Oct. 28, 1930. G. F. GIBSON 1,780,124

VENDING MACHINE

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Fig. 1.

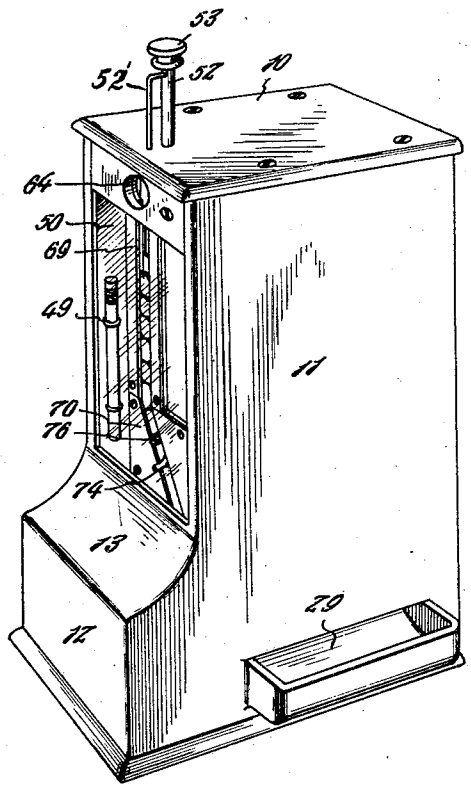


Fig. 5.

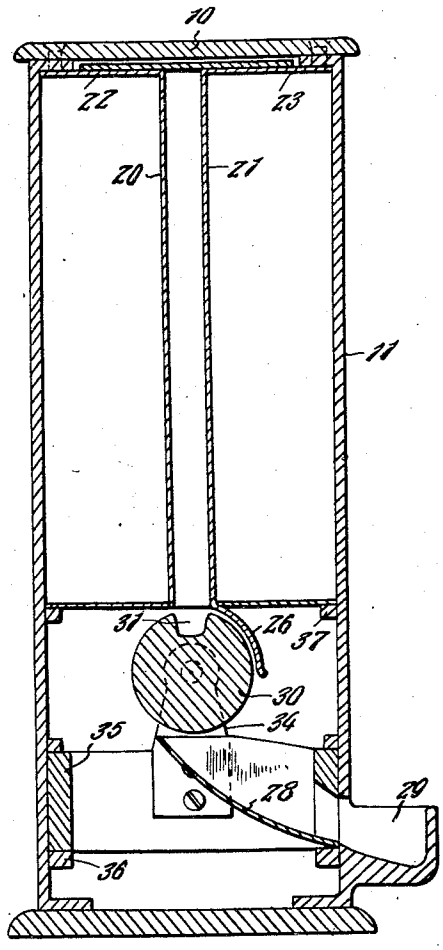
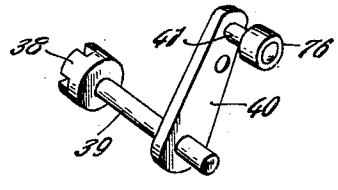


Fig. 8.



