

No. 803,399.

PATENTED OCT. 31, 1905.

C. G. COLWELL.  
SWITCH OPERATING MECHANISM.

APPLICATION FILED AUG. 2, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

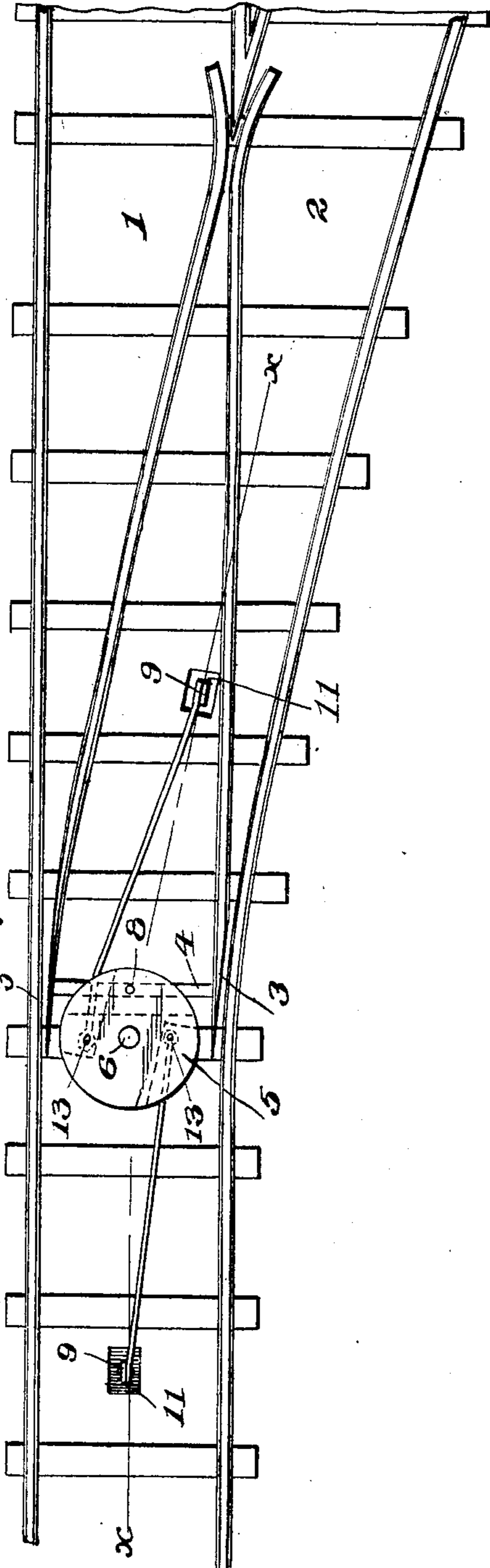
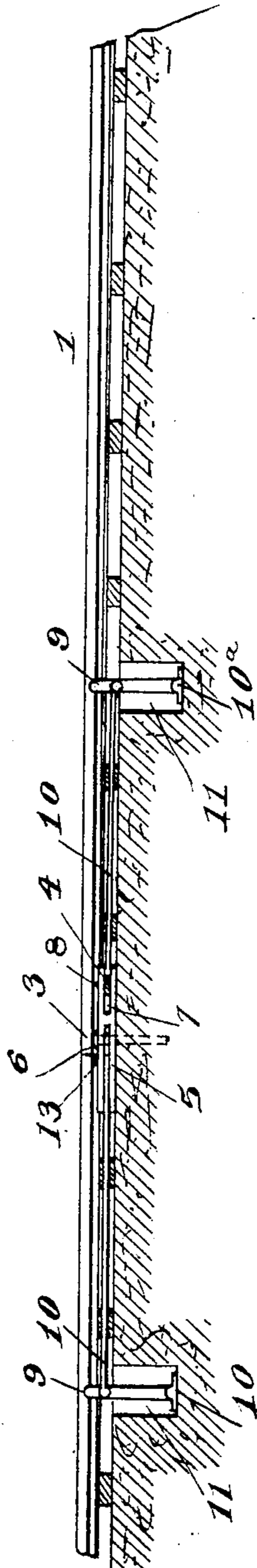


Fig. 2.



