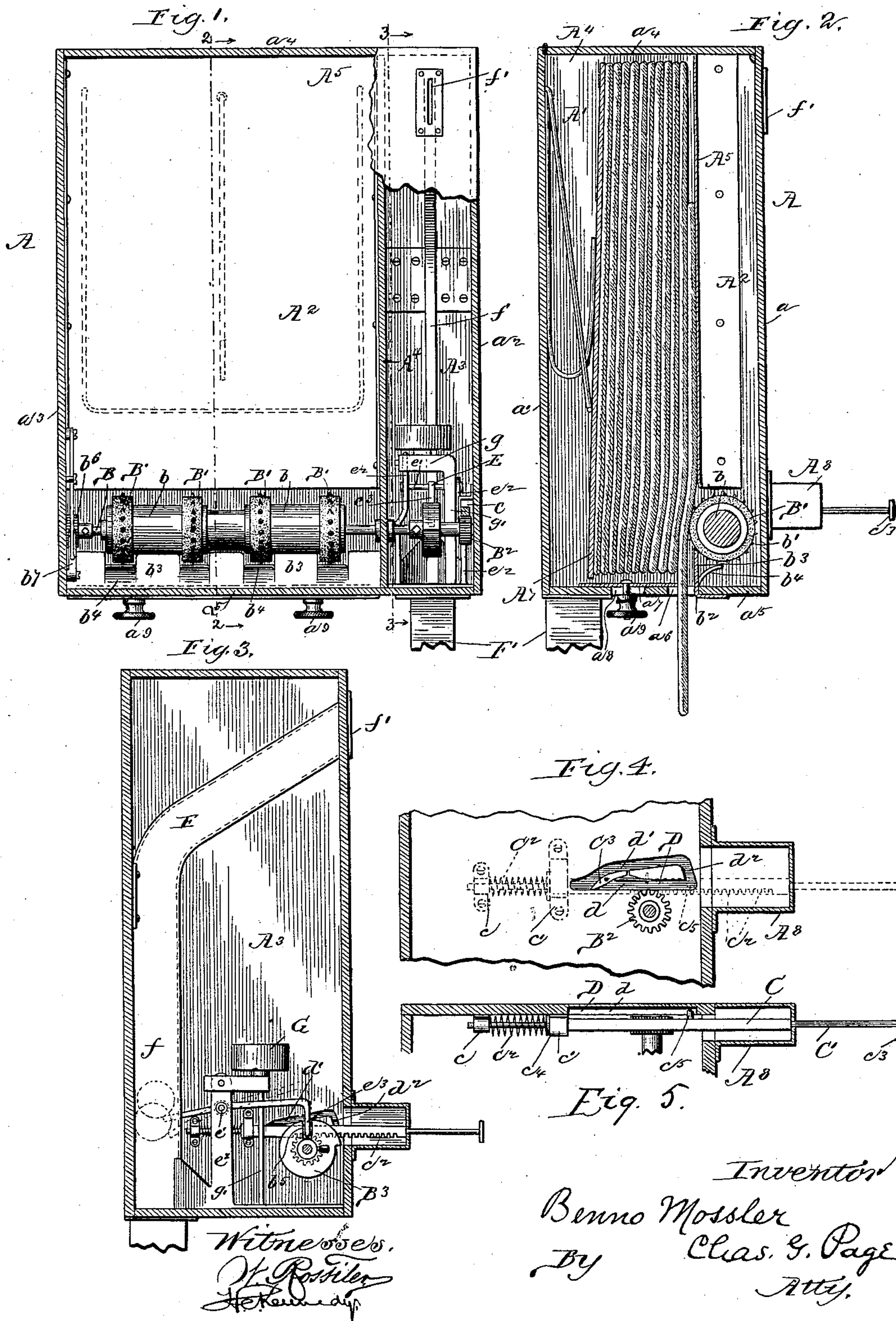


(No Model.)

B. MOSSLER.
NEWSPAPER VENDING APPARATUS.

No. 444,502.

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UNITED STATES PATENT OFFICE.

BENNO MOSSLER, OF CHICAGO, ILLINOIS.

NEWSPAPER-VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 444,502, dated January 13, 1891.

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To all whom it may concern:

Be it known that I, BENNO MOSSLER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Newspaper-Vending Apparatus, of which the following is a specification.

