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 COIN SELECTING MECHANISM FOR VENDING MACHINES.
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Fig. 1.

Fig. 3.

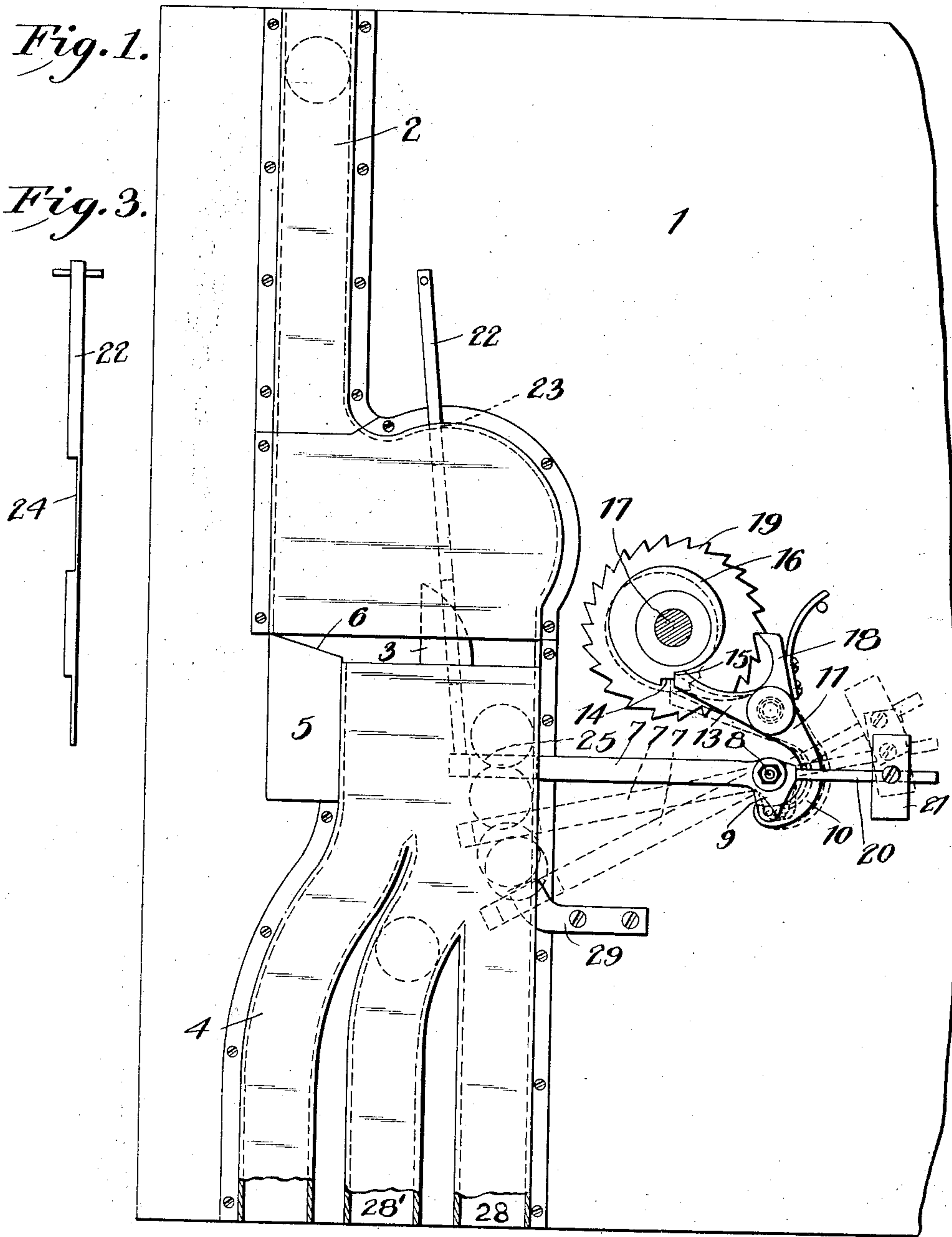


Fig. 2.

Witnesses

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COIN-SELECTING MECHANISM FOR VENDING-MACHINES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD D. SCHMITT, a citizen of the United States, residing at Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Coin-Selecting Mechanism for Vending-Machines, of which the following is a specification.

