

No. 882,063.

PATENTED MAR. 17, 1908.

W. H. HONISS.  
FARE REGISTER OPERATING MECHANISM.

APPLICATION FILED APR. 13, 1906.

2 SHEETS—SHEET 1.

Fig. 2

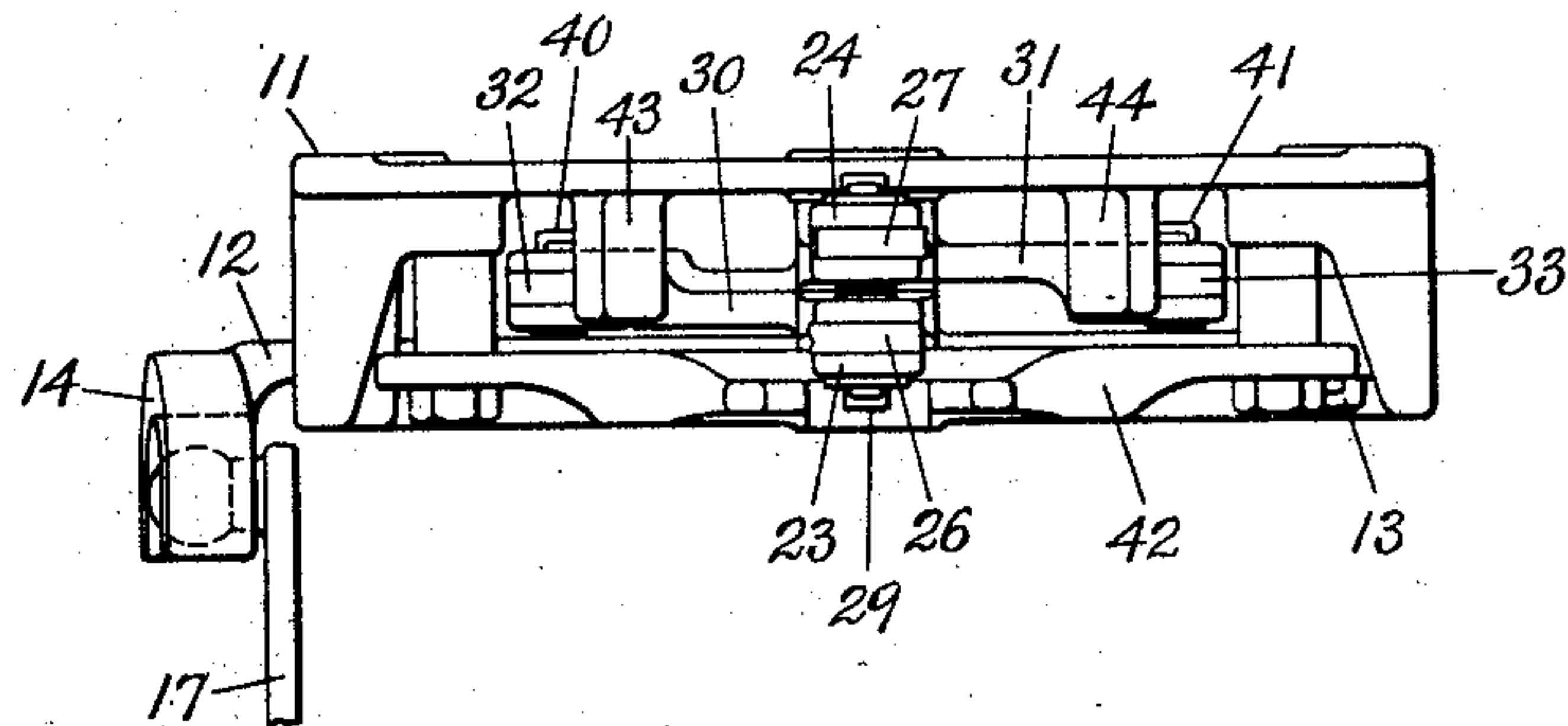


