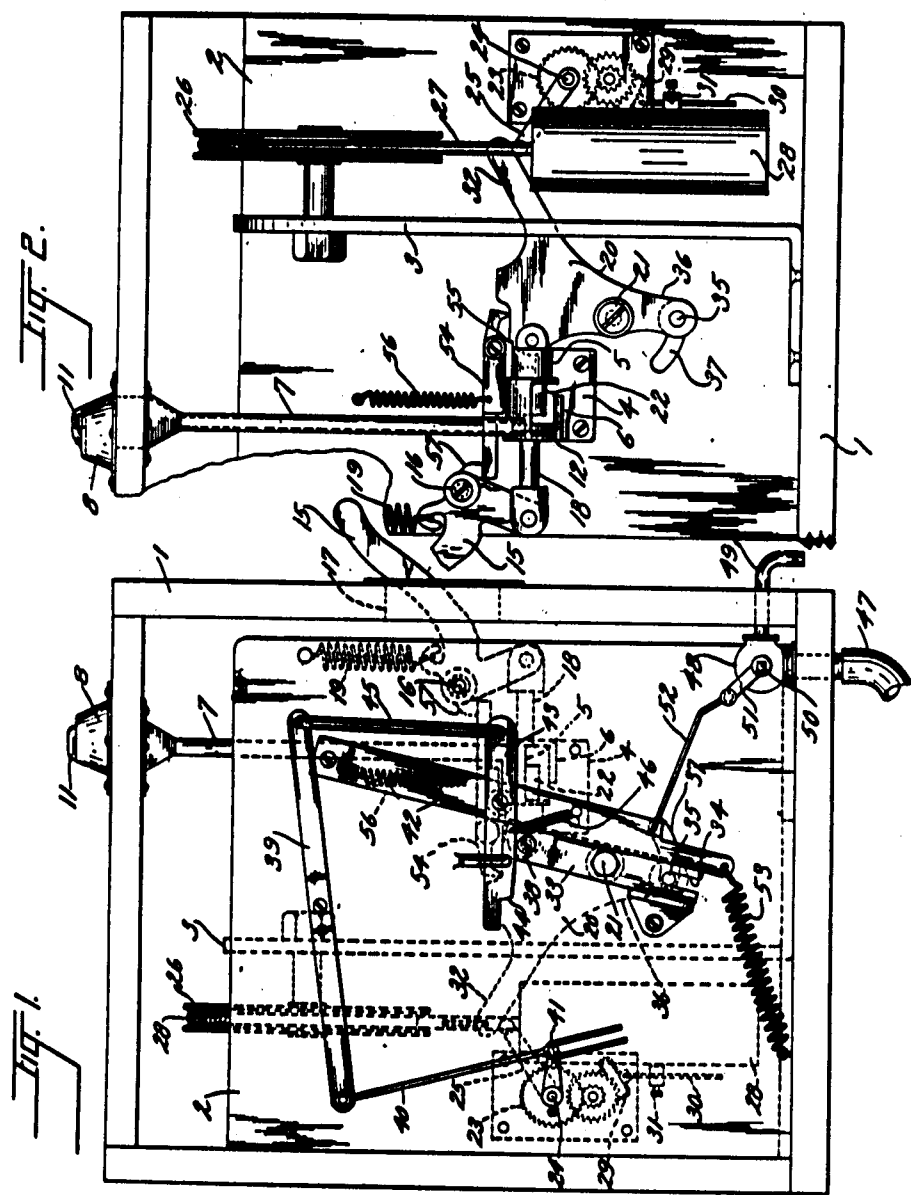


1,038,648.

G. PLEOGER.
VENDING MACHINE.
APPLICATION FILED NOV. 17, 1911.

Patented Sept. 17, 1912.
2 SHEETS—SHEET 1.



WITNESSES:
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2 SHEETS—SHEET 2.