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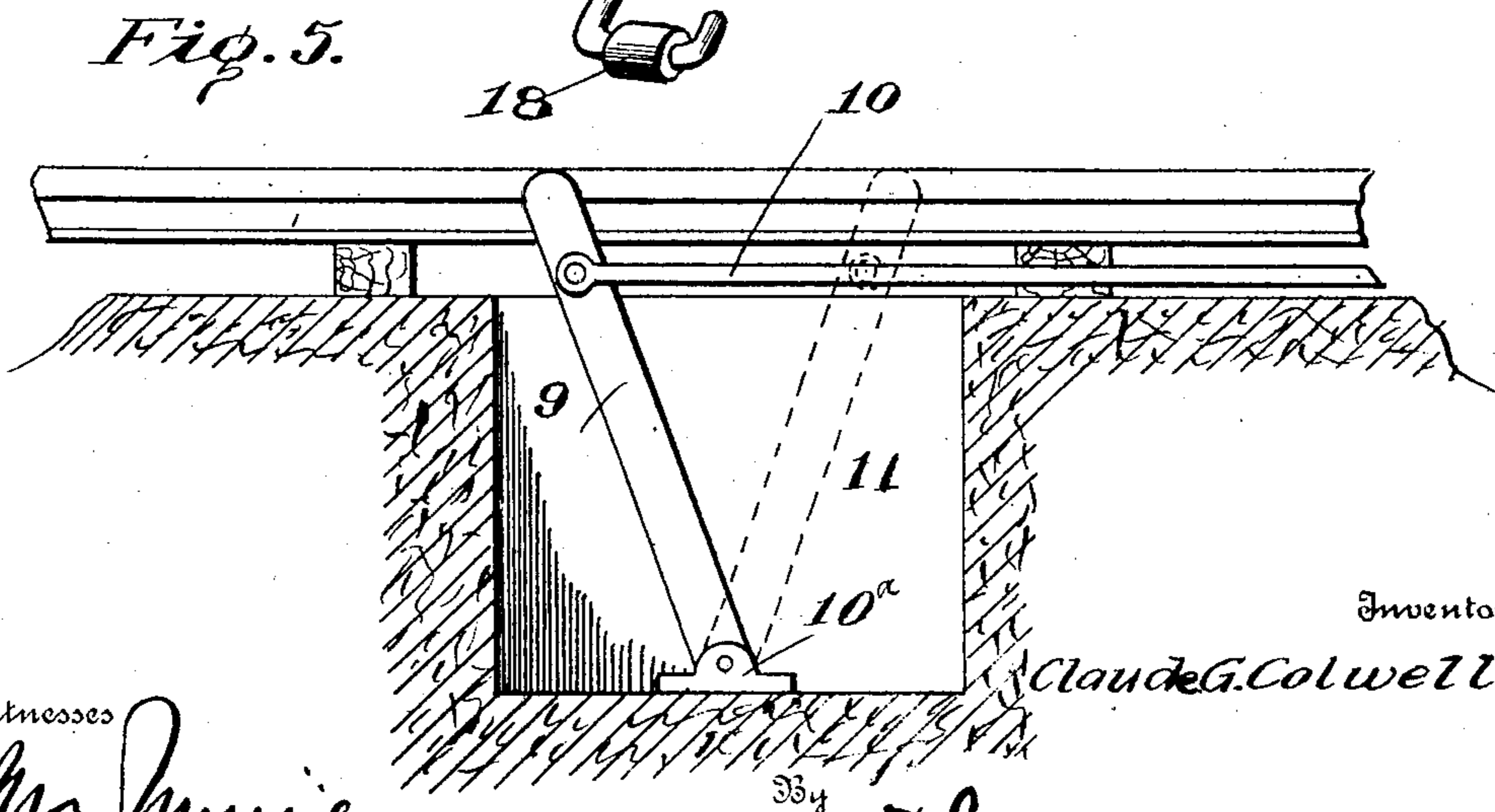
