May 18, 1926. 1,585,342

M. L. GILBERT ET AL

INFORMATION VENDING MACHINE

Filed March 2, 1925

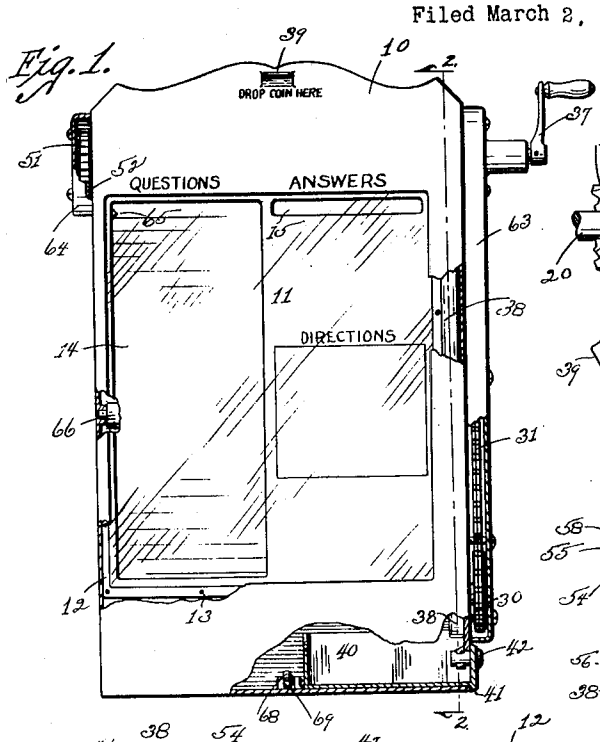


Fig. 1.

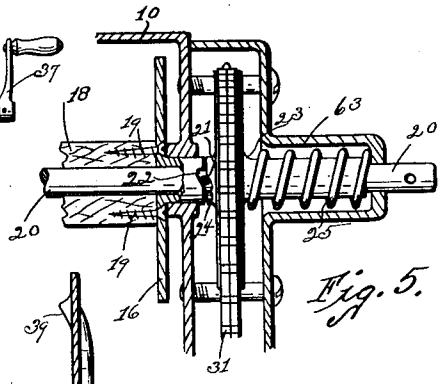


Fig. 5.

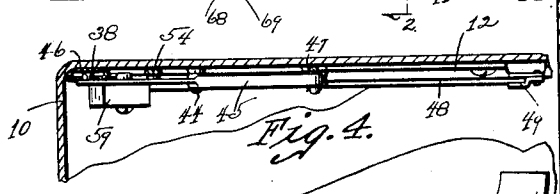


Fig. 4.

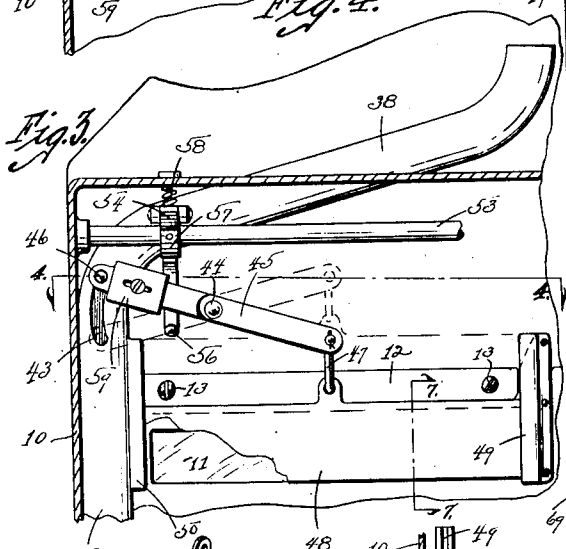


Fig. 3.

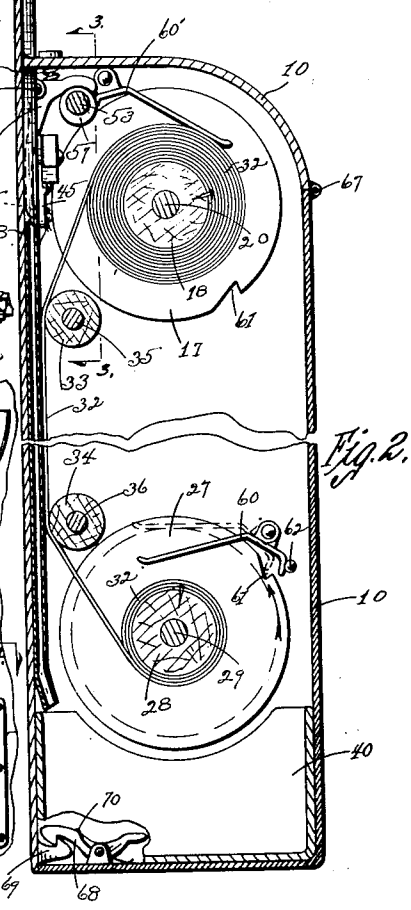


Fig. 2.

