Nov. 12, 1929. J. A. URBANEK 1,735,819

NEWSPAPER VENDING MACHINE

Filed July 11, 1925 4 Sheets-Sheet 1

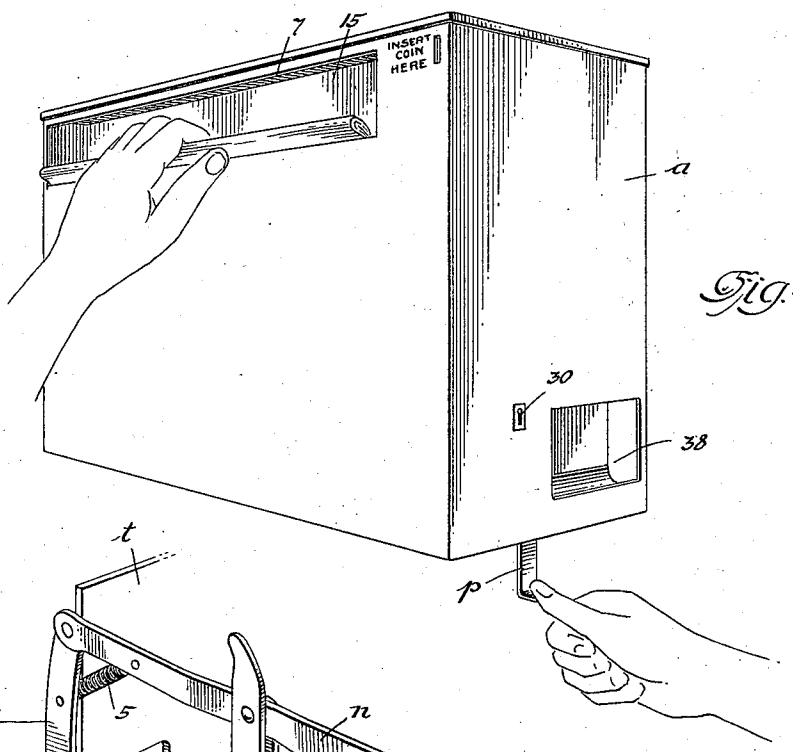


Fig. 1.

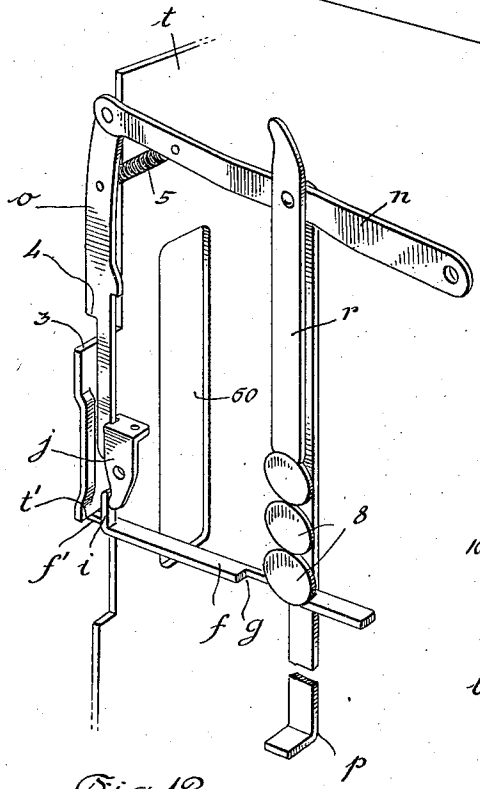


Fig. 12.

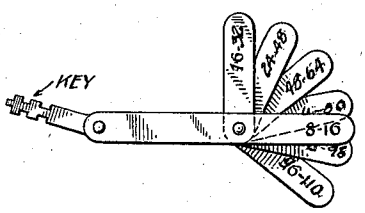


Fig. 14.

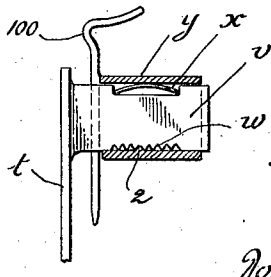


Fig. 13.

