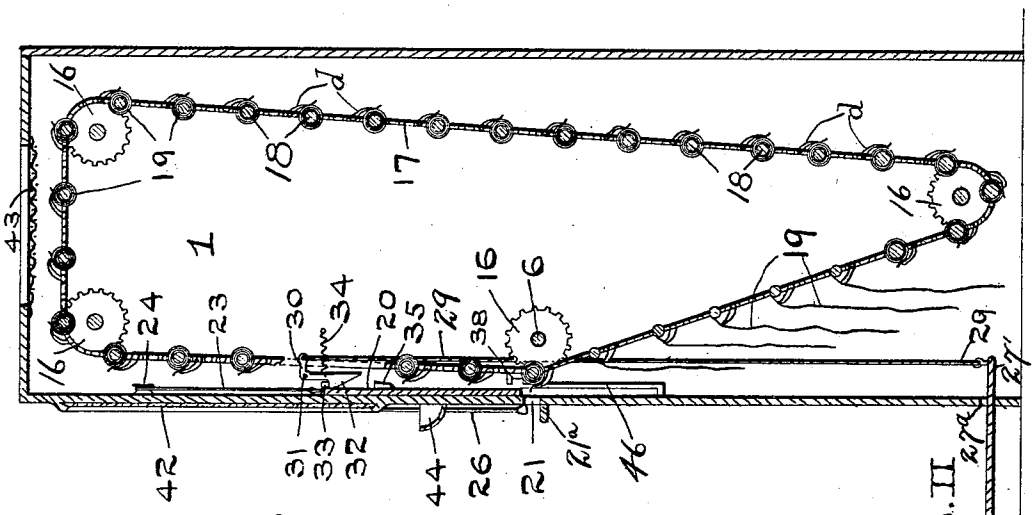
No. 750,883. PATENTED FEB. 2, 1904.

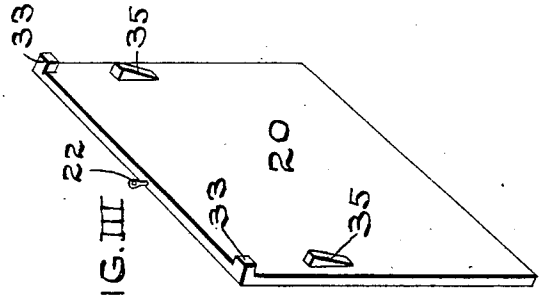
C. O. McCASLAND.

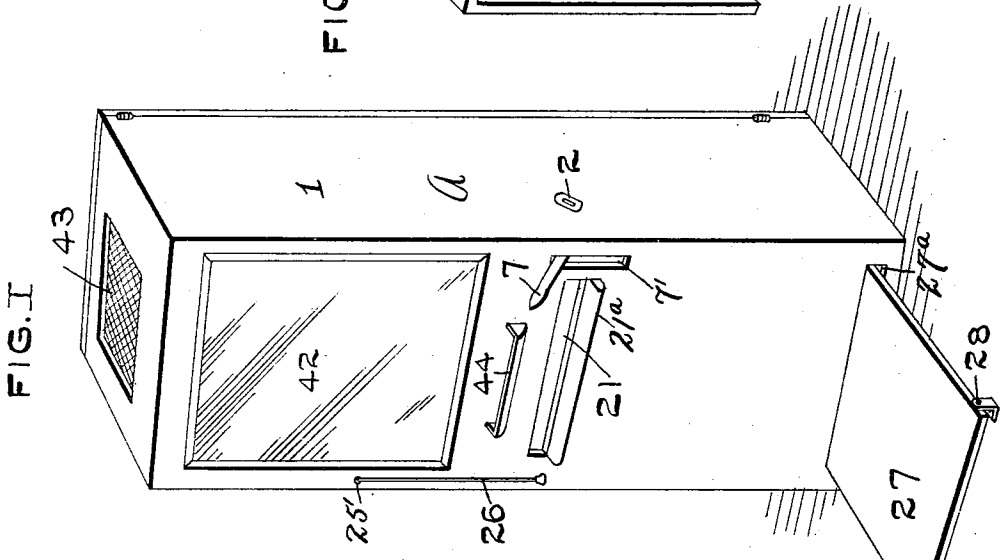
COIN OPERATED TOWEL MACHINE.