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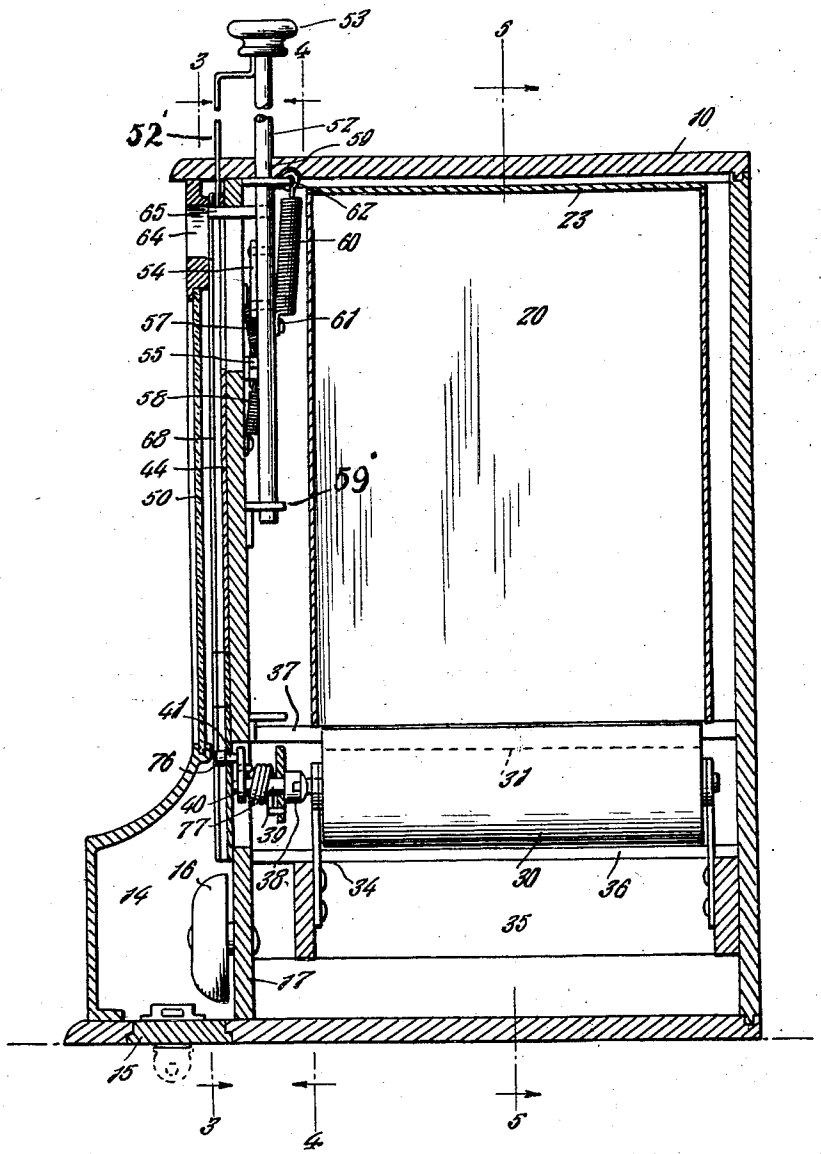


Fig. 2.

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VENDING MACHINE

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Fig. 3.

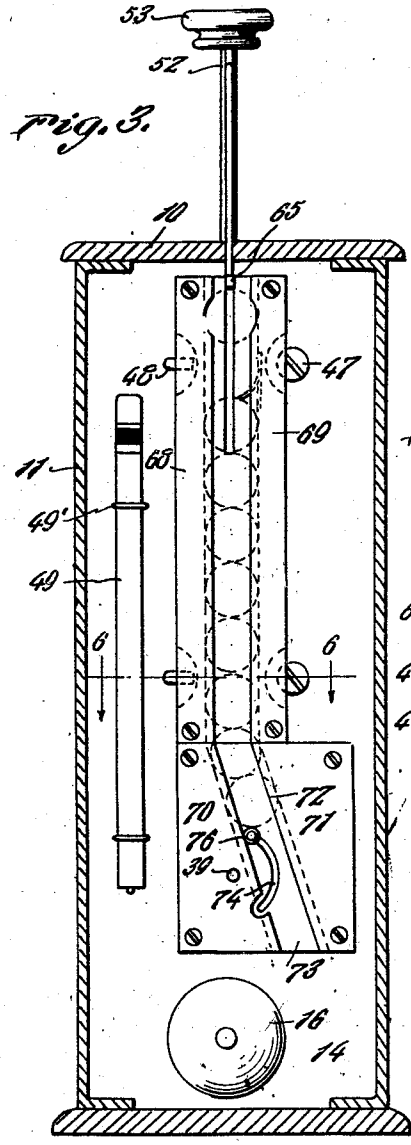


Fig. 7.

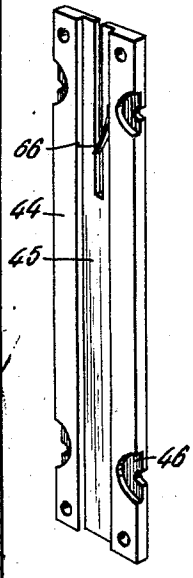


Fig. 4.

