

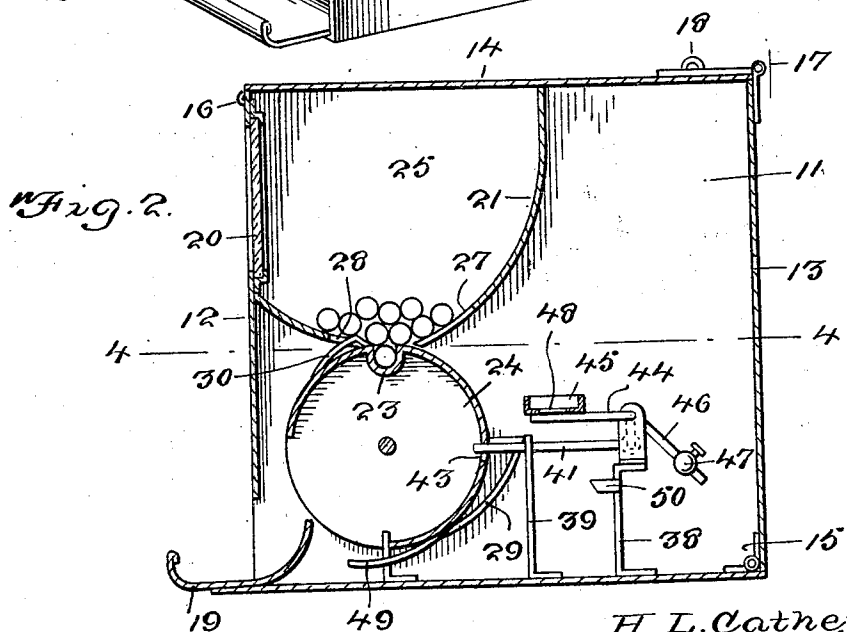
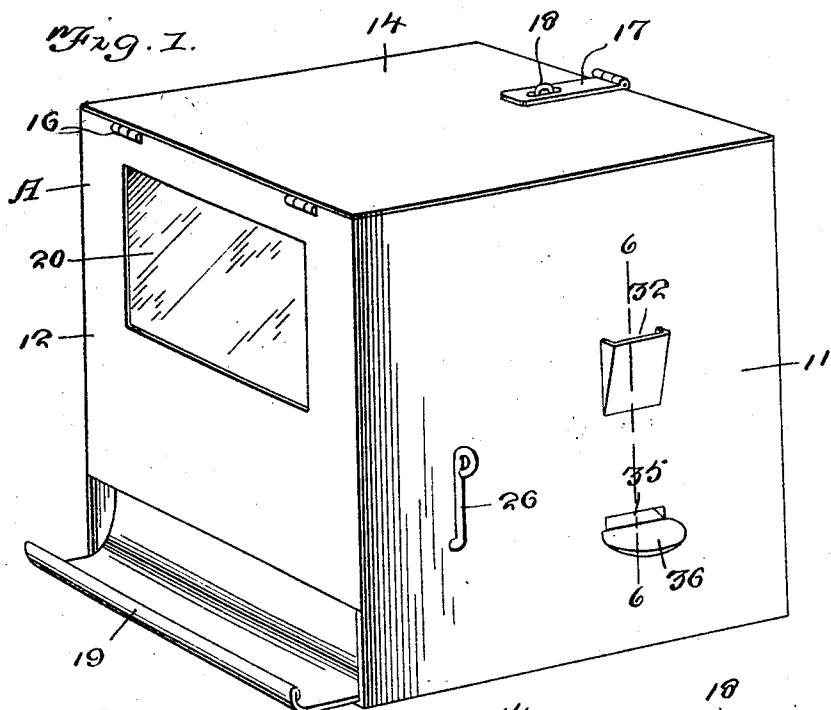
Aug. 5 , 1924.

1,504,098

H. L. CATHEY

PENCIL DISPENSING MACHINE

Original Filed Nov. 27, 1922 3 Sheets-Sheet 1



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Fig. 3.

