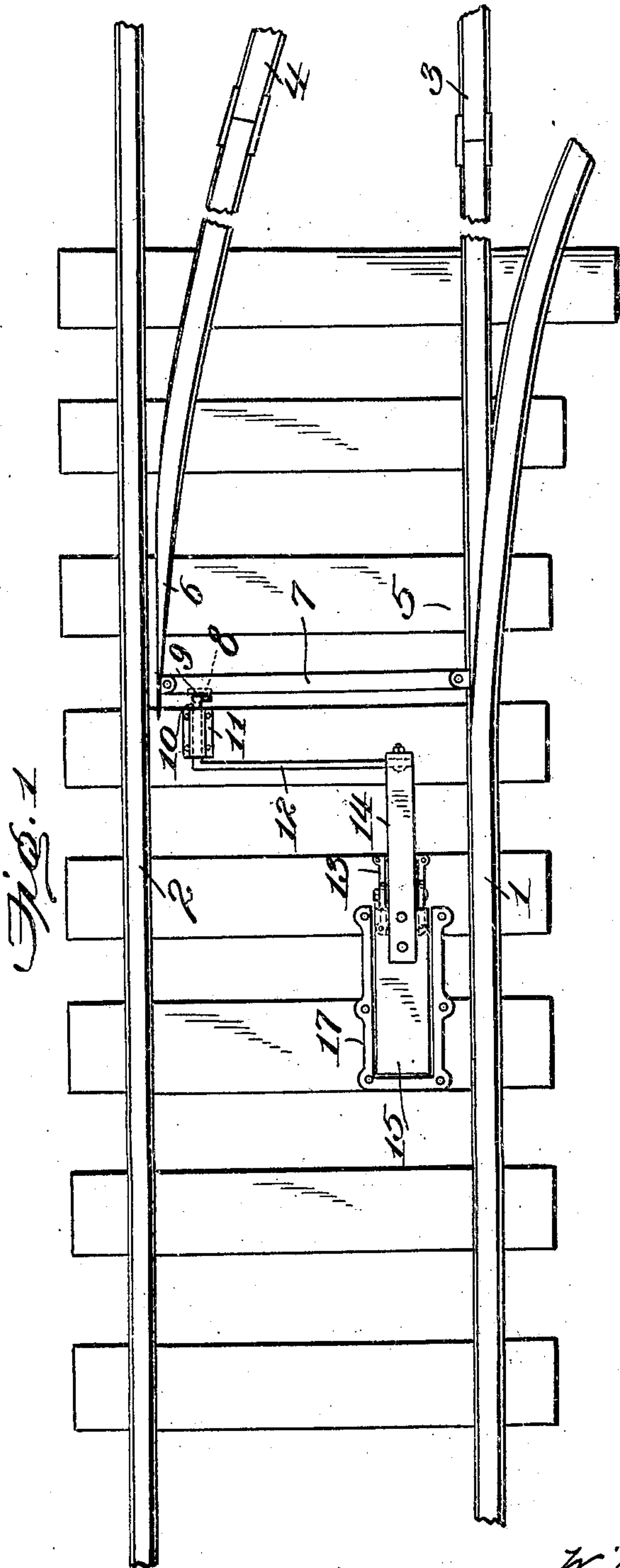
SWITCH.

APPLICATION FILED MAY 27, 1909.

946,750.

Patented Jan. 18, 1910.

2 SHEETS—SHEET 1.



Witnesses:

Gerald Bartholomew.
A. R. Walton

William D. Woodward.

Inventor
Milo B. Stevens.
Atty's

W. D. WOODWARD.
SWITCH.

APPLICATION FILED MAY 27, 1909.

946,750.

Patented Jan. 18, 1910.

2 SHEETS—SHEET 2.

Fig. 3.

