

No. 693,640.

Patented Feb. 18, 1902.

W. S. CONNER.

COIN ACTUATED MECHANISM FOR NEWSPAPER DELIVERY BOXES.

(Application filed Apr. 29, 1901.)

(No Model.)

2 Sheets—Sheet 1.

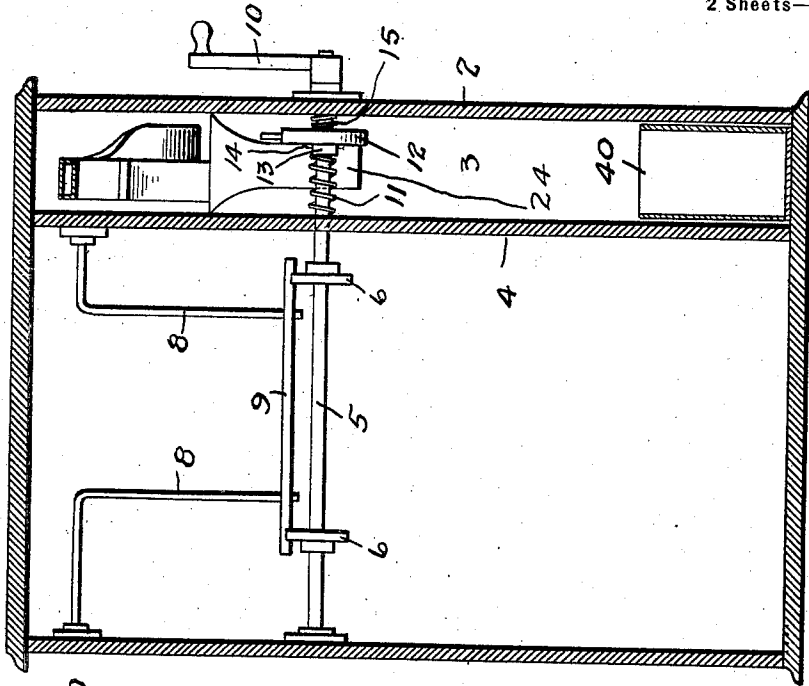


FIG. 1.