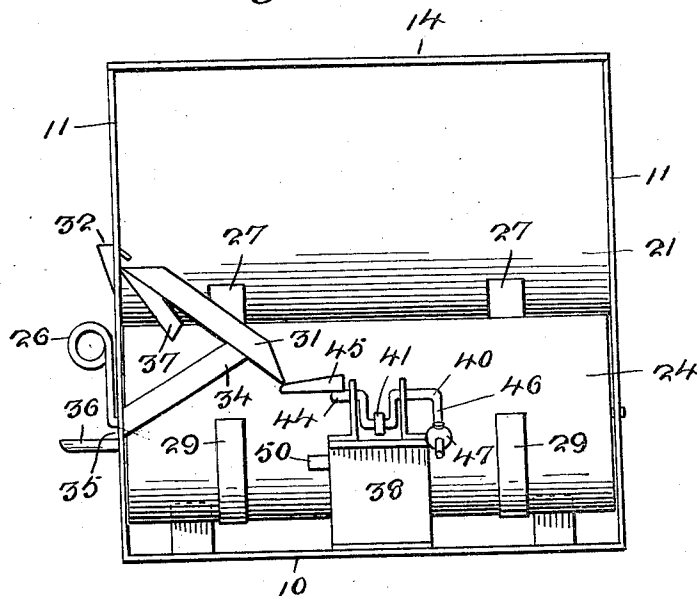
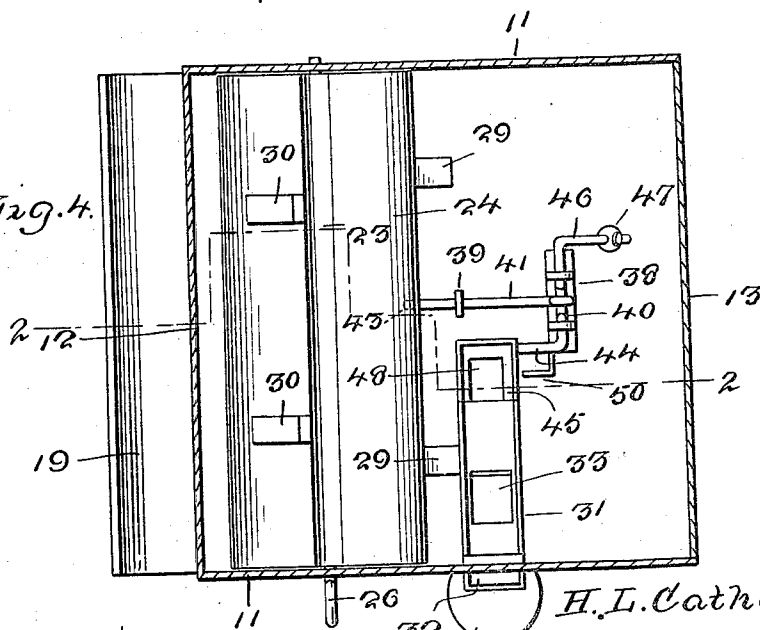


Fig. 4.



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WITNESS:

