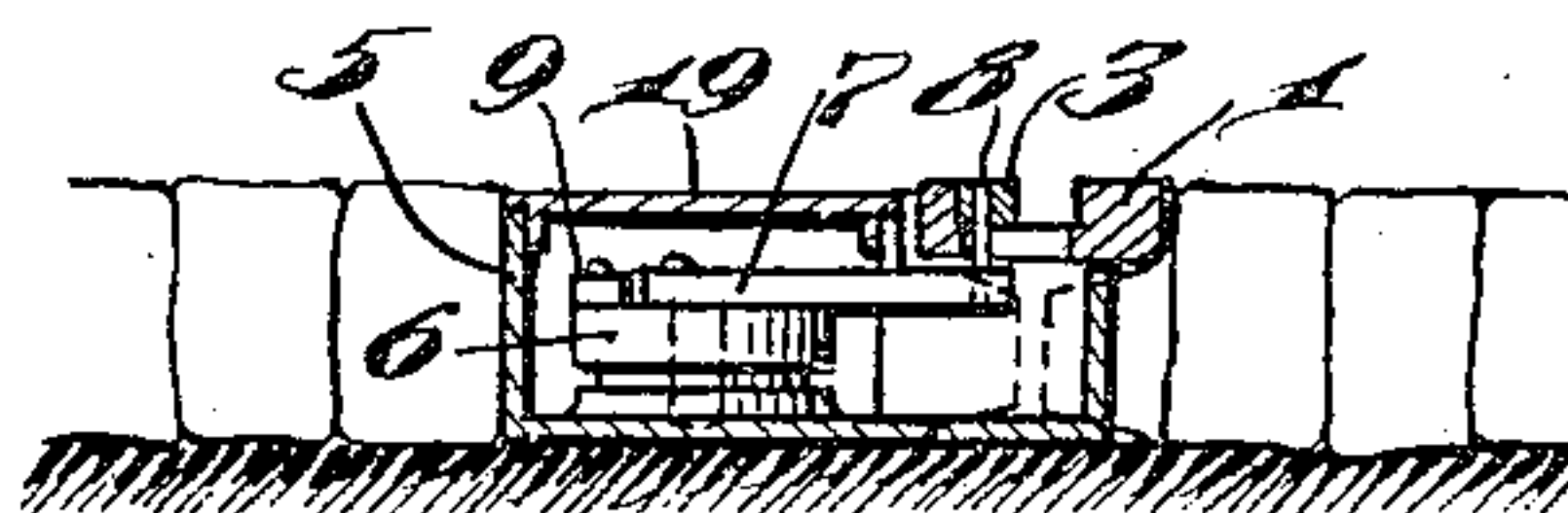
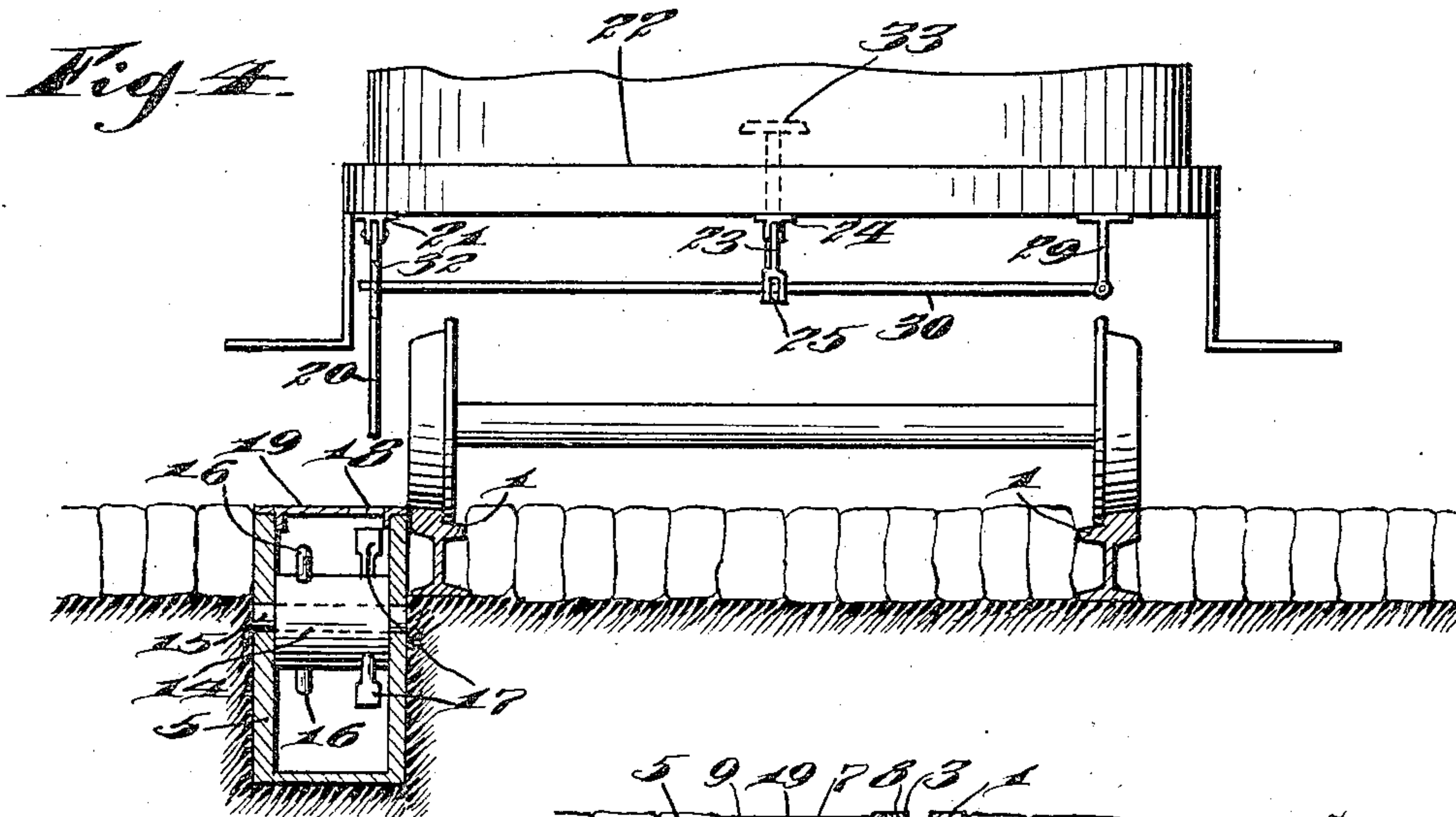