Fig. 3

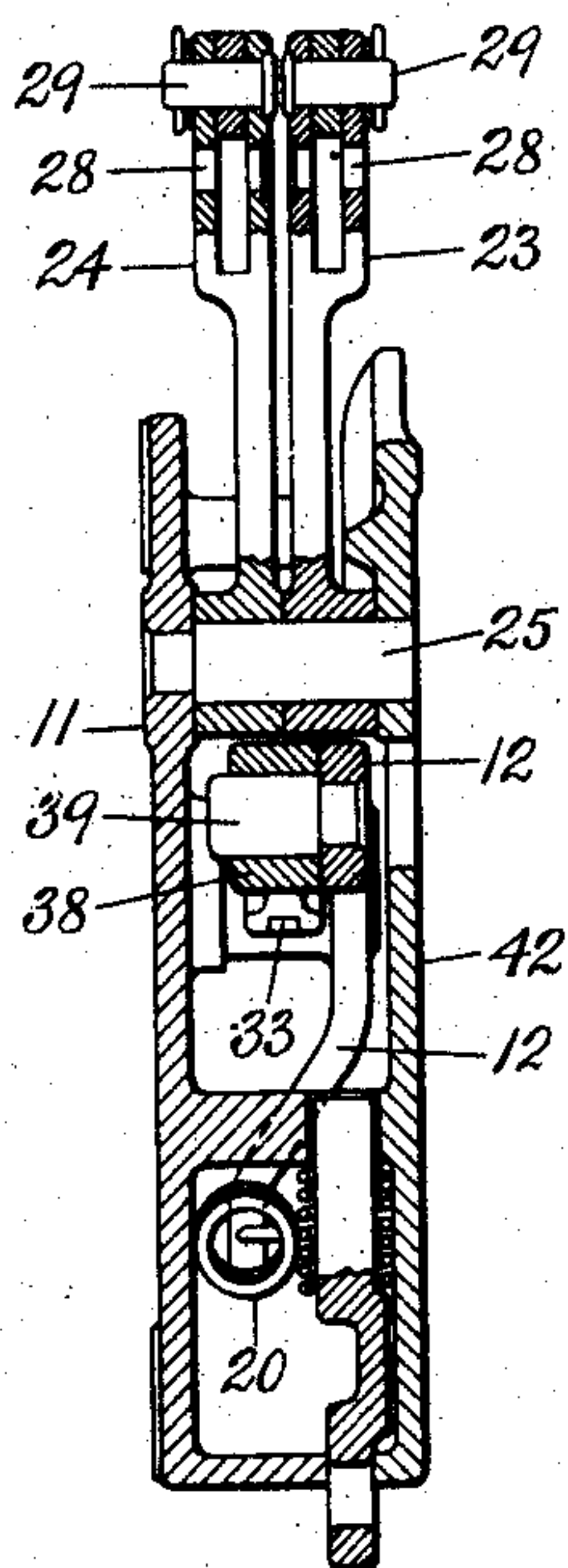
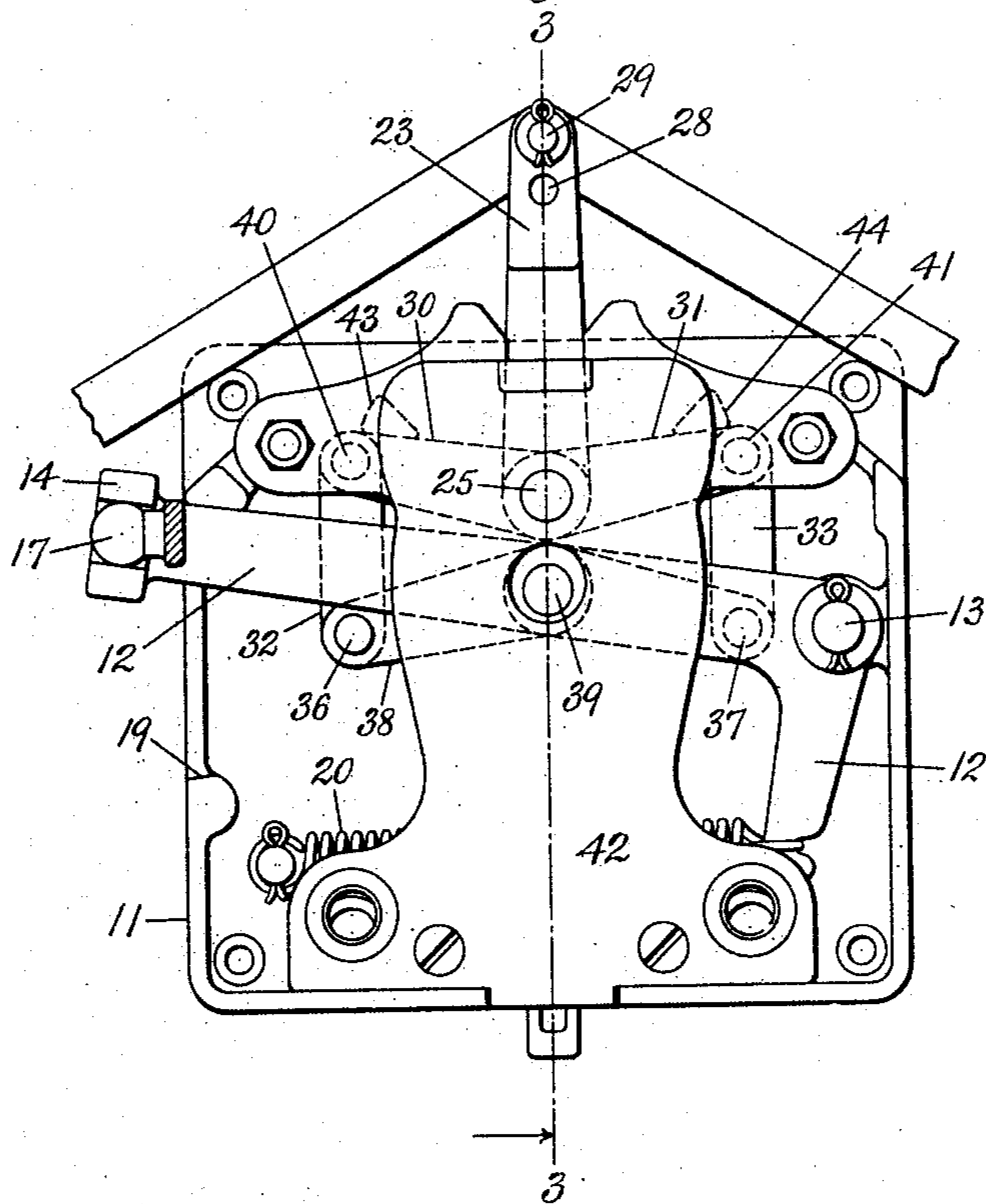