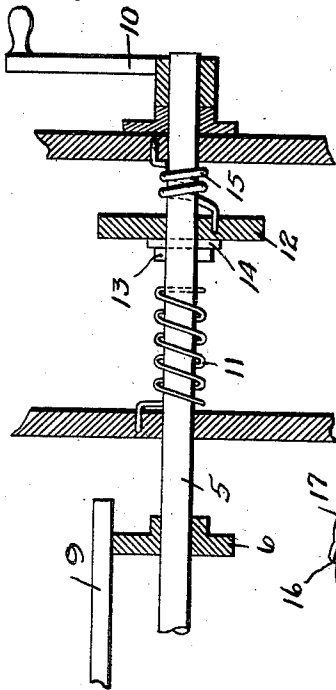


FIG. 2

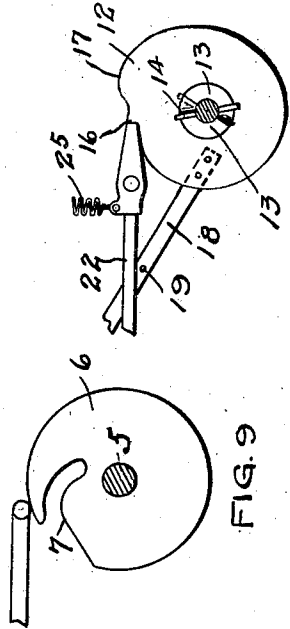


FIG. 9

FIG. 11

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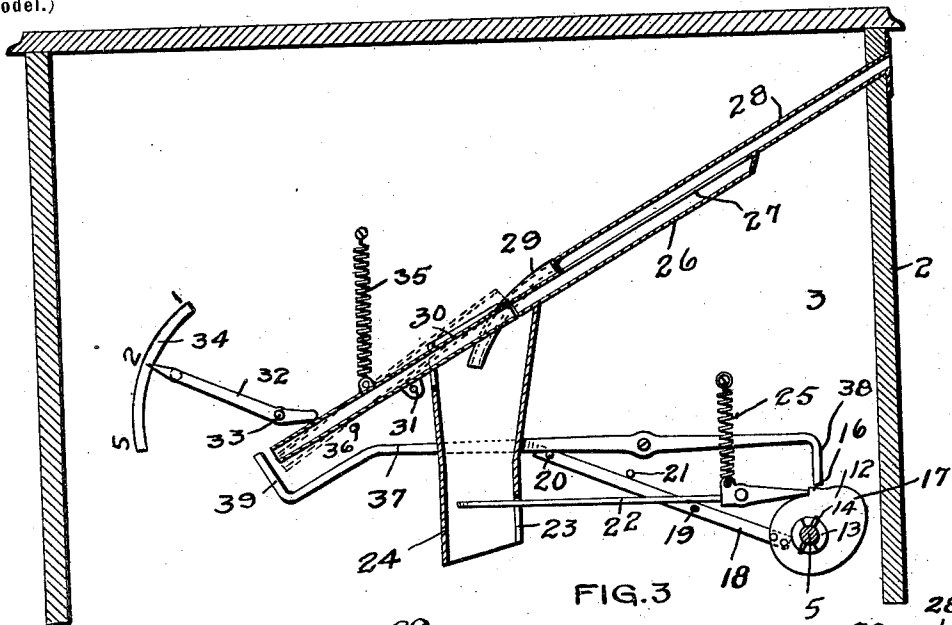


FIG. 3

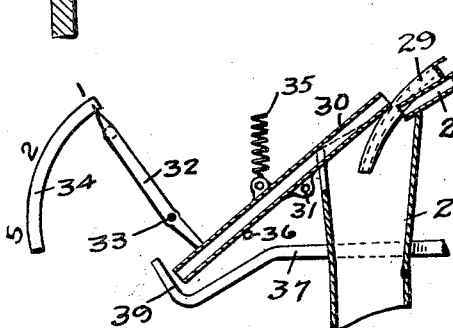


FIG. 4

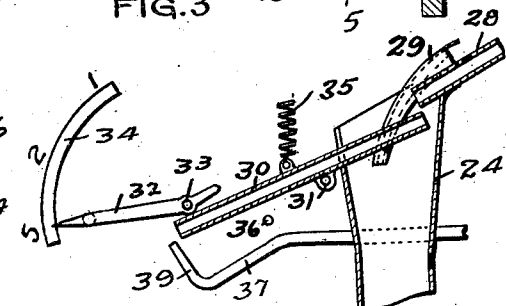


FIG. 6

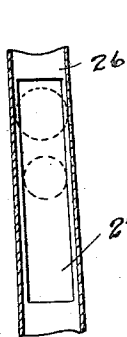


FIG. 8.