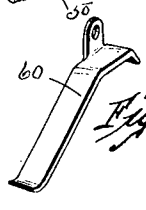


Fig. 6.

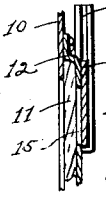


Fig. 7.

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UNITED STATES PATENT OFFICE.

MARION L. GILBERT AND ROY GILBERT, OF DES MOINES, IOWA.

INFORMATION-VENDING MACHINE.

Application filed March 2, 1925. Serial No. 12,554.

The object of this invention is to provide a coin-controlled mechanism for vending information.

A further object is to provide a coin-controlled information vending machine which is simple in construction and economical in manufacture.

These and other objects will be apparent to those skilled in the art.

Our invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in our claims and illustrated in the accompanying drawings, in which:

Fig. 1 is a front view of our complete device with portions cut away to illustrate certain internal parts thereof. Fig. 2 is an enlarged sectional view of our device taken on line 2—2 of Fig. 1. Fig. 3 is a sectional view of the coin controlled parts taken on line 3—3 of Fig. 2. Fig. 4 is a plan view of the coin-controlled parts taken on line 4—4 of Fig. 3. Fig. 5 is an enlarged view of the clutch mechanism employed to wind the sheet of questions and answers from one roller to the other. Fig. 6 is a lever detent used on each of the reels. Fig. 7 is a side sectional view taken on line 7—7 of Fig. 3.

The information that may be compiled for our device is boundless. It may contain information similar to a city directory or it may contain national statistics of interest to the general public.

We have designated the housing of this device by the numeral 10, which is preferably made of sheet steel or the like. This housing has the greater portion of its face or front open which is designed to be covered by glass plate 11. This glass plate is slightly larger than the opening and is held inside said housing and at the opening by the frame 12, which in turn is held in proper position by the screws 13. This frame extends over the back and sides of the glass 11, and has two openings, 14 and 15. Over the opening 14 and printed on the housing 10 is the word "Questions". Over the opening 15 and printed on the housing 10 is the word "Answers". Journaled near the top and in the sides of the housing are the disc-wheels 16 and 17. They are retained in this position by being held the proper distance apart by the wooden roller 18 which is secured thereto by the wood screws 19. Journaled in the roller 18 and the wheels 16 and 17, is the shaft 20 which has the pin 21 designed to enter and engage the ratchet-notch 22 of the disc-wheel 16 when the shaft is rotated to the right. Loosely and rotatably mounted on the shaft 20 is the sprocket wheel 23 having the ratchet-notch 24 which is so designed that when the shaft 20 is rotated to the left the pin 21 will enter and engage the same. The numeral 25 designates a coil spring designed to yieldingly hold the inner hub of the sprocket wheel 23 adjacent the outer hub of the disc-wheel 16. The entering edges of the ratchet notches 22 and 24 are slightly rounded so that engagement one with the other is impossible. Journaled near the bottom and in the sides of the housing 10 are the disc-wheels 26 and 27. They are retained in this position by being held the proper distance apart by the wooden roller 28, which is secured thereto by wood screws or the like. Permanently mounted in the roller 28 is the shaft 29 which carries the sprocket wheel 30. The numeral 31 designates an endless chain around the sprocket wheels 23 and 30. The numeral 32 designates a long strip of paper or the like, approximately as wide as the opening in the housing 10, and designed to be secured at each end to the rollers 18 and 28 and rolled thereon as shown in Fig. 2. The numerals 33 and 34 designate rollers mounted on the shafts 35 and 36 journaled in the sides of the housing and are so designed and positioned as to keep the face of the paper 32 close to the openings 14 and 15. Printed the full length of this sheet of paper and adjacent the opening 14 are questions, while printed the full length, and adjacent the opening 15 are the correct answers, each in alignment with the particular question asked. The numeral 37 designates a handle mounted on the shaft 20 for turning the same. I have used the numeral 38 to designate a coin tube which has its upper end at 39 and designed to receive a coin such as a penny. This tube extends down within the housing 10 and terminates just above the money box 40 in the bottom of the housing. This money box is removable from the housing through an opening in the side of the housing. The flange 41 of the money box limits the movement of the same in one direction, while the lock 42 limits (when in locked position) its movement in the other direction, thereby sealing the side opening