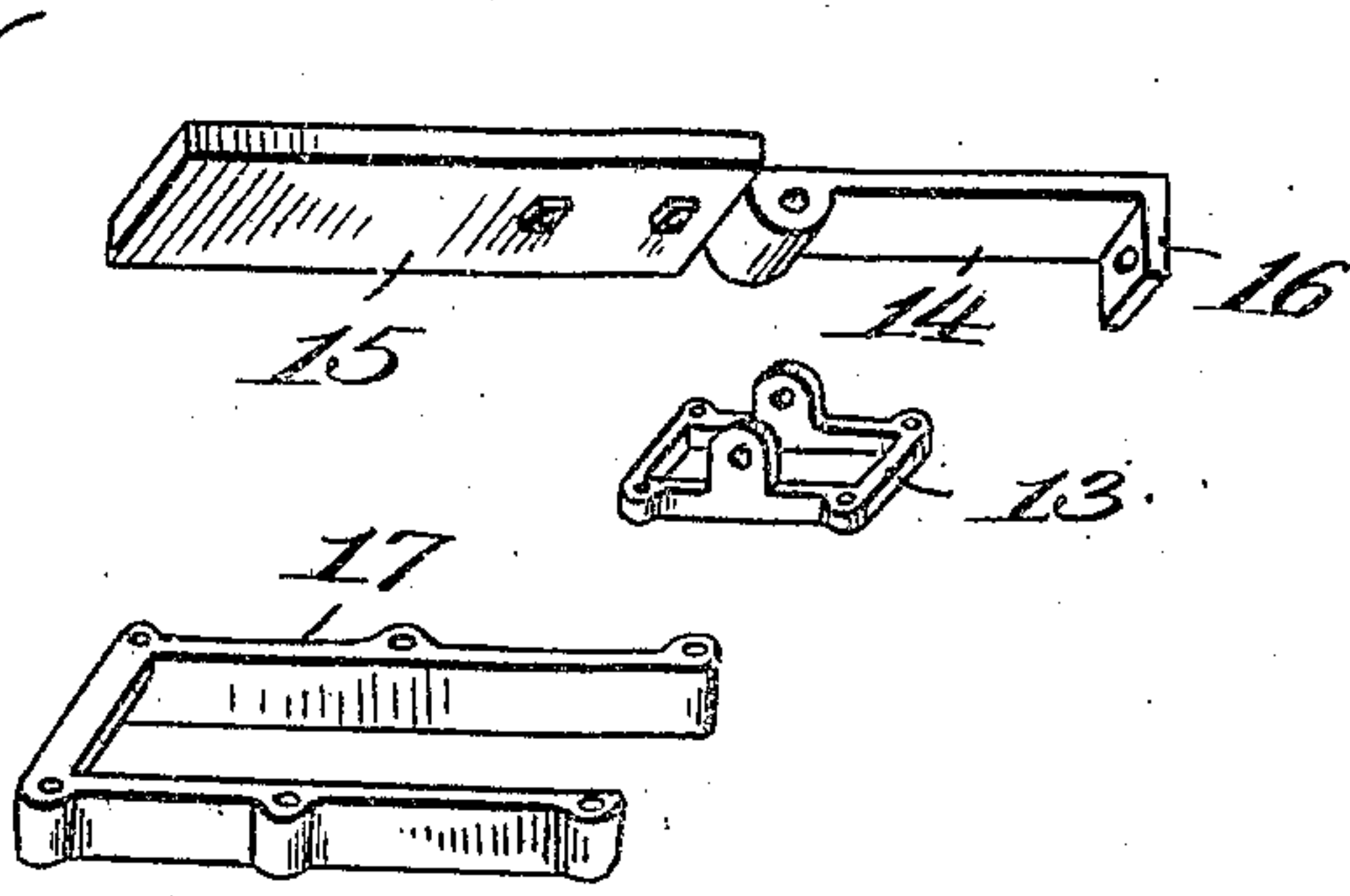


Fig. 4.