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NEWSPAPER VENDING MACHINE

Filed July 11, 1925 4 Sheets-Sheet 2

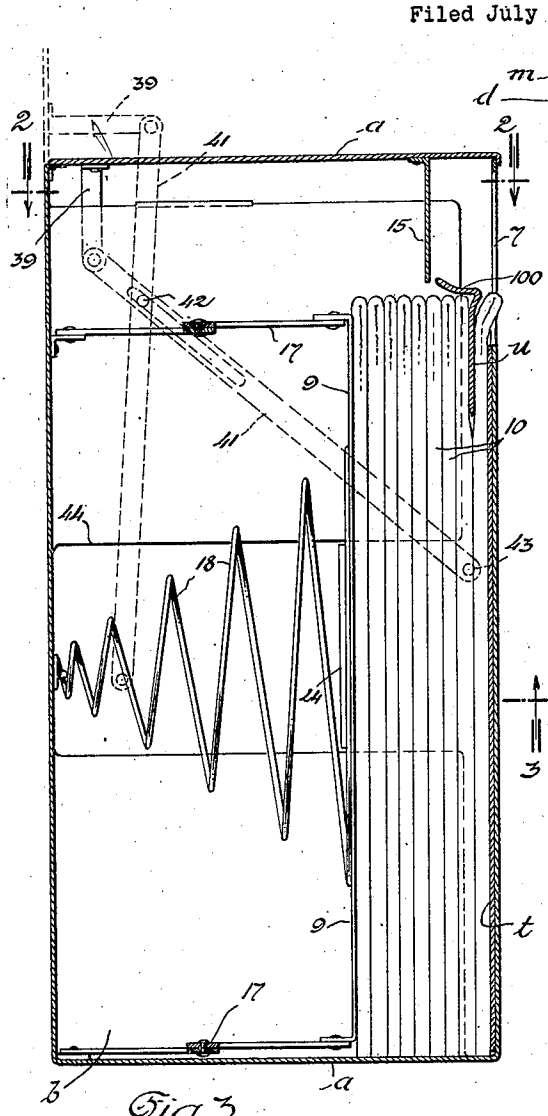


Fig. 3.