in the housing. Therefore when it is desired to remove the collected coins from the money box, one may do so by unlocking the lock 42 and removing the money box through the opening to such a position as to be accessible thereto. The numeral 43 designates a curved slot in one side of the coin tube. Rotatably mounted on the stud 44 and near its center is the arm 45. One end of this arm is very thin and is preferably made of spring steel. Near the end of this thin portion is the nipple 46 which is designed when in normal position to enter and operate within the slot 43. Pivotally mounted in the other end of the arm is the link 47. This link 47 is pivotally secured at its other end to the curtain 48 which is designed to operate within the guides 49 and 50 which are mounted in the housing and on each side of the opening 15. By this arrangement the curtain operates between the opening 15 and the paper 32. Mounted on the shaft 20 at the end opposite the crank handle is the gear 51 which is in engagement with the pinion 52 which is mounted on the shaft 53 journaled in the two sides of the housing 10. The numeral 54 designates a trigger pivotally mounted near its center to the housing at 55. At the lower end of this trigger is the projection 56 designed to engage the thin portion of the arm 45 at times when that member is in lowered position. The other end of the trigger 54 extends up and over the shaft 53 and is yieldingly held in contact with the eccentric 57 on the shaft 53 by the coil spring 58. By this arrangement, when the handle 37 is turned the shaft 53 will also be rotated which will oscillate the trigger and if the thin portion of the arm 45 is in lowered position the projection 56 will engage it and thereby cause the nipple 46 to be withdrawn from the slot 43. The numeral 59 designates a counter weight on the thin portion of the arm 45, provided to almost counter balance the thick portion of the arm and the curtain 48. The numerals 60 and 60′ designate lever detents oppositely arranged and mounted on the inner wall of the housing 10. Their long arms are each designed to engage the paper 32 when a certain amount of it is on one of the rollers adjacent that arm. As the roll of paper becomes larger the arm is elevated which causes the other end or detent portion to engage the notch 61 in that respective reel and prevent any additional amount of paper being wound on the same. The numeral 62 designates a stop which may be provided to limit the movement of the lever detent in one direction. The numeral 63 designates a housing around the mechanism located on the outside and right hand side of our machine. The numeral 64 designates a housing around the mechanism located on the outside and left hand side of our machine.

The practical operation of the complete device is as follows:

Turn the handle until a desired question appears in the opening 14. Turn slowly until it is adjacent the indicator 65. Drop a coin in the slot 39. This coin will travel down the tube 38 until its descent is prevented by the nipple 46, however due to the fact that the arm 45 is almost balanced on the stud 44, the additional weight of the coin will overbalance the arm on one side and the nipple will descend in the slot 43 as far as it is possible for it to do so, while the other end of the arm will ascend and raise with it the curtain 48, thereby making it possible to read the desired answer in the opening 15. As soon as the handle is again turned for another question, the trigger 54 is actuated and as the thin portion of the arm is in lowered position and directly in front of the projection 56 the same will be forced inward thereby causing the nipple 46 to be withdrawn from the slot 43 and allowing the coin to continue its descent down the tube and into the money box. As the projection retreats the spring arm will return the nipple. By the weight of the coin being absent the arm will return to normal position and the curtain will shade the opening 15, and the device will be ready for another operation.

It may be found advisable to have an additional roller such as 66 to keep the paper close to the glass in the opening 14. This roller is an exact duplicate of 33 and 34.

The opening 15 is relatively narrow, so that although many of the questions are visible at all times through the opening 14, yet the answer to only one question is visible at any time through the opening 15, and that only when the curtain 48 is raised.