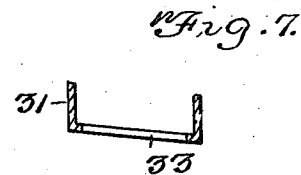
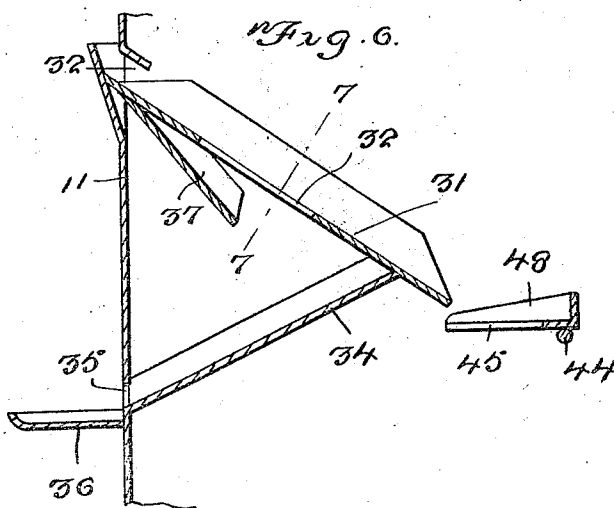
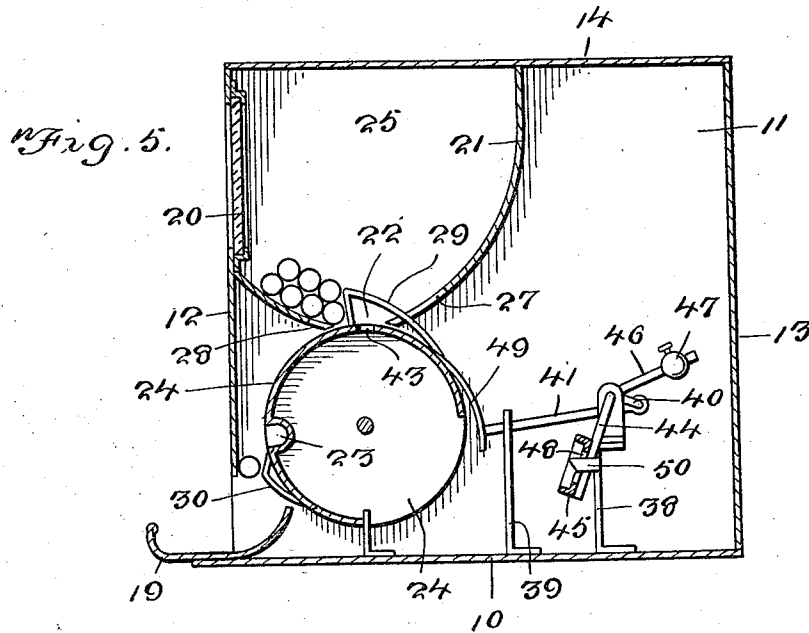
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UNITED STATES PATENT OFFICE.

HARDY L. CATHEY, OF CLINTON, OKLAHOMA.

PENCIL-DISPENSING MACHINE.

Application filed November 27, 1922, Serial No. 603,606. Renewed June 24, 1924.

To all whom it may concern:

Be it known that I, HARDY L. CATHEY, a citizen of the United States, residing at Clinton, in the county of Custer and State of Oklahoma, have invented new and useful Improvements in Pencil-Dispensing Machines, of which the following is a specification.

This invention relates to vending machines, primarily intended for vending pencils but susceptible of vending other articles of somewhat similar design, the invention aiming to provide a construction which is both positive of and accurate in operation, including comparatively few parts so that the machine is not easily impaired.

The chief characteristic of the invention resides in the provision of a coin actuated mechanism for controlling the movements of a delivery drum and susceptible of being regulated to require a coin or other article of predetermined weight to actuate said mechanism.

Other objects of the invention will be apparent, when the following detailed description is read in connection with the accompanying drawings, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawings forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:

Figure 1 is a perspective view.

Figure 2 is a sectional view taken on the line 2—2 of Figure 4.

Figure 3 is a vertical sectional view taken at a right angle to Figure 2.

Figure 4 is a sectional view taken on the line 4—4 of Figure 2.

Figure 5 is a view similar to Figure 2, showing the position of the drum when released and actuated to deliver an article.

Figure 6 is a sectional view taken on the line 6—6 of Figure 1.

Figure 7 is a sectional view taken on the line 7—7 of Figure 6.

Referring to the drawings in detail, A indicates the cabinet or casing, of the machine which preferably includes a bottom 10, spaced sides 11, front wall 12, rear wall 13 and a top 14. The rear wall 12 is pivoted to the bottom as at 15, while the top is pivoted to the front wall as at 16, and these walls are held in right angular relation in the forma-

tion of a cabinet by means of a hasp 17 pivotally associated with the rear wall and adapted to be operatively associated with an eye or staple 18, carried by the top 14. The casing includes the mechanism for delivering the articles to be vended, the articles being received by a tray 19 projecting beneath and forwardly of the front wall 12, the latter terminating short of the bottom 10 to permit the articles to be delivered on to the tray. The front wall 12 includes a transparent panel 20 so that the contents of the machine can be viewed from the outside.