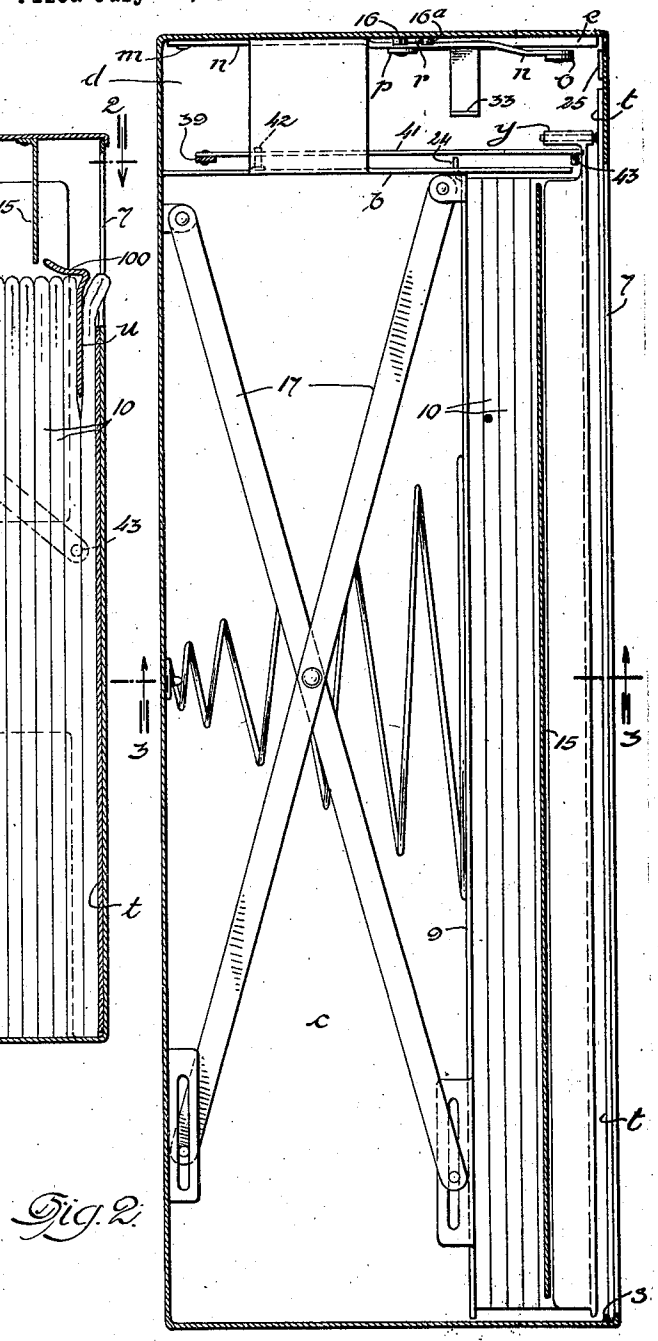


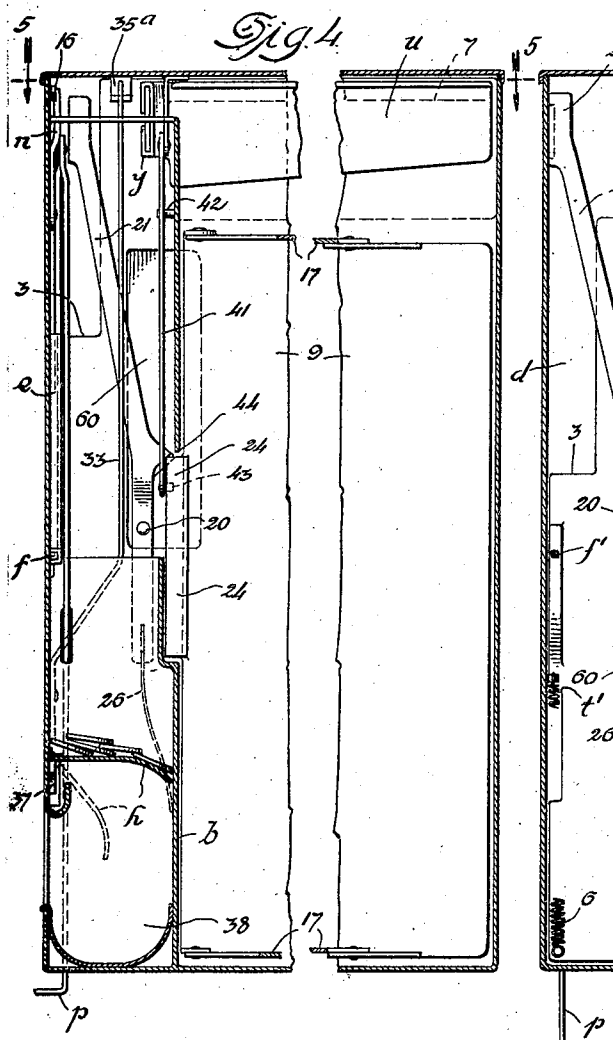
Fig. 2.

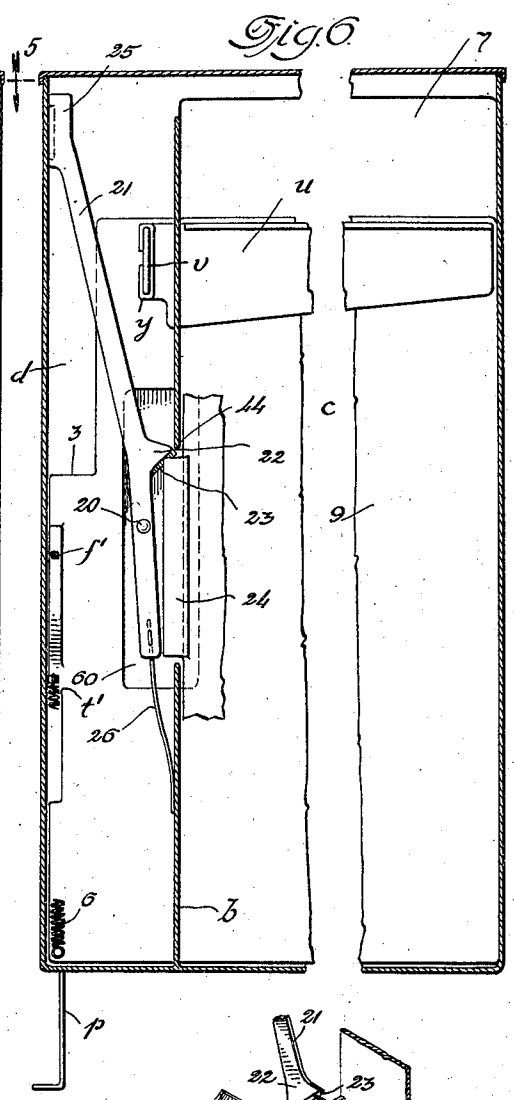
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NEWSPAPER VENDING MACHINE

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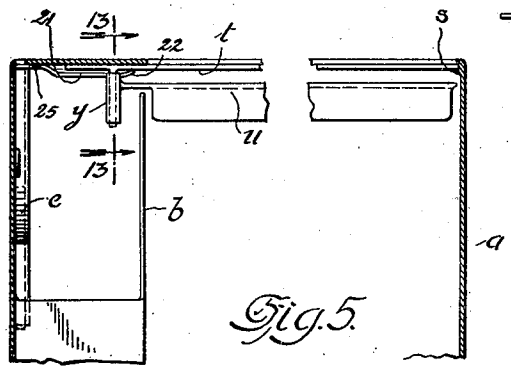


Fig. 5.

