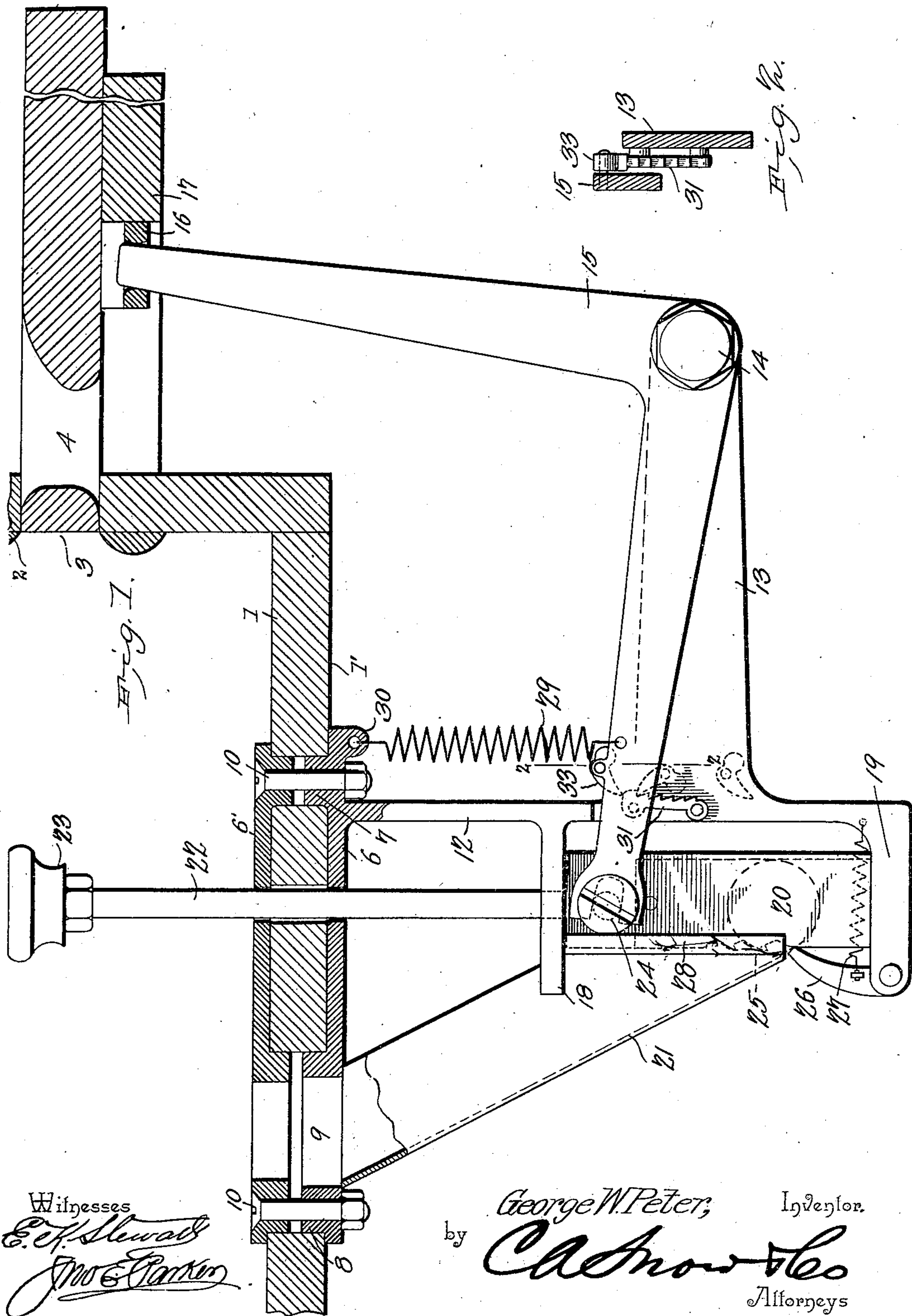


No. 725,867.

PATENTED APR. 21, 1903.

G. W. PETER.
VENDING MACHINE.
APPLICATION FILED JAN. 9, 1903.

NO MODEL.



UNITED STATES PATENT OFFICE.

GEORGE W. PETER, OF ST. LOUIS, MISSOURI.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 725,867, dated April 21, 1903.