Fig. 1



Witnesses:  
H. Mallner  
Janette S. Ellsworth

Inventor  
W. H. Honiss.

No. 882,063.

PATENTED MAR. 17, 1908.

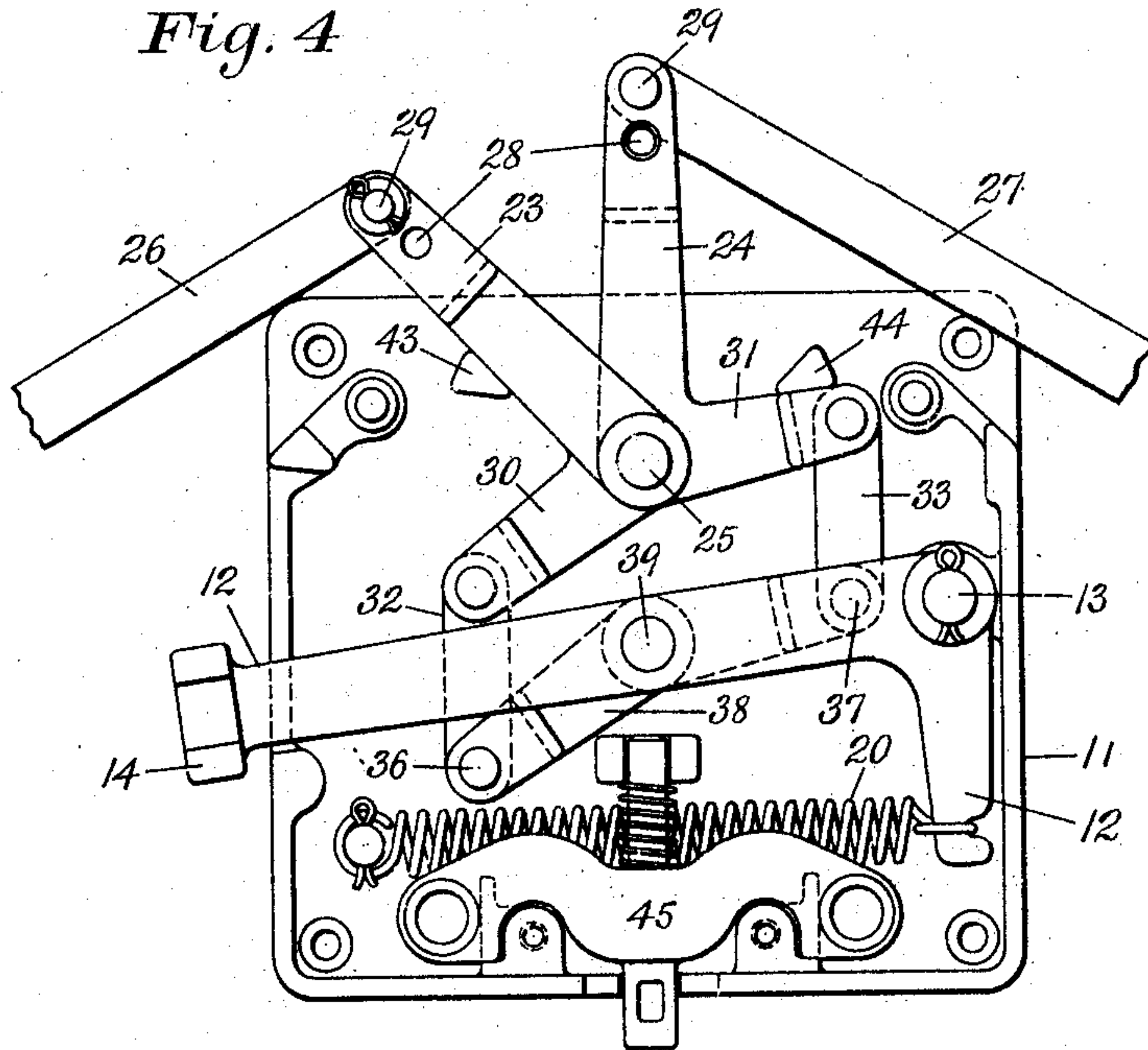
W. H. HONISS.

FARE REGISTER OPERATING MECHANISM.