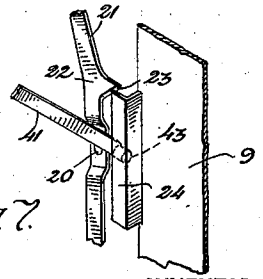


Fig. 7.

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NEWSPAPER VENDING MACHINE

Filed July 11, 1925 4 Sheets-Sheet 4

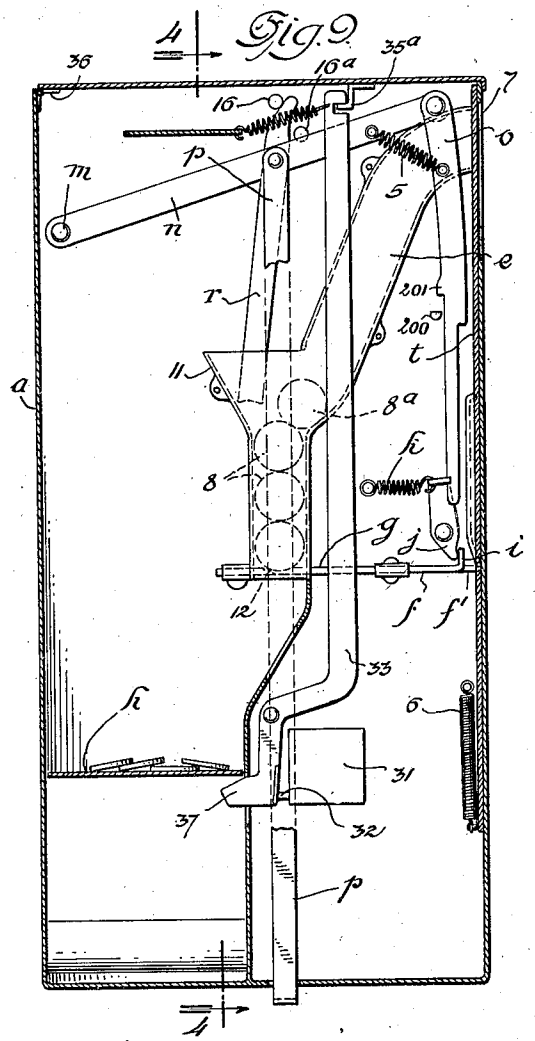


Fig. 9.

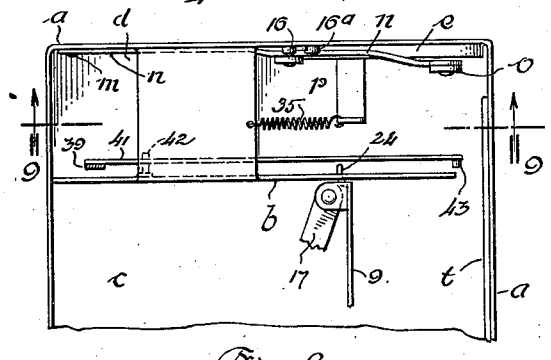


Fig. 8.

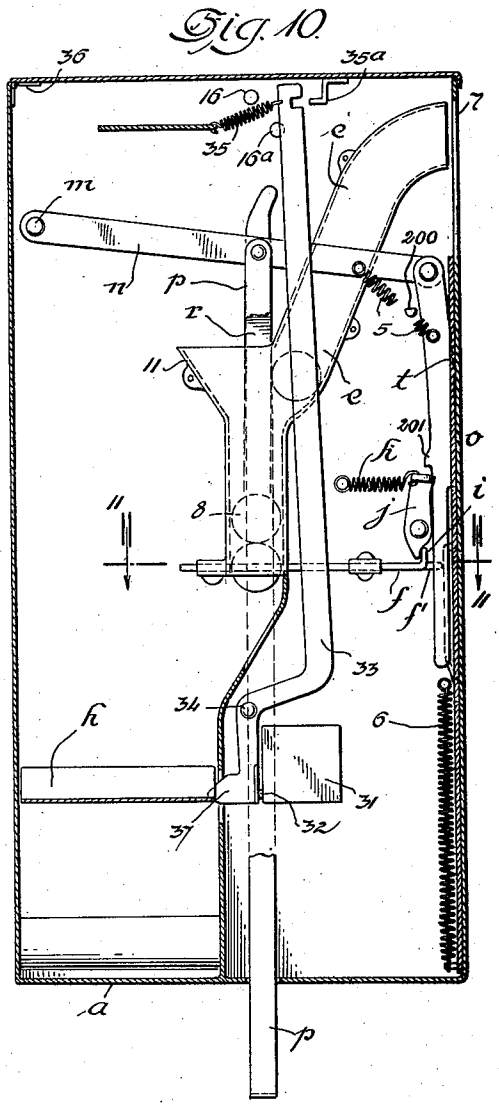


Fig. 10.



