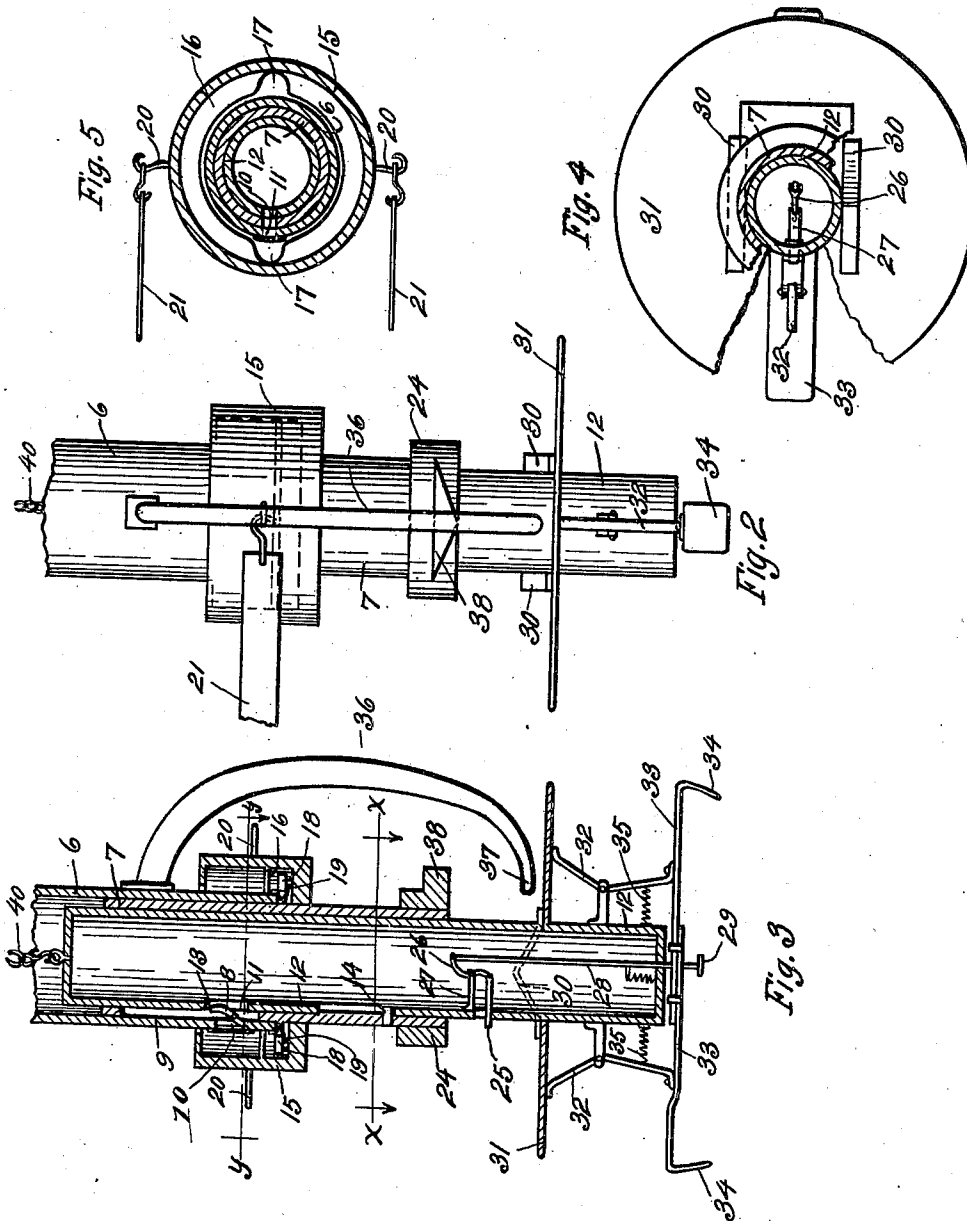


G. R. HAMMOND.
VENDING MACHINE.
APPLICATION FILED JULY 15, 1910.

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Patented June 20, 1911.