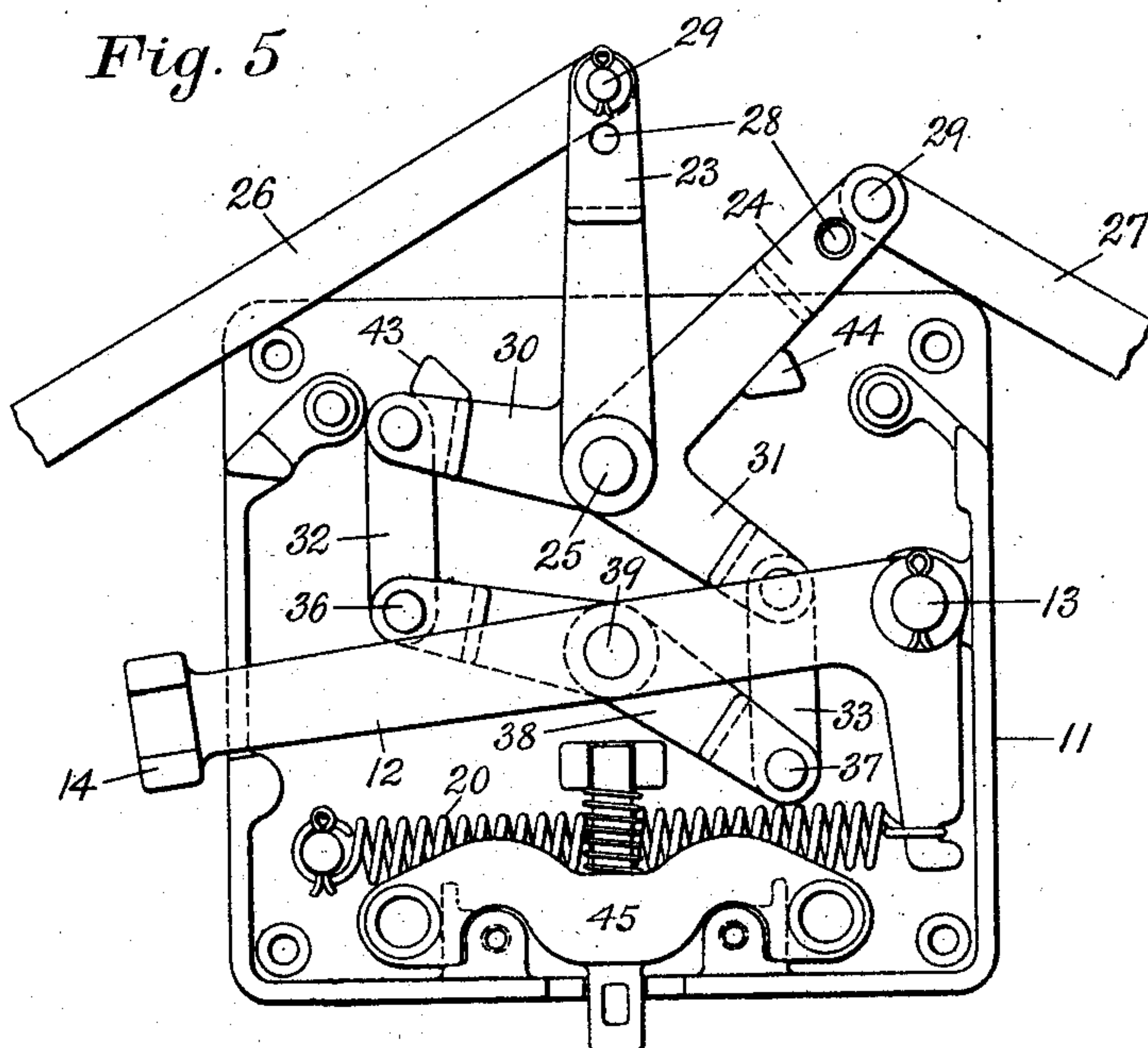
APPLICATION FILED APR. 13, 1906.

2 SHEETS--SHEET 2.

*Fig. 4*



*Fig. 5*



*Witnesses:*

H. Mallner  
Janette S. Ellenworth

*Inventor*

Wm H. Horner.



# UNITED STATES PATENT OFFICE.

WILLIAM H. HONISS, OF HARTFORD, CONNECTICUT.

## FARE-REGISTER-OPERATING MECHANISM.

No. 882,063.

Specification of Letters Patent.

Patented March 17, 1908.