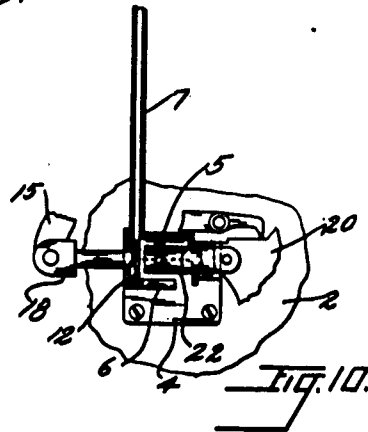
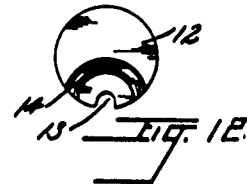
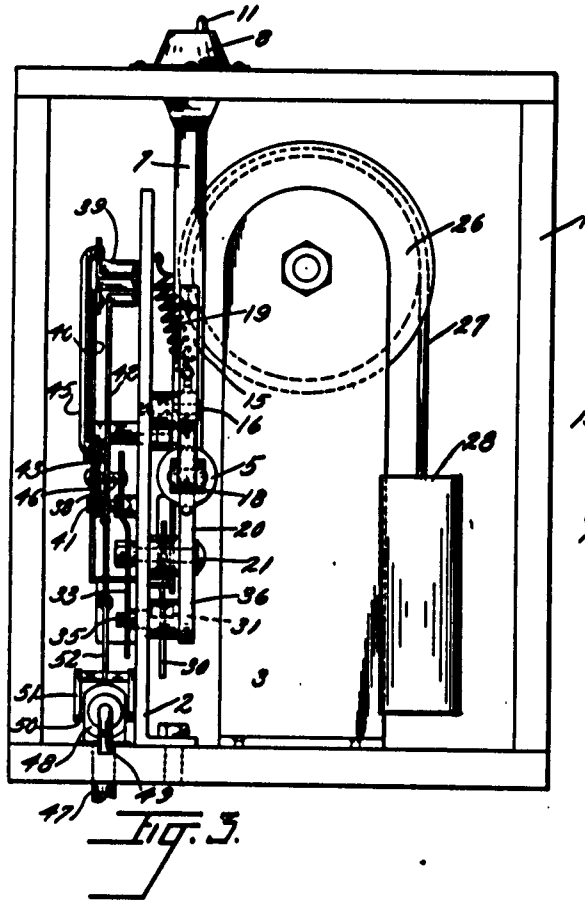


Fig. 6.

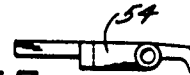


Fig. 7.

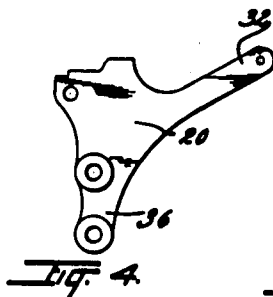


Fig. 4.

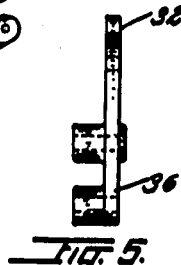


Fig. 5.

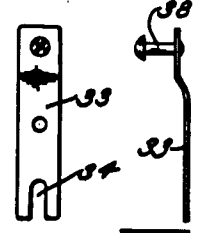


Fig. 8.

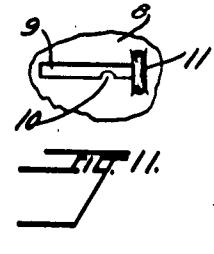


Fig. 11.

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UNITED STATES PATENT OFFICE.

GEORGE PLEOGER, OF ANTIGO, WISCONSIN.

VENDING-MACHINE.

1,038,648.

Specification of Letters Patent. Patented Sept. 17, 1912.

Application filed November 17, 1911. Serial No. 660,774.

To all whom it may concern:

Be it known that I, GEORGE PLEOGER, a citizen of the United States, and residing at Antigo, in the county of Langlade and State of Wisconsin, have invented a new and useful Improvement in Vending-Machines, of which the following is a complete specification.

The main objects of this invention are to provide an improved vending machine; to provide a vending machine particularly adapted to dispense liquids; to provide a vending machine adapted to be adjusted to vary the quantity of liquid to be dispensed at each operation; to provide a device having improved mechanism for receiving the operating check or slug; to provide a device having improved mechanism for automatically stopping the flow of liquid when the desired quantity has been dispensed; and to provide a strong and durable construction which will not easily get out of repair.

A specific embodiment of the invention is illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of a vending machine embodied in this invention, with the walls of the casing removed. Fig. 2 is a side elevation of the side of the machine opposite from that shown in Fig. 1, with the wall of the casing removed. Fig. 3 is a front elevation of the machine with the wall of the casing removed. Fig. 4 is a side elevation of the bell-crank lever for operating the timing and dispensing mechanism. Fig. 5 is a rear elevation of the bell-crank lever. Fig. 6 is a top plan view of the locking pawl for the bell-crank lever. Fig. 7 is a side elevation of said pawl. Fig. 8 is a side elevation of the locking lever for the valve operating mechanism. Fig. 9 is a front elevation of said lever. Fig. 10 is a fragmentary side elevation, partly in section, of the check receiving mechanism. Fig. 11 is a fragmentary plan view of the machine showing the check slot. Fig. 12 is a side elevation of the check or slug adapted to permit operation of the machine.