Arranged within the casing is a partition 21 which divides the casing into several compartments, one of which is adapted to receive the articles to be vended, it being hereinabove stated that the machine is primarily intended for vending lead pencils or the like. The partition extends from a point adjacent the top of the casing and is curved downwardly and forwardly, terminating immediately beneath the transparent panel 20, the partition being secured to the sides and front walls in any suitable manner. The partition is provided with a slot 22 which normally coincides with a groove 23 extending through the entire length of the delivery drum indicated at 24, so that one article at a time is permitted to pass from the compartment 25 to the groove 23. Consequently, when the drum is rotated in any suitable manner, preferably by means of a handle 26 arranged exteriorly of one side of the casing, the groove 23 is positioned to deliver the article carried thereby onto the tray 19, this positioning of the parts being illustrated in Figure 5. The partition is further provided with spaced parallel slots 27 and 28 respectively, and these slots are adapted to receive the curved strips or members 29 and 30 respectively to keep the pencils properly arranged within the compartment 25. In other words, when the delivery drum is rotated in a forward direction to deliver one of the articles contained in the machine, the curved members 29 carried by this drum enter the slot 27 and moves the articles to one side of the slot 22, so that when the delivery drum is returned to normal position the curved members 30 and the slots 28 of the partition contact the pencils and in this manner the pencils or other articles are kept in proper position to be vended.

The delivery drum 24 is normally held

stationary, by a coin actuated mechanism, thereby requiring the deposit or insertion of a coin of a certain denomination to actuate this mechanism and thereby effect the release of the drum. This mechanism is very simple eliminating the use of springs or other elements which might become easily impaired after the machine was subjected to rough usage and consequently is very positive and accurate in its operation. Projecting inwardly from one side of the casing is a coin chute 31, the chute being operatively disposed with respect to a coin receiving opening 32 provided in said side. The coin chute is of substantially U-shaped formation in cross section as illustrated in Figure 7, wherein it will be further noted that the bottom of the chute is arranged at a slight inclination having a purpose to be presently described. This chute is provided with an opening of predetermined dimensions, the opening being indicated at 33. Disposed beneath the chute 31 is what I term a return chute 34, the latter leading to an opening 35 in the same side of the casing that includes the coin receiving opening 32, and disposed immediately beneath the opening 35 is a receiving tray 36. The chute 31 further includes a portion 37 which is arranged directly beneath the chute 31 partly underlying the opening 32 therein, and the purpose of this portion 37 is to direct a coin, slug or any other article inserted into the machine through the opening 32, if insufficient to operate the coin mechanism, on to the return tray 34 which conveys the said coin or slug to the receiving tray 36. For instance, if the machine is to be actuated by a five cent piece, any coin smaller than the size of this particular coin mentioned will drop through the opening 32 arranged in the length of the coin chute 31 strike the portion 37 of this chute which throws the said coin to the return chute 34 for the purpose mentioned. By slightly inclining the bottom of the chute 31, the return of any coin introduced into the machine, and insufficient to operate the said mechanism, is unquestionably returned, this inclination throwing the coin to one side, or in other words, slightly tilting the coin so that it is absolutely forced to return through the opening 32.

Rising from the bottom of the casing are spaced brackets of any suitable design indicated at 38 and 39 respectively, and journaled on the bracket 38 is a crank shaft 40. A horizontally disposed locking rod 41 has one end associated with the crank portion of the shaft 40, the rod sliding through an opening provided in the bracket 39. This rod 41 is normally received by an opening 43 in the delivery drum to hold the latter against rotation, and the rod is retracted to release the drum by the coin actuated mechanism above referred to, and include the

