

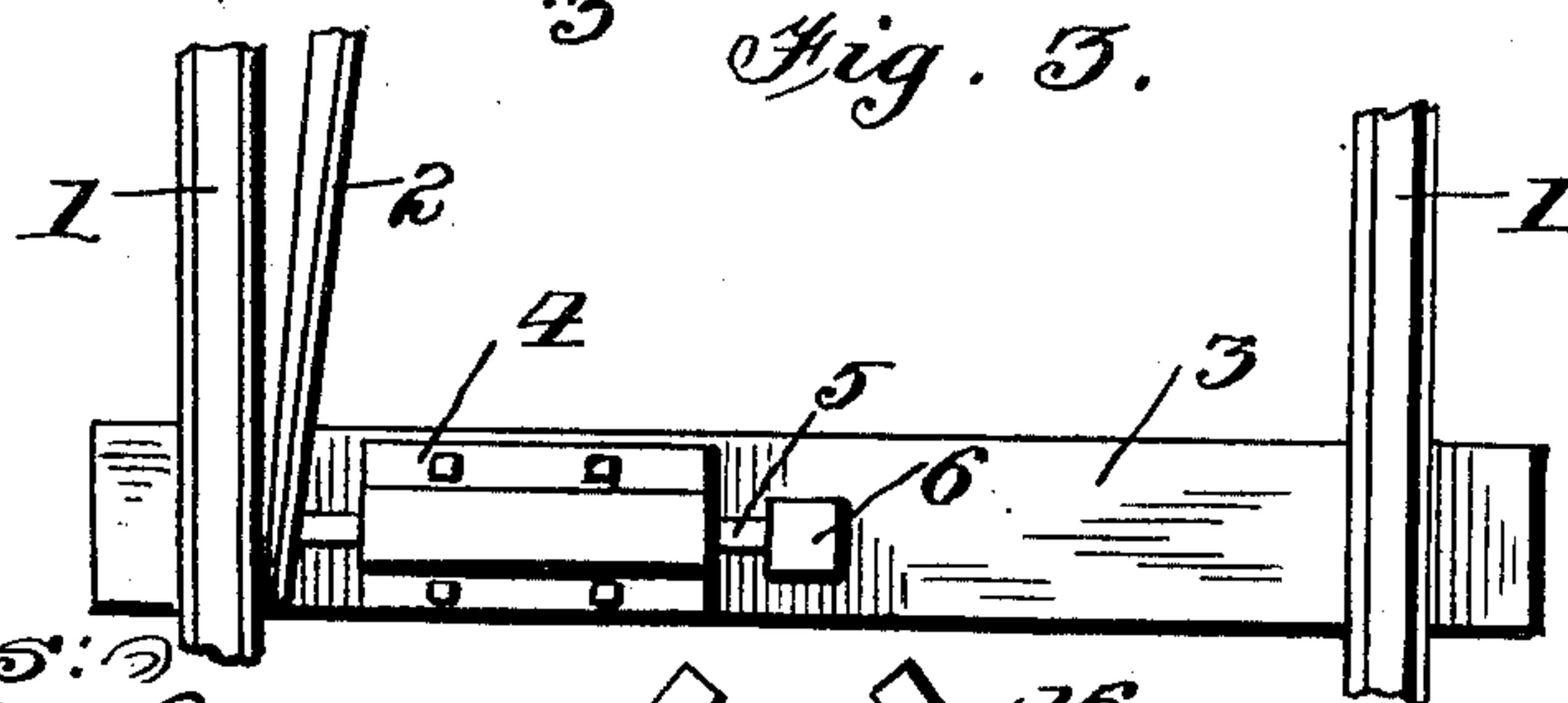
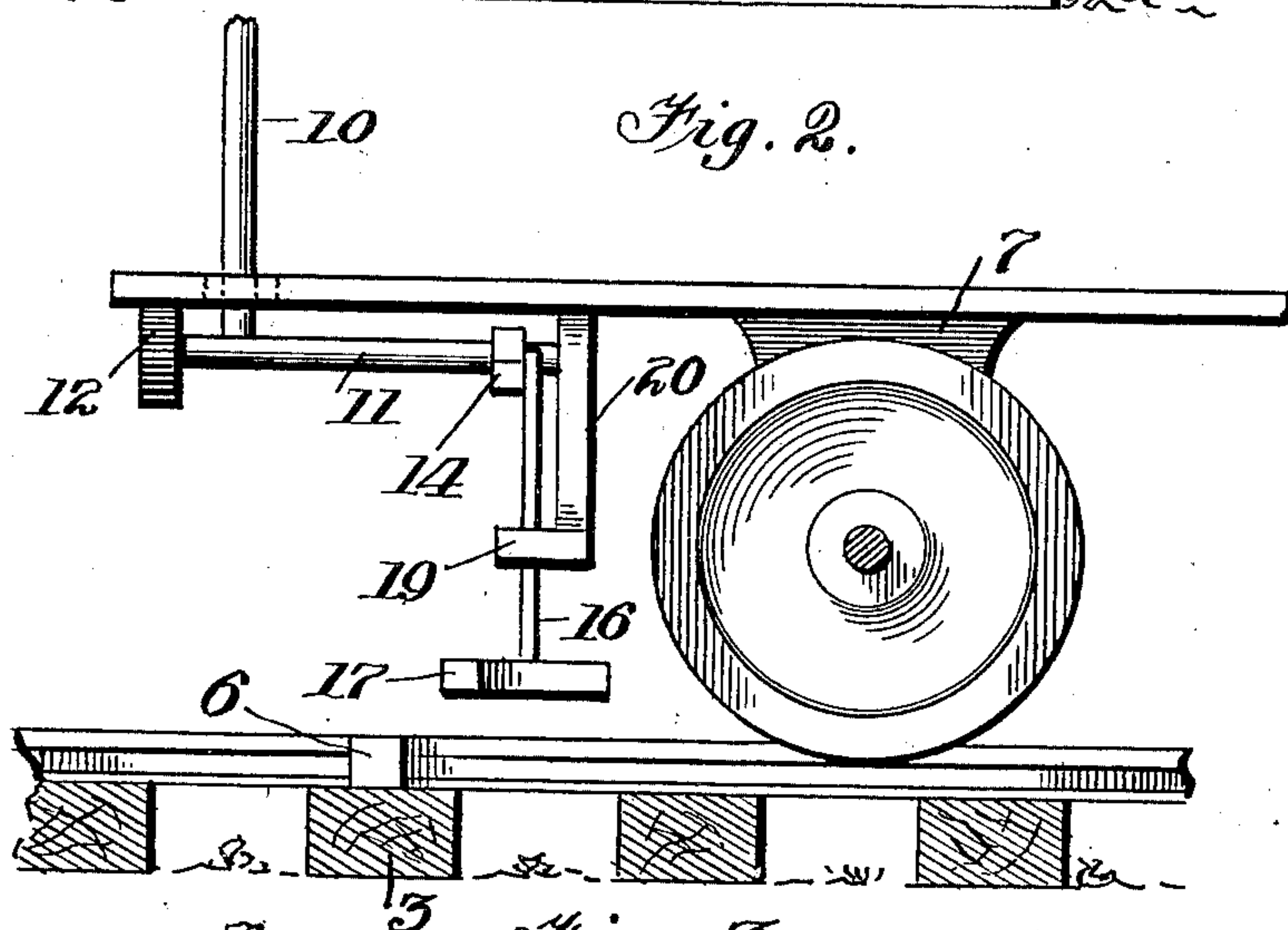