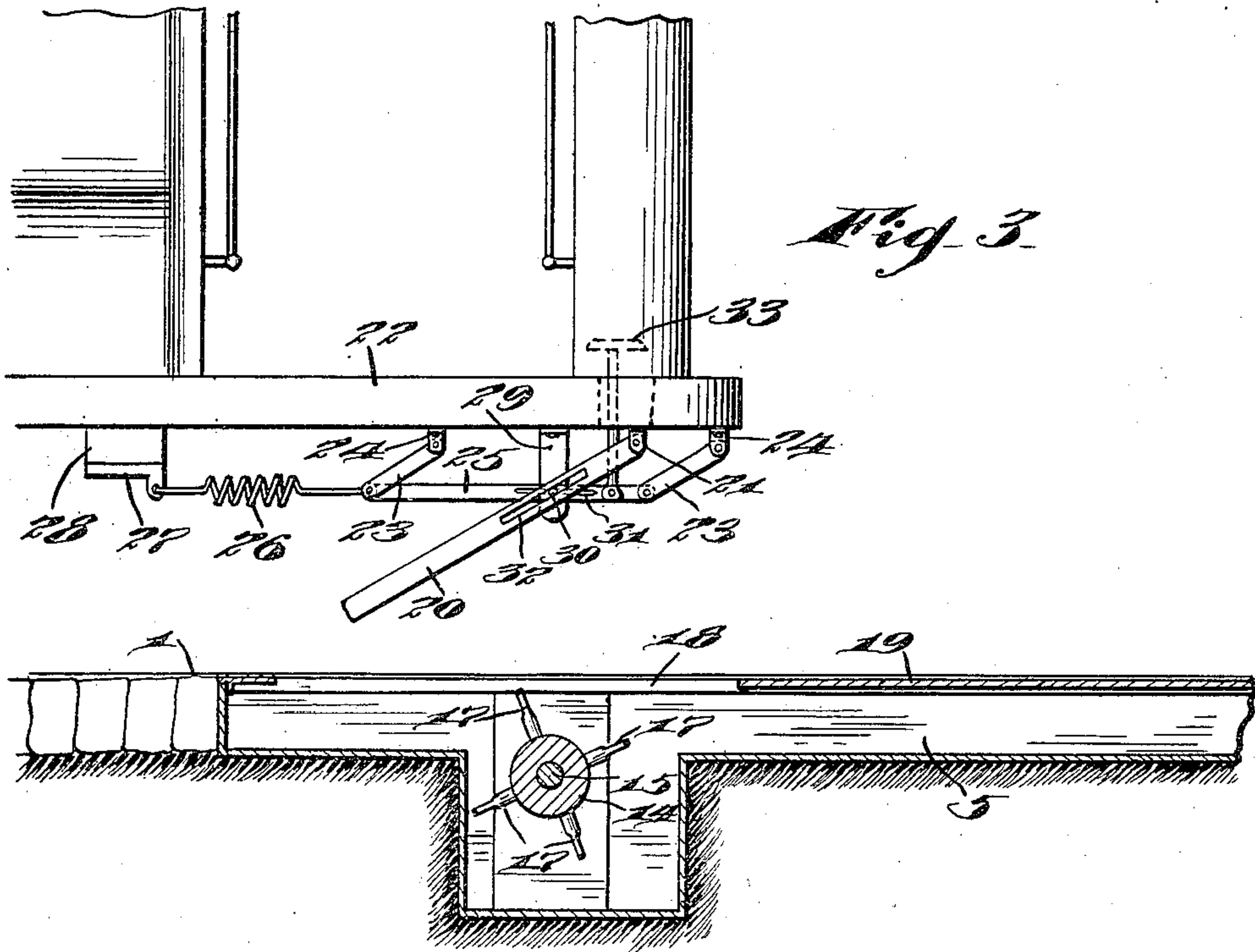