The clutch mechanism before explained and shown in Fig. 5 allows the questions and answers on the sheet to move either upward or downwardly as is desired. This is accomplished by the pin 21 entering and engaging the ratchet notch 22 of the wheel 16 when the handle is turned to the right thus locking the top reel so that it will turn with the handle and wind the sheet on that reel. When the handle is turned to the left the pin 21 has no hold on the ratchet notch 22 and therefore slides out of the same and enters the oppositely arranged ratchet notch 24 of the sprocket wheel 23 and thereby locks the sprocket wheel so that it will turn with the handle. As the sprocket wheel 30 is mounted on the lower reel and the endless chain 31 is around the sprocket wheel 30 and the sprocket wheel 23, the reel last mentioned must turn to the left when the handle is also turned to the left, thereby winding the sheet from the top reel to the lower reel.

It is necessary to provide a means for gaining access to the inside of our device

and for this reason the back is hinged at 67 and held in closed position by the catch 68 engaging the hook 69. To open, unlock the money box and remove the same, and reach in and manually raise the catch from engagement with the hook, the same being yieldingly held in engagement by the spring 70.

Having fully described our invention, what we claim and desire to obtain by Letters Patent, is:

1. In an information vending machine, a housing having an opening, a drum on each side of said opening, a guard disc of greater diameter than the drums secured to and mounted on each side of each of the said drums, one of said discs of each drum having a ratchet notch in its periphery, a sheet having information printed thereon and having each end secured to said drums and wound thereon, two arms pivotally mounted near their centers on said housing and each having one of their ends extending over a drum respectively and their other end normally extending over the notched disc of that drum, but capable of engaging said notch and preventing the rotation of that drum in one direction when the end extending over the drum is raised a certain distance, and a means for selectively rotating said drums.

2. In an information vending machine, a housing having an opening, a drum on each side of said opening, a guard disc of greater diameter than that of the drums secured to and mounted on each side of each of the drums, one of said discs of each drum having a ratchet notch in its periphery, a sheet having information printed thereon and having each end secured to said drums and wound thereon, two arms each pivotally mounted between their two ends to said housing, said arms each having their heaviest free end extending over a drum respectively and the other free end normally extending over the notched disc of that drum, two studs mounted on said housing and each engaging one of the ends of the arms when that end is in normal position for limiting the movement of that arm to one direction, and a means for selectively rotating said drums.

3. In a device of the class described, a housing, spaced reels therein, a sheet wound on said reels, a shaft on which one of said reels is loosely mounted, said reel having a ratchet notch in its hub, a sprocket wheel also loosely mounted on said shaft and having a ratchet notch in its hub, a second sprocket wheel secured to the other reel, an endless chain around said two sprocket wheels, and a key in said shaft for engaging the ratchet notch in the hub of the reel when the shaft is rotated in one direction and the ratchet notch in the hub of the first mentioned sprocket wheel when the shaft is rotated in the opposite direction.

4. In a device of the class described, a housing, spaced reels therein, a sheet wound on said reels, a shaft on which one of said reels is loosely mounted, said reel having a ratchet notch in its hub, a sprocket wheel also loosely mounted on said shaft and having an oppositely arranged ratchet notch in its hub from the first mentioned ratchet notch, a second sprocket wheel secured to the other reel, an endless chain around said two sprocket wheels, a key secured to said shaft and positioned between the hub of the reel and the hub of the sprocket wheel first mentioned, a spring for yieldingly holding the hub of the sprocket wheel adjacent the said key, and a handle on said shaft for rotating the same in either direction.

5. In an information vending machine, a housing having two or more openings, a reel on each side of said openings, a sheet having questions and answers printed thereon and having each end secured to said reels and wound thereon, an arm pivotally mounted near its center to said housing, a curtain suspended from one end of said arm and normally positioned back of one of the said openings, a weight on the other end of the said arm for almost counterbalancing the weight of the curtain, and a means for automatically removing (as soon as one of the reels is rotated) any weight placed on the last mentioned end of said arm for raising said curtain.

6. In an information vending machine, a housing having two openings, a reel on each side of said openings, a sheet secured to and wound on said reels and having questions printed thereon and adjacent one of said openings and answers printed thereon and adjacent the other opening, an arm pivotally mounted near its center to said housing, a curtain suspended from one end of said arm and normally positioned in front of the answers printed on said sheet, a weight on the other end of the said arm for almost counterbalancing the weight of the curtain, and a means for removing any additional weight, placed on the last mentioned end of said arm for raising said curtain, as soon as one of the reels is rotated.

Signed at Des Moines, in the county of Polk and State of Iowa, this 23d day of February, 1925.

MARION L. GILBERT.
ROY GILBERT.