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PATENTED AUG. 18, 1908.

H. W. NICHOLAS & J. R. JONES.

VENDING MACHINE.

APPLICATION FILED JAN. 3, 1908.

2 SHEETS—SHEET 1.

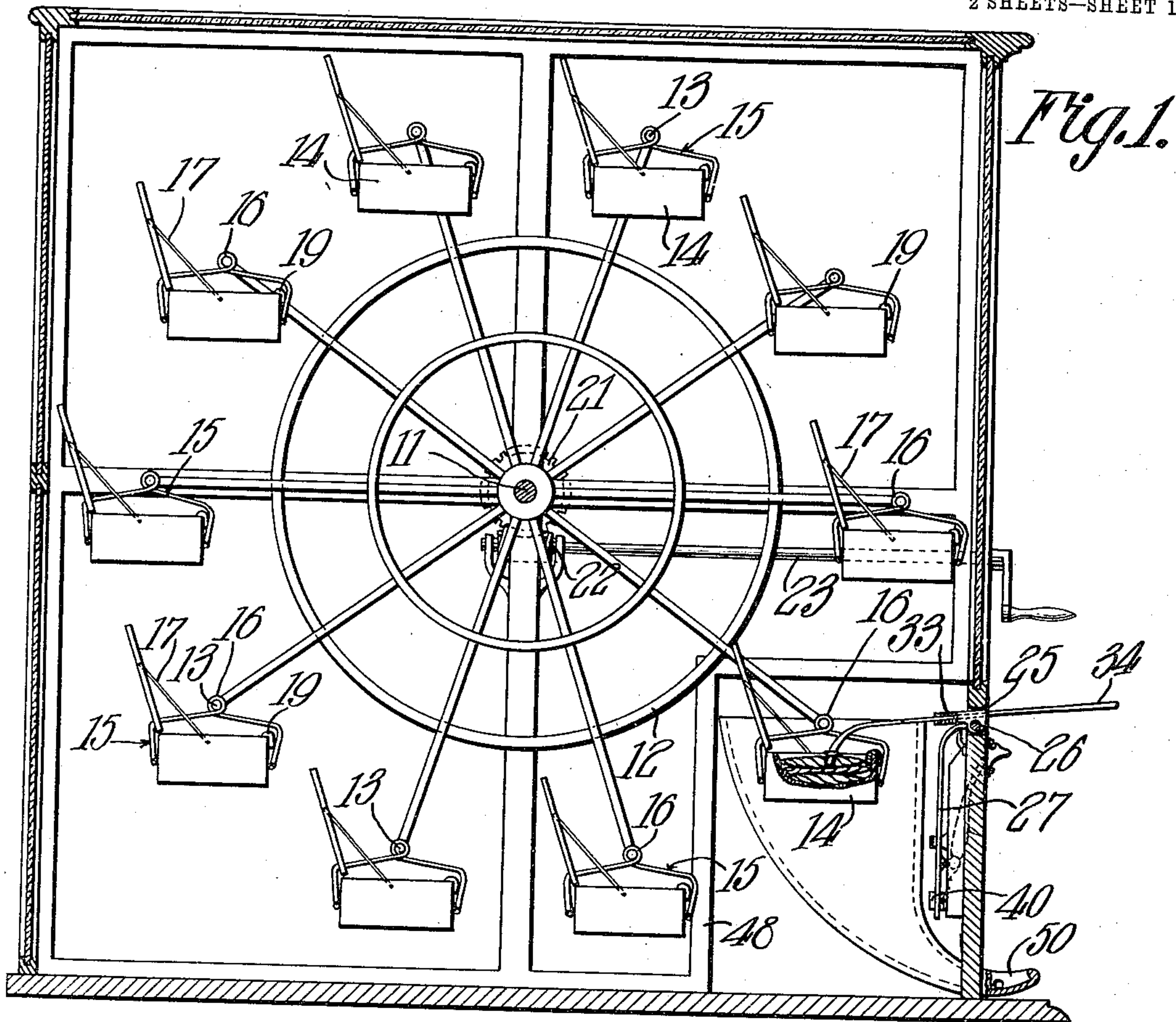


Fig. 1.