APPLICATION FILED JULY 23, 1903.

NO MODEL. 2 SHEETS—SHEET 1.







ATTEST

A. J. McCauley.

George T. Wright

INVENTOR:-

Chas. O. McCasland

BY Stanley Stoner

ATTY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 750,883. PATENTED FEB. 2, 1904.

C. O. McCASLAND.

COIN OPERATED TOWEL MACHINE.

APPLICATION FILED JULY 23, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

FIG. IX

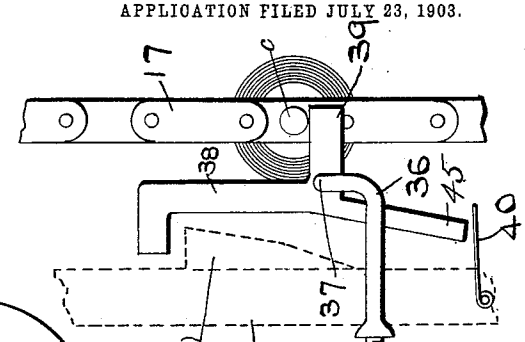


FIG. X

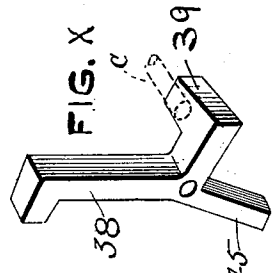


FIG. VI

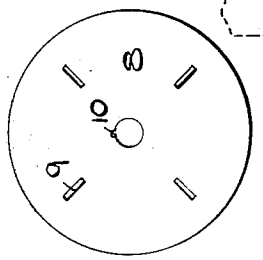


FIG. VIII

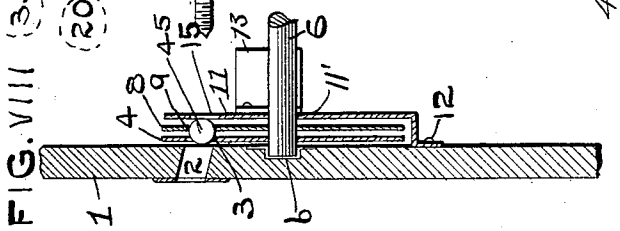


FIG. V

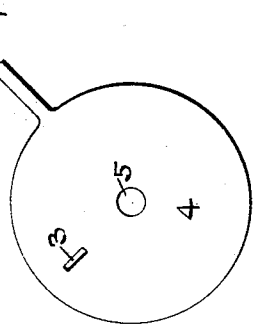


FIG. VII

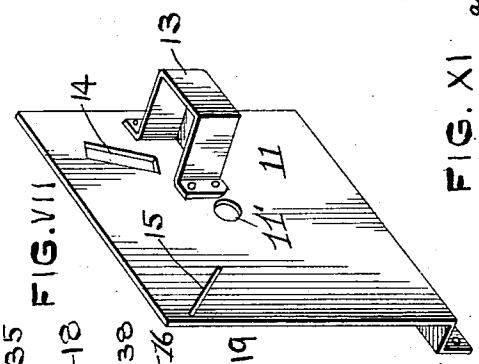


FIG. XI

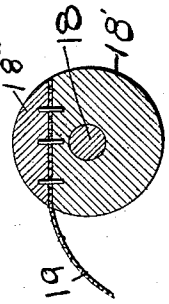
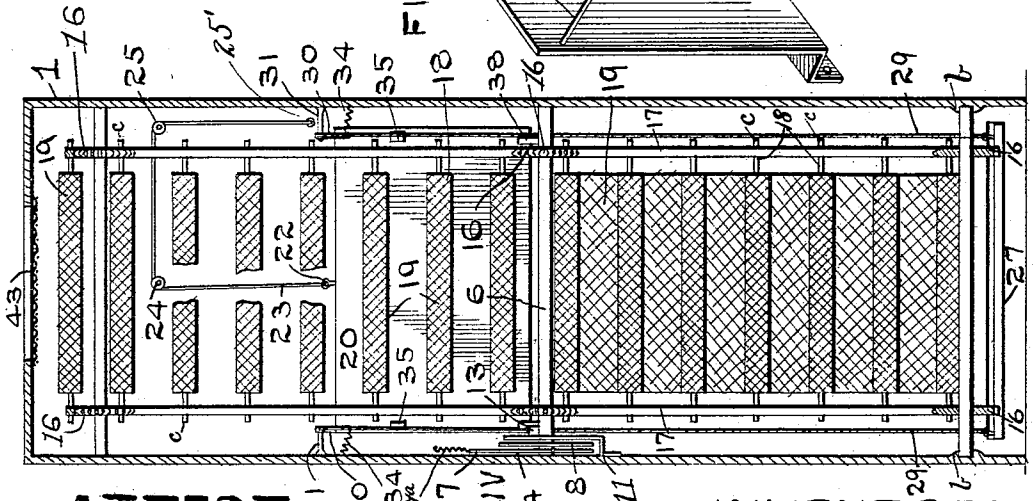


FIG. IV



ATTEST

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No. 750,883. Patented February 2, 1904.

UNITED STATES PATENT OFFICE.

CHARLES ORVILLE McCASLAND, OF EAST ST. LOUIS, ILLINOIS.

COIN-OPERATED TOWEL-MACHINE.

SPECIFICATION forming part of Letters Patent No. 750,883, dated February 2, 1904.

Application filed July 23, 1903. Serial No. 166,699. (No model.)

To all whom it may concern:

Be it known that I, CHARLES ORVILLE McCASLAND, a citizen of the United States, residing at East St. Louis, State of Illinois, have invented certain new and useful Improvements in Coin-Operated Towel-Machines, of which the following is a full, clear, and exact description.