Fig. 11.

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Patented Nov. 12, 1929 1,735,819

UNITED STATES PATENT OFFICE

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NEWSPAPER-VENDING MACHINE

Application filed July 11, 1925. Serial No. 42,865.

This invention relates to a newspaper vending machine, and has for its object a machine which may be very cheaply manufactured. Another object is the provision of means for detaching one newspaper from the rest which permits one to withdraw the detached newspaper from the machine, but yet prevents one from molesting any of the remaining newspapers.

A further object is the provision of means which prevents the actuation of the machine when less than the right amount of coins are inserted in the machine. It has the further object of providing a construction which permits the easy filling of the container with the newspapers the cover for said filler opening being locked in place and which may be only unlocked by means of a key.

There are numerous details of construction which are new and novel. These will be clearly understood as the description of this machine progresses.

In the drawings:

Fig. 1 is a perspective view of the machine.

Fig. 2 is a horizontal section through the machine taken substantially on the line 2—2 of Fig. 3.

Fig. 3 is a vertical section through the machine taken on the line 3—3 of Fig. 2.

Fig. 4 is a vertical section taken on the line 4—4 of Fig. 9, showing the shutter raised and preventing the withdrawal of any newspaper.

Fig. 5 is a horizontal sectional view taken just below the cover and taken on the line 5—5 of Fig. 4.

Fig. 6 is a vertical sectional view similar to Fig. 4, showing the shutter lowered to permit the withdrawal of a newspaper, some parts of the machine being omitted for clearness.

Fig. 7 is a perspective view of the coin chute closing means.

Fig. 8 is a plan view of a portion of the box with the cover removed.

Fig. 9 is a section on the line 9—9 of Fig. 8, showing the coin control mechanisms for operating the shutter, and showing the shutter raised to close the opening in the container.

Fig. 10 is a similar section, but showing the shutter lowered to uncover the opening in the container.

Fig. 11 is a detailed sectional view taken on the line 11—11 of Fig. 10.

Fig. 12 is a perspective view of the coin operating mechanism.

Fig. 13 is a detailed section taken on the line 13—13 of Fig. 5.

Fig. 14 is a detail view of the gauge for adjusting the position of the dividing blade according to the thickness of the newspaper which is dispensed from the said machine.

This machine comprises a container or box-like structure *a* which is provided with the partition wall *b* dividing this container into two compartments *c* and *d*. The newspapers are contained within the compartments *c* and the mechanism for controlling the dispensing of said newspapers is contained within the compartment *d*.

Secured to the side wall of said container and in the compartment *d* is a coin chute *e*. This coin chute is rigidly supported by the container and slidably supports the coin chute closing member *f*. (Refer to Figs. 9 and 10). This sliding closure member *f* is provided with the coin opening *g* (see also Fig. 11), through which the coins may just pass. However, in the position as shown in Fig. 9 this sliding closure member is in a retracted position which positions the coin slot *g* in such a position that the same will not register with the mouth of the coin chute. This will not allow any of the coins to drop through the slot *g*, and in order to actuate the machine it is necessary to force the coins through the slot *g*, and into the coin tray *h*. This sliding closure member *f* is provided with the struck up ear *i* which is engaged by the pivoted lever *j*. The tension spring *k* is secured to the lever *j* and yieldingly holds the lever up against the ear *i*, and exerts a force on the closure member *f* to maintain the same in the retracted position such as is shown in Fig. 9.

Pivoted as at *m*, is an arm *n* to which is pivoted the trip arm *o* and the draft arm or actuator *p*. A pull on this draft arm will also move the trip arm *o* and the coin push arm *r*, also carried by this arm *n*, bears on the coin exerting a pressure thereon to force the coins

down through the coin chute which shifts the closure member and then forces the coins through the coin slot *g*.