This invention relates to an apparatus for the sale of newspapers and like articles, which does not require the aid of an attendant, and relates more particularly to a coin-operated device in which the newspapers are held in a suitable receptacle, and are removed therefrom by devices which are normally held in an inoperative position, but are adapted to be thrown into operative position by a coin which is deposited in a suitable opening or openings.

It is of the greatest importance that an apparatus of this character should be of simple construction, having the least number of parts, which are not liable to get out of order, for the reason that they are generally located in public places to be used by the public and are subjected to very rough handling and treatment, either in their ordinary use by careless people or by persons with mischievous intentions.

Heretofore newspaper-selling apparatuses of this class commonly comprise a comparatively large number of parts, some of which are of expensive construction, thereby making an expensive apparatus and one which, owing to the large number of parts, is liable to get out of order. The object of this invention is to obviate these difficulties and provide a device of this character comprising a minimum number of parts of simple construction, which can be easily manufactured and put together, thereby lessening the cost and making a stronger and more durable apparatus.

The invention consists in the features of construction and combinations of parts hereinafter fully described, and pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a view in front elevation of a device constructed in accordance with my invention,

the parts being inclosed within a suitable case the front piece of which is removed to show the parts. Figs. 2 and 3 are vertical sectional views taken, respectively, on the lines 2 2 and 3 3 of Fig. 1. Fig. 4 is a fragmentary view in side elevation, showing a cam groove or slot for guiding the movement of the operating rod or handle, said rod or handle being shown in dotted lines. Fig. 5 is a fragmentary view in plan, showing the parts shown in Fig. 4 with the operating-handle in full lines.

Referring to said drawings, A indicates the case or housing within which the parts are inclosed, said case comprising front and rear pieces $a a'$, side pieces $a^2 a^3$, and top and bottom pieces $a^4 a^5$. The case A is divided into three compartments A' , A^2 , and A^3 by means of two upright partitions A^4 and A^5 . The partition A^4 extends from the front to the rear of the case near the side piece a^2 , thereby forming between said partition and the side piece a^2 the side compartment A^3 . Between the partition A^4 and the other side piece a^3 and near the front piece a a transverse partition A^5 is located, thereby forming the front compartment A^2 and the rear compartment or paper-holding receptacle A' . The top piece a^4 is made removable and preferably provided with hinges and a lock to permit access to the paper-holding receptacle to be had only by authorized persons.

The paper-holding receptacle A' is provided in its bottom and adjacent its front side with a transverse slit or opening a^6 , through which the papers are discharged from the receptacle, and a spring-pressed follower A^7 is located in the said receptacle to keep the papers always in the front portion thereof, so that the foremost paper will be just over the said discharge-opening a^6 . To enable the device to be capable of use with papers of different sizes, the said discharge-opening is made wider than will usually be employed, and an adjustable plate a^7 is located upon the bottom piece a^5 of the case, with its front edge in position to overlap the discharge-opening. The said plate a^7 is provided with screw-threaded studs which project through slots a^8 in the bottom piece, and

are provided with set-screws a^9 , by means of which said plate can be secured in its adjusted position.

The devices for discharging the newspapers, periodicals, or other articles in the receptacle comprise a friction-roller or a series of friction-rollers, which project into the paper-holding receptacle from its front side, so as to engage the foremost paper, and devices for turning said friction-rollers in a direction to discharge the said paper. In the construction herein shown the transverse partition A^5 terminates a short distance above the bottom piece of the case, Figs. 1 and 2, and a transverse shaft B, carrying friction-rollers $B' B'$, is located within the front compartment A^2 , adjacent the lower edge of said partition A^5 . The said shaft is supported in suitable bearings upon the side pieces $a^2 a^3$ and the partition A^4 . In the particular construction illustrated the shaft B is provided with a cylindric portion b , upon which are mounted the friction-rollers B' , said rollers being conveniently formed of rubber or similar material and having the form of ribs or ridges upon the cylindric portion b . The diameter of said cylindric portion b is desirably such that it does not extend into the receptacle A' , while the rollers B' thereon extend into said receptacle a distance equal to their thickness. As a means for increasing the efficiency of the rollers in discharging the papers from the receptacle, said rollers are each provided with small peripheral points or pins $b' b'$, which project very slightly beyond the surface of the roller, so that while assisting the roller in discharging the paper they do not tear or mutilate the latter. For convenience of construction the said rollers are located somewhat above the bottom of the case, and the space between the rollers and the bottom is occupied by an upright plate b^2 , secured to said bottom and having upright portions b^3 , which rise into the space between the rollers, and bent or cut-away portions b^4 , which are located in alignment with said rollers. The inner face of said dividing-plate desirably forms the outer side of the discharge-opening a^6 , thereby serving to guide the papers as they are discharged by the rollers.