Application filed January 9, 1903. Serial No. 138,406. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. PETER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented
5 a new and useful Vending-Machine, of which the following is a specification.

This invention relates to certain improvements in vending-machines, and particularly to that class of machines in which a plunger
10 connected to a discharging-slide is unlocked and allowed to operate on the insertion of a coin or check of the proper size.

The principal object of the invention is to improve and simplify the construction and
15 arrangement of the plunger and its connected parts and to provide a simple form of mounting by which all of the parts may be first assembled and then secured in position in the machine.

20 A further object of the invention is to provide improved means for preventing more than a single operative movement of the plunger on the insertion of one coin or after the insertion of each coin or check.

25 With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the ap-
30 pended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

35 In the accompanying drawings, Figure 1 is a sectional elevation of sufficient of a vending apparatus to illustrate the invention. Fig. 2 is a detail view of a portion of the device, showing the means for preventing more than
40 a single operative movement of the plunger after the insertion of a coin.

Similar numerals of reference are employed to indicate corresponding parts throughout both figures of the drawings.

45 In the drawings, 1 indicates a portion of the general framework and casing of an ordinary form of coin-controlled vending apparatus, in which 2 is a goods-receptacle, and 3 the discharge-slide, having a pocket 4 for
50 receiving single articles and discharging the same from the receptacle. This general class of machine is employed for vending cigars,

cigarettes, chewing-gum, and other articles. To the inner face of the horizontal wall 1' of the casing is secured a plate 6, having up-
55 wardly-projecting lugs 7 and 8, which fit into corresponding openings formed in the wall, and the lug 8 is provided with a slot 9 to permit the passage of a coin or check. As a convenient means of securing the plate 6 in
60 place a similar plate 6' is bolted to the upper side of the wall of the casing and is provided with corresponding lugs, the two plates being firmly secured together by means of bolts 10, and when these bolts are fastened in place the
65 whole of the plunger and its connected mechanism are in position in readiness for operation. The plate 6 is provided with an integral depending bracket 12, having a rearwardly-extending substantially horizontal arm 13, 70
provided at its outer end with an opening for the reception of a pivot-bolt 14, on which is mounted a bell-crank lever 15, forming the connecting means between the plunger and the
75 delivery-slide. The upper and substantially vertical arm of the bell-crank lever 15 is passed through a slotted lug 16, depending from the outer side of the delivery-slide, and said lug by contact with the inner wall of the casing in one direction of movement and by
80 contact with a fixed stop 17 in the opposite direction of movement prevents any excessive movement of either the plunger or the delivery-slide.

The bracket 12 is provided with a pair of
85 horizontal arms 18 and 19, the latter being provided with a substantially rectangular opening forming a guide for the lower portion of the plunger 20, the latter being in the form of a vertically-slotted plate open at one
90 end to permit the entrance of a coin from the coin-chute 21, the upper end of which is in alinement with the coin-slot 9. The arm 18 limits the upward movement of the plunger, and said arm is provided with a suitable
95 opening for the passage of the plunger-rod 22, which extends up through suitable openings formed in the plates 6 and 6' and is provided at its upper end with a knob 23 for the convenience of the operator. On one side of
100 the plunger is a headed pin or screw 24, with which engages the bifurcated substantially horizontal arm of the bell-crank lever 15, the length of the slot or opening at the end of

the lever being sufficient to permit movement of the plunger in a straight line. In the front face of the plunger are a number of detent-notches 25, with which may engage
 5 a pawl 26, pivoted between a pair of ears or lugs which form forward ends of the arm 19 and normally held against the side of the plunger by means of a tension-spring 27. The upper end of the pawl 26 when in a normal position is immediately below and practically forms a continuation of the lower wall of the coin-chute, so that any coin passing
 10 down through the chute may be caught and held between the top of the pawl and inner face of the plunger, and on application of pressure to the plunger the coin will be forced down past the pawl, moving the latter outwardly from engagement with the side of the plunger and preventing its engagement with
 15 the teeth of said plunger. If a small coin or check is inserted, it will immediately fall past the pawl and through the open slotted end of the plunger into the coin-receptacle, while the plunger will be locked and operative
 20 movement prevented by the engagement of the pawl in one of the detent-notches 25. As an additional guiding means for the plunger the sides of the coin-slot are extended outwardly and thence bent or turned in a direction parallel with the plane of the walls of the slot to form guides 28, which embrace the forward edge of the plunger. The plunger is returned to initial position by means of a tension-spring 29, which extends between
 25 one arm of the bell-crank lever and a lug 30, forming an integral part of the plate 6.