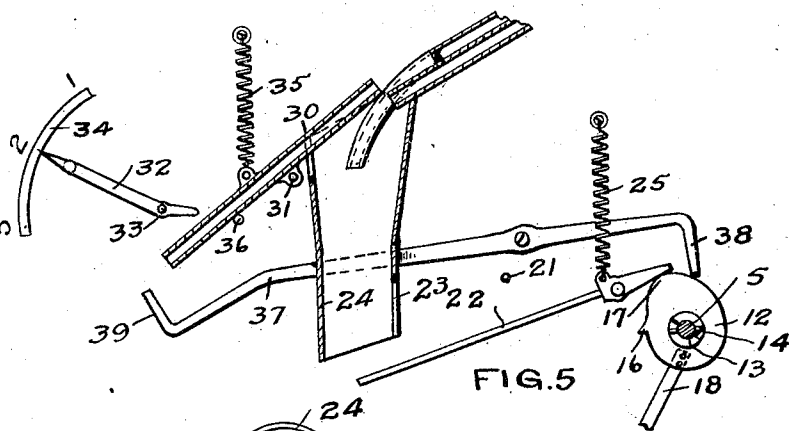


FIG. 5

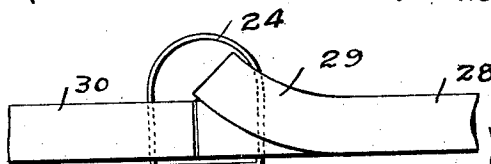


FIG. 7

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UNITED STATES PATENT OFFICE.

WILLIAM S. CONNER, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-FOURTH TO CHARLES T. GLASSER, OF MINNEAPOLIS, MINNESOTA.

COIN-ACTUATED MECHANISM FOR NEWSPAPER-DELIVERY BOXES.

SPECIFICATION forming part of Letters Patent No. 693,640, dated February 18, 1902.

Application filed April 29, 1901. Serial No. 57,867. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. CONNER, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Coin-Actuated Mechanism for Newspaper-Delivery Boxes, of which the following is a specification.

My invention relates to coin controlled or releasing devices; and the object of the invention is to provide means operated by the weight of a coin for releasing a newspaper-delivery apparatus to the end that a purchaser may obtain either a one, two, or five cent paper, according to the price for which the mechanism is set.

Other objects of the invention will appear from the following detailed description.

The invention consists generally in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of the specification, Figure 1 is vertical section of a newspaper-delivery box with my invention applied thereto. Fig. 2 is a detail of the shaft, disks thereon, and an operating-lever. Fig. 3 is a vertical section of the box, showing the coin-actuated mechanism applied to the wall thereof. Fig. 4 is a detail showing the mechanism set to deliver a penny paper. Fig. 5 illustrates the mechanism in position to deliver a two-penny paper. Fig. 6 is a similar view showing the coin-actuated mechanism set to receive a five-cent piece. Fig. 7 is a plan view of the coin-chute, showing a branch for the five-cent piece. Fig. 8 is a similar view showing the slot in the bottom of the coin-chute. Fig. 9 is an enlarged detail of one of the disks for supporting the newspaper-racks. Figs. 10 and 11 are details of the coin-released mechanism.

In the drawings, 2 represents a suitable box or casing having closed top and a door or opening through which access may be had to its interior.

3 is a chamber provided at one side of the box wherein the coin-actuated mechanism is arranged. This chamber is separated from the newspaper-containing compartment by a partition 4. The horizontal rocking shaft 5 is mounted in bearings in the walls of the box and said partition 4. Disks 6 are secured on

said shaft, each having slots or recesses 7. Brackets 8 are arranged on the walls of said box near the rear of the same, and on these brackets are arranged a series of racks 9, whose forward ends rest upon the peripheries of the disks 6. This construction is similar to that shown and described in Letters Patent of the United States issued to me May 7, 1901, No. 673,760. These racks are adapted to be released one at a time by the rotation of the shaft to permit the discharge of the papers.

Upon the outer end of the shaft 5 is an operating-handle 10, and on said shaft within the chamber 3 is a spring 11, that is adapted to return the shaft and the mechanism connected therewith to their normal position after a newspaper has been delivered and the handle has been released by the operator. A disk 12 is loosely mounted on the shaft 5 within the chamber 3 and is provided on one side with lugs 13, between which a pin 14 on the shaft 5 is adapted to move. A spring 15 on the shaft 5 normally holds the lugs in contact with said pin. This construction permits a slight movement of the shaft without affecting the disk 12 and enables me to lock said disk before the rack drops into the slots 7 and prevent any possibility of more than one paper being obtained with the deposit of a single coin. The disk 12 is provided on its periphery with a shoulder 16 and with a rounded cam extension or projection 17. An arm 18 is secured on said disk and has a swinging vertical movement up beside the wall of the box, and is provided with pins 19 and 20 and is limited in its upward movement by a stud 21. A lever 22 is pivoted on the wall of the box, its short arm being adapted to engage the shoulder 16, while its opposite arm projects through an opening 23 in a coin-chute 24 into the path of the coin descending therein. This lever 22 is normally held in engagement with the shoulder 16 by means of a spring 25. Above the coin-chute 24 is an inclined chute 26, having a slot 27 in its top communicating with a second inclined chute 28, that extends through the wall of the box and into which the coins are inserted. At the lower end of the coin-chute 28 is a branch chute 29, that is adapted to receive the five-cent pieces and conduct them into