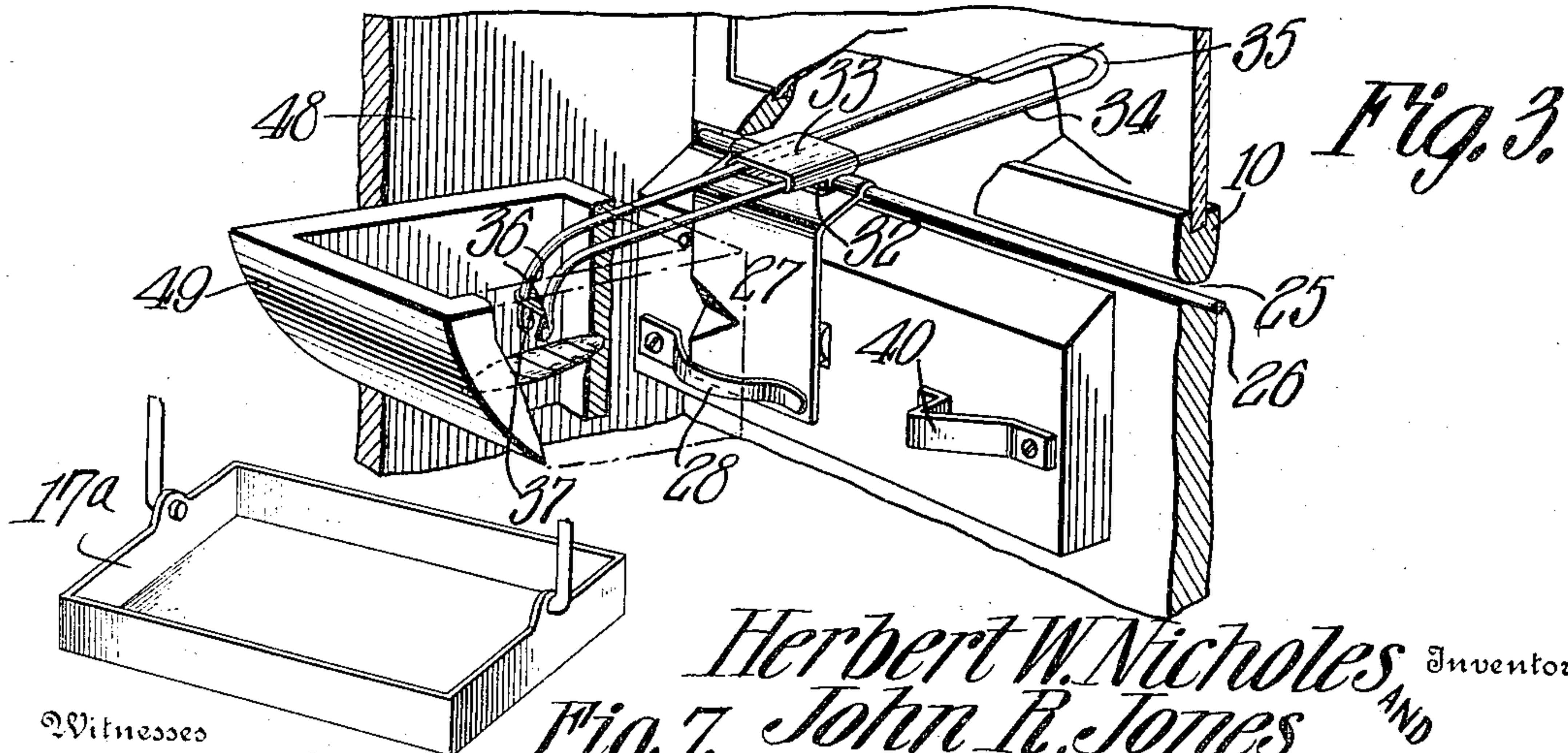


Fig. 3.