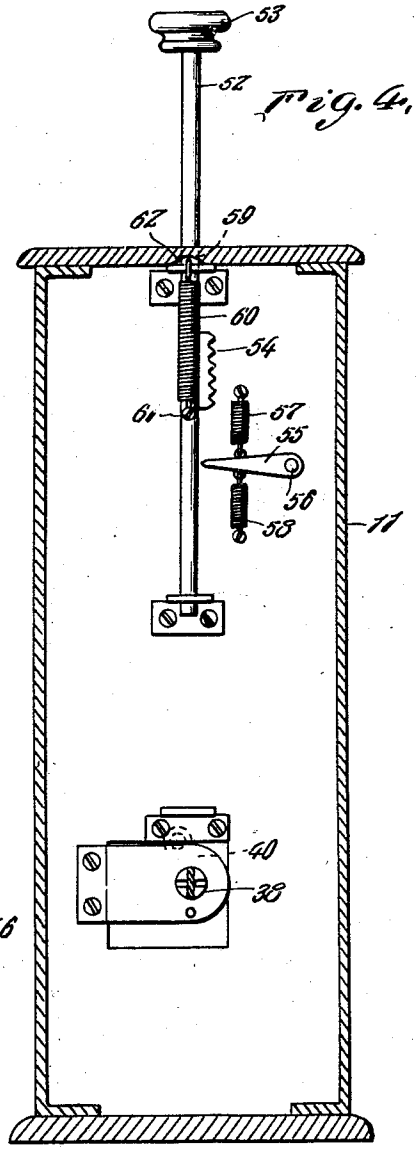
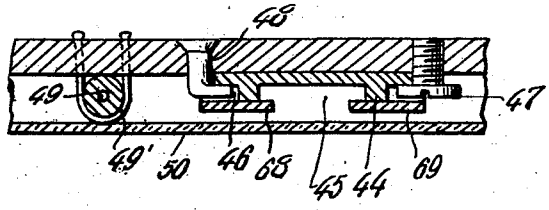


Fig. 6.



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VENDING MACHINE

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Fig. 9.

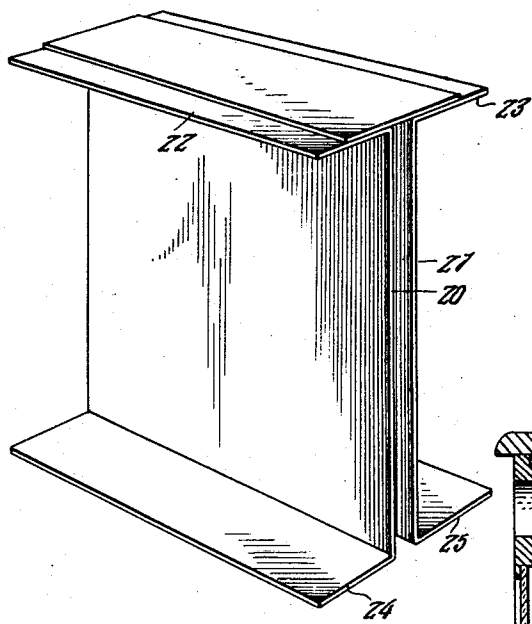


Fig. 10.

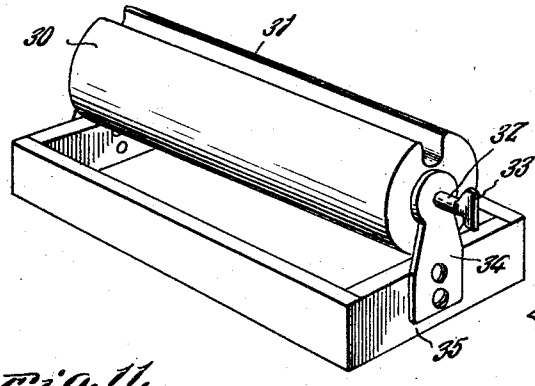


Fig. 11.