The device relates to that character of machines which is operated by a coin dropped into a slot, which releases the mechanism to deliver a towel to any one desiring it, said towel, however, being captive to prevent purloining and reuse.

In the carrying out of my invention I make use of certain details of construction and combinations of parts, such as will be more fully described hereinafter and particularly set forth in the claims.

In the accompanying drawings, Figure 1 is an exterior perspective view of my device. Fig. 2 is a vertical sectional view taken through the front and back. Fig. 3 is a perspective view of the door or shutter for closing the towel-opening of the casing. Fig. 4 is a vertical sectional view through the casing, taken from side to side. Fig. 5 is a view in side elevation of the loose disk and operating-lever. Fig. 6 is a similar view of the fast or shaft-operating disk. Fig. 7 is a perspective view of the coin-receiver and the plate to which it is secured. Fig. 8 is a vertical sectional view through the disks and plate, showing their relation to the casing. Fig. 9 is a view in side elevation of the means for locking the door in closed position. Fig. 10 is a perspective view of the locking-dog, and Fig. 11 is a cross-section of one of the towel-carrying rollers.

In the drawings, 1 indicates the hollow casing, preferably rectangular in general outline and provided with a door *a*, by means of which access is had to the interior of the casing for recharging, repairs, or other suitable purpose.