In the construction shown, a casing 1 of any suitable size, construction and material is provided, and rigidly secured on the bottom thereof and extending upwardly therein are the plates or standards 2 and 3 adapted to support the operating mechanism of the

Rigidly secured on the side of the plate 2 is the bracket 4, having a guide sleeve 5 thereon, which for part of its length is open on its under side and is provided with a ledge 6 which extends partially across the open portion. Said sleeve is provided above said ledge with an aperture into which opens one end of a check or coin chute 7, the other end of which extends upwardly to the top of the casing. On the top of the casing above the chute 7 is the check or coin receiver 8 which has a slot 9 therein. Near one end of the slot is a projection or lip 10 which extends into the slot, and at the end of the slot is a raised apertured lug 11. The check or slug 12 is provided in its edge with a notch 13, and concentric with the notch is a slot or groove 14. In inserting the check the notch 13 is placed on the lug 11, and the groove 14 receives the lip 10, and by giving the check a partial rotation it will enter the chute and fall down onto the ledge 6 of the guide sleeve 5, as shown more clearly in Figs. 2 and 10.

The operating lever 15 is pivoted at the plate 2, and the power end thereof projects through a slot 17 in the front of the casing in position to be grasped by the operator. The other end of the lever 15 is pivoted to a plunger 18 which projects into the adjacent end of the sleeve 5 in position to engage the check 12 and move it longitudinally of the sleeve. A coiled spring 19 is connected at one end to the power arm of the lever, and at its other end to the plate 2 and normally acts to hold the power end of the lever raised and the plunger retracted.

A bell-crank lever 20 is pivoted to the plate 2 on a pivot pin 21 at the opposite side of the sleeve 5 from the lever 15. A cylinder 22 is pivoted to the lever 20 and projects into the end of the sleeve 5 opposite from the plunger 18 and extends to near the mouth of the chute 7.

At the rear of the bell-crank lever 20 is a clock mechanism 23, on the shaft 24 of which is a crank 25. Journaled on the plate 2 above the crank 25 is a grooved pulley 26 over which hangs a cord 27, which has one end attached to the crank 25, and has a weight 28 on the other end. An escapement 29 is connected with the clock mechanism and is provided with a rod or pendulum 30 having an adjustable weight 31 thereon adapted to control the speed of the clock mechanism. The arm 32 of the lever 20

bears on the crank 25, and when said lever is operated by the plunger it moves the crank 25 downwardly and raises the weight 28.

A locking lever 33 is pivoted on the pin 21 on the opposite side of the plate 2 from the bell-crank lever 20, and is provided with a slot 34 in its lower end into which projects a pin 35 which is carried on the arm 36 of the lever 20 and projects through a curved slot 37 in the plate 2. The upper end of the lever 33 is provided with an outwardly projecting pin 38. A lever 39 is pivoted to the upper portion of the plate 2 above the lever 33 and a fork 40 is pivoted to the rear end thereof and engages a crank 41 on the shaft 24 of the clock mechanism. A bar 42 is pivoted at its upper end to the upper portion of the plate 2 and extends downwardly to a point below the lever 33. Pivoted to the bar 42 adjacent the upper end of the lever 33 is a trip lever 43 which has a shoulder 44 at its rear end behind which the pin 38 is adapted to engage. The front end of the lever 39 is connected to the front end of the trip lever 43 by means of a link 45, and a coiled spring 46 is connected at one end to the rear portion of the trip lever, and is connected at its other end to the bar 42 beneath the lever 43.

A supply pipe 47 leads from the source of beer supply and projects through the bottom of the casing at the front thereof. A valve 48 is connected to said pipe and has an outlet spout 49 projecting through the front of the casing. The valve closure 50 is provided with a handle 51, and a rod 52 connects the handle with the lower end of the bar 42. A coiled spring 53 is connected to the lower end of the bar 42 and the bottom of the casing at the rear of said bar, and normally acts to hold the valve closure 50 in closed position.

A pawl 54 is pivoted to the plate 2 above the sleeve 5 and its forward end is adapted to engage a shoulder 55 on the bell-crank lever 20 when the arm 32 has reached the downward limit of its movement, and hold the lever 20 against back movement until the operating lever 15 has returned to normal position. A spring 56 is connected to the pawl 54 at the rear of its pivotal point, and to the plate 2, and normally acts to hold the forward end of the lever down in position to engage the shoulder 55. The lever 15 is provided with a lug 57 adapted to engage the rear end of the pawl and trip the pawl out of engagement with the shoulder 55 when the lever 15 returns to normal position.