This invention relates to coin controlled machines in general, but more particularly to certain novel improvements in mechanism for insuring the passage of the proper coin to the releasing element of the operative mechanism of the machine.

The invention contemplates the provision of an anvil which will cause the proper coin, in its descent, to rebound with sufficient force to carry it into the proper coin-runway or chute.

The invention further contemplates the provision of means for preventing improper coins, such as iron or lead washers or disks of lighter or thinner metal than the proper coin, from reaching or operating the releasing element of the operative mechanism.

The invention still further contemplates the provision of a novel means for preventing more than the proper number of coins from reaching the unlocking element of the operative mechanism of the machine.

The invention consists in the general construction and arrangement of the several parts, as will be hereinafter fully described.

The chief object of the invention is to prevent the use of improper coins in the operation of the machine, by diverting them from the proper coin run-way or chute into a runway or chute having an exit on the outside of the machine through which the improper disks, coins or checks are returned, or trapped, as may be desired.

In the drawings: Figure 1 is an elevation of my improved device from the rear, showing the mechanism arranged in the inner side of the front plate of a coin controlled machine; Fig. 2 is a top plan view of the unlocking lever; and Fig. 3 is a detail edge elevation of the movable coin barrier.

In the several views, the numeral 1 indicates the front plate of an ordinary coin controlled machine on the inner side of which, my improved mechanism is arranged. The device is provided with the usual coin runway or chute 2, but in the present case, the runway is divided into upper and lower

sections, the lower section being divided into three receiving chutes, two for improper and thin coins or disks, and an intermediate one for proper coins.

Arranged between the upper and lower sections of the coin-runway and the improper coin-receiving chute 4, is a magnetic anvil 5 having an inclined surface 6, the lower edge of which is in the same horizontal plane with the entrance of the improper coin runway 4.

Projecting into and across the proper coin runway in the path of movement of the coin, is one end of a coin receiving lever 7 which is rockably pivoted at 8 to the casing plate. The coin receiving lever is provided with a projection 9 which is connected to an arm 10 of a pivoted pawl 11, which has an arm 13 adapted to engage notches 14 and 15 in a cam 16, mounted on an operating shaft 17 of the machine and a spring pressed pawl 18 is adapted to engage the teeth of a ratchet wheel 19 also mounted on the operating shaft, to prevent backward movement of the parts. The outer or pivoted end of the lever is provided with an arm 20 carrying an adjustable weight 21, which serves as a counter-balance for said lever and which the weight of the proper coin or coins; as the case may be, will overcome, when said coin or coins, engage said lever.

The numeral 22 indicates a gravity operated barrier in a guide-way 23. This gravity barrier has a portion of its side cut away or recessed as shown at 24 to provide a passage-way for the proper coin on its travel to the off-set, or lower section of the coin run-way, and its lower end rests upon the extreme inner end of the coin receiving lever. The inner end of the coin receiving lever is provided with a slot 25 having reduced end portions 26 to form shoulders 27 against which the proper coin, or coin of proper thickness impinges when it has entered the lower portion of the coin runway and is seated in said slot.

The receiving-chute 28 is designed for thin or worn coins, or thin improper disks which are of non-magnetic metal and which may be deposited and pass the barrier. Such coins or disks being thinner than the proper coin, will pass entirely through the slot 25 in the coin receiving lever without moving it, and as the exit of this runway or chute is on the outside, such coin or disk so

deposited, will be returned to the person depositing it.