Journaled in suitable bearings *b b* within the sides of the casing are a plurality of shafts arranged, preferably, as shown in Fig. 2, one of which shafts 6 is the operating-shaft, and keyed or otherwise secured upon the shafts in pairs are the sprocket-wheels 16 16, one of which is located near each end of the shafts, which sprockets are adapted to support the sprocket-chains 17 17. It is obvious that all the shafts except shaft 6 may be stationary and that the sprockets 16 16 may rotate thereon with the exception of at least one of the sprockets on shaft 6, which fast sprocket or sprockets will serve as the driving-sprocket for the chains 17 17, which travel thereupon. Extending between and connected to the chains at regular intervals are the bars 18 18, which bars or rods have journaled thereon the rollers 18′ 18′, each of which rollers is provided with a separable portion 18ª, between which and the roller the end of a towel 19 is firmly secured, as shown in Fig. 11. The ends *c c* of the bars or rods 18 18 project laterally beyond the sprocket-chains 17 17 for a purpose to be hereinafter set forth. The links of the sprocket-chains 17 17 also carry short curved pins *d d*, adapted to engage and retain the towels in rolled position, and these pins are preferably resilient.

A coin-slot 2 is formed, preferably, in the door *a*, as shown, to the rear of which door is secured an upright partition or plate 11, provided with an aperture 11′ for the reception of the rotating shaft 6, whereby the partition serves as a bearing therefor, the end of the shaft being provided with a stepped bearing on the inner surface of the door *a*, the bearing being disengaged from the shaft when the door is opened, the shaft in such event being supported from its opposite end in any suitable manner.

The plate 11 has secured thereto a coin-receptacle 13, located above and adjacent to which is the coin-discharge slot 14, formed in the plate, and within the space inclosed between the plate and the door *a* are located a pair of disks 4 and 8, preferably circular, as shown in Figs. 5 and 6, the disk 4 being provided with an aperture 5, through which loosely passes the shaft 6 and having a coin-receiving slot 3, which normally registers with the coin-slot 2 in the door. A lever or handle 7 is secured to the disk 4 and projects outside the casing 1 through a slot or hole 7′ therein, the ends of the hole serving to limit the movement of the handle, and consequently

of the disk, and preferably permitting a movement of the lever of about ninety degrees, the lever being normally retained in an upright or elevated position by means of the spring 7ª. It will be understood that normally the slot 3 of the loose coin-receiving disk 4 is held in alinement with the coin-slot 2 and out of alinement with the discharge-slot 14 of the plate or wall 11.

Between the loose disk 4 and the wall 11 is the disk 8, which is provided with a keyway 10 for the reception of a key on the shaft, so that the disk is secured rigidly to the shaft, and this fast disk has radial slots 9 9 formed therein, preferably four in number and spaced equally apart, one of which slots is always in alinement and registers with the radial slot 3 in the loose disk and with a slot 15, formed in the wall 11, the last-mentioned slot being too small to admit coins of legitimate size, but will permit the entrance and passage therethrough of spurious, defective, or worn coins or coins of less size than those which the slots are adapted to receive, which in consequence pass therethrough and fall to the floor of the casing or into a suitable receptacle, if preferred, thereby preventing the fraudulent operation of the machine.

It will be observed by an inspection of Fig. 8 that the coin-slot 2 and slots 3, 9, and 15 are arranged in a descending scale or inclination, so that such improper coin falls by gravity directly through the slots and out of the operative portion of the machine. A coin of the proper size, however, will not enter the slot 15, but will be held by and between the slots 3 and 9 with its edge resting against the wall 11, as shown. The handle 7 is then forced downwardly to its limit of movement and the coin, serving as a temporary lock between the loose and fast disks, causes the latter, and with it the shaft 6, to make a quarter-revolution, which movement will bring slots 3 and 9 opposite and in alinement with the coin-discharge slot 14, through which the coin will pass and drop into the coin-receptacle 13. Such rotation of the shaft 6 will cause a step-by-step movement of the chains 17 17 and the towel-rollers carried thereby, the rollers being spaced apart a sufficient distance so that this partial travel will bring a towel opposite the towel-opening 21 in the front of the casing. As soon as the lever 7 is released it is returned to its normal position by means of the spring 7ª. Of course it is obvious that when no coin has been deposited the lever and disk 4 may be oscillated without actuating the machine. Furthermore, the number of slots, their positions, and amount of travel is subject to variation.