In this class of machines there is always danger of the discharge of more than a single article after the plunger is released by the insertion of a coin, especially if the plunger be
 40 operated very rapidly or its movement be stopped in advance of a complete downward movement, permitting the delivery-slide to move out a sufficient distance to enable the article to be abstracted and then returned to receive another article from the receptacle, the second article being delivered from the machine on the complete downward movement of the plunger. To prevent operation of
 45 the machine in this manner, I provide means for preventing any return movement of the plunger and delivery-slide until said plunger has completed a full downward movement.

To the depending bracket 12 is secured a curved rack-bar 31, arranged on an arc struck from the center of the pivot-bolt 14. The lever is provided with a pivoted pawl 33, which engages the teeth of the rack and prevents any return movement of the bell-crank lever
 55 until the pawl has reached the lower end of the rack and is allowed to swing downward, whereupon the spring is free to return the parts to the normal position. At the beginning of the downward movement of the plunger the position of the pawl is changed, so that it may be engaged with the teeth of the rack. This mechanism prevents any return

movement of the plunger until the latter has reached the limit of its stroke.

The mechanism as described is found convenient in that all of the parts may be secured to the plate 6 and its depending bracket 12 and assembled at one shop or factory, while the wooden case is manufactured elsewhere, and to place the parts in position it is only
 70 necessary to insert the plate 6 and its parts within the casing, while the plate 6' is placed at the top of the casing and bolted in position, the plunger-knob being afterward screwed in place.
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Having thus described the invention, what is claimed is—

1. In a device of the class specified, a coin-controlled discharging mechanism comprising a plate having a coin-slot, a depending bracket
 85 forming an integral part of the plate and provided with a rearwardly-extending arm, said bracket having a pair of parallel arms provided with plunger-guiding openings, a plunger having a coin-receiving recess and provided at one edge with notches, said plunger being guided in the parallel arms of the bracket, a plunger-carrying stem secured to the plunger and extending up through a guiding-opening in the plate, a pawl pivoted to the lower of said parallel arms and adapted to engage the notches of the plunger, a coin-chute leading from the coin-slot of the plate to the coin-recess of the plunger, a bell-crank lever pivoted at the point of bifurcation to the rearwardly-extending arm of the bracket and having one end operatively connected to the plunger and its opposite end being adapted for connection to the delivery-slide of the machine.
 100

2. In a device of the class specified, the combination with the plate 6 and its integral bracket 12, of a mating plate 6', the two clamping a wall of the casing, securing-bolts for holding the plates to each other, a vertically-guided plunger 20 adapted to the horizontal arms of the bracket, a plunger-rod 22 extending upwardly from the plunger through guiding-openings in the two plates and provided at its upper end with a knob, a coin-chute extending from coin-slots formed in the plates to the forward edge of the plunger, the lower ends of the walls of the chute embracing and forming a guide for said plunger, a coin-controlled pawl for preventing downward movement of said plunger, a delivery-slide, a bell-crank lever 15 pivoted to one of the bracket-arms and connected at one end to the plunger and at the opposite end to the slide, and a tension-spring extending between one arm of the bell-crank lever and the securing-lug of the plate 6.
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3. In a device of the class described, the combination with a depending supporting-bracket including a pair of parallel plunger-guiding arms and a rearwardly-extending arm for the support of a bell-crank lever, of a plunger having a coin-recess and provided on its forward edge with notches, a pawl carried by
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one of the parallel arms of the bracket and adapted to engage said notches, a coin-chute opening at its lower end in alinement with the coin-recess of the plunger, a bell-crank lever pivoted at the point of bifurcation to the rearwardly-extending arm of the bracket and having one end operatively connected to the plunger and its opposite end adapted for connection to the delivery-slide of the machine, an arcuate rack secured to the bracket, a loosely-mounted counterweighted pawl carried by the forwardly-extending arm of the

bell-crank lever and adapted to engage the teeth of said latch, and a spring connecting the bell-crank lever to the bracket for returning the parts to initial position. 15

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEO. W. PETER.

Witnesses:

R. A. WALKER,
R. ADCOX.