In operation, a proper coin, say a nickel, being deposited in the runway, or chute 2, will fall upon the inclined surface of the anvil and being non-magnetic will rebound with sufficient force to carry it over the barrier 3, through the slot 24 in the gravity-operated barrier and into the slot 25 of the coin receiving and unlocking lever 7, where it will be temporarily held by the shoulders 27. The weight of the coin is sufficient to depress the inner end of said lever and said lever will move downward under the weight of the coin for a sufficient distance to cause the lever to operate upon the pawl to cause its end to disengage the notch or notches in the cam 16 and permit the shaft 17 to be rotated to bring about an operation of the vending mechanism. After the lever has been moved sufficiently to unlock the operating mechanism the coin will still remain in the slot in said lever, but upon the movement of the cam 16, the deep portion thereof will be brought against the end of the arm 13 of the pawl 11 and cause the lever to be forced down positively, until the coin thereon is engaged by the ejector 29, whose end entering the slot pushes the coin out of its seat, permitting it to roll into the curved portion of the proper coin-receiving chute and pass through said chute to a suitable cash drawer or receptacle within the casing. A lead disk deposited in the coin runway, would also fall upon the anvil, but being of a soft material, it would not rebound with sufficient force to carry it over the barrier 3, but would fall into the improper coin runway and be returned to the depositor. If a disk of iron should be deposited, it would be sufficiently retarded in its passage by the magnetic influence of the anvil to prevent it rebounding over the barrier 3, and such a disk, like the lead disk or slug, would fall into the improper coin runway and be returned. As has been before suggested, any worn coins proper or improper that may pass over the barrier 3 would pass entirely through the slot 25 in the end of the receiving and unlocking lever and pass out through the chute 28. When the proper coin reaches the end of the receiving lever and depresses the same, the gravity barrier falls, it being supported by and moving with said lever so as to bring its solid portion 22 across the path of movement of the coin and effectually closes the passage-way against the entrance of another proper coin until the barrier is again returned to normal position, which obviously will bring the recessed portion back to its normal position above the barrier 3. If, when the gravity barrier is in its lowest position, a proper coin should be deposited, it would strike said barrier and fall back upon the anvil and out through the chute 4.

Coins lighter than nickels, in reaching the slot in the coin receiving lever, and in passing therethrough, will only depress the lever sufficiently to depress the arm 13 from the notch 14 and cause it to engage the notch 15, without completely unlocking or permitting an operation of the mechanism.

What I claim is:

1. In a machine of the character described, the combination with a coin-runway comprising upper and lower sections, the lower section consisting of three separate receiving chutes, of a gravity-operated barrier, arranged in the path of the coin, provided with a slot for the passage of the coin and with a solid portion to prevent the passage of another coin when the barrier is moved from normal position.
2. In a machine of the character described, the combination with a coin-runway, comprising upper and lower sections, the lower section consisting of three separate receiving-chutes, of a gravity-operated barrier, arranged in the path of the coin, provided with a slot for the passage of the coin and with a solid portion to prevent the passage of another coin when the barrier is moved from normal position, and means for returning the barrier to normal position.
3. In a machine of the character described, the combination with a coin-runway comprising upper and lower sections, the lower section consisting of three separate receiving chutes, of an anvil arranged below the upper section, and a gravity-operated barrier, arranged in the coin-path, provided with a slot for the passage of the coin and with a solid portion to prevent the passage of another coin when the barrier is moved from normal position.
4. In a machine of the character described, the combination with a coin-runway comprising upper and lower sections, the lower section consisting of three separate receiving-chutes, of an anvil arranged below the upper section, a gravity-operated barrier, arranged in the coin-path, provided with a slot for the passage of a coin and with a solid portion to prevent the passage of another coin when the barrier is moved from normal position, and means for returning said barrier to normal position.
5. In a machine of the character described, the combination with a coin-runway comprising upper and lower sections, the lower section consisting of three separate receiving-chutes, of a fixed barrier between said sections, an anvil arranged below the upper section, and a gravity-operated barrier, arranged in the coin-path, provided with a slot for the passage of the coin and with a solid-portion to prevent the passage of another coin when the barrier is moved from normal position.
6. In a machine of the character described,

the combination with a coin-runway comprising upper and lower sections, the lower section consisting of three separate receiving-chutes, of a fixed barrier between said sections, an anvil arranged below the upper section, a gravity operated barrier, arranged in the coin-path, provided with a slot for the passage of the coin and with a solid portion to prevent the passage of another coin when the barrier is moved from normal position, and means for returning said barrier to normal position.

7. In a machine of the character described, the combination with a coin-runway comprising upper and lower sections, the lower section consisting of three separate receiving-chutes, and an anvil arranged below the upper section, of a gravity-operated barrier, arranged in the coin-path, provided with a slot for the passage of a coin and with a solid portion to prevent the passage of another coin, when the barrier is moved from normal position, and a rockable lever, arranged in the path of the coin, adapted to temporarily hold the coin.