It is obvious that it is not necessary to entirely discharge the papers from the case, as they can be drawn therefrom by the purchaser if a portion is exposed to allow him to take hold and pull upon the same. For this reason the rollers are made quite small, and in Fig. 2 of the drawings one of the papers is shown as part of a discharge by the revolution of said rollers. As before described, the shaft B, carrying the rollers, extends through the compartment A^3 , and is supported in suitable bearings in the partition A^4 in the side piece a^2 of the case. Within the said compartment A^3 is located a mechanism for turning said discharging-rollers. Said mechanism comprises, essentially, a pinion B^2 , mounted

upon the shaft conveniently located adjacent to said side piece a^2 , and a sliding rack-bar or operating-rod C, supported in suitable bearings and engaging said pinion. Other devices hereinafter described are employed for controlling the movement of the said shaft and operating-rod. The said rod C is supported at its rear end portion in guide-brackets $c c'$, in which it is capable of vertical movement as well as endwise. The intermediate portion of the bar is provided with the teeth c^2 , while the extreme outer end portion C' extends outside of the case, and is preferably reduced and of cylindric form, so that it can slide freely through a bearing-aperture in an outward extension A^8 of the compartment A^3 , said extended portion being provided to protect and conceal the toothed portions of said operating-rod. The rod C is provided at its outer end with a head c^3 , affording a suitable handle for pressing the rod inwardly. The said rod operates to turn the rollers in a direction to discharge the paper by an inward movement of the operating-rod, as herein shown, although it is obvious that if the said rod engaged the pinion from below an outward movement of the rod would be necessary to accomplish the desired movement of the rollers. It is intended that the operating-rod, after acting upon the pinion by an inward pressure, shall be returned to its outer and operating position automatically, and for this purpose I have herein shown a coiled spring C^2 for accomplishing this movement. The said spring C^2 acts by expansion and is located between the brackets $c c'$ and bears at the opposite end against said bracket c' and a shoulder c^4 , located upon the operating-rod. It is obvious that if the operating-rod was returned to its normal position, with its teeth in engagement with the pinion, such movement would turn the rollers B' in an opposite direction, which would either disarrange the papers within the receptacle or mutilate them; or, on the other hand, the engagement of the rollers with the paper might be such as to prevent the said return movement of the operating-rod. To this end I have provided means for disengaging the operating-rod from the pinion during its return movement, which comprise a lateral pin c^5 upon the rod C, which enters and travels in a cam slot or groove D upon the adjacent side a^2 of the compartment. The said cam slot or groove D comprises three channels or members—namely, a horizontal channel d , an upwardly-inclined channel d' , and a downwardly-inclined channel d^2 . The said channels or members of the cam-groove D communicate with each other, so that the pin c^5 upon the operating-rod can pass from one member to the other without interference. The horizontal channel d is located so that when the pin c^5 travels therein the operating-rod will be held in engagement with the pinion for turning

the same. The upwardly-inclined channel d' rises from the inner end of the horizontal channel d , and the pin c^5 is adapted to travel inwardly in the horizontal member of the cam-groove, so that after traveling inwardly through the horizontal member when the spring c^2 returns the rod C the pin c^5 , traveling in the upwardly-inclined member, will disengage the teeth of the operating-rod C from the pinion and allow the latter to remain at rest during the return movement of the operating-rod. The downwardly-inclined member or channel d^2 of the cam-groove connects the outer ends of the other two members, so that after the pin c^5 has traveled to the forward end of the upwardly-inclined member it can pass therefrom through the channel d^2 to the outer end of the horizontal channel, and thus bring the teeth of the operating-rod again into engagement with the pinion.