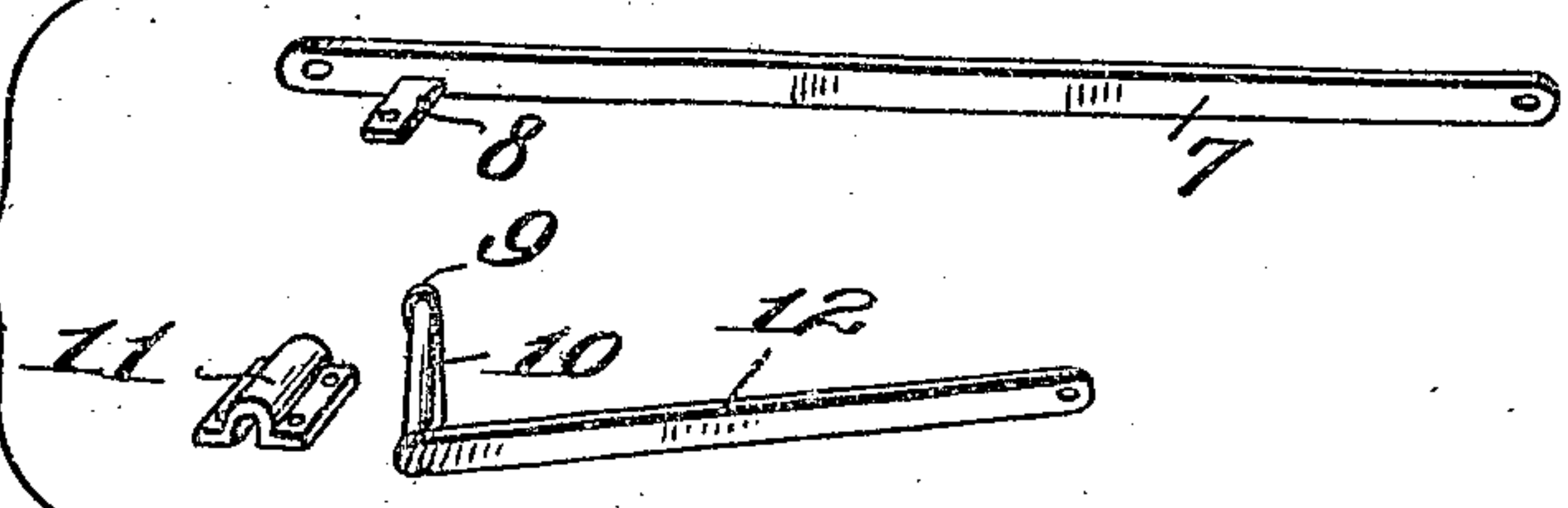


Fig. 5.

