

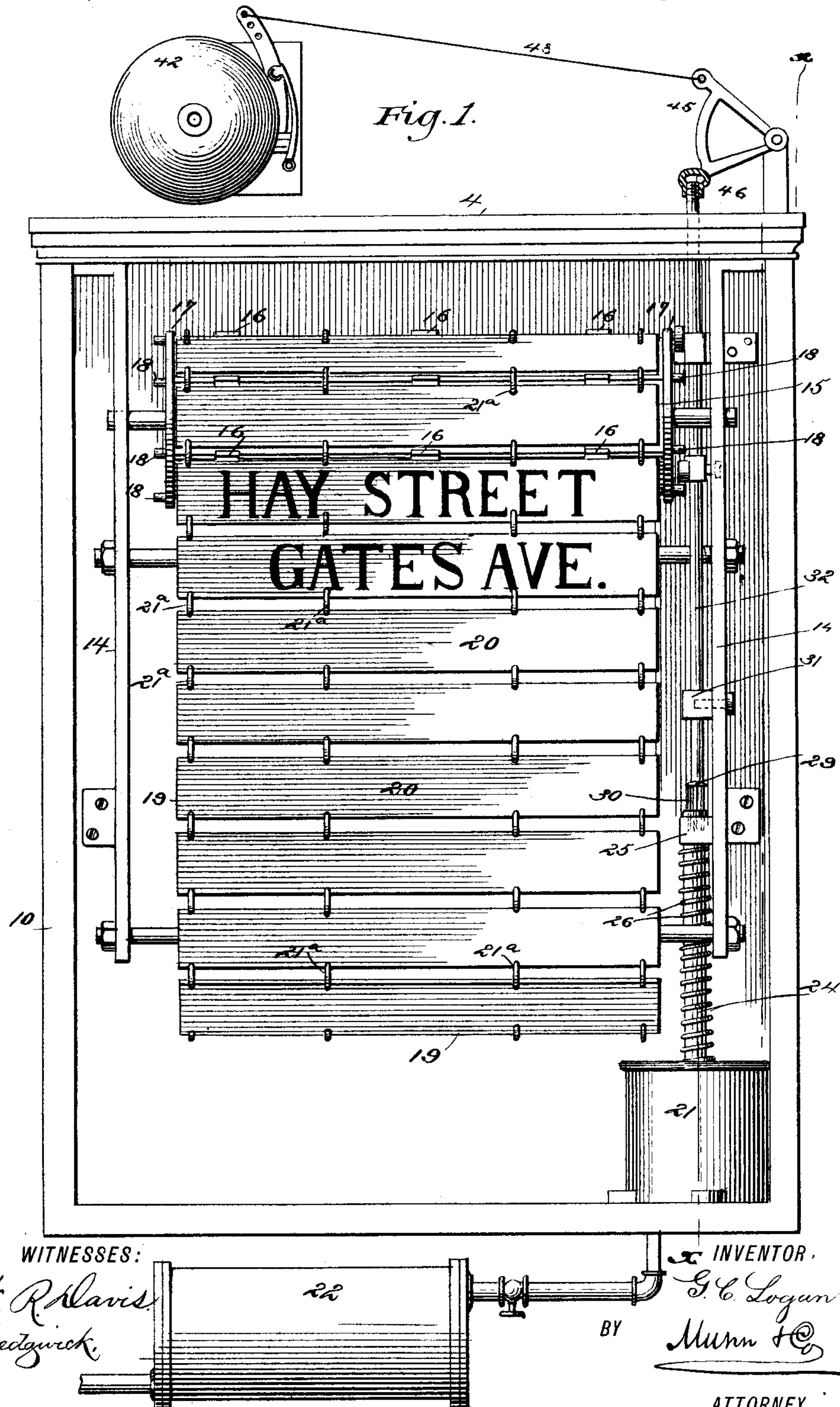
(No Model.)

3 Sheets—Sheet 1.

G. C. LOGAN.
STATION INDICATOR.

No. 388,209.

