

P. HEALY.
 SWITCH THROWING DEVICE.
 APPLICATION FILED AUG. 19, 1908.

915,857.

Patented Mar. 23, 1909.

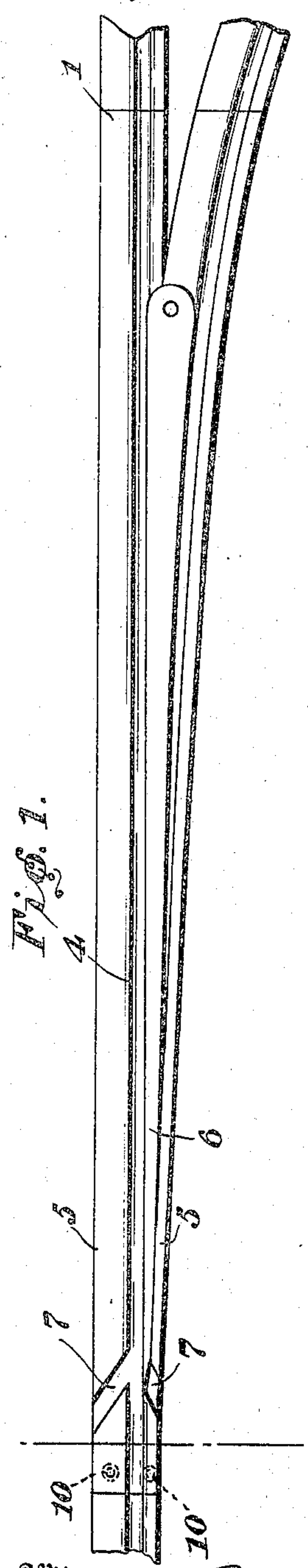