Slidably supported as at *s*, Fig. 5, is a shutter *t*. This shutter *t* is provided with the adjustable newspaper dividing blade *u* and may be spaced from said shutter the correct distance corresponding to the thickness of the newspaper contained in the machine. The lower edge of the blade is slanted (see Figs. 4 and 6) so that one end will engage between the newspapers first and the blade is then properly guided between the newspapers. This adjustment of the blade is shown in Fig. 13 and shows an arm *v* secured to the shutter *t*, and provided with the teeth *w* along the lower edge, and a leaf spring *x* bears on this arm to force the teeth into engagement with the tooth 2 carried by the guide *y* which is carried by the blade *u*. To adjust the space between the dividing blade and shutter it is merely necessary to press down on the guide *y* to disengage the teeth *w* from the teeth 2 carried by the guide *y*. When these teeth are disengaged the blade may be adjusted so as to provide the space desired and when released the spring action presses the teeth into engagement and locks the divided blade in such position, (refer to Fig. 13). A gauge tool is shown in Fig. 14 which is suitably marked for various thicknesses of newspapers and may be stuck in between the shutter and blade to obtain the proper adjustment.

This shutter *t* is provided with a cut-away portion forming a shoulder 3. The trip arm *o* is provided with the shoulder 4. As shown in Fig. 9, the spring 5 is connected between the arm *n* and the trip arm *o* and this spring yieldingly holds the trip arm shoulder 4 out of engagement with the shutter. If there are no coins in the coin slot a pull on the draft member *p* would merely lower this trip arm without the arm engaging the shutter and consequently the shutter is yieldingly held there by the arm *f*. The container is provided within the opening 7 which this shutter normally closes. Preferably I provide a stop 200 struck out of the side wall of the box which will be engaged by the 201 on the trip arm, which will prevent the pushing of coins through when a less number of coins are used; the machine will not operate when two coins are used where three coins are required. To aid in a complete understanding of the operation of the machine we will proceed as if the correct amount of coins had been dropped in the coin chute. The machine as shown is arranged to operate with three coins. These coins are designated 8 and are shown in the dotted lines in the Figs. 9 and 10 and also in 12. Obviously the machine could be arranged to operate with any number of coins as well as with three. The container is provided with the sliding spring pressed pad 9, which bears up against the back of the newspapers 10. In the operation of the machine the pull is exerted on the draft member *p* which pulls down on the lever *n* which consequently moves the coin push arm *r* and the trip arm *o*. The coin push arm *r* is guided by means of the inclined cam surface 11 carried by the coin chute into engagement with the pennies. This coin push arm then engages the top coin and tends to force the coins through the mouth of the chute. However, the mouth of the chute is obstructed by a portion of the sliding closure member *f*. The curvature of the coin is such, however, that the coin engages the beveled surface 12 at one end of the coin slot *g* and when the pressure is applied to the push arm *r*, the coins shift the sliding closure member *f* to the left or to the position as shown in Fig. 10. It will be noticed that the sliding closure member *f* is provided with an extension *f'* that normally is engaged under the shoulder *t'* on the shutter. This supports the shutter and it is not released until the member *f* is moved by forcing the coins through the slot *g*. This brings the coin slot *g* into registration with the mouth of the coin chute and permits the coins to drop through into the coin tray *h*. This shifting of the member *f* rocks the arm *j* which in turn bears against the trip arm *o* and moves the same so that the shoulder 4 will engage the shoulder 3 carried by the shutter, and also throws the trip arm over so that the shoulder 201 carried thereby will miss the stop 200. Further movement of the mechanism pushes all the coins down through the chute and as the trip is in engagement with the shutter the shutter is caused to move downwardly also, thus uncovering the opening 7.

Fig. 3 shows a vertical section through the machine when the shutter is in its lowermost position. This shows how the dividing blade *u* enters between the first and second newspapers, thus detaching one from the rest, and permits one to thrust his hand through the opening 7 and withdraw the detached newspaper. This blade is bent out as at 100 so as to spread the newspapers by bending the detached paper out, thereby permitting one to easily grasp the newspaper. A baffle or partition 15 is suspended from the top of the container and prevents one from attempting to withdraw a newspaper that is not detached. Only one newspaper can be withdrawn with each operation of the coin controlled dispensing mechanism. After one has received the paper he releases the draft member *p* which permits the shutter to fly back into closed position and the mechanism to return to the idle position or to the position shown in Fig. 9.