Patented Aug. 21, 1888.



(No Model.)

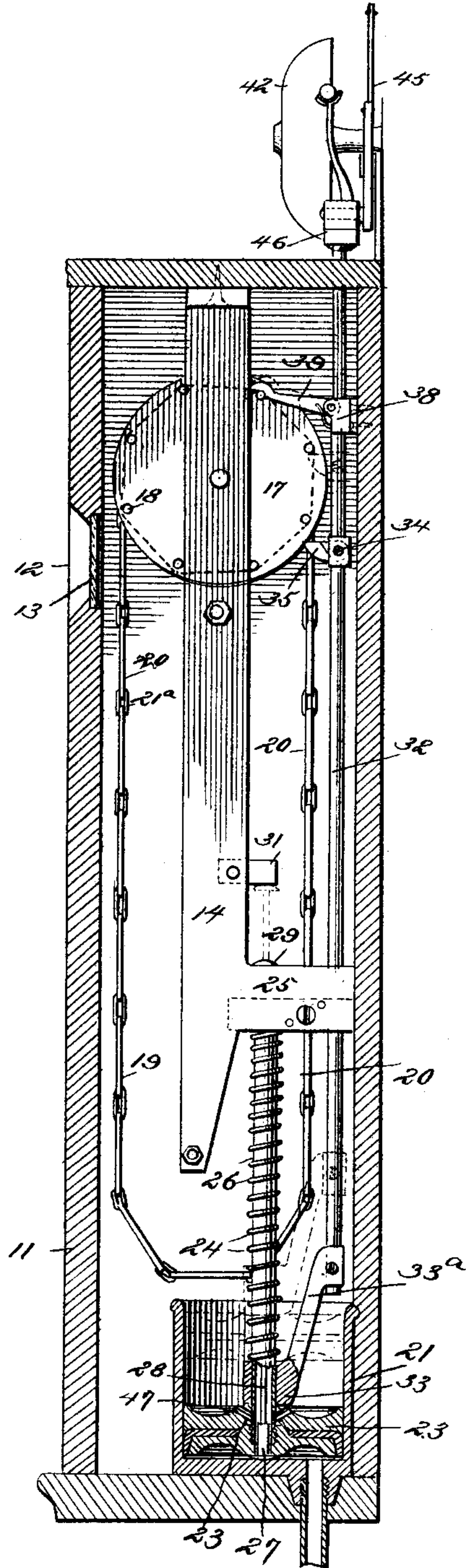
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Fig. 2.



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(No Model.)