Application filed April 13, 1906. Serial No. 311,504.

*To all whom it may concern:*

Be it known that I, WILLIAM H. HONISS, a citizen of United States, and resident of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Fare-Register - Operating Mechanism, of which the following is a full, clear, and exact specification.

10 This invention relates to counting machines, fare registers and similar machines; and consists in an improved intermediate or connecting device between the registering and counting mechanism proper, and the  
15 operating rods, ropes, keys or levers which are directly engaged by the hand of the operator, this device serving to translate or convert the operating movements received from diverse directions, into the particular uni-  
20 form movement required to actuate the registering or counting mechanism.

This invention is herein shown in a form adapted for use with the fare registers commonly employed in street cars, in which the  
25 register is operated from different portions of the car by means of rods or ropes, which commonly extend lengthwise of the car, and on opposite sides thereof, or at any rate, from different locations, and usually from  
30 different directions relative to the register, these contrary or diverse movements being by this device translated or converted into the movement of uniform direction and extent required to operate the fare registering  
35 mechanism.

This improved apparatus, although susceptible of being incorporated directly with the registering mechanism, and upon or within the casing which carries that mechanism, is herein shown as being mounted in an independent or supplemental base or back which is intended to be attached more or less permanently to the wall of the car or vehicle, the registering mechanism proper being  
40 mounted in a separate casing, removably attached to the more permanent base fixture. These register casings, besides being removable are also preferably made interchangeable so that any register may be applied to or removed from any base fixture without attaching or detaching, or otherwise interfering with the cord, or rod connections which extend from the base fixture to different portions of the car.

55 Figure 1 of the drawings is a front view of the register base looking at the face to which

the registering mechanism is attached and showing the operating parts in their resting position. Fig. 2 is a plan view projected from Fig. 1. Fig. 3 is a side view in section  
60 through the line 3—3 of Fig. 1. Figs. 4 and 5 are front views similar to Fig. 1, with the front plate removed, and show the mechanism in the two positions either of which it may assume at the end of the operating  
65 stroke and before the parts have been returned to their position of rest, the two positions differing according as the mechanism is operated from one side of the car or the other.

70 The register base to which the registering mechanism is removably attached, and which is adapted to be permanently secured to any convenient part of the car, consists of the plate 11 and the levers and connections  
75 mounted thereon. The operating lever 17 of the registering mechanism is actuated by the lever 12 which receives its motion from a pair of bell-crank levers 23 and 24, which are pivoted one in front of the other on the stud  
80 25, appurtenant to the base 11. The upper ends of the levers 23 and 24 are connected respectively to the bars 26 and 27, which are connected to rock-shafts generally extending  
85 lengthwise along the opposite sides of the car, and provided with handles or other conveniences by which they may be operated by the conductor. The lower arms 30 and 31 of the  
90 levers 23 and 24 respectively extend in opposite directions from the stud 25 and have depending links 32 and 33 connected at 40 and 41 respectively to their outer ends. Stops  
95 43 and 44 are provided for preventing backward movements of the yoke 38 beyond the position shown in Fig. 1, by engaging respectively the arms 30 and 31. The forward movement of the actuating lever may be limited by the shoulder 34. These stops are so placed as to permit a full stroke of the registering mechanism. The lower ends of the  
100 links 32 and 33 are connected at 36 and 37 with a floating lever or yoke 38 pivoted at 39 to the actuating lever 12 which swings on the stud 13 appurtenant to the base 11. The actuating lever 12 is capable of oscillating  
105 movement to the extent represented by the two positions shown in Fig. 1 and Figs. 4 or 5, and is pressed upward by the action of the spring 20. It is provided with a forked end 14 adapted to engage the lever 17 of the reg-  
110 istering mechanism which mechanism may be retained on the base by the latch 45. A



plate 42 may be secured to the front of the base 11, serving to hold the parts in place, and to support and brace the outer ends of the pivot studs, or some of them.

