

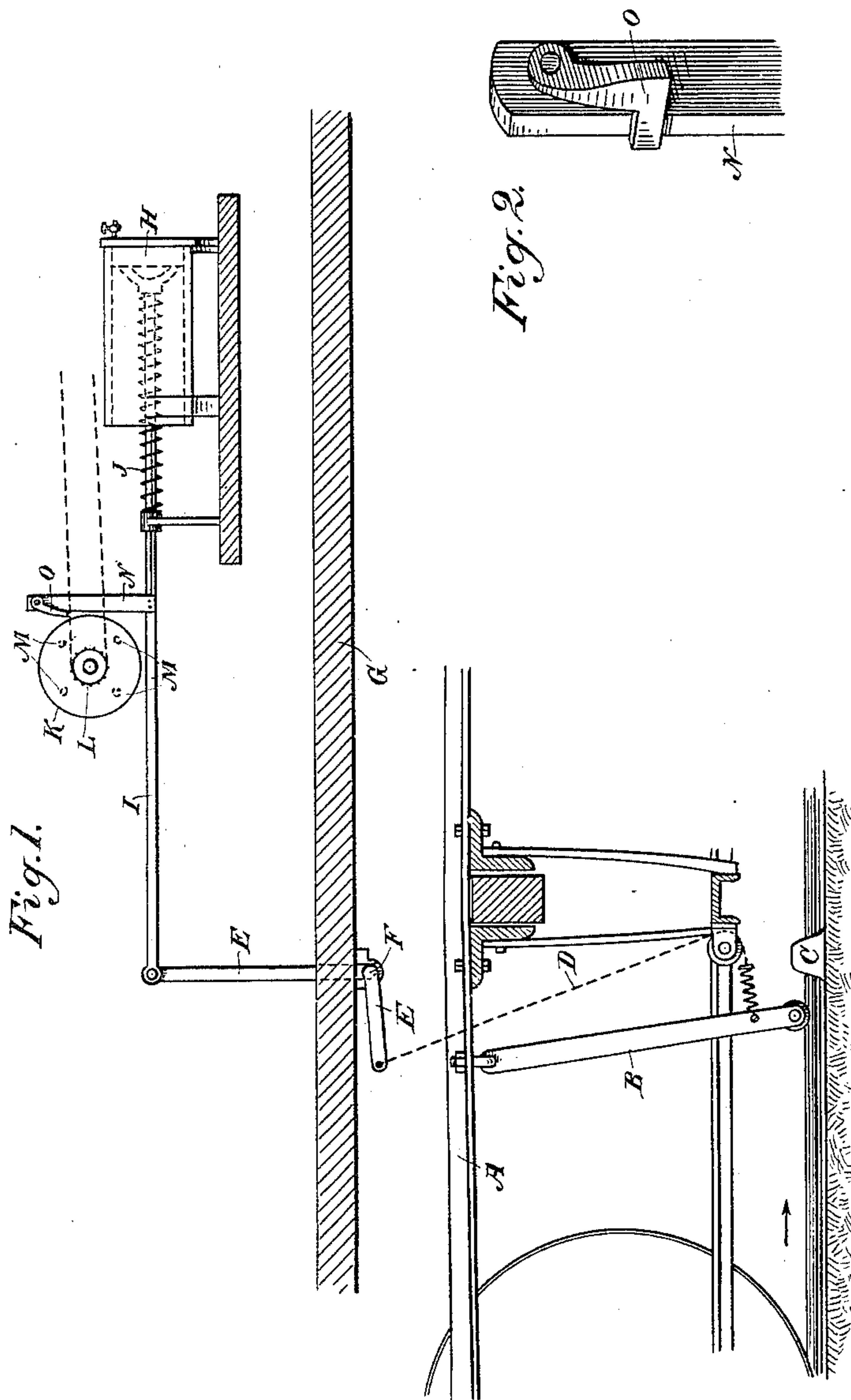
(No Model.)

B. W. LYON.

MECHANISM FOR OPERATING STATION INDICATORS.

No. 394,077.

Patented Dec. 4, 1888.



Witnesses,
Geo. H. Strong,
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UNITED STATES PATENT OFFICE.