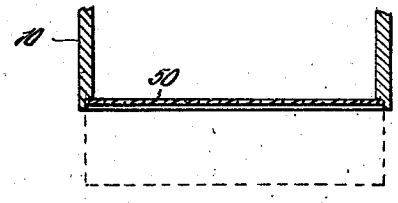
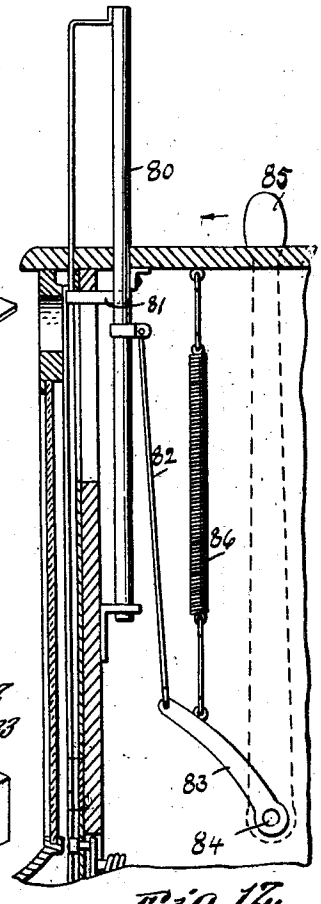


Fig. 12.



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Patented Oct. 28, 1930 1,780,124

UNITED STATES PATENT OFFICE

GRANVILLE F. GIBSON, OF SHREVEPORT, LOUISIANA

VENDING MACHINE

Application filed December 17, 1927. Serial No. 240,826.

The object of this invention is to provide a machine adapted for vending pencils and other articles, and especially to provide a machine in which the merchandise holders and coin handling means are detachable and interchangeable with reference to other devices similarly constructed but of another size, so that different articles may be sold at different times, and the machine will be capable of operation by coins, the value of which corresponds with the value of the merchandise, the coins being in sight long enough to prevent the use of slugs.

With the foregoing and other objects in view, the invention consists in the novel construction and arrangement of elements described, illustrated and claimed, it being understood that modifications may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming part of this application,

Figure 1 is a perspective view of the complete machine.

Figure 2 is a view in vertical section.

Figure 3 is a vertical section on the line 3—3 of Figure 2.

Figure 4 is a vertical section on line 4—4 of Figure 2.

Figure 5 is a vertical section on line 5—5 of Figure 2.

Figure 6 is a horizontal section on line 6—6 of Figure 3.

Figure 7 is a perspective view of a portion of the coin handling means.

Figure 8 is a perspective view of the crank and clutch device for rotating the cylinder of Figure 10.

Figure 9 is a perspective view of a detachable merchandise receiving device.

Figure 10 is a perspective view of the cylinder of Figure 5, which receives and discharges the merchandise.

Figure 11 is a detail in section showing elements referred to below.

Figure 12 is a detail view, in vertical section, of a modified control, by an outside lever, of the push rod 80, similar to rod 52 of the first form.

The main casing is adapted for use with the interchangeable devices referred to below which facilitate the handling of different articles, at different prices. This casing includes a top 10, sides 11 and a front portion 12 having a curved element 13 formed therewith, as shown in the present instance, the lower front portion of the casing providing a chamber 14 closed by an element 15, intending to be locked in any suitable manner. A bell 16 is mounted at 17 within the chamber 14.

The merchandise receiving device, magazine or the like, is shown in detail in Figure 9, and is assumed to be detachable from the machine, for the purpose already indicated. This device includes the parallel walls 20 and 21 having upper outwardly extending portions 22 and 23, respectively and having lower lateral extensions 24 and 25. The lower portion of this device carries a shield or apron 26, for retaining the article being sold until ready for discharge. A discharge chute is designated 28, and a pan or the like 29 receives the article in position where it is accessible to the customer.

The coin controlled cylinder 30 in Figure 5 and Figure 10 is provided with a longitudinal slot 31, and when necessary this cylinder may be detached and another cylinder having a slightly different channel or groove therein may be provided. A single cylinder will however accommodate articles having no great difference in size or diameter.

The cylinder 30 is carried by a shaft 32 which may have a flattened element 33 thereon, and the shaft or spindle is supported by brackets or the like such as that shown at 34. A frame 35, detachable if desired, is supported within the main casing by means of cleats or the like 36, and the device shown in Figure 9, may be supported upon cleats 37.