8. In a machine of the character described, the combination with a coin-runway comprising upper and lower sections, the lower section being divided into three separate receiving-chutes, and an anvil arranged below the upper section, of a gravity-operated barrier, arranged in the coin-path, provided with a slot for the passage of a coin and with a solid portion to prevent the passage of another coin when the barrier is moved from normal position, a rockable-lever arranged in the path of the coin, adapted to temporarily hold the coin, and means for ejecting the coin from its seat in the lever.

9. In a machine of the character described, the combination with a coin-runway comprising upper and lower sections, the lower section being divided into three separate receiving chutes, and an anvil arranged below the upper section, of a gravity-operated barrier, arranged in the coin-path, provided with a slot for the passage of a coin and with a solid portion to prevent the passage of another coin when the barrier is moved from normal position, a coin-receiving, rockable-lever, arranged in the path of the coin, and mechanism normally restraining the operation of the lever and adapted to be set in motion by the weight of the coin, when said coin is seated on said lever.

10. In a machine of the character described, the combination with a coin-runway comprising upper and lower sections, the lower section being divided into three separate receiving-chutes, an anvil arranged below the upper section, and a fixed barrier between said sections, of a gravity-operated barrier, arranged in the coin-path, provided with a slot for the passage of a coin and with a solid portion to prevent the passage

of another coin when the barrier is moved from normal position, and a coin-receiving, rockable-lever arranged in the path of the coin.

11. In a machine of the character described, the combination with a coin-runway comprising upper and lower sections, the lower section being divided into three separate receiving-chutes, an anvil arranged below the upper section, and a fixed barrier between said sections, of a gravity-operated barrier, arranged in the coin-path, provided with a slot for the passage of a coin and with a solid portion to prevent the passage of another coin when the barrier is moved from normal position, a coin-receiving, rockable lever arranged in the path of the coin, and mechanism for normally restraining the operation of the lever and adapted to be set in motion by the weight of a coin, when said coin is seated upon said lever.

12. In a machine of the character described, the combination with a coin-runway comprising upper and lower sections, the lower section being divided into three separate receiving-chutes, an anvil arranged below the upper section, and a fixed barrier between said sections, of a gravity-operated barrier, arranged in the coin-path, provided with a slot for the passage of a coin and with a solid portion to prevent the passage of another coin when the barrier is moved from normal position, a coin-receiving, rockable-lever arranged in the path of the coin, mechanism for normally restraining the operation of the lever and adapted to be set in motion by the weight of a coin, when said coin is seated upon said lever, and means for ejecting the coin.

13. In a machine of the character described, the combination of a coin-runway provided with a receiving-chute for improper coins or disks, a similar chute for thin coins or disks and with a receiving-chute for proper coins, a device arranged in the coin-path for assisting and directing the proper coins to their proper chute, and a gravity-operated device for preventing the passage of another coin until said device is returned to normal position.

14. In a machine of the character described, the combination with a coin-runway provided with a receiving-chute for improper coins or disks and with an intermediate receiving-chute for proper coins, a device arranged in the coin path for assisting and directing the proper coins to the proper chute, a fixed barrier arranged to deflect the improper coins to their proper chutes, and a gravity-operated barrier for preventing the passage of another coin until said barrier is returned to normal position.

15. In a machine of the character described, the combination with a coin-run-

way provided with a receiving-chute for improper coins or disks, a similar chute for thin coins or disks and with an intermediate receiving-chute for proper coins, a device
5 arranged in the coin-path for assisting and directing the proper coins to their proper chute, a gravity-operated device for preventing the passage of another coin until said device is returned to normal position,
10 and a coin-receiving, rockable-lever held inoperative until a coin is deposited thereon.

16. In a machine of the character described, the combination with a coin-run-

way and a device arranged in the coin-path for assisting and directing the passage of proper coins, of a gravity-operated barrier provided with a coin-passage, said barrier being arranged in the coin path to prevent the passage of another coin until said barrier is returned to normal position. 15 20

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD D. SCHMITT.

Witnesses:

CARY D. HALL, Jr.,
LILIAN W. JOHNSON.