3 Sheets—Sheet 3.

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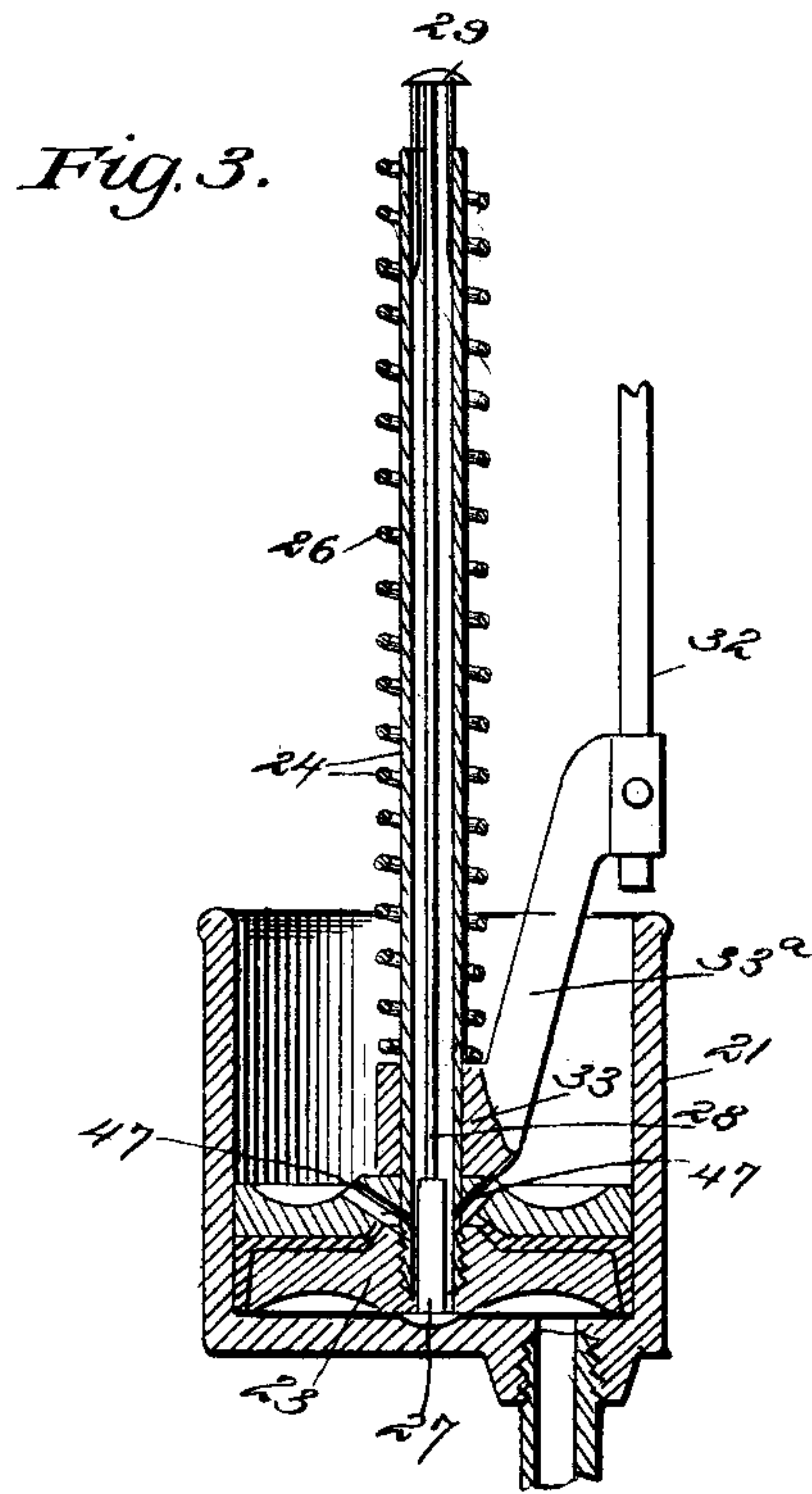


Fig. 4.