A platform 27, hinged or pivotally supported at its outer end 28, is located in front of the casing, its inner end 27′ passing through a slot 27ª, in which it has a limited movement, into the interior of the casing, the inner end of the platform within the casing having fastened thereto a pair of cords, chains, or other flexible connections 29 29, which extend upwardly and are secured each to one arm of the bell-crank levers 30 30, pivotally secured to the casing at points 31 31, the remaining arms of which bell-cranks are formed into hooks 32 32 and have springs 34 34 secured thereto. These hooks are adapted to be thrown into engagement with the lugs 33 33 of the sliding door 20 (shown in Fig. 3) to retain the latter in raised position; but normally the springs 34 34 retain the hooks away from the door. The door 20 is normally adapted to close the towel-opening 21, which opening may be provided with a ledge 21ª for the purpose of preventing injury to the towels when being drawn into the casing after use. A stud 22, located, preferably, on the upper edge of the door and having an eye therein, has secured thereto a flexible connection 23, which passes over the idle pulleys or rollers 24 and 25 and out of the casing through an aperture 25′, the outer end 26 of the flexible connection hanging within reach of a person standing on the platform and may have a button or knot on the end thereof to prevent the withdrawal of the connection into the casing.

The door is further provided with inclined ears 35 35 and upon its side edges carries flexible springs 40 40, and located laterally of the door are the stationary hooks 36 36, provided with angularly-shaped ends 37 37, upon which are pivotally supported dogs each comprising a three-armed member, as shown in Figs. 9 and 10, which arms approximately radiate from the pivotal point of the dog, one arm, 38, being offset at its upper end and normally adapted to lie over the squared end of the ear 35 to prevent upward movement of the door. Another arm, 39, projects into the path of movement of the protruding ends *c c* of the bars 18 18 and is adapted to be engaged thereby, thus rocking the dogs on their hooked supports 36 36 and releasing the arms 38 to permit movement of the door. The remaining arm, 45, which extends approximately diametrically opposite to the arm 38, is adapted to be engaged by the spring 40 as the door is descending. This spring also bears against the arm 38 during the ascent of the door, the pressure of the spring against arm 45 during such ascent being neutralized by the engagement of the arm 39 and the end *c* of the bar 18, the spring acting upon the arm 38 to throw it still farther out of engagement and away from the door 20 and causing the release of arm 39 and end *c* of the roller. When the door is lowered, however, the spring 40 passes from arm 38 to arm 45 and by its action rocks the dog and throws the offset end of arm 38 above the ear 35 to lock the door in closed position, such action being facilitated by the inclination of the arm 45, which as the door descends gradually restricts the spring 40. Such movement of the dog is of course accom-

plished after the disengagement of the end *c* of the roller and the arm 39.

Within the casing and below the towel-opening are located brackets 46 46, adapted to receive and guide the door 20, which is of greater length than the length of the opening 21, and to support the door in its lowered position. The upper end of the casing is provided with a ventilating-opening 43, guarded by a screen or grating, to prevent the towels from becoming musty or mildewed, and in the front of the casing is fixed a mirror, beneath which is located a comb-and-brush receptacle 44.