Fig. 1.

Witnesses

W. J. Munn
W. P. Hodson

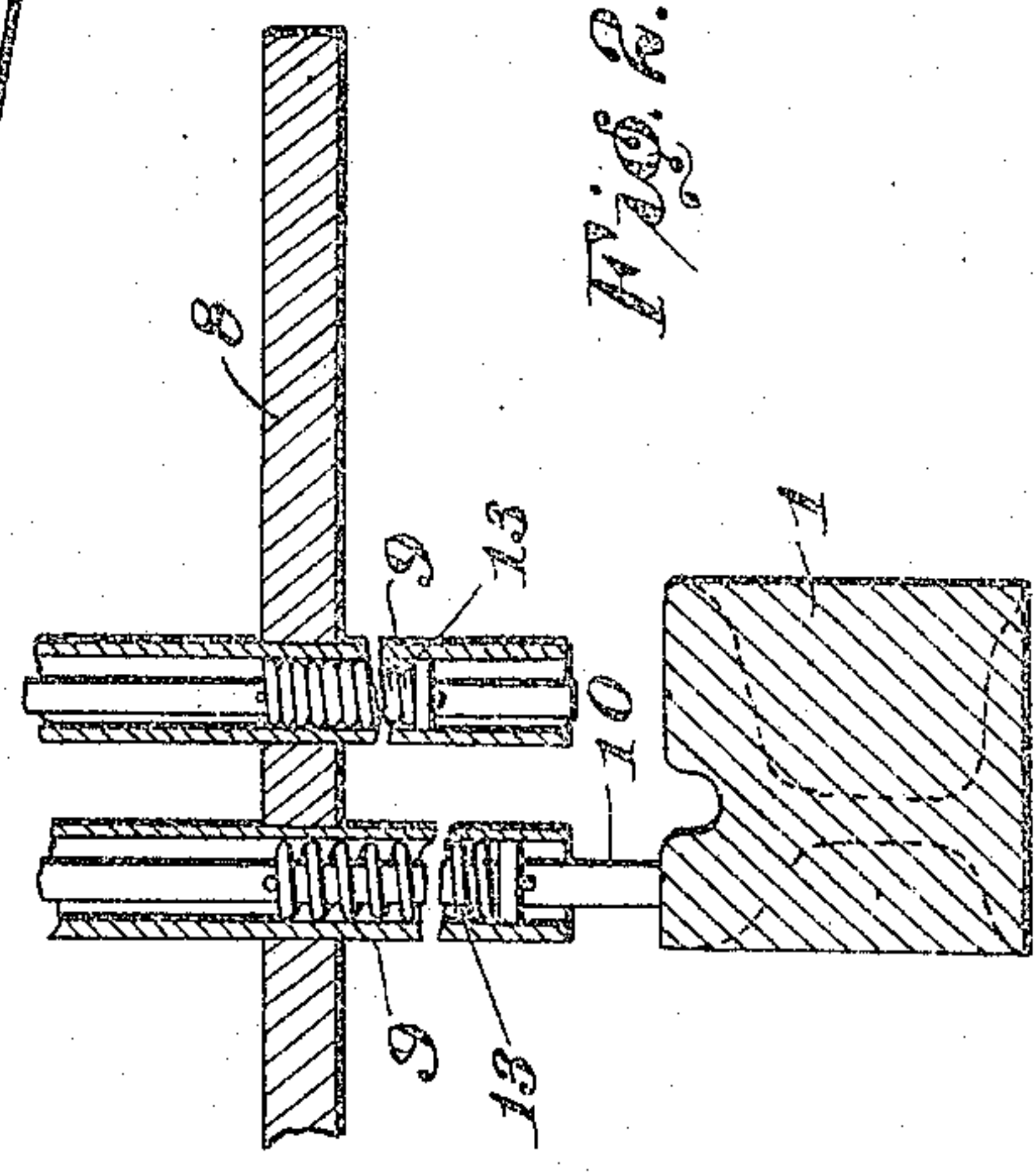
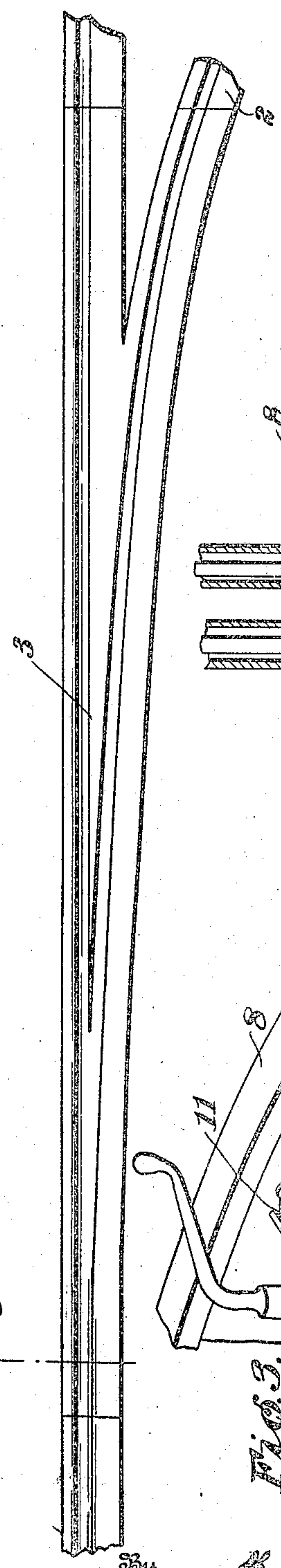