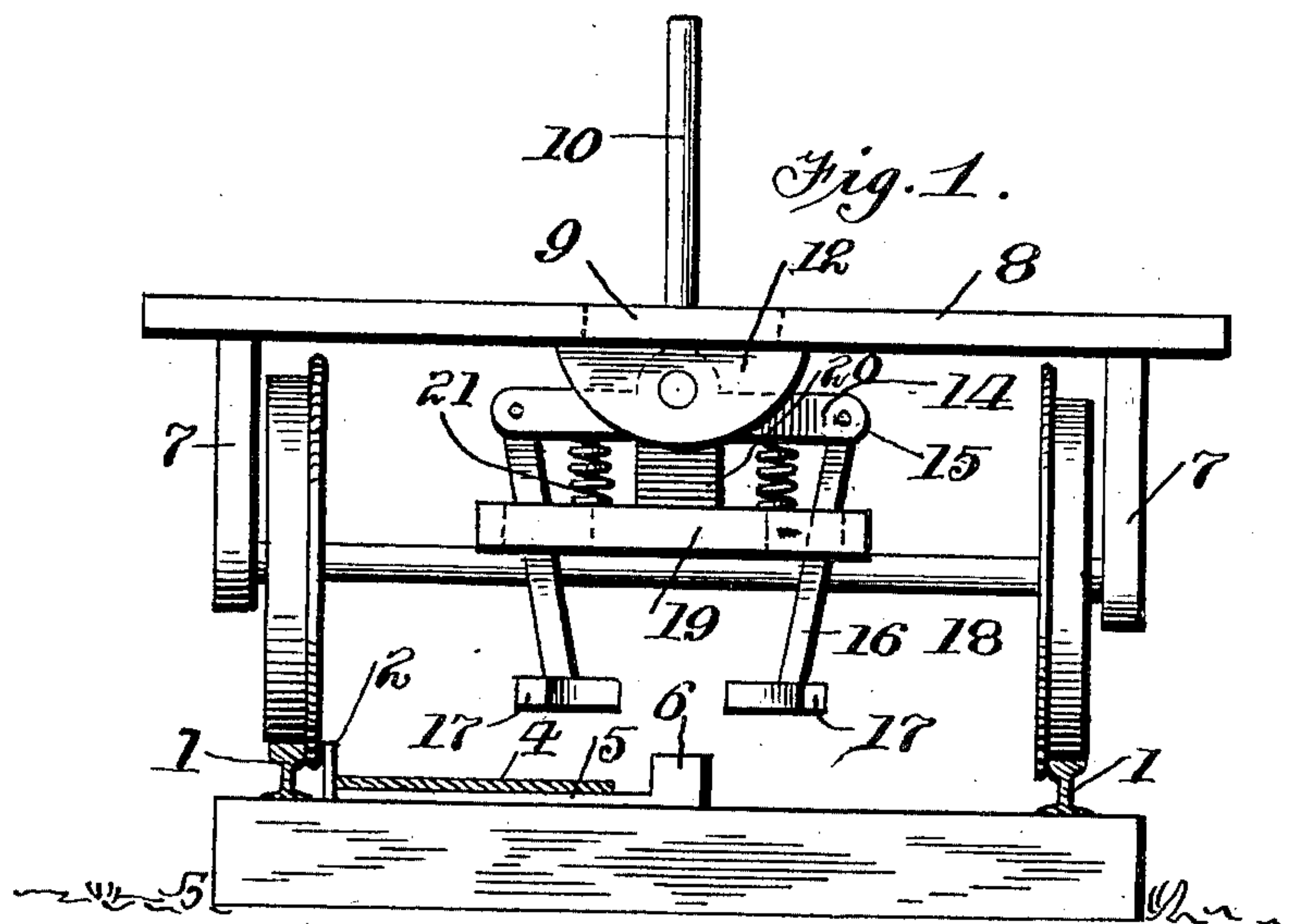
No. 697,238.