the vertical chute 24. The lower end of the chute 26 projects over the edge of the chute 24, and as the coins are deposited into the upper end of the chute 28 the one-cent pieces will drop through the slot 27 and be carried into the chute 24, while the five-cent pieces being too large to drop through said slot will pass over the same into the branch chute 29. Below the chute 26 and forming a continuation thereof is a chute 30, pivoted on a lug 31, adapted to be swung on its pivot by the engagement of a pointer 32, mounted on a pin 33, its long arm being adapted to travel over a scale 34. At one end of this scale I provide a numeral representing one cent, at the opposite end a numeral representing five cents, and in the middle a numeral representing two cents. As the pointer is moved over this scale its short arm will engage the wall of the chute 30 and swing the same on its pivot against the tension of a spring 35. A pin 36 limits the downward movement of said chute. Beneath the chute 30 is a lever 37, pivotally supported on the wall of the box, having at one end a downwardly-turned portion 38, that is adapted to be engaged by the periphery of the disk 12 when the shaft 5 is rocked. The lever 37 at its opposite end has a turned-up extension 39, that is opposite the open lower end of the chute 30 and directly in the path of the coins delivered thereby. In the bottom of the chamber 3 I prefer to provide a coin-receptacle 40.

The operation of the device is as follows: Presuming that newspapers that are sold for one cent apiece are placed in the box, the pointer will be set opposite the numeral "1" on the scale, when the chute 30 will be moved to the position indicated in Fig. 4. A person desiring to obtain a paper will drop a penny in the chute 28, which sliding down the same will drop through the slot 27 into the chute 26 and from thence into the chute 24 upon the lever 22. The weight of this coin will depress the long arm of the lever 22, disengaging its short arm from the shoulder 16. The lever 22 when the coin falls thereon will rest upon the pin 19 after being disengaged from the shoulder 16 and will remain in this position supporting the coin until the disk and shaft are rocked. The rocking of the shaft and disk will bring the cam-face 17 into engagement with the lever 22 and will depress the end of the same whereon the coin is deposited until the coin slides off into the coin-receptacle in the bottom of the chamber. At the same time the disks 6 will be rocked to release one of the racks and deliver a paper. The operation of the device when a five-cent piece is deposited in the chute will be substantially the same, except that the coin instead of passing down through the chute 26 will slide over the slot and be deposited in the chute 24 through the branch 29. If the box is filled with two-cent papers, the indicator is set opposite the numeral "2" on the scale, when the chute 30 will stand in the po-