5 The operation of the device is as follows:—

When the rock shaft attached to the bar 26 is operated by the conductor, it swings the lever 23 over as shown in Fig. 4, and pushes the link 32 downward, thus carrying downward the left-hand end of the yoke 38. The right-hand end of the yoke 38 cannot move upward because the arm 31 to which the link 33 is connected is against the stop 44. The pivot 37 therefore acts as a fulcrum for the yoke 38 so that the latter, by means of the connection at 39 swings the actuating lever 12 on the pivot 13. This moves the forked end 14 downward and causes it to operate the register by means of the lever 17. The downward movement may continue until stopped by the register mechanism, or until the upper arm of the device 23 engages the stop 43. As soon as the bar 26 is released the spring 20 returns the parts to the position of Fig. 1, the stop 43 arresting the return movement by engaging the arm 30. If now the bar 27 be operated it will draw the lever 24 over to the position shown in Fig. 5. This swings the yoke 38 on the pivot 36 as a fulcrum, and the effect on the lever 12 is substantially the same as when the pivot 37 acts as the fulcrum.

In some instances it may be found permissible or advisable to dispense with the connecting links 32 and 33, and have the ends of the arms 30 and 31 bear directly against their respective ends of the yoke 38, especially when used in connection with some types of registers in which the yoke may be mounted directly upon the prime moving member of the register itself, thereby enabling those types of registers to be detached from the base without paying any attention to these operating connections. Or the ends of the levers 30 and 31 may be connected with their respective ends of the yoke 38 by means of a pin and slot, this and other modifications being matters which are to be determined by the judgment of the designer, in view of the conditions of each particular case.

Where it is not considered desirable to have an independent base, separable from the register, these devices may be mounted directly upon the back of the register, either outside or inside of the casing. In the latter case, the arms 23 and 24 or the rods 26 and 27 may project through slots in the wall of the casing.

60 The operating levers 23 and 24 are herein shown to be bell-cranked, or approximately at right angles to their appurtenant members 30 and 31, because of the fact that the directions of pull of their respective connecting rods 26 and 27 are from opposite sides of the

apparatus; and therefore at a considerable angle with the direction of movement of the actuating member 12, the bell-crank form of these levers serving in conjunction with the yoke 38 to convert or translate these diverse 70 directions of pull into the uniform direction and extent of movement of the member 12, required for the uniform operation of the registering mechanism. In cases where the direction of pull is approximately downward, 75 or approximately coincident with the direction of movement of the actuating member 12, the connecting rods 26 and 27 might be connected directly to the ends of the yoke 38 by means of the pins 36 and 37; or to the ends 80 of the arms 30 and 31; and in either of these cases, the ends of the yoke, or the ends of the said arms may be extended to or beyond the sides of the base 11. By suitable proportioning the lengths of the respective arms or 85 levers, the extent of movement of the rods 26 and 27 may be in any desired proportion to the extent of movement of the actuating member 12. In the arrangement herein shown, the levers 23 and 24 are shown to be 90 provided with additional pivot holes 28 to receive the pivot pins 29; and when thus connected, a shorter movement of the rods is required to operate the actuating member 12.

An important feature of this invention is 95 that it provides for independent operation of either connection, without moving the other connection. This is illustrated in Figs. 4 and 5. In Fig. 4 the left side connection is operated by means of the rod 26 without moving 100 the right hand connecting members 24, 27 and 33, the yoke in that case swinging upon the pin 37 as a pivot. In Fig. 5, the right hand connection is shown to be operated without moving the left side connecting members 23, 26 and 32, the yoke in that case swinging upon the pivot 36. In most instances in which a registering or counting mechanism is thus operated from two or more keys or other connections, it is desirable 110 thus to operate either connection or key without moving the other connection or key.