Means are provided for automatically guiding the pin c^5 into the upwardly-inclined channel after passing through the horizontal channel, said means comprising a spring-actuated catch or detent C^3 , located near the inner end of the horizontal member or channel. The said detent C^3 is located in the said horizontal channel and opens inwardly and upwardly, so that the pin passing through the channel from front to rear will easily pass by the spring-actuated detent. The upper edge of the said detent forms a continuation of the lower wall of the upwardly-inclined slot, so that after the pin c^5 has passed inwardly of the said detent and it is returned by the action of the spring it will ride along the upper edge of the detent, and thus be directed into the upwardly-inclined member or channel of the cam slot or groove. From the foregoing description it is evident it is only necessary to press the operating-rod inwardly and then remove the hand from the same. Thereupon it will return to its operating position ready for another operation automatically by the action of the spring and the cam-groove. To provide means for preventing the turning of the rollers backward, the said shaft B is provided near its end adjacent the side piece a^3 with a ratchet-wheel b^6 , which is engaged by a spring-actuated ratchet b^7 , fastened upon said side piece.

As before stated, the apparatus is held from operation by devices which release and allow the operation of the apparatus from the action of a coin upon said devices. The devices for accomplishing this end comprise a cam-disk B^3 , mounted upon the shaft about midway between the sides of the compartment A^3 and provided with radial notch b^5 , which is engaged by a pivoted pawl or coin-lever E, the said lever E being supported by a pivot e' , secured between two posts of apparatus e^2 . The lever E is provided at one end with an offset or bent portion e^3 , adapted for engagement with the notch b^5 of the cam-disk, while

the part of the lever on the other side of the pivot extends into a vertical arm f of a coin-chute F, extending to the front part of the compartment through the front of the case, where it is provided with a coin-slot f' . It is manifest that while the bent end of the coin-lever E is in engagement with the notch of the cam-disk said disk will be prevented from turning, thereby holding the shaft and parts connected therewith in a stationary position. When a coin is placed in the coin-chute and rolls down the same, it strikes the inner end of the coin-lever, and thereby swings the same on its pivot. The bent end of the coin-lever will be drawn from engagement with the notch in the cam-disk and will allow the same to be turned. The coin-lever E is suitably weighted and balanced so that the necessary weight of the coin or coins to swing the same on its pivot can be predetermined. To limit the swing of the coin-lever E about its pivot under the influence of the weight of the coin or coins, so that the inner end of the coin-lever will not swing far enough to permit the coins to fall, as such operation would permit the lever to swing backwardly on its pivot and engage the cam-disk, I have provided a weight G, secured to a pivoted arm g , which is pivoted to one of the posts or uprights e^2 . The said weighted arm g is located over the end of the coin-lever that engages the cam-disk, and is provided with a leg g' , that rests on the bottom of the compartment and limits the downward movement of the arm g . The arm g is so located above the coin-lever that when the said coin-lever is turned about its pivot by the coin or coins resting upon the inner end the other end of the coin-lever will come in contact with the weighted arm g in time to prevent the inner end of the coin-lever from moving sufficiently to allow the dropping of the coins. The shaft can now be turned, and as it turns by an inward movement of the operating-rod the face of the cam-disk will engage the end of the bent portion of the coin-lever and lift the same, thereby raising the weighted arm g and depressing the inner end of the coin-lever and drawing it out of the coin-chute. The face of said cam-disk will continue to lift the bent end of the coin-lever until the other end thereof is moved sufficiently to permit the coins to fall. The bent end e^3 of the coin-lever will be held in engagement with the face of the disk until said disk has completed a revolution, whereupon it will fall into the notch b^5 , thereby preventing further movement of the shaft and parts connected therewith.

As this apparatus is primarily intended for the sale of newspapers which usually cost one cent or multiples thereof, the weight necessary to tilt the coin-lever and release the cam-disk can be computed upon this basis. For instance, if the paper to be sold costs one cent, the weight of one cent should be sufficient to tilt the lever; but if it is a two-cent paper the

weight of one cent will be insufficient to move the lever, but will require the weight of another cent resting on that, it being obvious that proper indications and directions can be
5 displayed to guide the purchaser in operating the machine. It is further manifest that other indications can be displayed to denote whether the device is in operative condition or whether all the papers have been sold.

10 The operation of the device will obviously be seen from the foregoing description, and will not be set forth at this place. It is further obvious that various modifications can be made in the construction of the apparatus
15 without departing from the spirit of my invention. For instance, the construction of the weighted arm for limiting the movement of the coin-lever can be varied, the form shown being the simple and convenient way of ac-
20 complishing this object. The coin-chute F extends below the case A and communicates with a suitable box or till F' for holding the coins which are placed in the apparatus. It is also obvious that said cam slot or groove
25 could be arranged upon the lever and the guiding-pin upon the case and the same movement on the part of the operating-rod be secured.