Fig. 3.

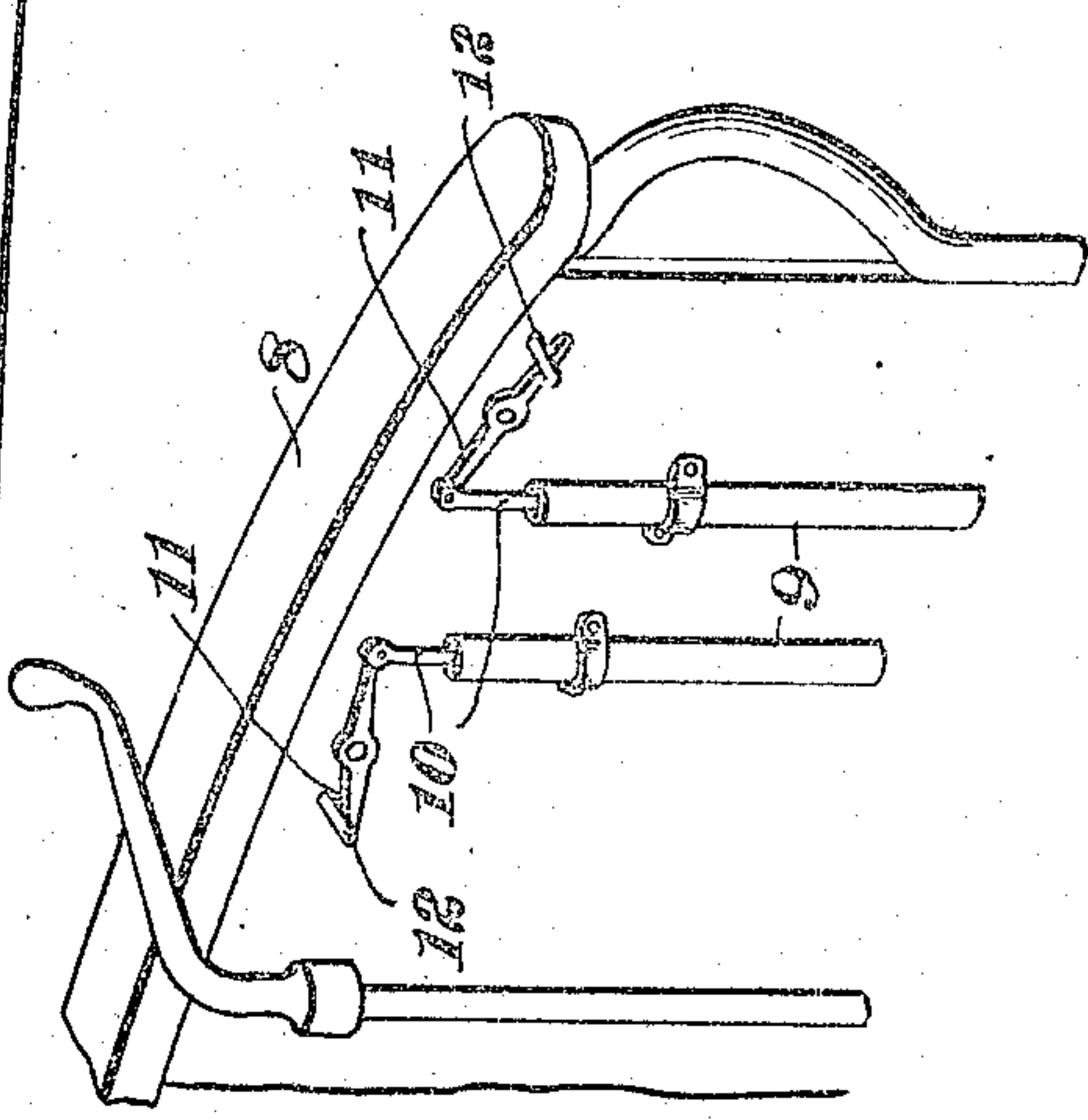


Fig. 4.

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UNITED STATES PATENT OFFICE.

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SWITCH-THROWING DEVICE.

No. 915,857.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PATRICK HEALY, citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Switch-Throwing Devices, of which the following is a specification.

The present invention relates in general to railways and more particularly to a novel switch operating mechanism which is especially designed for use in connection with street railway lines.

The primary object of the invention is the provision of a device of this character by means of which the switch point may be readily thrown in either direction without the necessity of stopping the car or dismounting therefrom, it being merely necessary to throw the proper switch operating member into an operative position and to reduce the speed of the car as it runs through the switch.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and 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 a switch constructed in accordance with the invention. Fig. 2 is a transverse sectional view on the line 2—2 of Fig. 1 showing a car traveling upon the track, one of the switch operating bars of the car being lowered into an operative position. Fig. 3 is a perspective view of the portion of the device above the platform of the car.

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 drawing, the numeral 1 designates the main track and 2 the branch track, the usual frogs 3 and 4 being located at the intersection of the respective rails of the branch track with the corresponding rails of the main track. The various rails are of the type commonly employed in street railway construction, the upper surface of the head of the rail being formed with a groove to receive the wheel flanges and a solid portion being provided upon each side of the groove. The frog 4 embodies the usual tread members 5 which diverge from one end of the

frog to the opposite end. A swinging switch point 6 is located between the two tread members 5 of the frog and is adapted to be moved from side to side to admit of a car being either switched upon the branch track or caused to continue in its movements upon the main track. The tread portions 5 of the frog 4 are formed with the oppositely inclined diagonal grooves 7 which converge inwardly toward the swinging end of the switch point and are designed to engage switch operating members upon the car to cause the same to throw the switch point as will be hereinafter more fully set forth.

A car 8 is adapted to travel upon the track and the front platform of the car is provided with a pair of independent pipes or tubes 9 which project downwardly to within about four inches of the rail, one of the pipes being located over the rail upon each side of the flange receiving groove therein. Loosely mounted within each of the tubes 9 is a switch operating rod 10 which is normally held in an elevated position by means of a lever 11 which is designed to engage a projection 12 upon the car. However, when either of the levers is disengaged from the projection 12 the corresponding rod 10 drops downwardly into engagement with the track and as the car travels forward enters the corresponding diagonal groove 7 and is deflected thereby into engagement with the switch point so as to throw the same in the required direction. It will thus be obvious that by lowering the proper switch operating rod 10 the switch point may be thrown in either direction and the car either switched upon the branch track or caused to continue in its movements upon the main track. The switch operating rods will tend to drop into an operative position owing to the action of gravity as soon as the levers 11 are released, but under some conditions it may be found desirable to utilize springs 13 for positively moving the rods.

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

The combination of a main track, a branch track, a movable switch point, oppositely inclined diagonal grooves being formed in the track upon opposite sides of the switch point, and a pair of independent switch operating members carried by the

rolling stock for moving the switch point in either direction, either one of the switch operating members when in operative position being adapted to enter the corresponding diagonal groove and to be deflected thereby into engagement with the switch point for throwing the same.

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

PATRICK HEALY. [L. S.]

Witnesses:

W. S. HILL,

W. N. WOODSON.