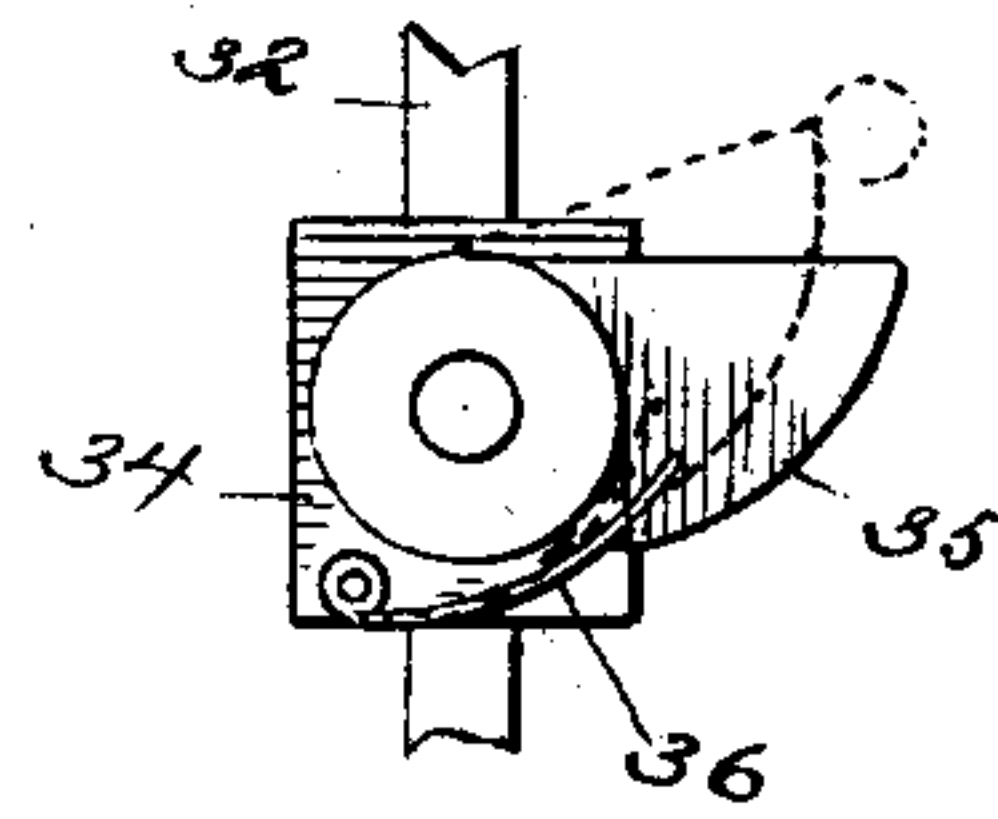


Fig. 5.

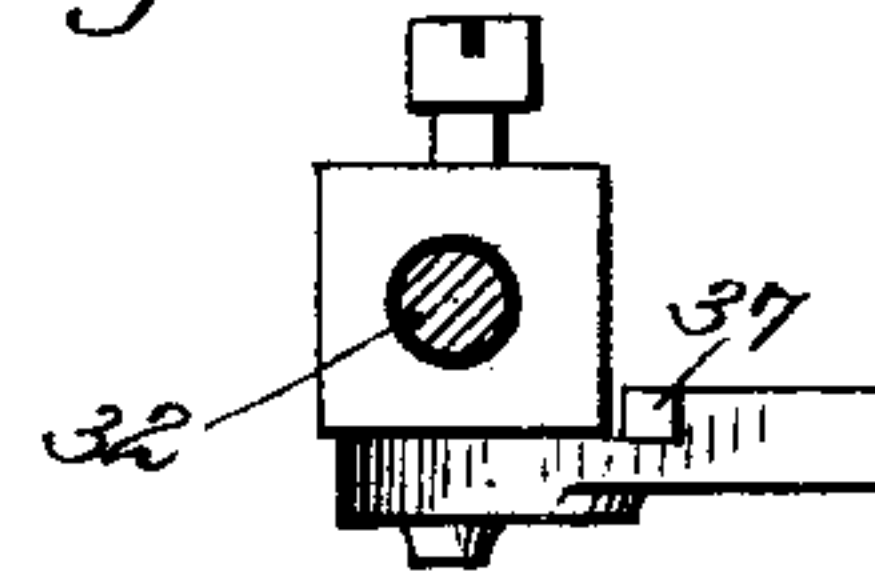


Fig. 6.