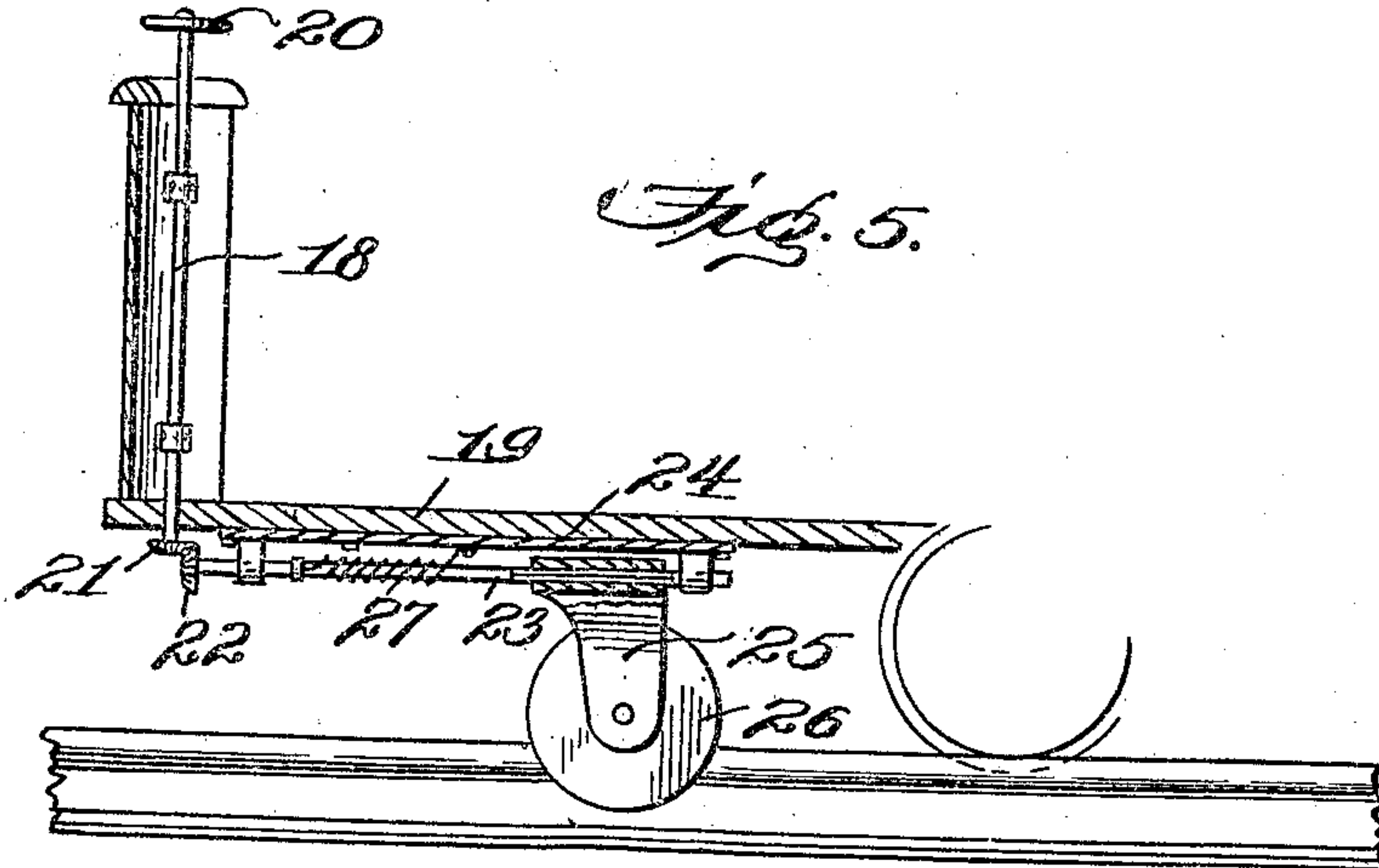
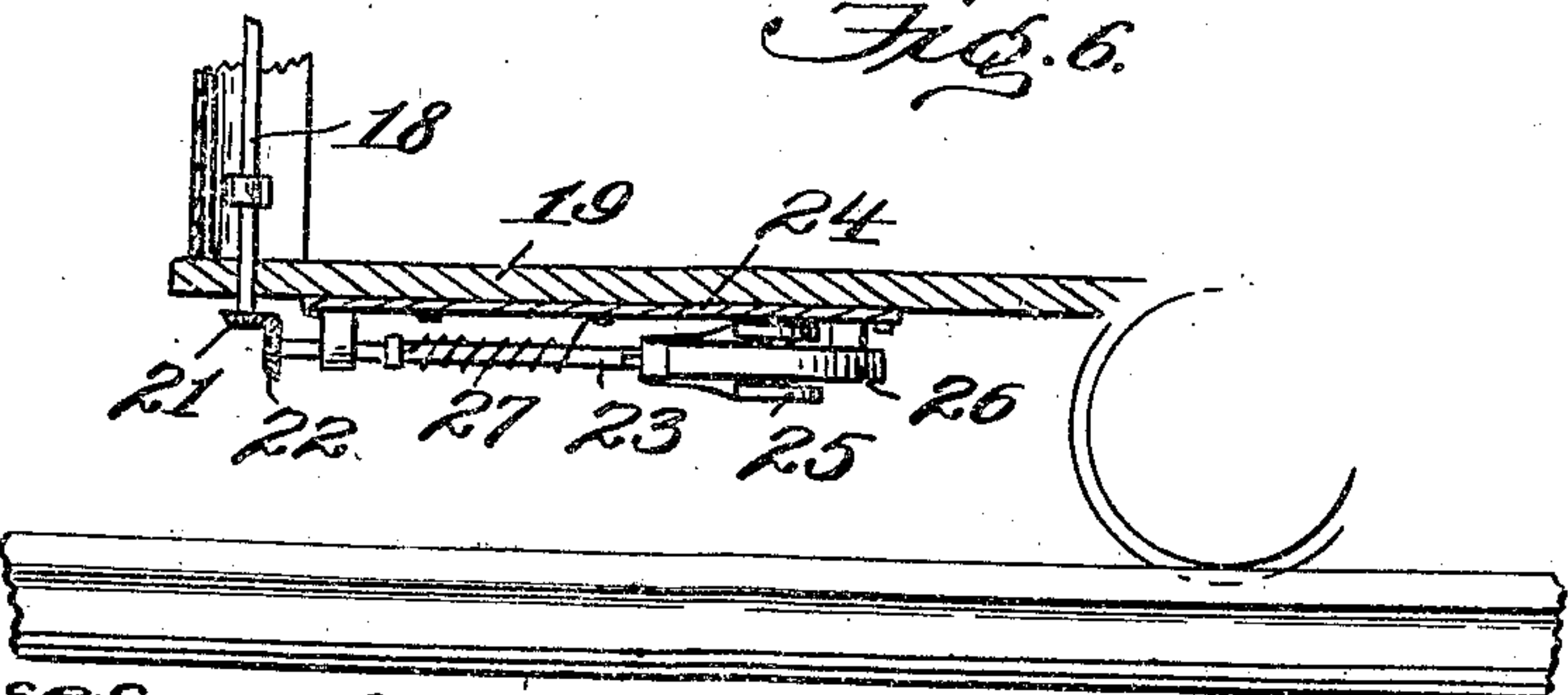


Fig. 6.



Witnesses

Gerald Bartholomew
A. R. Walton

Inventor
William D. Woodward
By Milo B. Sturges

Attys

UNITED STATES PATENT OFFICE.

WILLIAM D. WOODWARD, OF WEST CHAZY, NEW YORK, ASSIGNOR OF ONE-FOURTH TO ALICE L. CLAIR, THREE-SIXTEENTHS TO LEWIS P. CLAIR, AND THREE-SIXTEENTHS TO ALMOND B. CLAIR, OF SPRINGVILLE, NEW YORK.