R. A. MORRISEY.
 SWITCH OPERATING MECHANISM.
 APPLICATION FILED JUNE 18, 1910.

990,376.

Patented Apr. 25, 1911.

2 SHEETS—SHEET 2.



Witnesses

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RICHARD A. MORRISEY, OF PHILADELPHIA, PENNSYLVANIA.

SWITCH-OPERATING MECHANISM.

990,376.

Specification of Letters Patent. Patented Apr. 25, 1911.

Application filed June 18, 1910. Serial No. 567,590.

To all whom it may concern:

Be it known that I, RICHARD A. MORRISEY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Switch-Operating Mechanism, of which the following is a specification.

My invention relates to improvements in switch operating mechanism, an object of the invention being to provide improved mechanism operated by a device on the car for moving the switch point to either of its operative positions.

A further object is to provide an improved rotary member having a plurality of radial arms adapted to be engaged by mechanism on a car for moving the switch point, said rotary member adapted to be turned always in the same direction and operate an improved connecting mechanism so as to throw the switch point from side to side.

A further object is to provide improved mechanism on the car for engaging the rotary member.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a plan view illustrating my improvements, the cover of the boxing being removed. Fig. 2, is a view in longitudinal section through the boxing and the operating mechanism. Fig. 3, is a view in longitudinal section through the boxing and showing the mechanism on the car in side elevation. Fig. 4, is a view in cross section showing the car operating mechanism in end elevation, and Fig. 5, is a view in section on the line 5, 5, of Fig. 2.

1, represents the rails of the main track, 2 the rails of the turnout, and 3 the switch point pivoted at 4.

5, represents a boxing or casing which supports at one end, a horizontally positioned wheel 6, to which a transversely disposed link 7 is pivotally connected, and this link 7 projects below the switch point 3, and is pivotally connected thereto by means of a pin 8.

Wheel 7, is connected by a rod 9 with one member 10 of a bell-crank-lever 11, the other

member of said lever being given reference character 12 for convenience of description. Lever 11 is fulcrumed on a pin 13, and is adapted to be moved by my improved rotary member 14, as will hereinafter appear.