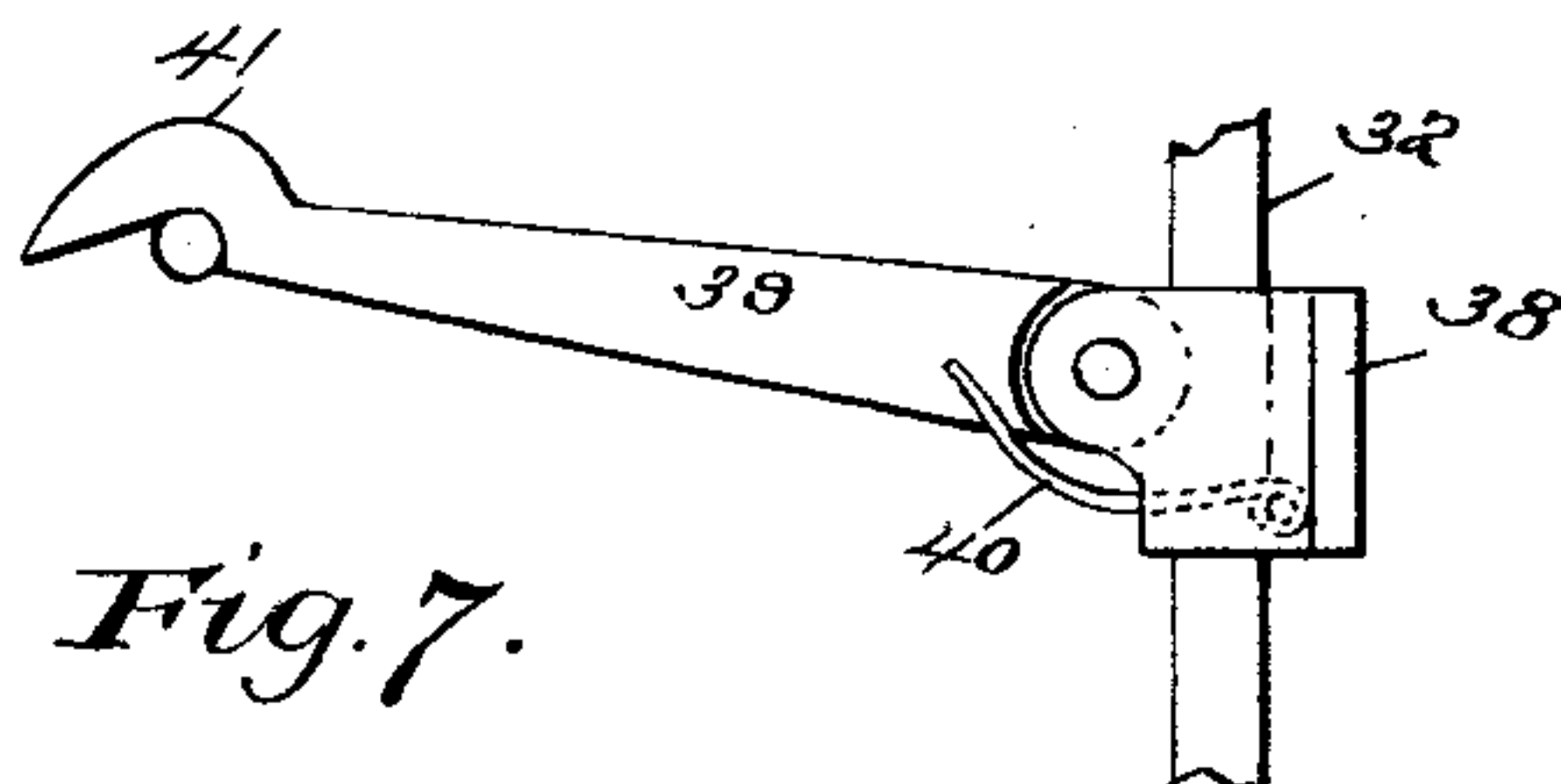
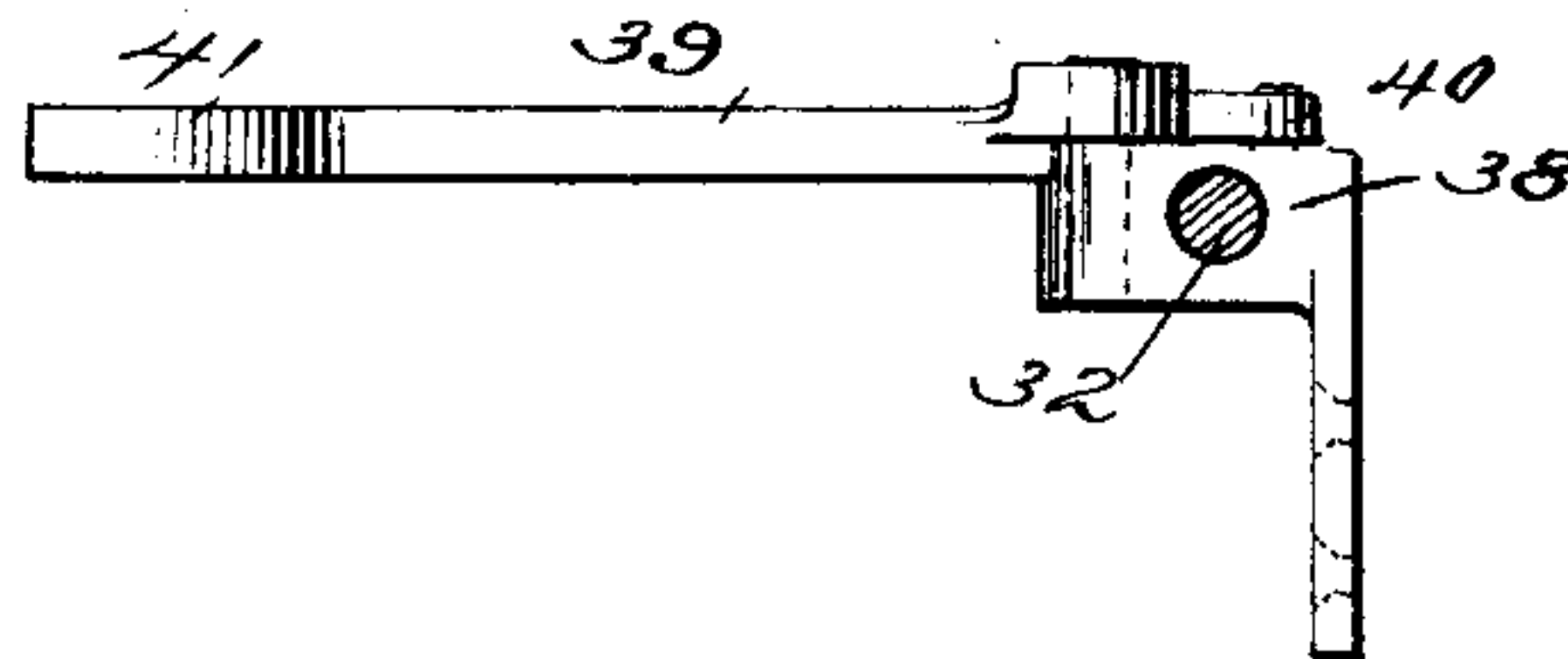