It will be understood that a plurality of
30 these devices can be arranged together in series, so that different papers may be obtained.

I claim as my invention—

1. A coin-operated vending apparatus com-
35 prising a receptacle for holding articles to be vended, rollers extending into said receptacle for discharging the articles and mounted upon a rotative shaft, an operating rod or bar geared to said shaft for turning the same, and
40 a coin-lever engaging said shaft, said cam-lever being adapted to be withdrawn from engagement therewith by the action of a cam upon said lever, substantially as described.

2. A coin-operated vending apparatus com-
45 prising a receptacle for holding articles to be vended, rollers extending into said receptacle for discharging the articles and mounted upon a rotative shaft, a reciprocating rod or bar geared to said shaft for turning the same
50 when moved in one direction and adapted to be disengaged therefrom when moved in an opposite direction, and a coin-lever engaging said shaft and adapted to be disengaged therefrom by the action of a coin, substantially as
55 set forth.

3. A coin-operated vending apparatus comprising a receptacle for holding articles to be vended, rollers extending into said receptacle and mounted upon a rotative shaft, a recip-
60 rocating operating rod or bar geared to said shaft for turning the same, a cam slot or groove for guiding said rod or bar, whereby the latter is alternately engaged with and disengaged from said shaft, and a coin-lever en-
65 gaging said shaft and adapted to be disen-

gaged therefrom by the action of a coin, substantially as set forth.

4. A coin-operated vending apparatus comprising a receptacle for holding articles to be vended, rollers extending into the same for
70 discharging said articles and mounted upon a rotative shaft, a reciprocating rod or bar geared to said shaft for turning the same, said rod or bar being supported in bearings permitting it to be moved away from said shaft
75 to disengage it therefrom, and a cam-lever engaging said shaft and adapted to be disengaged therefrom by the action of a coin, substantially as set forth.

5. A coin-operated vending apparatus com-
80 prising a case or housing, a receptacle for holding articles to be vended, rollers extending into said receptacle for discharging said articles and mounted upon a rotative shaft, a reciprocating operating rod or bar geared
85 to said shaft and located adjacent to the side of said case or housing, a pin or projection on one of said parts, a cam-slot on the other of said parts engaged by said pin or projection, said cam-slot having one member *d* for keep-
90 ing the rod engaged with the shaft and another member *d'* for disengaging it therefrom, and a coin-lever engaging said shaft and adapted to be disengaged therefrom by the action of a coin, substantially as de-
95 scribed.

6. A coin-operated vending mechanism comprising a case or housing, a receptacle for holding articles to be vended, rollers extend-
100 ing into said receptacle for discharging said articles and mounted upon a rotative shaft, a reciprocating operating rod or bar geared to said shaft and located adjacent to the side of said case or housing, a pin or pro-
105 jection on one of said parts, a cam-slot on the other of said parts engaged by the said pin or projection, said cam-slot having one member *d* for keeping the rod engaged with the shaft and another member *d'* for disen-
110 gaging it therefrom, a spring-actuated catch or detent between said members opening toward said member *d'*, and a coin-lever engaging said shaft and adapted to disengage it by the action of a coin, substantially as set forth.

7. A coin-operated vending apparatus com-
115 prising a receptacle for holding articles to be vended, an opening in said receptacle for the passage of said articles, rollers extending into said receptacle in the rear of said opening for discharging said articles and mounted
120 upon a rotative shaft, means for turning said shaft, a notched cam-disk upon said shaft, a coin-chute, and a pivoted coin-lever engaging said notched disk at one end and having its other end extending into said coin-chute, sub-
125 stantially as set forth.

8. A coin-operated vending apparatus comprising a receptacle for holding articles to be vended, rollers extending into said receptacle for discharging said articles and mounted
130

upon a rotative shaft, means for turning said shaft, a notched cam-disk upon said shaft, a coin-chute, a pivoted cam-lever engaging said notched disk at one end and extending into
5 said coin-chute, said coin-lever being arranged so that the weight of a coin upon its end in the chute will disengage its other end from said disk, and a pivoted weighted arm engag-

ing said lever to limit its movement under the influence of the coin, substantially as set forth.

BENNO MOSSLER.

Witnesses:

HARRY COBB KENNEDY,
ANNIE L. COATES.