

(No Model.)

W. H. REECE.
SWITCH THROWING DEVICE.

No. 571,733.

Patented Nov. 17, 1896.

Fig. 1.

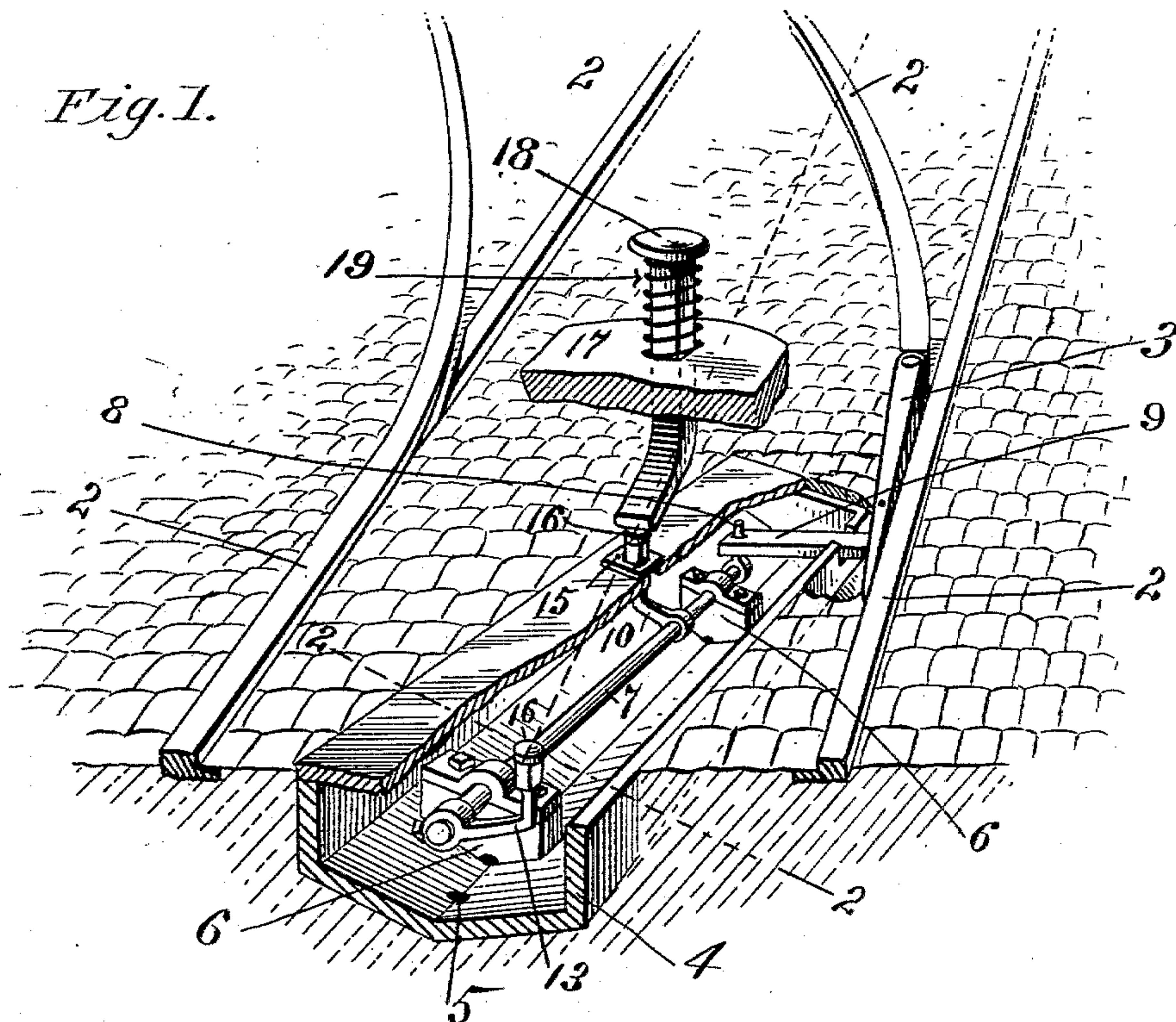
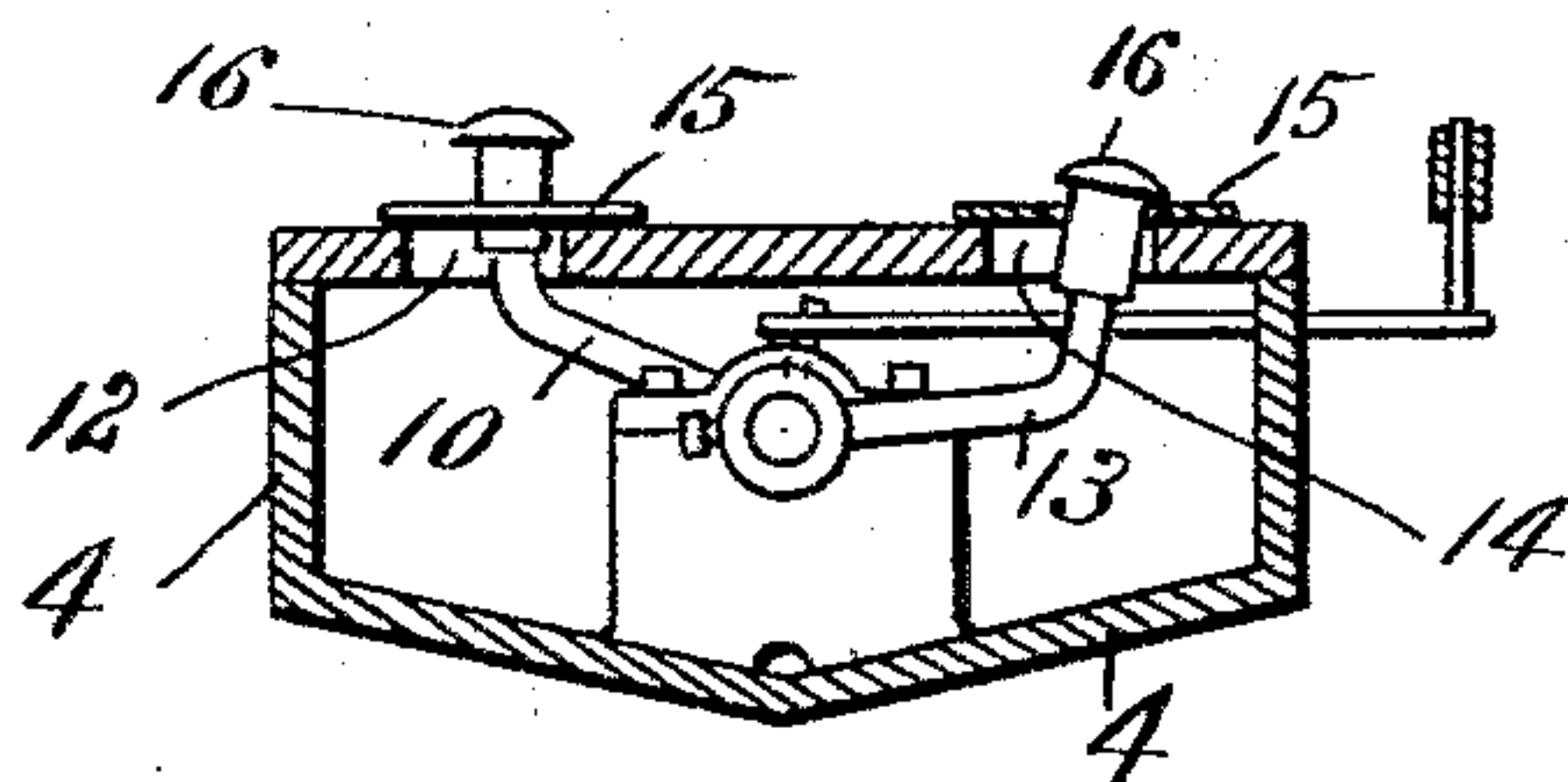