The manner of actuating the traveling chains whereby one towel after another in succession is brought opposite the towel-opening 21 has been set forth. The towels are preferably wound on the rollers, as shown, and retained in such position by the pins *d d*, the free end of the towel protruding slightly. After a person has deposited his coin and operated the lever 7 to bring a fresh towel opposite the opening 21 he steps upon the platform 27, which is thereby forced downwardly, which movement of the platform, through the flexible connection 29, rocks the bell-crank pivoted at 31 against the tension of the spring 34 and brings the hooked arm 32 into the path of movement of the door 20. The movement of the traveling chains 17 17, as described, has brought the protruding ends *c c* of the bars 18 18 into engagement with the arms 39 39 of the dogs pivoted on supports 36 36, so that the latter are rocked to release the ears 35 35 from the offset ends of the arms 38 38. The operator then pulls on the end 26 of the flexible connection 23, thereby raising the door 20 until the lugs 33 33 pass above the hooked ends of the arms 32 32 of the bell-cranks, which hooks will take under the lugs and retain the door in raised position as long as the operator stands on the platform 27, and the springs 40 40 on the door will press against the arms 38 38 to release arms 39 39 from the ends *c c* of the bars 18 18 and retain the arms 38 38 out of alinement with the path of movement of the ears 35 35. The free end of the towel appears just within the opening and may be withdrawn for use, the opposite end of the towel remaining captive within the casing. When the towel is released by the user, it may be drawn into the casing by means of a spring, such as is commonly used with window-shades, or it may be left hanging out over the ledge 21ª. As soon as the operator steps off the platform the springs 34 34 retract the hooks 32 32, which releases the door, the latter falling by its own weight. The lower edge of the door in descending engages the towel and causes its withdrawal within the casing by pressing down upon the towel, which then hangs down, as shown in Fig. 2. As the door descends the springs 40 40, engaging the arms 45 45, rock the dogs to throw the offset ends of the arms 38 38 into the path of movement of the ears 35 35, the ends of the dogs riding over the inclined surfaces of the ears and taking behind them when the door has reached its limit of downward movement and rests on the brackets 46 46, thus locking the door in closed position.

My machine is intended to be placed in hotels, theaters, depots, restaurants, office-buildings, and other suitable localities, it being simple, cheap, and durable, as well as capable of ornamentation, so that it will present an effective appearance. It will further be observed that my invention constitutes a perfectly trustworthy machine of this class, since it cannot be operated without the insertion of the proper coin, for which a wire cannot be substituted, and, more important still, it will not fail to operate after the insertion of such a coin.

It is obvious that many changes might be made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but,

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a vending-machine, the combination with a casing, of a plurality of rotatable members, flexible means received upon the members, article-carriers mounted in the flexible means, the casing provided with an aperture through which access is obtained directly to the articles supported by the flexible means, means for closing and opening the access-aperture, means for operating the shaft step by step, the articles spaced apart the distance of one step, one of the articles lying opposite the access-aperture when the operating means is at rest.

2. In a vending apparatus, the combination with a casing, provided with an access-aperture, a movable shutter for the aperture, means for locking the shutter in closed position, a traveling carrier, means for actuating the carrier and means on the carrier for releasing the locking means.

3. In a vending-machine, the combination with a casing, of a traveling carrier mounted therein, means for giving the carrier a step-by-step movement, the casing provided with a ventilating-aperture and an access-aperture, a shutter for the access-aperture and means for opening and closing the shutter.

4. In a vending apparatus, the combination with a casing provided with an access-aperture, of a traveling carrier located within the casing, means for operating the carrier, articles carried by the carrier and adapted to be withdrawn through the access-aperture, a portion of each article detained within the casing to prevent removal.

5. In a coin-controlled apparatus, the com-

bination with a casing provided with a plurality of rotatable members, flexible means carried thereby, an operating-shaft and means for actuating the shaft, of a series of bars carried by and extending between the flexible means, rollers journaled on each bar, articles mounted on each roller, the casing provided with an access-aperture, means for opening or closing the aperture and means for locking the last-named means in open or closed position, the articles adapted to be taken directly from the rollers.

6. In a coin-controlled apparatus, the combination with a casing provided with a plurality of rotatable members, flexible means supported thereon, an operating-shaft and means for actuating the shaft, of a series of rollers extending between the flexible means and supporting the articles to be vended, a portion of each article secured to the roller upon which it is supported, the casing provided with an access-aperture, and means for opening and closing the aperture, the articles located adjacent to and adapted to be drawn out and returned through the access-aperture.