sition indicated by full lines in Fig. 3. When the purchaser deposits a penny in the chute it will slide down as before described and pass over the chute 24 into the chute 30. The weight of the coin will depress the lower end of the chute to the position indicated in Fig. 5 and will be held in said chute by the extension 39. When the second penny is deposited, it will drop into the chute 24 upon the lever 22 and the mechanism will be operated as described. The rocking of the disk 12 to release the second penny deposited will tilt the lever 37 and release the first penny, that still remains in the chute 30. The return of the disk 12 to its normal position will bring the pins 19 and 20 into engagement, respectively, with levers 22 and 37 and return them to their normal position. In case one or more pennies should be dropped in the chute when the device is set to deliver a five-cent paper the coins will fall upon the upper end of the chute 30, which will stand in the position shown in Fig. 6, and will pass on over the chute to the bottom of the chamber without actuating the releasing-lever 22. If the pointer is set opposite either of the numerals "1" or "2" and a five-cent piece is deposited in the chute, it will slide down its branch tube into the chute 24 and actuate the releasing-lever, there being of course no objection to a purchaser paying five cents for a one or two cent paper. As the rock-shaft and disks are returned to their normal positions the releasing-lever 22 will drop into engagement with the shoulder 16 before the racks reach the slot 7 in the disk 6. After the lever 22 engages the shoulder 16 the shaft may continue its movement, the pin 14 traveling between the lugs 13 until the pin has crossed the space between these lugs, when the racks will drop into the slot 7. With this construction I am able to prevent any possibility of a second paper being delivered without the deposit of additional coins. I may provide suitable stops (not shown) on the wall of the box to limit the stroke or travel of the operating-lever.

I claim as my invention—

1. The combination, with a coin-chute having a slot in its bottom, of a second chute underlapping the first-named chute and into which pennies fall through said slot, a chute adapted to receive the coins from both said first and second named chutes and a switch device provided in connection with said second-named chute, for the purpose specified.

2. The combination, with a coin-chute having a slot in its bottom, of a second chute underlapping the first-named chute and adapted to receive the coins that fall through said slot, a third chute to receive the coins from both said first and second named chutes, a pivoted switch device provided in connection with said second-named chute, a scale having marks or numerals representing coins of different denominations, and an indicator-hand adapted to move over said scale and to

actuate said pivoted switch device, for the purpose specified.

3. The combination, with a coin-chute, of a second coin-chute beneath the same to receive coins therefrom, a pivoted switch device provided in connection with said second-named chute, means for adjusting said switch device, a locking-lever provided in the path of the coin falling through said second-named chute, and a reciprocating device adapted to be released by the movement of said lever, substantially as described.

4. The combination, with a chute 28 having a slot in its bottom, of a chute 26 beneath said slot, a chute 24 adapted to receive coins from both said chutes 28 and 26, a switch device, means for operating the same, a pivoted lever provided near said switch device and means for tilting said lever.

5. The combination, with a rock-shaft, of a disk thereon, a pivoted lever normally locking said disk and shaft, a coin-chute, a pivoted switch device actuated by a coin from said chute, and a second lever actuated by the movement of said disk to permit the discharge of a coin after actuating said switch device, substantially as described.

6. The combination, with a rock-shaft and a disk mounted thereon having a shoulder or projection and a cam-face, of a locking-lever normally engaging said shoulder, a coin-chute adapted to direct a coin upon the free end of said lever, a second lever adapted to be operated by the engagement of said cam-face, and a switch device adapted to direct a coin upon said second lever, substantially as described.

7. The combination, with a rock-shaft, of a disk thereon having a shoulder 16 and a cam-face 17, a pivoted lever 22 normally engaging said shoulder, a spring 25, a lever 37 adapted to be engaged by said cam-face, means carried by said disk for preventing downward movement of said levers until said shaft is rocked, and coin-chutes adapted to deposit coins upon said levers, for the purpose specified.

8. The combination, with a rock-shaft, of a disk mounted thereon having a shoulder 16 and the cam-face 17, a pivoted lever 22 normally engaging said disk, a spring 25, a pivoted lever 37 adapted to be engaged by said cam-face when said shaft is rocked, means carried by said disk for limiting the downward movement of said levers, a coin-chute adapted to deliver a coin upon said lever 22, and a switch adapted to receive coins from said coin-chute and direct them against said lever 37, for the purpose specified.

9. The combination, with a coin-chute, of an adjustable chute-section forming a continuation of said chute, means for adjusting said chute-section, a locking-lever whereon the coins are discharged from said coin-chute, a second lever adapted to receive coins from said chute-section, and means for operating said levers to discharge the coins, substantially as described.