The operation of the construction shown is as follows: When a check or slug is placed in the chute 7 it drops down upon the ledge 6 in front of the plunger 18. The lever 15 is forced downwardly, thereby moving the plunger into the sleeve and forcing the check

against the cylinder 22. As the plunger advances the cylinder is forced outwardly of the sleeve and swings the bell-crank lever, causing the arm 32 to operate the clock mechanism and raise the weight 28. The downward movement of the arm 32 also causes the crank 41 to move downwardly to the lower end of the fork tines. When the bell-crank lever is being operated by the cylinder 22, the arm 36 moves rearwardly, and the pin 31 swings the locking lever 33 on its pivot and causes the pin 38 to engage behind the shoulder 44 of the trip lever 43 and lock therewith. As the bell-crank lever reaches its limit of movement the pawl 54 engages the shoulder 55 and holds it from returning until the operating lever 15 has returned to normal position and its lug 57 has released the pawl. This permits the plunger to be retracted from the end of the cylinder and permits the check to fall from the sleeve from the opening at the end of the ledge 6. As soon as the pawl is released from the shoulder 55 the weight 28 begins to operate the clock mechanism and the crank 25 returns the bell-crank lever 20 back to normal position. The pin 35 on the bell-crank lever swings the lower end of the locking lever 33 rearwardly, thereby swinging the lower end of the bar 42 forwardly by means of the trip lever. The forward movement of the bar 42 causes the rod 52 to open the valve and permit the beer to flow. As soon as the crank 41 reaches the end of the slot in the fork 40 it operates the lever 39 and trips the trip lever out of engagement with the pin 38 of the locking lever and the spring 53 moves the bar 42 rearwardly with a quick motion and closes the valve. The machine cannot be operated until a check has been deposited since the plunger will enter the cylinder and fail to operate it. The length of time during which the valve shall remain open may be regulated by adjusting the weight 81 on the rod 80 and thereby regulating the speed of the clock mechanism.

While but one specific embodiment of the invention has been herein shown and described it will be understood that many details of the construction shown may be varied or omitted without departing from the scope of the claims.

Claims:

1. A vending machine, comprising a valve, a pivoted bar adapted to operate the same, a locking lever, a trip lever pivoted upon the bar and adapted to engage the locking lever, a bell-crank lever, a clock-work mechanism adapted to operate the bell-crank lever and thereby operate the valve, and means operated by the clockwork adapted to release the trip lever from the locking lever.

2. A vending machine, comprising a valve, a pivoted bar adapted to operate the

same, a bell-crank lever, means connecting said lever and said bar, means adapted to disconnect said bell-crank lever from said bar at a predetermined time, means adapted to return said bar to normal position and thereby close the valve, and means adapted to operate the bell-crank lever.

3. A vending machine, comprising a valve, a pivoted bar connected therewith and adapted to operate the same, a locking lever, a trip lever pivoted upon the bar and adapted to connect the locking lever with the bar, a bell-crank lever connected with the locking lever, clockwork mechanism adapted to operate the bell-crank lever and thereby cause the bar to open the valve, means operated by the clockwork mechanism adapted predeterminedly to disconnect the trip lever from the locking lever, and means adapted to throw the bell-crank lever to operative position.

4. A vending machine, comprising a valve, a bell-crank lever, a plunger, a sleeve adapted to hold the plunger and cylinder in alinement, means adapted to cause the plunger to move the bell-crank lever to operative position, means operatively connecting the bell-crank lever with the valve, and weight-operated mechanism adapted to operate the bell-crank lever.

5. A vending machine, comprising a bell-crank lever, a cylinder pivoted thereupon, an operating lever, means to move the bell-crank lever to operative position, a pawl adapted to hold the bell-crank lever in such position, means on the operating lever adapted to hold the bell-crank lever in such position, means on the operating lever adapted to release the pawl when the operating lever returns to position, a valve, operating mechanism for the valve controlled by the bell-crank lever, and means for operating the bell-crank lever.

6. A vending machine comprising a valve, a pivoted bar adapted to operate the same, a pivoted lever, means connecting said lever and said bar, a movable member adapted to release said locking means when said movable member has traveled a predetermined distance, a pendulum adapted to regulate the rate of travel of said movable member, and means adapted to operate said pivoted lever.

In testimony whereof I have hereunto subscribed my name in the presence of two witnesses.

GEORGE PLEOGER.

Witnesses:

JOHN BEHRENS,
JOHN SIPEK.