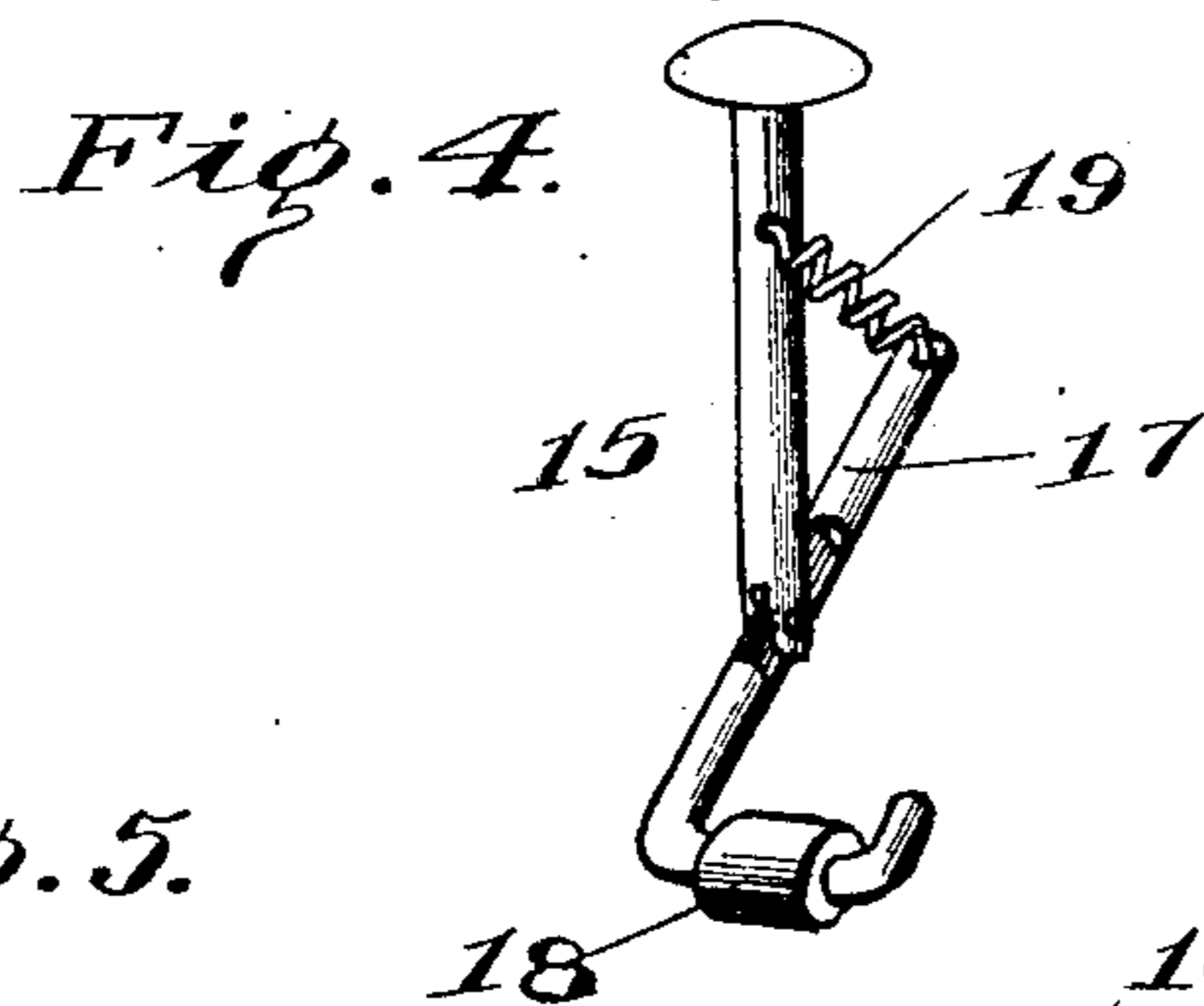