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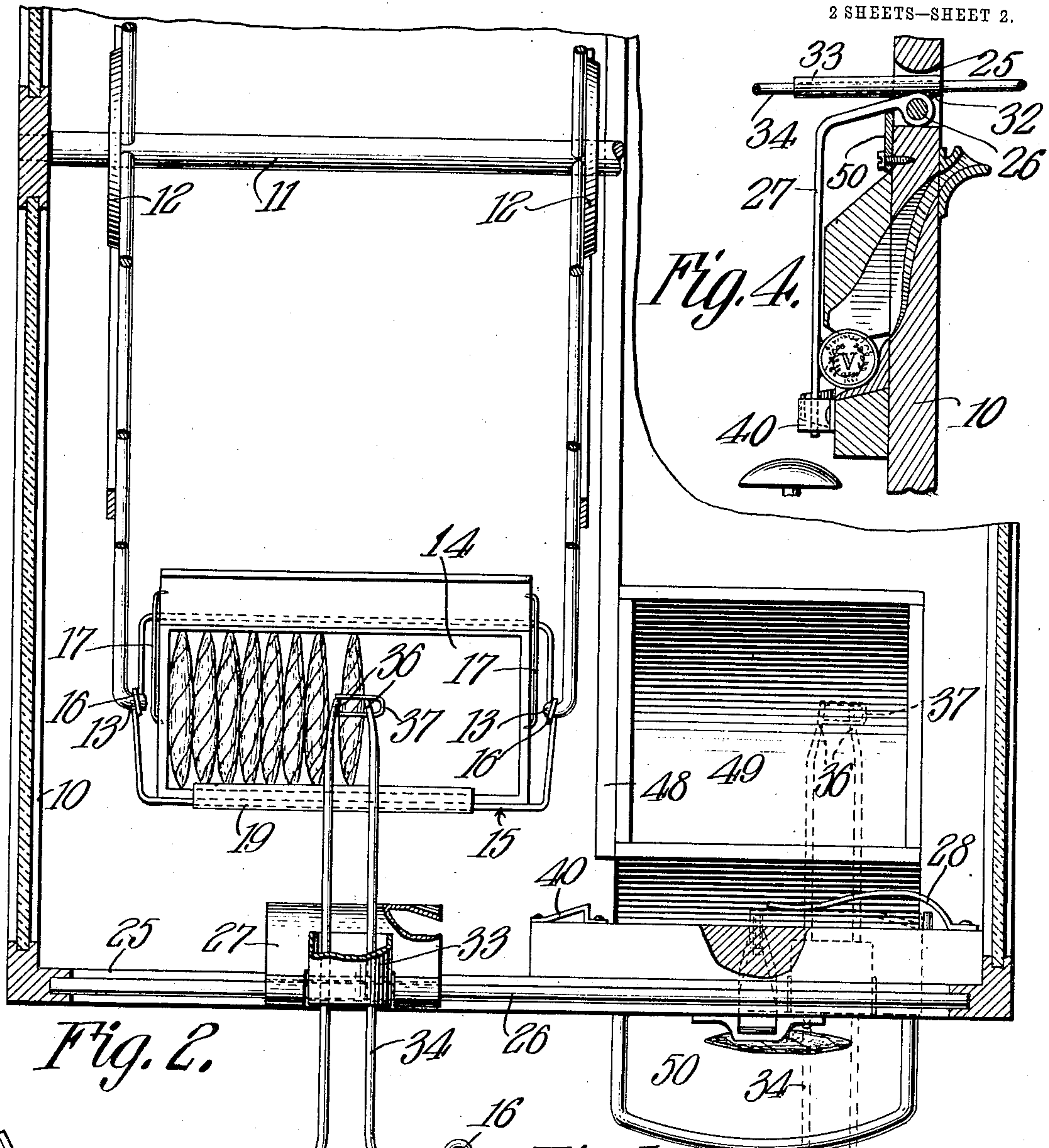
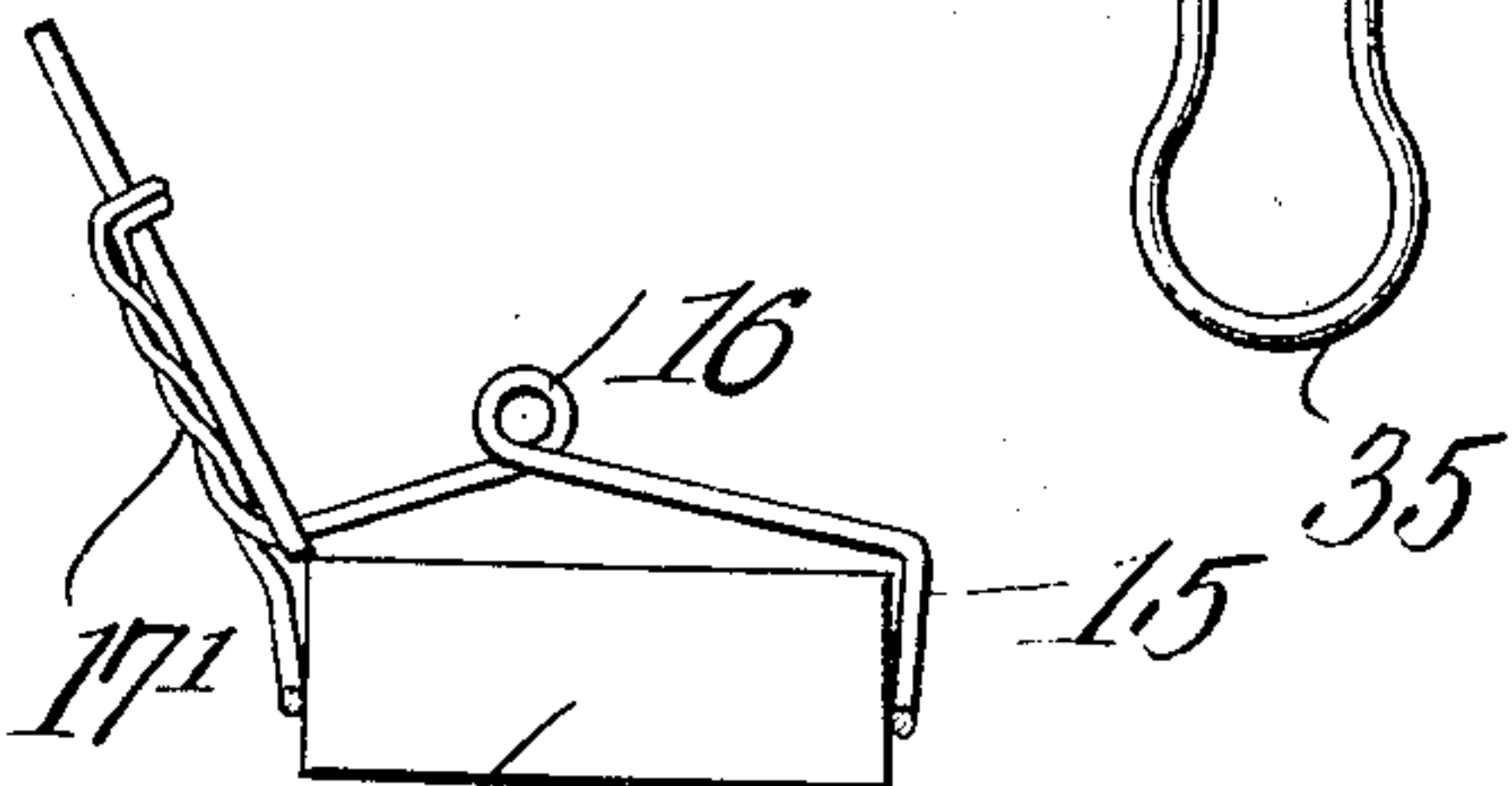