7. In a vending-machine, the combination with a traveling carrier for the articles to be vended and means for operating the carrier, of a casing provided with an access-aperture, means for permitting access through the aperture directly to the articles on the carrier and means for automatically closing the aperture and withdrawing the article into the casing.

8. In a vending-machine, the combination with a traveling carrier, and means for operating the same, of a series of bars mounted on the carrier, rollers journaled on the bars, articles wound on the rollers and means for retaining the articles in rolled position.

9. In a vending-machine, the combination with a traveling carrier and means for operating the same, of a series of bars mounted in the carrier, rollers journaled on the bars, articles wound on the rollers and curved pins mounted on the carrier and engaging the articles to retain them in rolled position.

10. In a vending-machine, the combination with a traveling carrier and means for operating the same, of a casing provided with an access-aperture, a door for opening and closing the aperture, means for automatically closing the door, the means comprising a hinged member, a pivoted hook normally retained out of engagement with the door and a flexible connection extending between the hook and hinged member, the hook adapted to engage and retain the door in raised position when weight is placed on the hinged member.

11. In a vending-machine, the combination with a casing provided with an access-aperture, a door for opening and closing the aperture, a traveling carrier and means for operating the carrier, of means for retaining the door in closed position and means mounted on the carrier for releasing the door-locking means.

12. In a vending-machine, the combination with a casing provided with an access-aperture, a door for opening and closing the aperture, a traveling carrier and means for operating the carrier, of means for locking the door in closed position, means on the carrier for releasing the locking means and means on the door for returning the lock to operative position.

13. In a vending-machine, the combination with a casing provided with an access-aperture, a door for opening and closing the aperture, a traveling carrier and means for operating the carrier, of means for locking the door in closed position, the means comprising a pivoted dog, the door provided with a projection engaged by the dog when the door is in closed position and means on the carrier adapted to engage and rock the dog away from the projection.

14. In a vending-machine, the combination with a casing provided with an access-aperture, a door for opening and closing the aperture, a traveling carrier and means for operating the carrier, of a pivoted dog adapted to engage the door to retain it in closed position, means on the carrier for engaging and retaining the dog out of engagement with the door and a spring carried by the door and engaging the dog to return it to operative position.

15. In a vending-machine, the combination with a casing provided with an access-aperture, a door for opening and closing the aperture, a traveling carrier and means for operating the carrier, of a pivoted dog comprising three arms, one of the arms adapted to lock the door in closed position, means on the traveling carrier adapted to engage a second arm to rock the dog out of engagement with the door, and a resilient member carried by the door for engaging the third arm to throw the first arm into locking position.

16. In a vending-machine, the combination with a casing provided with a traveling carrier, means operating the same, the casing provided with an access-aperture and a door for opening and closing the aperture, of a flexible connection secured to the door and extending without the casing to permit the manual raising of the door, and means for retaining the door in raised position.

17. In a vending-machine, the combination with a casing provided with an access-aperture, a door for opening and closing the aperture, a traveling carrier and means for operating the carrier, of a hinged platform, a hooked lever connected with the platform, means for normally retaining the lever out of engagement with the door, the lever adapted to engage the door to retain it in raised position when weight is placed on the platform.

18. In a vending-machine, the combination with a casing provided with an access-aperture, of a door for opening and closing the aperture, lugs and ears on the door, means engaging the ears to retain the door in closed position, means for releasing the locking means,

means for raising the door and means engaging the lugs to retain the door in raised position.

19. In a vending-machine, the combination with a casing provided with an access-aperture, a door for opening and closing the aperture, a traveling carrier and means for operating the same, of captive articles mounted on the carrier, the articles adapted to be drawn out of the access-aperture, supporting-guides for the door, means for retaining the door in raised position, the release of the last-named means permitting the automatic closing of the door and the withdrawal of the article within the casing.

CHARLES ORVILLE McCASLAND.

Witnesses:
GEORGE T. WEITZEL,
STANLEY STONER.