The rotary member 14 has a cylindrical body mounted to turn on a cross pin or journal 15, and is horizontally disposed. The member 14 is provided at diametrical opposite points with pins 16, which are adapted to engage the members 10 and 12 of the bell-crank-lever 11 when the member 14 is turned. This member 14 is also provided with four radial arms 17, which are located below a slot 18 in the cap plate or cover 19 of boxing 5. These arms are adapted to be struck by a lever 20, pivoted at its forward end as shown at 21 to the bottom of the car platform 22.

23, 23, represent links which are pivotally connected to brackets 24 depending from the car platform, and said links are pivotally connected by a bar 25. A spring 26 connects the pivotal connection between the rear link 23 and bar 25 with a bracket 27, fixed to a block 28 on the bottom of the car, and this spring 26 normally holds the parts in the position shown in Fig. 3.

A bracket 29 depends from the platform 23, and a transversely disposed rod 30 pivotally supported in one end in bracket 29, projects through a slot 31 in bar 25, and also projects through a slot 32 in lever 20.

33, is a foot-plunger which projects through the platform 22, and is adapted to be depressed by the motorman when he desires to operate the switch.

The operation is as follows: If the switch point 3 is in a position opening the main track and closing the turnout, and the motorman approaching the switch desires to pass onto the turnout, when his car reaches the proper point he depresses foot-plunger 33. This movement of the foot-plunger 33 causes the links 23 and bar 25 to swing downward and forward, which causes rod 30 to swing downward at its free end where it engages lever 20, and the latter will be moved through the slot 18 and will strike one of the arms 17, and as the car moves along will impart to the rotary member a rotary movement of 90 degrees. This rotary movement imparted to member 14 will cause one of the pins 16 to engage the member 10 of bell-crank-lever 11, swing the le-

ver on its fulcrum, move rod 9 forwardly, turn wheel 6 and through the medium of link 7 throw the switch point 3 to close the main track and open the turnout. If the next car approaching the switch desires to take the main track, a similar operation of lever 20 will cause rotary member 14 to turn a distance of 90 degrees, when the pin 16 will engage the lower member 12 of bell-crank-lever 11, rod 9 will be drawn rearward, and the switch point moved in the opposite direction to that above described. By providing two of these pins 16, one is always in position to engage the lever 11, and it will be noted that the rotary member is always turned in the same direction, and if the switch point is not as desired, the turning of the rotary member by the lever 20 on the car, will move the switch point to an opposite position.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. In a switch operating mechanism, the combination with a main track, a turnout, and a switch point between them, of a rotary member in advance of the switch point, means operated by said rotary member for throwing the switch point, a car, links pivoted at their upper ends to the car, a bar connecting said links, a lever pivoted at one end to the car, and between its ends having slot and pin connection with said bar, the lower end of said lever adapted to engage and operate the rotary element, means normally holding said lever elevated, and

means for depressing the bar to depress the lever, substantially as described.

2. In a switch operating mechanism, the combination with a main track, a turnout, and a switch point between them, of a rotary member in advance of the switch point, means operated by said rotary member for throwing the switch point, a car, links pivoted at their upper ends to the car, a bar connecting said links, a lever pivoted at one end to the car, and between its ends having slot and pin connection with said bar, the lower end of said lever adapted to engage and operate the rotary element, a spring connecting the rear end of said bar with a fixed point on the car normally holding the bar and the lever elevated, and means for depressing the bar and lever, substantially as described.

3. In a switch throwing mechanism, the combination with a main track, a turnout, and a switch point between them, of a boxing located beside the track, a rotary member in said boxing having a plurality of radial arms, means operated by said rotary member for throwing the switch point, a car, links pivoted at their upper ends to the car, a bar connecting said links, a spring connecting the rear link with a fixed part of the car, a lever pivoted to said car, a bracket depending from the car, a rod pivoted to said bracket and projecting through slots in the first-mentioned bar and in said lever, and a foot-plunger connected to said first-mentioned bar and projecting through the platform of the car, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

RICHARD A. MORRISEY.

Witnesses:

R. H. KRENKEL,
C. E. POTTS.