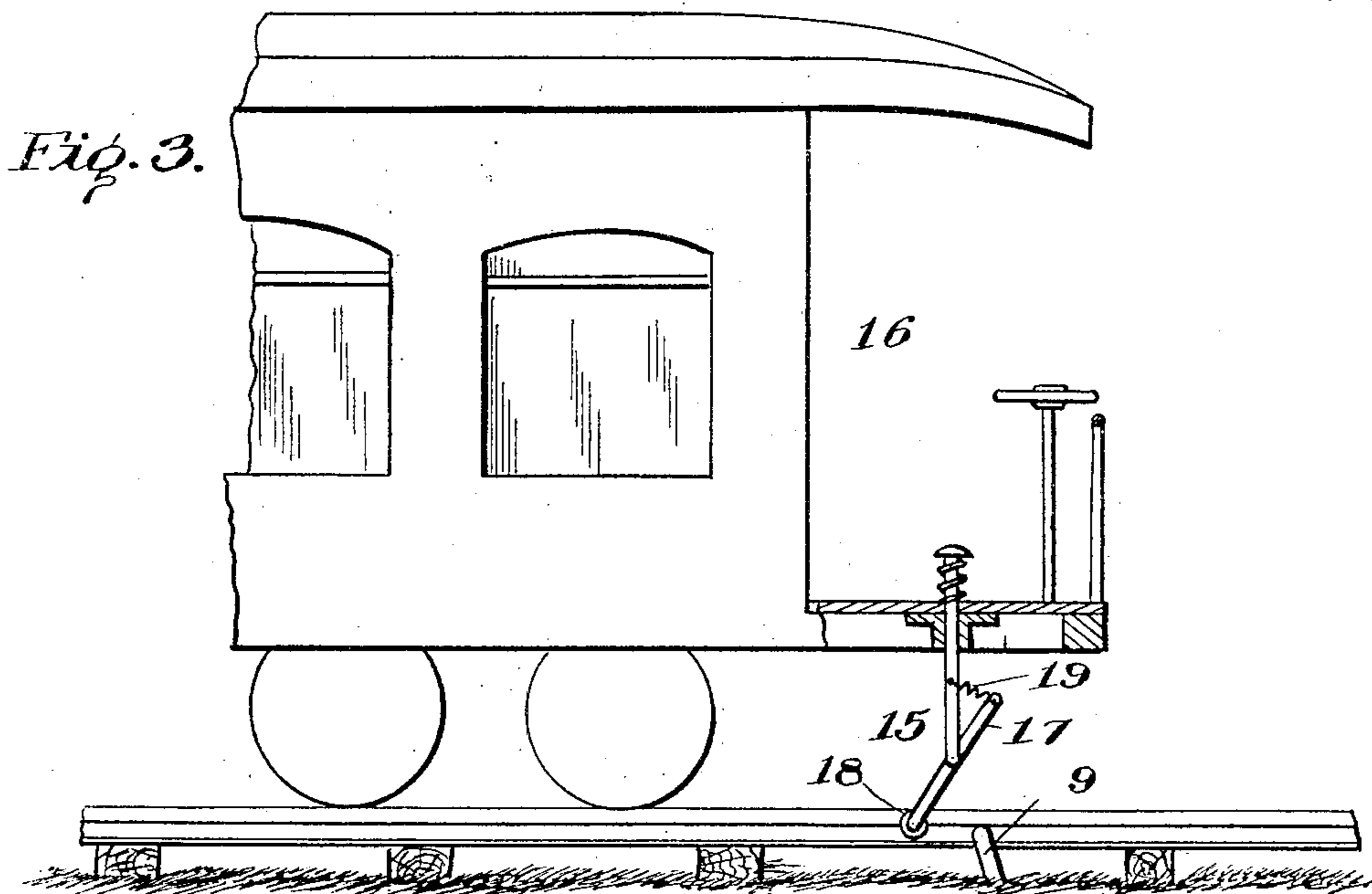
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