Fig. 2.

Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

HERBERT WHITTER NICHOLS AND JOHN REECE JONES, OF ATLANTA, GEORGIA, ASSIGNORS
TO VENDING SHOWCASE COMPANY, OF ROME, GEORGIA.

VENDING-MACHINE.

No. 896,234.

Specification of Letters Patent.

Patented Aug. 18, 1908.

Application filed January 3, 1908. Serial No. 409,137.

To all whom it may concern:

Be it known that we, HERBERT WHITTER NICHOLS and JOHN REECE JONES, citizens of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented a new and useful Vending-Machine, of which the following is a specification.

This invention relates to vending machines, and especially to machines of that class employed for the sale of cigars and other small articles.

The principal object of the invention is to provide a machine of such construction as to permit the purchaser to select the cigar or other article with the same facility as would be afforded in an ordinary store.

A further object of the invention is to provide a vending machine in which a pair of tongs or similar devices are placed at the disposal of the purchaser, so that he may pick out any one article from a box or reservoir, the tongs being so arranged as to permit the lifting of all the cigars or other articles, one by one, for examination, and, after the selection is made, the article is carried by the tongs to a delivery point.

A still further object of the invention is to provide means whereby the selecting tongs after movement to the delivery point are automatically locked against return movement to the selecting point, so that only a single article may be carried to the delivery point at each operation.