Fig. 7.



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UNITED STATES PATENT OFFICE.

GEORGE C. LOGAN, OF NEW ORLEANS, LOUISIANA.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 388,209, dated August 21, 1888.

Application filed May 31, 1888. Serial No. 275,645. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. LOGAN, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and
5 Improved Station-Indicator, of which the following is a full, clear, and exact description.

My invention relates to an improvement in station-indicators, and has for its object to provide a means whereby an approaching station
10 may be indicated within a car, and wherein the apparatus containing the names of the several stations may be operated from the engine or car; and the further object of the invention is to provide a device of simple and durable
15 construction which may be readily manipulated and not liable to disarrangement.

The invention consists in the construction and combination of the several parts, as will be hereinafter set forth, and pointed out in the
20 claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

25 Figure 1 is a front elevation of the device with the front plate removed. Fig. 2 is a transverse vertical section on line *xx* of Fig. 1. Fig. 3 is a vertical section of the air-cylinder and piston. Fig. 4 is a side elevation
30 of the trip-rod block and actuating-pawl. Fig. 5 is a plan view of the same. Fig. 6 is a side elevation of the drum-retaining latch, and Fig. 7 is a plan view of the same.

In carrying out the invention, a box or casing, 10, preferably rectangular in contour, is
35 attached to the wall of a car in such position as to be most readily seen by the greatest number of passengers. The front 11 of the casing 10 is provided above the center with a transverse opening, 12, which opening is ordinarily
40 closed by a glass or other transparent plate, 13, as best shown in Fig. 2. The said front of the casing may be permanently fixed to the sides and ends, or be hinged thereto to form a
45 door, as desired.