10. The combination, with a coin-switch, of an indicator-hand for operating the same, a spring normally holding said switch in its raised position, a scale representing different denominations of coins over which said indicating-hand is movable, and a receiving-chute adapted to deliver coins to said switch, substantially as described.

11. The combination, with a rock-shaft, of the disk 6 having slots 7 thereon, rack-bars one at a time engaging said slots, a spring-actuated disk loosely mounted on said shaft and having lugs 13, a pin provided in said shaft between said lugs and having a limited movement before engaging the same, and means for normally locking said disk, substantially as described.

12. The combination, with a coin-chute, of a pivoted member adapted to be moved by the weight of the first coin deposited in the chute, a lever preventing the discharge of said first coin, and locking devices provided in the path of the coins discharged from said coin-chute, substantially as described.

13. The combination, with a coin-chute, of a movable switch device, means for adjusting the same with respect to the discharge-opening of said chute, a rock-shaft, a disk thereon, means for normally locking said disk and operated by the weight of a coin to release the same, and means for preventing the discharge of a coin held by said switch device until said disk is rocked, substantially as described.

14. The combination, with a coin-chute, of adjustable means in alinement therewith to receive a coin therefrom, said adjustable means being adapted to be tilted out of alinement with said chute by the weight of the first coin therefrom, means for retaining the coin in said adjustable means, a locking device actuated by the weight of the second coin from said chute, and means for operating said retaining means and said locking device to discharge the coins, substantially as described.

15. The combination, with a coin-chute, of a tilting chute-section, means for adjusting said section into alinement with said chute to receive a coin therefrom, said section being adapted to be tilted by the weight of the first coin falling therein to move its receiving end out of alinement with said chute, means for retaining the coin in said section, a locking device adapted to be actuated by the weight of the second coin from said chute, and means for operating said retaining means and said locking device to discharge the coins held thereby, substantially as described.

16. The combination, with a coin-chute, of a locking-lever adapted to be actuated by the weight of a coin falling thereon, a rock-shaft, a disk provided on said shaft and normally locked by said lever, and means controlled by the movement of said disk for limiting the movement of said lever when a coin falls thereon, substantially as described.

17. The combination, with a coin-chute, of

a locking-lever adapted to be actuated by the weight of a coin falling thereon, a rock-shaft, a disk thereon having a notch to receive said locking-lever, means controlled by the movement of said disk for preventing the movement of said lever past a certain predetermined point and the discharge of the coin therefrom until said shaft and disk are rocked, substantially as described.

18. The combination, with a coin-chute, of a pivoted switch member operated by the movement of the first coin, a lever to prevent the premature discharge of said coin, and means released by the second coin to operate said lever, substantially as described.

19. The combination, with a coin-chute, of a locking-lever operated by the discharge of a coin from said chute, a disk released by the movement of said lever, a switch device for diverting the first coin deposited in the chute to prevent the operation of said lever, and means for preventing the discharge of said first coin until said lever is operated by the second coin, substantially as described.

20. The combination, with a coin-chute, of a pivoted switch device, means for adjusting said device with respect to the discharge-opening in said chute, said switch device being

adapted to be operated by the weight of the first coin deposited in the chute, means for preventing the discharge of said first coin, a locking device adapted to be actuated by the weight of the second coin deposited in said chute, and means for operating said preventing means and said locking device to discharge the coins held thereby, substantially as described.

21. The combination, with a coin-chute having a slot in its bottom, of a second chute underlapping the first named and into which the pennies fall through said slot while the larger coins pass over the same, means for retaining the coins in said second chute, a locking device adapted to be actuated by the weight of the coins falling from said chutes, and a switch device provided in connection with said second-named chute and operated by the first coin falling therein, substantially as described and for the purpose specified.

In witness whereof I have hereunto set my hand this 24th day of April, 1901.

WILLIAM S. CONNER.

In presence of—
RICHARD PAUL,
A. L. WHELAN.