A still further object of the invention is to provide a vending machine in which a plurality of cigar boxes or other containing reservoirs are movable by the intending purchaser to the selecting position, so that the purchaser may select a cigar or other article from any of the boxes and may obtain the brand and exact shade of cigar desired.

With these and other objects in view, the invention consists in the novel construction and arrangement of parts, hereinafter described and illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the accompanying drawings:—Figure 1 is a sectional elevation of a vending machine constructed in accordance with the invention. Fig. 2 is a sectional plan view of the machine. Fig. 3 is a detail perspective view illustrating the construction and arrangement of the tongs and tongs support.

Fig. 4 is a vertical section through the coin slot. Fig. 5 is a detail perspective view of one of the box carriers. Fig. 6 is a side elevation showing a modified construction of carrier. Fig. 7 is a detail perspective view illustrating a box carrying tray which may be employed.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

The working parts of the machine are arranged within a suitable casing 10 that is formed principally of glass panels in order that the operation of the parts may be at all times within view.

Mounted within suitable bearings in the casing is a horizontally disposed shaft 11 carrying a pair of spoked wheels 12, the spokes preferably extending some distance beyond the peripheries of the wheels and being provided with inturned end portions forming pivot pins or trunnions 13 on which are hung the cigar boxes or other receptacles 14.

The present machine is designed more especially for vending cigars, and it is preferred that all of the cigar boxes be arranged on the wheel with their lids in open position and tilted back at such an angle that the label or brand may be clearly visible from the front of the machine. The boxes are carried by spring wire frames 15 so bent as to form a pair of arms that extend under the box and a pair of eyes 16 that receive the pivot pins or trunnions 13. The lids of the boxes are opened to the desired angle and are retained in place by wires 17 preferably U-shaped in form and provided with pointed ends that may be forced into the wood of the lid and box. The opening of the lid shifts the center of gravity of the box rearward of the vertical plane of the eyes 16, and to correct this, small weights 19 are attached to the front edges of the boxes. Each weight is preferably in the form of a metallic bar of U shape in cross section so that it may be readily slipped over the upper edge of the front wall of the box.

The revolving carrier or "Ferris" wheel may be arranged to contain and support any desired number of boxes, and they may be of the same or different brands and provided with the same or different colored wrappers, although each cigar is to be sold for the same price, as, for instance, a nickel or dime.

The revoluble carrier may be rotated in a number of ways in order to bring the desired box to the selecting or selling point. In one construction, the shaft 11 is provided with a worm wheel 21 which is engaged by a worm 22 on a shaft 23 that extends to a point outside the casing and is there provided with a suitable operating crank.

Extending across the front of the casing is a horizontally disposed slot 25 in which is arranged a horizontal guide rod 26, and depending from the guide rod is a plate 27 that extends down parallel with the inner wall of the casing and preferably is held in contact therewith by a small strip spring 28. The upper end of the plate 27 is provided with a pair of spaced outwardly turned lugs having openings for the passage of the rod 26, and between these lugs is arranged a collar 32 that is pivoted on the rod and which carries a small sleeve 33 of link-like form in cross section. Through this sleeve 33 slides a pair of tongs 34 that preferably are formed of flat spring wire, the strip of which the tongs is made being centrally bent to form a handle 35 that is located outside the box or casing and is to be grasped by the intending purchaser. The inner ends of the tongs are turned downward, forming jaws 36 which normally are held in open position by the inherent elasticity of the wire. The opening movement of the tongs is limited by a link 37 embracing both jaws and secured to one of them. The extent of opening movement is but slightly greater than the diameter of a single cigar or other article, and the distance of the link from the ends of the jaws is such that only a single cigar or other article can be caught by the jaws at each operation. The tongs are slidably mounted in the sleeve 33 and may be readily moved to and fro, while the sleeve is swiveled to the collar 32, so as to permit considerable freedom of movement of the tongs in examining and selecting a cigar. The plate 27 is normally held from movement to the left by a stop 40 projecting from the inner wall of the front of the casing, and to release the plate and thereby permit the operator to move the tongs to the selecting position, it becomes necessary to deposit a coin or check. For this purpose, the front of the casing has a slot 41 into which a coin may be inserted, and the coin falls down, turning to a vertical position, and its edge strikes against the inner face of the plate 27 and forces the same outward, so that the plate may clear the stop 40. The inner face of the plate is provided with a cam 42 against which the coin strikes, and the coin thereupon becomes slightly wedged between this cam and the inner wall of the slot, so that when the operator, grasping the tongs 34, pushes the plate 27 to the left, the cam will ride against the projecting edge of the coin and the plate will clear the stop, so that the