BENJAMIN W. LYON, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE
PACIFIC INDICATOR COMPANY, OF SAME PLACE.

MECHANISM FOR OPERATING STATION-INDICATORS.

SPECIFICATION forming part of Letters Patent No. 394,077, dated December 4, 1888.

Application filed August 29, 1888. Serial No. 284,078. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN W. LYON, of the city and county of San Francisco, State of California, have invented an Improvement in Station-Indicators; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a means for operating station-indicators, which is especially designed as an improvement upon a device for which Letters Patent were issued to me June 26, 1888, No. 385,314.

The object of my present invention is to provide a means for moving the rotary disk by which the indicating mechanism upon the car is actuated, and to overcome the difficulty which arises when a rack and pinion are used for this purpose. When the rack is drawn back so far as to become disengaged from the teeth of the pinion, it is not possible to always secure the proper meshing of the teeth when they again come together.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a vertical section taken through the car-truck and the floor of the car, showing my mechanism. Fig. 2 is a perspective view showing the support and the swinging latch which engages the pin upon the rotary disk while moving in one direction, and is disengaged therefrom when moving in the opposite direction.

A is the truck-frame of the car.

B is the swinging lever, the upper end of which is hinged or fulcrumed upon the truck-frame, and the lower end (which is provided with a friction-roller or is otherwise suitably constructed for the purpose) engages the fixed obstructions C, placed at intervals along the line of the road-bed. When the lever B comes in contact with one of these obstructions, it is forced backward, and acting through a chain or cord, D, pulls one arm of a bell-crank lever, E, which is fulcrumed at F upon the car-body G.

H is a cylinder containing a piston, and I is a rod uniting this piston with the upper end of the bell-crank lever E, so that by means of this bell-crank lever the piston is drawn backward within its cylinder, in a man-

ner similar to that described in my former patent, and when released the piston is slowly returned to its normal position in the cylinder by the action of the spring J.

K is the disk or wheel, fixed upon the shaft of a band or chain pulley, L, through which power is communicated from the rod I to move the indicator, (which is not shown in the present case,) in the following manner: Projecting from the face of the wheel or disk K, and on the opposite side to the pulley L, are pins M. A post or standard, N, extends upward from the connecting-rod, I to which it is secured. Upon this post is fulcrumed the swinging latch O, (plainly shown in Fig. 2,) in such a position that when the rod I is forced backward by the action of the levers above described it will carry the post N and the latch O, and this, engaging with one of the projecting pins M upon the disk K, will rotate the disk, and with it the chain-wheel L, so as to actuate the indicating mechanism. As the rod I is returned to its normal position, the lower end of the latch O will swing out of the way as it passes either of the pins M which may be in line with it, and this allows the rod I to return the latch for the next impulse.

It will be manifest that the latch O may be suspended, as shown in the drawings, so as to engage the pins above the center of the wheel K, or it may be suspended from the post below the center, so as to engage the pins upon that side, by so arranging it as to swing loosely in the opposite direction from what it swings when above the center. It is also manifest that the arrangement of the dogs or latches may be varied, the object being to make them so as to engage the pins and rotate the disk when the rod I is moving in one direction, and to move loosely over the pins when it is moving in the opposite direction, and thus provide a positively-operating device which will not be open to the objectionable features of the rack and pinion. By this construction it is possible to cause the dogs or latches to engage the teeth of the wheel and actuate it with accuracy whenever the rod I is moved, while the latches will swing clear of the pins when moving in the opposite direction.

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

5 In a station-indicator, the pivoted lever suspended from the car-truck, so as to come in contact with the fixed lug or obstruction in the road-bed, a lever, E, journaled upon the car-body, a connection between one end of said lever E and the pivoted suspended lever,
10 a reciprocating piston-rod connected with the opposite end of said lever, an air-cylinder on the car, within which the piston of the reciprocating rod operates, and an indicating apparatus, in combination with the swinging dogs

or latches carried by the reciprocating rod, 15 and a wheel or disk having projecting pins with which the swinging dogs engage when passing the wheel or disk in one direction, the said dogs swinging clear of the projecting pins when passing the wheel or disk in an opposite direction, substantially as herein described. 20

In witness whereof I have hereunto set my hand.

BENJAMIN W. LYON.

Witnesses:

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