Patented Apr. 8, 1902.

T. COPE.
SWITCH OPERATING DEVICE.

(Application filed Jan. 3, 1902.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

TROY COPE, OF NEW WATERFORD, OHIO.

SWITCH-OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 697,238, dated April 8, 1902.

Application filed January 3, 1902. Serial No. 88,299. (No model.)

To all whom it may concern:

Be it known that I, TROY COPE, a citizen of the United States of America, residing at New Waterford, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Switch-Operating Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in switch-throwing devices, and relates more particularly to that class that are operated from the platform of the car.

15 The present invention has for its object the provision of novel means whereby the switch-tongue may be thrown in either direction by the motorman or gripman.

20 The present invention still further contemplates to provide a device of this character that will be extremely simple in construction, strong, durable, comparatively inexpensive to manufacture, and highly efficient in its operation.

25 With the above and other objects in view the invention consists in the novel combination and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claim.

30 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

35 Figure 1 is a front view of the car-truck and body portion of the car having my improved switch-throwing mechanism attached thereto. Fig. 2 is a side elevation thereof. Fig. 3 is a longitudinal sectional view of the device and a plan view of the road-bed.

40 In the drawings the reference-numeral 1 represents the rails, 2 the movable switch-tongue, and 3 represents the cross-tie, having the guide 4 secured thereon. Through said guide extends the rod 5, which is secured to the switch-tongue, and the other end of said rod carries an upwardly-extending head 6.

45 The reference-numeral 7 represents the car, and 8 the platform thereof. In the platform of said car is formed a slot 9, through which extends the operating-lever 10, secured to the

rock-shaft 11, said rock-shaft secured at its forward end in the bracket 12, secured to the under face of the platform of the car, and at its other end carries a rocking-arm 14, having bifurcated ends 15, in which are pivotally secured levers 16. At the lower end of said lever 16 are attached shoes 17, which shoes extend at an angle to the lever 16, said lever 16 passing through the openings 18, formed in the guide 19, said guide being secured to the hanger 20, which is rigidly attached to the under face of the car-platform.

21 represents springs attached to the rocking shaft for the purpose of returning the levers to their normal position.

The operation of my improved device is as follows: When it is desired to either open or close the switch as the car approaches the switch-tongue, the operating-lever 10 is operated in either direction, as the case may be, thereby imparting movement to the rock-shaft 11, which in turn operates the rocking arm 14, thereby lowering one of the levers 16, carrying the shoe 17, which engages the head 6, thereby moving the rod 5 and operating the switch-tongue in one direction or the other, as the case may be. By reason of the shoe 17 being inclined at an angle the lateral movement may be given to the rod 5, as will be readily understood.

The many advantages obtained by the use of my improved device will be readily apparent from the foregoing description, taken in connection with the accompanying drawings.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

In a switch-operating device, the combination with the car having a slot formed therein, of an operating-lever extending through said slot, a rock-shaft suitably mounted beneath the platform of the car, said rock-shaft being rigidly secured to said lever, a rock-arm rigidly secured to said rock-shaft, a pair of downwardly-extending converging levers pivotally secured to the ends of said rock-arm, angularly-disposed shoes carried by the

lower ends of said levers, a hanger secured to the under face of the platform, an outwardly-extending slotted guide rigidly secured to said hanger, said levers passing through the
5 said slots formed in the guide, a pair of springs interposed between the said rock-shaft and the said guide, and a switch-tongue having a rod connected thereto with a head carried by the rod for engagement with said slots

whereby the switch-tongue is actuated, substantially as described.

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

TROY COPE.

Witnesses:

P. F. VOLLNOGLE,
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