CLAUDE G. COLWELL, OF CLYDE, KANSAS.

## SWITCH-OPERATING MECHANISM.

No. 803,399.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed August 2, 1905. Serial No. 272,440.

*To all whom it may concern:*

Be it known that I, CLAUDE G. COLWELL, a citizen of the United States, residing at Clyde, in the county of Cloud and State of Kansas, have invented certain new and useful Improvements in Switch-Operating Mechanisms, of which the following is a specification.

This invention embodies improvements in that type of switch-operating mechanisms adapted for operation from a moving car and doing away with the necessity of stopping the car and actuation of manually-operated means in the length of the track in order that the switch may be closed or opened, as required by conditions of actual use.

The switch-operating mechanism included in the invention and which is operable from the rolling-stock as it passes thereover is of a construction combining cheapness and simplicity, which is especially desirable in mechanisms of this class.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a plan view of switch-operating mechanism embodying the invention. Fig. 2 is a longitudinal vertical sectional view taken on the line X X of Fig. 1. Fig. 3 is a view of the car broken away, showing operating mechanism carried thereby for actuating the switch mechanism. Fig. 4 is a detail view bringing out more clearly the operating mechanism on the car. Fig. 5 is a view in elevation of the trip mechanism, showing the parts on a larger scale.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings and specifically describing the invention, the numeral 1 indicates the main rails of the track and the numeral 2 the siding-rails. The switch-points 3 are of common form, being movable by means of a transverse switch-bar 4 in the customary manner in opening and closing the switch. Arranged between the main rails 1 of the track and adjacent the switch-bar 4 is a rotatable disk 5, said disk being journaled centrally upon a vertical pin 6, suitably arranged between the rails 1 aforesaid. The disk 5 is quite large and is about flush with

the road-bed upon which the rails 1 rest, and said disk is provided with an opening 7 between its upper and lower sides, through which the bar 4 passes, a vertical pin 8 spanning the opening 7 and pivotally connecting the bar 4 with the disk 5. Situated a suitable distance from the disk 5 are the vertically-arranged trip-levers 9, pivoted at their lower extremities, as shown at 10<sup>a</sup>, in a suitable casing or boxing 11. Rods 10 connect the levers 9 with the disk 5, the peripheral portion of the disk being cut away between the upper and lower sides thereof, as shown at 12, to receive adjacent end portions of the rods 10, which are pivotally connected with the disk at 13. The rods 10 are thus beneath the upper surface of the disk and may be suitably incased, as well as the levers 9, to prevent interference of the operation thereof by the elements or by foreign matter, such as dirt or the like. The upper ends of the levers 9 project slightly above the top of the casing 11 inclosing the same, and these projecting end portions are adapted to be engaged by a trip 15, carried by the car 16. (Shown in broken lines in Fig. 3.) The trip 15 comprises a vertically-movable member carrying a pivoted arm 17, provided with a roller 18 at its lower end, the roller being adapted to engage the upper extremity of the levers 9 in order to impart pivotal movement thereto and actuate the same. A spring 19, connected with the upper end of the arm 17, normally holds this arm in a position in which it will engage the levers 9, but permits the arm to give or move upwardly after the levers have been forced toward the disk 5 in operating the same.

In actual use as the car approaches the switch it is only necessary for the motorman or trainman to depress the trip 15 by placing his foot thereon if it is desired to actuate the switch. The arm 17 striking the lever 9 will throw the same toward the disk 5, and thereby actuate the switch in a manner which will be readily apparent.

Having thus described the invention, what is claimed as new is—

In switch-operating mechanism, the combination of the main rails of the track, side rails, switch-points, a switch-bar connecting the switch-points, a rotatable disk between the main rails of the track and provided with an opening between its upper and lower sides through which the switch-bar passes, a pin connecting the switch-bar with the disk, le-

vers upon opposite sides of the disk adapted  
to be tripped by means carried by the rolling-  
stock, and rod connecting the levers with the  
disk, peripheral portions of the disk being cut  
5 away between the upper and lower sides  
thereof to receive the adjacent ends of the  
rods.

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

CLAUDE G. COLWELL. [L. S.]

Witnesses:

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