However, if one does not put in the required amount of coins and then push the handle, the coin push arm *r* is not permitted to travel very far before the shoulder 201 engages the stop 200, thus preventing any

further actuation of the machine. If for example, one puts in one or two coins where three are required the shoulder 201 engages the stop before the coin push arm reaches the coins. This prevents the loss of the coins, and the customer will know he did not put in enough coins, so he can put in the additional coins to remedy his mistake. If one should put more than the required amount of coins in the machine the machine will still operate as the coin push arm *r* is guided onto the top of the third coin, the fourth coin 8ª resting on one side. The chute is designed for any certain amount of coins, depending on the number required to work the machine. Any excess to the correct number are positioned to one side so as to not interfere with the proper working of the dispensing mechanism. The pins 16 and 16ª carried by the container, engage the coin push arm *r* for positioning this arm and guiding the same as the same is moved to properly engage the coins. Upon moving the coin push arm *r* up, this arm engages the pin 16 positioned to the left as shown in Fig. 9, which cams the same over and causes the arm to spring slightly to the left, thus permitting the pennies to pass by as they are rolling down the chute. The pin 16ª locates the push arm on the downward stroke.

The newspapers which are held within the paper compartment are backed up by the pad 9 which is supported by a pair of toggle levers 17 at the top and bottom. The coil spring 18 bears against the back of the pad and yieldingly forces the same outwardly against the bundle of papers with which the machine is filled. This automatically feeds the papers forward.

As the newspapers are removed and this pad moves up, an additional means is provided for closing the coin chute when the contents of the box is exhausted. This will prevent anyone from inserting coins into an empty box.

Figs. 4, 6 and 7 show this very well. Pivoted to the front wall of the box as at 20 is an arm 21. This arm is bent and a portion projects through the opening 60 in the shutter. The arm is also provided with the lug or projection 22 having a beveled edge 23, (note Fig. 7). The pad is provided with the projecting ear 24 adapted to strike against the beveled edge 23 of the arm 21 and thrust the same over in a counter clockwise position as viewed in Figs. 4 and 6. This arm is provided with a foot 25 adapted to be swung in front of the coin chute entrance. This prevents the insertion of any coins in the chute and when the chute is closed it is understood that the box is empty. A spring 26 yieldingly forces against this arm 21 so that the entrance opening of the coin chute is nominally open.

When it is desired to fill the container and withdraw the money, the owner of the box inserts a key in the key opening 30 which turns the lock 31 which withdraws the bolt 32, thus permitting the lock arm 33 pivoted to the wall of the container, as at 34, to rock. The spring 35 exerts a pressure on the locking lever and withdraws the same from engagement with the depending bracket 35ª, carried by the cover. This permits the cover to be swung open on its hinges 36.

The swinging of this cover into open position permitted by the swinging of the locking arm also permits the coin tray to be dumped. This locking arm is provided with a projection 37 which engages under the hinged coin tray *h*. As the locking arm is withdrawn it permits the coin tray *h* to tip downwardly (see Fig. 4), which empties the coins into the coin chamber 38. See Figs. 2 and 3. In addition, when the box cover is opened it moves with it the rigid arm 39 to which is pivoted the arm 41 which is in turn pivoted to the container as at 42. This arm 41 is provided with the pin 43 which engages the pad, and as the cover is raised the arm 41 is moved and creates a force which pulls the pad backwardly against the tension of the spring 18. This permits a bundle of newspapers to be again inserted within the container after which the box may be locked up and is in position for dispensing further newspapers. The pad which is provided with this projection 24 is guided by the partition wall *b* by cutting out a portion of said partition wall as at 44 and permitting this projection 24 to project therethrough and to be guided by the edges of said opening.

What I claim is:

1. In a vending machine of the type designed for holding newspapers, or similar articles, and provided with means operable to permit vending or removal of an article, comprising in combination means for controlling the operation of said vending means and normally held in inoperative position, means for preventing movement of the controlling means while in such position, mechanism for moving said controlling means and which includes coin-controlled mechanism for throwing said means into operative position only when the correct amount of coins are used, said mechanism including means for holding said controlling means in such operating position during such movement.

2. In a vending machine of the type designed for holding newspapers, or similar articles, and provided with means movable to permit vending of a single article, comprising in combination, a trip arm normally held out of engagement with said means, an actuator arm, connections between the actuator arm and trip arm, whereby the trip arm is moved when the actuator arm is moved, means for supporting coins, a coin push arm and tripping mechanism operated by the ini-

tial movement of the coins to move said trip arm to engage the same with the vending means, whereby further movement of said actuator arm and coins move the said means to permit one to withdraw a single article.