A crank and clutch element is shown in Figure 8, and includes the clutch faced or slotted head 38 carried by stem 39 mounting a crank arm 40, the latter carrying a pin 41.

A portion of the detachable and interchangeable coin chute is shown in Figure 7, and is shown in horizontal section in Figure 6, and the complete coin mechanism appears in front elevation in Figure 3. The plate 44

is provided with a coin channel 45, and with segmental cutaway portions such as 46, adapted for engagement, on one side by screws 47, and on the other side by rotatable hooks or the like 48. It being the intention that the chute shall be capable of easy removal, any suitable means for serving the purpose may be provided. In Figure 6, and also in Figure 3, I have shown a pencil 49 secured by retaining devices 49′, and serving to show the character of the merchandise being dispensed. The sample article will of course be on the inner side of a glass plate 50.

A push rod or plunger is designated 52 and includes a handle 53, the rod carrying a rack or the like 54 on one side adapted for engagement by a pawl 55 pivoted at 56, and held normally in the position on Figure 4 by springs 57, 58.

The rod 52 is operable in upper and lower guides 59 and 59′, and the spring 60 is secured to the rod at 61 and to a stationary element at 62.

The coin is inserted thru opening 64 in the front of the casing, and is adapted for engagement by the pin or arm 65 carried by push rod 52, when the rod is moved downwardly against the tension of the spring 60. The coin is temporarily held by a spring 66 until forced downwardly as indicated.

Strips 68 and 69 are applied to the front of the element of Figure 7, as shown in Figure 3, and are suitably secured, and plates 70 and 71 are spaced to provide an inclined channel 72 in front of a plate 73 having a segmental slot 74 therein. The pin 39 of Figure 8 is movable thru this slot 74, for rotating the cylinder 30.

The merchandise in slot 31 is held by apron 26 until cylinder 30 moves far enough to discharge into the chute 28 and pan 29. The cylinder 30 is operated when push rod 52 is pressed downwardly—an offset bar 52′ on the rod protecting the opening 64.

Lug 65 on the push rod engages the last coin deposited, but as the chute is already filled with coins protected by glass the lower coin is the one which operates the cylinder 30, thrust being produced between the several coins in a vertical column. The lower coin passes the roller 76, strikes the bell 16 and is received within the coin receptacle 14. The coins remain in sight long enough to enable a clerk or store-keeper to keep a casual watch on the machine. Cylinder 30 is returned to normal position by a spring 77. A particular function of spring 66 is to prevent the coin being thrown out of the top of the slot when the push rod moves upwardly. The coin chute may be changed for one of another size, as indicated, to permit of the use of any standard U. S. coin, and the cylinder 30 may also be changed or withdrawn and another substituted therefor. This remark applies further to the merchandise, magazine element of Figure 9. The fact that the coin itself rings the bell 16 and attracts the attention of the merchant in the store in which the machine is installed, serves an important indirect result in that no bell mechanism need be operated by the plunger or push rod 52.

In Figure 12, push rod 80, corresponding with rod 52 of the first form, carries a lug, pin or arm 81 for engaging the coin inserted, and is connected by rod 82 with a crank arm 83 to be pivotally mounted at 84, and adapted for control by outside lever 85, when that operation is preferred. Tension spring 86 returns the elements mentioned to normal position.

What is claimed is:—

1. In a device of the class described, a chute for receiving a plurality of coins, one above the other, and having a slot in the face of the chute, a resiliently held push rod and means on the rod for imparting downward thrust to the coins, a slot obstructing element connected with the push rod, article vending means adjacent to the lower end of the chute and means temporarily supporting the coins in the chute and operable, upon downward thrust of the coins, to actuate the vending means.

2. In a device of the class described, a chute for receiving coins one above the other, the chute having a slot in the face thereof, a push rod and means on the rod for imparting downward thrust to the coins upon engagement of the upper coin by said means, a slot obstructing element connected with the push rod and extending lengthwise of the slot, article vending means, means for temporarily supporting the coins in the chute, and a crank-operated clutch device mounting the supporting means and operating the vending means when the coins are forced downwardly.

In testimony whereof I affix my signature.

GRANVILLE F. GIBSON.