selecting tongs may be moved over the cigar box. The customer may now turn and shift the tongs to pick up and examine the cigars one by one until he finds one suitable. Still grasping the tongs and holding the cigar clamped therein, the tongs and the plate are moved to the right, and during the latter part of this movement, the plate 27 will pass beyond the stop 40. By this time the coin has fallen from the end of the slot by gravity, so that the plate cannot be returned to selecting position until after the insertion of another coin.

Arranged within the main casing is a partition 48 that is disposed between one side of the revolving carrier and the delivery slide or chute 49, which latter terminates in a drawer or trough 50 into which the selected cigar is delivered. When the operator moves the tongs back to the right, the tongs remain over this chute, and when the tongs are released, the cigar falls by gravity to the delivery point. As before stated, it is then impossible to again move the tongs and plate to selecting position until after the deposit of another coin or check.

In some cases a carrier of the type shown in Fig. 6 may be employed. In this case the carrier is formed of a piece of wire, that is twisted as indicated at 17' for the purpose of forming a lid clamping and holding means. As this additional arm will tend to further shift the center of gravity of the box on the carrier, the pivot eyes are arranged somewhat to the rear of the center as clearly shown in Fig. 6.

Fig. 7 illustrates a further modification in the form of a carrying tray 17^a, the tray being provided with pivot ears arranged to the rear of the center.

In constructing the machine, it is preferred to make the coin slot follow a more or less tortuous line, so that it will be impossible to operate the device by the insertion of a knife blade or the like, and as an additional precaution a shield 50 may be employed at a point to the rear of the elongated slot 25, so as to prevent movement of the member 27 by the insertion of a pin or wire.

We claim:—

1. In a vending machine, a casing having an elongated slot, a box or reservoir within said casing, a guide rod, a sleeve tiltably and slidably mounted on the rod, and a pair of tongs slidably mounted in the sleeve and having an operating handle extending through the slot.

2. In a vending machine, a casing having an elongated slot, a box or reservoir within the casing, a guide rod arranged with the slot, a sleeve tiltably and slidably mounted on the rod, and a pair of spring opened tongs slidably mounted in the sleeve and having an operating handle extending through the slot.

3. In a vending machine, a casing, a box or reservoir therein, a guide rod, a sleeve tiltably and slidably mounted on the rod a selecting member slidably mounted in said sleeve and movable from a selecting position over the box or reservoir to a delivery position, and means for automatically locking said selecting member from return movement.

4. In a vending machine, a casing, a box or reservoir, a guide rod, a sleeve tiltably and slidably mounted on the rod, a selecting member slidably mounted in said sleeve and movable from selecting position over said box or reservoir to a delivery position, means for automatically locking the selecting member in the delivery position, and a delivery chute or channel leading from the casing.

5. In a vending machine, a casing, a plurality of boxes or reservoirs, a carrier therefor, means for revolving said carrier to bring any one of the boxes or reservoirs to a selecting position, a guide rod, a sleeve tiltably and slidably mounted on said guide rod, and a freely movable selecting member slidably mounted in said sleeve and movable from the selecting position to a delivery position.

6. In a vending machine, a casing, a pair of revoluble wheels arranged therein and provided with trunnions, box carrying wires pivotally hung on said trunnions, means for

fastening the lids of the boxes in open position, and detachable counterbalance weights arranged to be secured to the front edges of said boxes.

7. In a device of the class described, a bent wire carrier having a pair of pivot eyes and provided with a rearwardly extended integral arm forming a lid clamping and holding means.

8. In combination, a revoluble box carrier, means for rotating the same to present any box to selecting position, a rod held parallel to the axis of rotation of said carrier, and a selecting member mounted for sliding movement on said rod.

9. In combination, a revoluble box carrier, means for rotating the same to present any box to selecting position, a rod held parallel to the axis of rotation of said carrier, a sleeve tiltably and slidably mounted on said rod, and a selecting member carried by said sleeve.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

HERBERT WHITTER NICHOLS.
JOHN REECE JONES.

Witnesses:

E. L. BROOKS,
M. W. BROWN.