Fig. 2.



Witnesses:

J. D. Garfield
H. J. Clemons

Inventor,
William H. Reece,

by *Chapman & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM H. REECE, OF NORTHAMPTON, MASSACHUSETTS, ASSIGNOR TO
JAMES STONE, OF SAME PLACE.

SWITCH-THROWING DEVICE.

SPECIFICATION forming part of Letters Patent No. 571,733, dated November 17, 1896.

Application filed June 10, 1896. Serial No. 594,925. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. REECE, a citizen of the United States of America, residing at Northampton, (Florence,) in the county of Hampshire, State of Massachusetts, have invented new and useful Improvements in Switch-Throwing Devices, of which the following is a specification.

This invention relates to switch-throwing devices for street or other railroads, and particularly to that class which are operated by devices attached to the platform or body of the car, the object of the invention being to simplify and cheapen the construction of said devices; and the invention consists in the construction and arrangement of the parts, all as hereinafter fully described and claimed.

In the drawings forming part of this specification, Figure 1 is a perspective view of the switch-throwing devices constructed according to this invention attached to a switch-point. Fig. 2 is a sectional view taken on line 2 2, Fig. 1.

In the drawings, 2 2 are the rails, and 3 is a pivoted switch-point of ordinary construction. Diagonally between said rails 2 and in a horizontal position is placed a box-like structure 4, the top of which is preferably substantially flush with the road-bed. Said box is preferably made of cast-iron, the bottom of which inclines downwardly from the sides to the center for the purpose of properly draining said box of any water that may collect therein, an opening 5 being provided for that purpose. Two bearing-blocks 6 6 are cast therein for the reception of the shaft 7, suitable caps being fitted to said blocks for securing said shaft in operative position in its bearings. Secured to the end of shaft 7 which is nearest the switch-point is a short upstanding arm 8, which engages with one end of the horizontally-moving arm 9, the opposite end of which is pivotally secured to the switch-point. Between the bearing-blocks 6, and near one of them, is located the right-angled lever 10, which is securely fixed to the shaft 7 in any suitable manner in such a position that the vertical end thereof projects through a slot 12 in the cover or top of the box 4. Near the second of said bearings is secured another right-angled lever 13 on said shaft 7,

whose vertical end also projects through a second slot 14 in the cover or top of the box.

As has been stated, the shaft 7 lies in a diagonal position relative to said rails 2, and the said levers 10 and 13 are so located, one projecting horizontally and vertically from one side of said shaft and the other horizontally and vertically from the opposite side and near the ends thereof, and said levers are made of such length that the ends thereof which project through the top of the box are practically in a line centrally between the rails 2.

If desired, a plate 15, fitting loosely the vertical end of said levers 10 and 13 and sliding freely on the cover or top of the box 4, may be used to prevent the entrance of mud or other impurities within the box 4, the said plates being retained on the end of said lever by a head 16, fixed thereon in any suitable manner. The preferable construction, however, is to omit the plates, as the sweep of the end of the levers 10 and 13 is of comparatively slight extent, and when the ends of said levers lie in one end of either of the slots 12 or 14 the open end thereof is of comparatively small area, and by doing away with said plates 15 the head 16 on the end of said levers is not required.

It will be seen from the above description that when power is applied to depress the vertical end of lever 10 the shaft 7 will be oscillated, and by means of the upstanding arm 8 arm 9 will move the switch-point in one direction and the end of lever 10 be forced down practically flush with the top of the box and the vertical end of the lever 13 will be raised from a position substantially flush with the top of the box to a short distance above it. Pressure upon the said end of lever 13 reverses these motions and throws the switch-point in the opposite direction, the end of lever 10 rising above the surface of the box as the end of lever 13 descends therein. Any suitable means may be provided on the platform of a car for operating on the end of said levers 10 and 13 as desired.

In the drawings a small section 17 of the platform of a car is shown, having projecting therethrough a lever 18, operated by the foot of a person standing on said platform. The

said lever is held out of engagement normally with the ends of levers 10 and 13 by a spring 19, as shown, located between the flanged end of said lever and the platform of the car. The lower end of said lever 18 is curved backwardly and downwardly, as shown, the under side thereof thereby forming a cam-surface, whereby either one of said levers 10 or 13 may be depressed at will by pressing the foot on the end of the lever 18.

The construction of the devices shown herein overcomes many of the objections which have been made to switch-throwing devices by street-railway officials especially and the municipal authorities, and by placing the operating-shaft 7, as shown, diagonally between the rails it can be extended so that the switch may be thrown at a considerable distance ahead of the arrival of the car at that point, and the operating-levers 10 and 13 being in a line centrally between said rails the device for operating said levers 10 and 13 from the car is of the most simple character. Furthermore, this construction permits of such a separation of the exposed ends of the levers 10 and 13 that vehicles other than the cars could not by any possible means run over both of said points at once, thus breaking them or throwing them out of their proper relative positions on the shaft 7.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In switch-throwing devices for railroads, a shaft extending diagonally between the rails and below the level thereof, suitable bearings therefor and arms secured to opposite sides of said shaft and extending outwardly therefrom, the ends of which are substantially level with the top of the said rails and in a line centrally therebetween, means on a car

for depressing said arms for reciprocally oscillating said shaft, and means of engagement between said shaft and the movable point of a switch, substantially as described.

2. In a switch-throwing device, a shaft located between and below the rails of a railroad in a diagonal position, arms secured to and extending outwardly from opposite sides of said shaft whose ends are substantially level with the said rail and in line centrally between them, an arm fixed to the end of said shaft, and a lever pivotally engaging said arm and the movable point of a switch, and means on a car for depressing one of said oppositely-located arms on said shaft for oscillating said shaft for moving said switch-point horizontally in either direction, substantially as described.

3. In a switch-throwing device, a shaft located between and below the rails of a railroad in a diagonal position, arms secured to and extending outwardly from opposite sides of said shaft whose ends are substantially level with the said rail, and in line centrally between them, an arm fixed to the end of said shaft, and a lever pivotally engaging said arm and the movable point of a switch, and means on a car for depressing one of said oppositely-located arms on said shaft at a time consisting of a spring-held push-rod having a rearwardly and downwardly extending cam-surface on the lower extremity thereof for engagement with the upper extremity of said levers for oscillating said shaft for moving said switch-point horizontally in either direction, substantially as described.

WILLIAM H. REECE.

Witnesses:

E. W. PATRELL,
GEO. N. BAKER.