The effect on the actuating lever 12 is substantially the same whether the lever 23 or the lever 24 is operated. The spring 20 115 holds both lever arms 30 and 31 against their respective stops, and the operation of either lever tends to increase the pressure of the other lever against its stop. If desired, a stop 19 may be employed to stop the downward movement of the parts at the end of their stroke, by engaging the actuating lever 12. An arrangement similar to that shown is preferable, however, as it places the arresting point nearer the source of motion. The 125 levers 23 and 24 need not swing on the same stud but may be placed side by side or otherwise disposed with reference to each other. While it is obviously preferable both for ease in manufacture and for symmetrical appear- 130



ance to keep the corresponding levers connections and center distances as near alike as possible, such an arrangement is not essential provided the parts are so arranged as to give the requisite motion to the actuating lever 12.

In many ways the mechanism may be modified and transposed to suit different environments and different conditions of service.

I claim as my invention:—

1. Means for operating registering mechanism having in combination with the actuating member of the register a yoke mounted for swinging movement upon and relative to said member, and independent operating means connected with the yoke to swing it in reverse directions for imparting the actuating movement to the said member.

2. Means for operating registering mechanism, having in combination with the actuating member of the register, a yoke pivotally mounted upon the actuating member, and independent operating means connected with different portions of the yoke.

3. Means for operating registering mechanism, having in combination with the actuating member of the register a yoke pivotally mounted upon the actuating member, and having arms extending in substantially opposite directions from the pivotal connection, and independent operating means connected with the opposite arms of the yoke.

4. Means for operating registering mechanism, having in combination with the actuating member of the register, a yoke, operating levers for receiving movements from different directions, and means connecting the levers with the yoke.

5. Means for operating registering mechanism, having in combination with the actuating member of the register, a yoke pivotally mounted upon the actuating member, operating levers and connections for transmitting the operating movement from different connections, and means for connecting the levers with different portions of the yoke.

6. Means for operating registering mechanism, having in combination with the actuating member of the register, a yoke pivotally mounted upon the actuating member, operating levers and connections for transmitting the operating movements from different directions, and means for connecting the operating levers with the yoke to swing it in opposite directions.

7. Means for operating registering mechanism, having in combination with the actuating member of the register, a yoke pivotally mounted upon the actuating member, operating levers and connections for transmitting the operating movement from different directions, a yoke pivotally mounted

upon the actuating member, and having arms disposed in opposite directions from its pivot, and means for connecting the operating levers with the arms of the yoke, to move the latter in opposite directions.

8. Means for operating registering mechanism, having in combination with the actuating member of the register a yoke, operating levers for transmitting movements from different directions, means connecting the levers with the yoke, and stops for limiting the backward movements of the yoke.

9. In a fare register, the combination of an actuating member for the registering mechanism, two levers mounted on axes adjacent to each other and remote from the actuating device, stops limiting the backward movement of the levers, and means connecting the levers with the actuating member, for translating the diverse movements of the levers into uniform movements of the actuating member.

10. In a fare register, the combination of an actuating member for the registering mechanism, two levers mounted to swing on axes which are in alinement with each other, stops limiting the backward movements of the levers, and means connecting the levers with the actuating member whereby the movement of either lever away from its stop holds the other lever against its stop, and imparts to the actuating device a movement which is substantially the same whichever lever is moved.

11. In a fare register, the combination of an actuating member for the registering mechanism, two levers adjacent thereto, stops limiting the backward movement of each lever, a yoke, links connecting the levers with the opposite ends of the yoke, and means for connecting the yoke to the actuating member at a point between its link connections.

12. The combination, in fare register operating mechanism, of an actuating member for the register, connections operating in diverse directions from different locations in a car, and means for translating the said diverse directions of movement into uniform forward movements of the actuating member, including a yoke carried by and pivotally connected to the actuating member, and means for articulating the said connections with the said yoke upon opposite sides of its pivotal connection with the said actuating member.

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

W. H. HONISS.

Witnesses:

CAROLINE M. BRECKLE,  
HANS MALLNER.