3. In a vending machine of the type designed for holding a plurality of newspapers, or similar articles, and provided with means operable for segregating and permitting vending of a single article, comprising in combination, a trip arm normally held out of engagement with said means, an actuator arm and connections between the actuator arm and trip arm for moving the trip arm as the actuator arm is moved, a coin chute for holding coins, a coin push arm connected with and arranged to be moved simultaneously with said trip arm, a sliding closure member for the mouth of said chute, and provided with a coin opening normally held slightly out of alignment with the mouth of said coin chute, and connections between said closure member and trip arm whereby when the actuator arm is moved the coins are forced through the opening in said closure member, thereby camming the closure member and moving the same so that the opening registers with the mouth of the chute to permit the coins to pass through, and the trip is moved to engage the said means during the initial movement of said actuator arm, further movement operating means to permit the withdrawal of the segregated article.

4. In a vending machine of the type designed for holding newspapers, or similar articles, and provided with means operable to permit vending or removal of an article, comprising in combination, a trip arm normally held out of engagement with said means, a coin chute for holding coins, operating mechanism which includes a slidable closure for the mouth of said chute and provided with an opening of a size to permit a coin to pass through, means for holding said slidable closure in a retracted position with the opening therein in non-registration with the mouth of said coin chute, a coin push member having connections with said trip arm thereby causing them to move together, said slidable closure arranged to be moved when said coins are moved to bring the opening therein into registration with the mouth of the chute, and connections between the closure member and trip arm which throw the trip arm into engagement with the said means when the closure member is moved.

5. A vending machine for newspapers and like articles, comprising a container for holding a supply of articles, and movable vending means for separating a single article from the supply for vending the same, in combination with the control mechanism which includes a manually operable means, a chute for receiving a number of coins or checks, one end of the chute being disposed in close proximity to a portion of the manually operable means, said manually operable means including a part for segregating a predetermined number of the said coins, means associated with the said vending means and disposed in close proximity to the opposite end of said chute, whereby said predetermined number of coins in the chute effects an operable connection between the manually operable means and the means associated with the vending mechanism and the said coins, in excess of the predetermined number, being outside the operable connection.

6. A vending machine for newspapers and like articles, comprising a container for holding a supply of articles, and movable vending means for separating a single article from the supply for vending the same, in combination with a control mechanism including a manually operable plunger, a chute for receiving a number of coins with one end of the plunger projecting within one end of the chute, means associated with the vending mechanism and serving normally to partially cover the opposite end of the chute to hold the coins in said chute, and means for moving the plunger into the chute, the plunger and chute being arranged so that the plunger may segregate a predetermined number of coins, to eject the predetermined number of coins whereby the coins actuate the means associated with the vending mechanism and effect operation of the vending mechanism.

7. A vending machine for newspapers and like articles, comprising a container for holding a supply of articles, and movable vending means for separating a single article from the supply for vending the same, in combination with a control mechanism including a manually operable plunger, a chute for receiving a predetermined number of coins with one end of the plunger projecting within one end of the chute, means associated with the vending mechanism and serving normally to partially cover the opposite end of the chute to hold the coins in said chute, and means for moving the plunger into the chute to eject the coins whereby the coins actuate the means associated with the vending mechanism and effect operation of the vending mechanism, and a locking device which prevents the plunger from moving into the chute but which is released by the action of the coins in actuating the said means which normally closes one end of the chute.

8. In a coin controlled mechanism for a vending machine, the combination of a chute for receiving a plurality of coins, movable means partially closing the chute which supports the coins in the chute, a plunger projecting in the chute, manually operable means for actuating the plunger, said plunger being arranged normally in the chute so that a plurality of coins having a combined height greater than the distance between the par-

tially closed end of the chute and the plunger may be placed in the chute, means permitting movement of the plunger upon actuation thereof to segregate a predetermined number of coins from the total and means operably connecting the said movable means with certain of the vending mechanism.

9. In a coin controlled mechanism for a vending machine, the combination of a chute for receiving a plurality of coins, means partially closing the chute which supports the coins in the chute, a plunger projecting in the chute, manually operable means for actuating the plunger, said plunger being arranged normally in the chute so that a plurality of coins having a combined height greater than the distance between the partially closed end of the chute and the plunger may be placed in the chute, means permitting movement of the plunger upon actuation thereto to segregate a predetermined number of coins from the total, a vending mechanism associated with the manually operable means, means normally preventing actuation of the vending means, said means for partially closing the end of the chute being arranged to be actuated when the coins are moved by the plunger, this closure means and the means normally preventing actuation of the vending mechanism being operably associated whereby the means which normally prevents actuation of the vending mechanism is released to permit actuation of the vending mechanism.

In testimony whereof I have affixed my signature.

JOHN A. URBANEK.