Within the casing 10 vertical brackets 14 are attached, preferably, to the top or back, which brackets extend downward from the top near
50 each side of the casing to within a suitable distance of the bottom, as is best shown in Fig. 1. Near the upper end of the casing a

drum, 15, is pivoted in the said brackets 14, which drum is preferably octagonal in cross-section and provided longitudinally at the several angles upon the periphery with a series
55 of lugs or projections, 16. The said drum is further provided at the ends with disks 17, which disks are adapted to carry upon their outer faces a series of horizontally-projecting pins, 18, one pin being preferably affixed to
60 the disk in alignment with each angle of the drum.

The drum 15 is adapted to carry an endless apron, 19, which apron consists of a series of boards, 20, constructed of card-board or equivalent light material, the several boards being of
65 a length slightly less than the distance between the disks of the drum and of a width nearly equal to the several faces of the same. In forming the apron the boards 20 are united by a
70 series of links, 21^a, as best shown in Figs. 1 and 2; but these links may be substituted by other equivalent devices. Owing to this construction, as the drum 15 revolves, the boards
75 lie flat upon the face of the said drum, permitting the projections 16 to intervene the several boards and retain the same as they fall upon the drum in their proper position, as is also best illustrated in Fig. 1.

In the base of the casing at one side a cylinder, 21, is located having an open top, which
80 cylinder communicates with an air-cylinder, 22, located beneath the engine or beneath the several cars, as may in practice be found most desirable. Within the cylinder 21 a piston, 23, is held to reciprocate. The rod-stem 24
85 thereof is tubular and projects upward through an arm, 25, integral with one of the brackets 14, as best shown in Fig. 2. The tubular stem is surrounded by a spiral spring, 26, which
90 spring has a bearing upon the collar 33, attached to the piston-rod at one end and against the bracket-arm at the upper end. The lower end of the piston-head at the center is provided with an aperture, in which aperture a
95 valve, 27, is held, the said valve being provided with a rod, 28, extending upward through the tubular piston-rod above the top thereof, the rod 28 terminating at the upper end in a
100 button, 29, being guided through the medium of springs 30, attached to said button and extending downward within the piston-rod to

bear against the inner side thereof, as best illustrated in Fig. 3.

Above the bracket-arm 25 a second arm, 31, is secured, which arm is adapted to receive the button 29 as the piston ascends and limit the motion of the rod 28 and likewise the movement of the piston. From an arm, 33^a, extending from the collar 33, fast on the piston-rod above the piston-head, a trip-rod, 32, is projected upward through the top of the casing at one side of the drum. Upon the trip-rod 32 a block, 34, is secured, upon which block a pawl, 35, is pivoted, the said pawl being held in a horizontal position at right angles to the block by a spring, 36, secured at one end of the block 34, the other end of the said spring being held in a slot formed in the face of the pawl, as best shown in Fig. 4.

The upper surface of the pawl is flat and adapted for engagement with the several pins 18 of the disk. The pawl 35 is free to move upward, but is prevented from moving downward beyond its normal position by an offset, 37, formed in the upper face of the pawl, which recess is adapted to engage a face of the block 34, as best shown in Fig. 5, or other equivalent means may be substituted.

A second block, 38, is secured to the back of the casing above the block 34, upon which block a latch, 39, is pivoted, the said latch being normally held in a horizontal position over the pins of the drum through the medium of a spring, 40, secured to said latch and block in a similar manner as the spring 36 of the pawl.

The latch 39 consists of an arm provided with hook-like head 41, as best shown in Figs. 6 and 7. The head 41 of the latch is adapted to engage the several pins 18 of the drum, being free to move upward, but normally retained in a horizontal position in engagement with the pin through the medium of the afore-said spring 40.