crank shaft 40. The terminals of the crank shaft 40 are horizontally disposed, and extended in opposite directions, one of the extremities indicated at 44 supporting the coin receiving tray 45, while the other extremity 46 supports a weight 47. By sliding the weight 47 on the extremity 46, more or less weight can be required to operate the mechanism. For instance, the nearer the weight is arranged to the extremity of the extension 46 the more weight is required to depress the coin tray 45, while the nearer the weight is arranged to the crank portion of the shaft, the less weight is required to operate the mechanism. The money receiving tray 45 is normally disposed immediately beneath the coin chute 31, to receive the coin as it leaves the chute, and this tray is provided with a slot or opening 48 for a purpose to be presently described. Manifestly, when the coin is received by the receptacle 45, the latter is depressed thereby turning the crank shaft a sufficient distance to retract the rod 41 from the opening 43 of the drum, so that the latter can be rotated by means of the handle 26 to deliver the article vended by the machine. However, the receptacle 45 remains in this depressed position, holding the rod 41 retracted until the drum is rotated for the purpose just stated, and when rotated in this direction, a resilient strip 49 engages the adjacent end of the rod 41 to further retract the latter. Under these circumstances, the coin receiving tray is again lowered, to a position wherein the slot 48 of the tray receives a finger 50 projecting from the bracket 38, and this finger passing through the slot pushes the coin out of the receptacle 45. The weight 47 then comes into play, and returns the component parts of the mechanism to normal position, or in other words moves the rod 41 through the opening 43 in the drum as the latter assumes its normal position. The drum is slightly weighted along one edge, so that after the article has been vended and the handle 26 released, the drum automatically returns to normal position.

While it is believed that from the foregoing description, the nature and advantages of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown and described and that such changes may be resorted to when desired as fall within the scope of what is claimed.

Having thus described the invention, I claim:

1. In a vending machine, the combination with a casing having a supply compartment, and a delivery drum mounted for rotation beneath the compartment, of means for normally holding the drum stationary, a coin chute arranged within the casing, coin actuated means for releasing said drum, and

including a coin receiving tray normally disposed beneath said chute and adapted to be depressed by the weight of a coin to a predetermined position, means for further depressing said tray incident to the rotation of the drum, means for removing the coin from the tray as it reaches its final position, and means for automatically returning said tray to its normal position.

2. In a vending machine, a casing having a supply compartment, a delivery drum mounted for rotation beneath the compartment, a coin chute arranged in the casing, means for holding the drum normally stationary, coin actuated means for releasing the drum and including a crank shaft connected with and controlling the first mentioned means, a coin receiving tray supported by one end of the shaft, a weight carried by the other end of the shaft to hold the tray normally disposed beneath the coin chute, said tray being adapted to be depressed by the weight of a coin to a predetermined position to release the drum, means for rotating the drum, means for further depressing the tray incident to the rotation of the drum, and means for removing the coin from the tray as it reaches its lowermost position.

3. A vending machine comprising a casing having a supply compartment, a delivery drum arranged beneath the compartment, a rod mounted for sliding movement and adapted to cooperate with said drum to hold the latter normally depressed, coin actuated means for releasing the drum, said means including a crank shaft connected

with and operating said rod, a coin receiving tray supported on one end of the shaft and adapted to be depressed by the weight of the coin introduced into the casing, whereupon said rod is retracted to release the drum, an adjustable weight carried by the other end of the shaft and normally holding the tray horizontally, means for further lowering the tray incident to the rotation of the drum, and means disposed in the path of movement of the tray for removing the coin therefrom as it reaches its normal position.

4. A vending machine comprising a casing having a supply compartment, a delivery drum operating beneath the compartment, means for normally holding the drum stationary, coin actuated means for releasing said drum, and including a coin receiving tray having an opening therein, a shaft mounted for rotation and supporting said tray, a coin chute arranged within the casing, an adjustable weight carried by the shaft and normally holding the tray positioned immediately beneath the chute to receive the coin, and to be depressed by said weight thereof, means for rotating the drum, means carried by the drum and operable to further depress or lower the tray when the drum is rotated in one direction, and a projection disposed in the path of movement of the tray and passing through the opening thereof to remove the coin from the tray as the latter assumes its lowermost position.

In testimony whereof I affix my signature.
HARDY L. CATHEY.