SWITCH.

946,750.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed May 27, 1909. Serial No. 498,642.

To all whom it may concern:

Be it known that I, WILLIAM D. WOODWARD, a citizen of the United States, residing at West Chazy, in the county of Clinton and State of New York, have invented certain new and useful Improvements in Switches, of which the following is a specification.

My invention relates to switches, and more particularly to devices for operating the same, and the object thereof is to provide a highly efficient device which will be strong and durable and do away with the use of springs.

A further object of my invention is a novel gravity-held switch, together with car carried actuating elements therefor, which are normally held inoperative.

In the accompanying drawings, which illustrate my invention, and form a part of this specification, Figure 1 is a plan view of my improved gravity held switch. Fig. 2 is a sectional side elevation thereof. Fig. 3 is a detail perspective view of the weighted switch controlling bar and its guard, removed. Fig. 4 is a similar view of the crank shaft. Fig. 5 is a sectional view through the platform of a car, provided with my improved switch actuating mechanism, and, Fig. 6 is a similar view showing the actuating mechanism in its normal or inoperative position.

Referring specifically to the drawings, the switch comprises the main line rails, 1 and 2 and the side tracks 3 and 4 crossing one another, and being provided as is usual, with the movable spurs or switch points 5 and 6 respectively, which are connected at their ends, by a connecting bar 7, whereby when the bar 7 is moved in one direction, the main line is closed and the side track opened, and upon the reverse movement, the side track is opened and the main line closed.

In the embodiment of my invention, I provide the spur connecting bar 7 with an arm 8, bolted thereto, to the end of which arm is pivotally secured the crank arm 9 at one end of a rock shaft 10 mounted through a journal bracket 11. Shaft 10 extends longitudinally of the track rails, and has, at its opposite ends an elongated crank arm 12, extending transversely between.

Centrally pivotally mounted within a tie-

supported chair 13, and extending longitudinally of, and between the track rails, is a controlling bar 14, having a weight 15 bolted to one end thereof, and having its opposite end provided with an apertured downturned extremity 16, loosely connected to the end of the crank arm 12. Cranks 9 and 12 are so arranged that weight 15, being normally down, causes the switch to be closed on the main line. Supported upon the track ties is a U-shaped frame 17, which surrounds the weight 15, and acts as a guard to prevent stones and other obstacles from getting beneath said weight and preventing the same from falling.

In accordance with my invention, a car is provided with a vertical shaft 18, rotatably journaled through its forward portion, for instance its front platform 19, said shaft being provided with an upper hand wheel 20 and a lower bevel gear 21, meshing with the bevel gear 22, secured upon the end of a horizontal shaft 23. Shaft 23 is rotatably mounted through bearings upon a bracket plate 24 secured upon the under side of platform 19, and carries upon its opposite end, spaced brackets 25, between which is journaled a roller 26, and said shaft is controlled by a spring 27, in such manner that said brackets 25 and their roller 26 normally extend horizontally therefrom, and may be moved downwardly to a vertical position by the rotation of shaft 18 by its hand wheel 20.

The car carried actuating device just described, is so mounted that when it is desired to side-track the car, the operator thereof has only to rotate shaft 18, turning roller 26 to a vertical position in which it will ride upon the controlling bar 14, and oscillate the same upon its pivot against the action of weight 15, and rocking shaft 10, to move the spur connecting bars and the spur toward the opposite side of the track and open the switch to the siding. It will be understood that after passing the switch, the car carried actuating mechanism is returned to its normal position by spring 27, while the switch is returned to its normal position by the fall of the weighted end of gravity bar 14.

Having fully described my invention, I claim:

1. The combination of a gravity-controlled switch, comprising a switch point

moving crank shaft, and an oscillatory weighted controlling bar, connected to said crank shaft, and a car-carried actuating mechanism comprising a horizontally held
5 roller movable to a vertical position to ride upon and oscillate said controlling bar, and hand operated means to move said roller.

2. The combination in a switch operating mechanism, of an oscillating switch con-
10 trolling bar mounted between the track rails, and a car-carried mechanism comprising a horizontal rotatable shaft, a vertical hand rotated shaft adjacent one end thereof, brackets carried adjacent the opposite end

thereof, a spring controlling said horizontal 15 shaft to normally hold said brackets in a horizontal position, a roller mounted in said brackets, and gearing connecting said shafts whereby to move the roller to a vertical position to ride upon and oscillate said switch 20 controlling bar.

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

WILLIAM D. WOODWARD.

Witnesses:

F. N. SWIFT,
LEWIS G. ROBINSON.