Over the casing 10 a suitable gong, 42, is attached to the car-body within the same, the trip-lever of which gong is connected by a chain, 43, with a bell-crank, 45, pivoted upon a suitable standard attached to the upper end of the casing. The bell-crank 45 is actuated by engagement with the head 46 of the trip-rod 32, as best illustrated in Fig. 1. Thus, in operation, when the air is admitted below the piston 23 the said piston is elevated, which movement also elevates the trip-rod 32, whereupon the pawl 35 engages the nearest pin 18, carrying the pin above the one in contact to an engagement with the hooked end of the latch 39, which latch, being forced upward as the drum revolves, is thereupon brought down to a bearing upon the pin through the medium of the spring 40. This having been accomplished, the button 29 of the piston, which is normally elevated above the piston-rod, is brought in contact with the arm 31, whereupon the valve 27 is opened and the air permitted to escape through diagonal ports 47 in the piston-head out through the

cylinder 21, as best shown in Fig. 2, whereupon the said head is permitted to resume its normal position. It will thus be observed that at every elevation of the piston the pins of the disk are made to change position, causing one of the boards at each time to register with the opening 12 in the casing. When the trip-bar 32 is elevated, the head 46 will act upon the bell-crank 45, and ring the gong 42 simultaneously with the appearance of the new board before the opening 12 in the casing.

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

1. In a station-indicator, the combination, with a drum and an endless indicating-belt carried by said drum, of an air-cylinder below the drum, a piston reciprocating in said cylinder, a trip-rod connected to the piston, a pawl on the trip-rod for engaging the drum to rotate the same, and a latch on the said trip-rod and engaging the drum to lock it in position, substantially as described.

2. In a station-indicator, the combination, with a drum provided with pins projecting from its ends, and an indicating endless belt carried by said drum, of an air-cylinder below the drum, a piston in the said cylinder, a trip-rod secured to the piston and projecting past the drum, a spring-pressed pawl carried by the trip-rod and engaging the pins of the drum to rotate the same by the movement of the said rod, and a latch carried by the trip-rod and engaging the pins on the drum for holding it in the position to which it has been moved, substantially as herein shown and described.

3. In a station-indicator, the combination of a polygonal drum provided with lugs projecting from the angles of the drum, an indicating-belt consisting of flat boards united a short distance apart by links to receive the lugs on the drum between them, and means for rotating said drum, substantially as herein shown and described.

4. In a station-indicator, the combination, with a polygonal drum provided with pins projecting from its ends and with lugs projecting from the angles of the drum, and an endless belt carried by the drum and consisting of spaced slats united by links, of an air-cylinder below the drum, a valved piston in the said cylinder, a trip-rod secured to the piston and projecting past the drum, a spring-actuated pawl mounted on the trip-rod and engaging the pins on the end of the drum, and a pivoted latch on the trip-rod above the said pawl and engaging the said pins to hold the cylinder in the position into which it has been moved, substantially as herein shown and described.

5. In a station-indicator, the combination, with a drum and an endless indicating-belt carried by the said drum, of an open-top cylinder below the drum, a centrally-apertured piston provided with a tubular piston-rod and with posts leading from the central aperture, a valve in the said piston and pro-

vided with a rod extending into the tubular piston-rod and adapted to be engaged by a projection carried by the frame, and means for operating the drum from the said piston, 5 substantially as herein shown and described.

6. In a station-indicator, the combination, with a casing, a drum journaled in the upper part of the casing, and an endless indicating-belt carried by the drum, of an open-top air- 10 cylinder in the lower part of the casing, a centrally-apertured piston provided with a tubular rod and with ports leading from the central aperture, a spring surrounding the tubu-

lar rod between a collar on the piston and a guide for the piston-rod, a valve in the piston 15 provided with a rod projecting through the tubular rod, a fixed projection in the casing against which the upper end of the said valve-rod abuts, and means for operating the drum from the piston, substantially as herein shown 20 and described.

GEORGE C. LOGAN.

Witnesses:

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JNO. I. WARD.