3 SHEETS-SHEET 2.



Witnesses:

H. J. Hansen

B. G. Richards

Inventor:

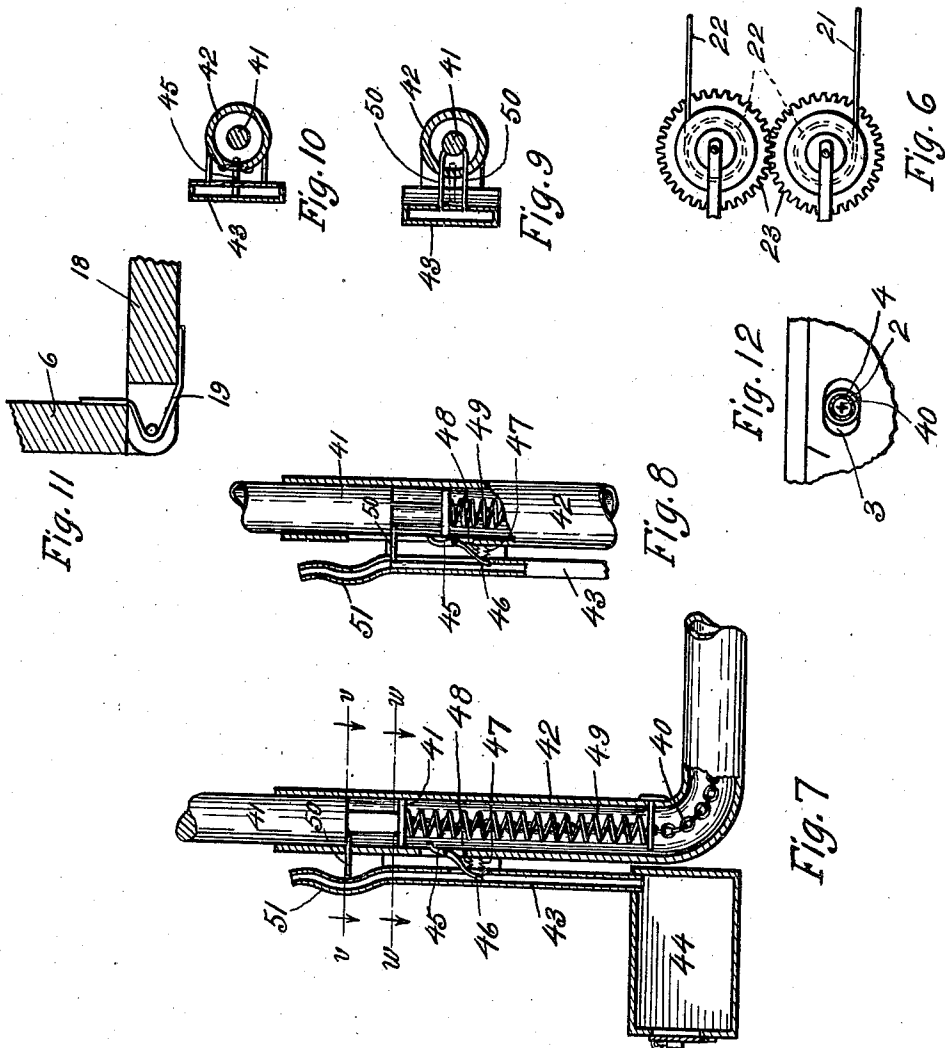
George R. Hammond,
By *Byrdshwar N. Lora*
Attorney.

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George R. Hammond,

By *Joshua H. Hottel*
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE R. HAMMOND, OF CHICAGO, ILLINOIS.

VENDING-MACHINE.

995,865.

Specification of Letters Patent. Patented June 20, 1911.

Application filed July 15, 1910. Serial No. 572,127.

To all whom it may concern:

Be it known that I, GEORGE R. HAMMOND, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification.

My invention relates to improvements in vending machines and has for its object the provision of a vending machine which will permit the purchaser to make a selection of a variety of articles and which shall be of simple construction and efficient in operation.

The invention consists in the combination and arrangement of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a sectional elevation of a vending machine embodying my invention, Fig. 2 is an enlarged elevation of the grappling device, Fig. 3 is a section of the device taken at right angles to Fig. 2, Fig. 4 is a section on line $x-x$ of Fig. 3, Fig. 5 is a section on line $y-y$ of Fig. 3, Fig. 6 is a view on line $z-z$ of Fig. 1, Fig. 7 is an enlarged sectional elevation of the coin operatable means employed in the device, Fig. 8 is a partial view similar to Fig. 7 but showing a coin in operative position in the device, Fig. 9 is a section on line $v-v$ of Fig. 7, Fig. 10 is a section on line $w-w$ of Fig. 7, Fig. 11 is an enlarged detail section illustrating the connection of one of the spring held stops employed in the grappling device, and Fig. 12 is a section on line $u-u$ of Fig. 1.

The preferred form of construction as illustrated in the drawing comprises a show case 1 which may be provided with the usual glass panels in its top and front. A ring 2 is pivoted to swing horizontally in an opening 3 in the upper central portion of the back of said case. A substantially U-shaped tube is arranged with its lower limb 4 projecting into said case through ring 2 and its upper limb 5 projecting forwardly over the top of the case. By this arrangement it will be observed that the said tube may be moved forwardly and back in casing 1 and swung from side to side therein.

Limb 4 is provided with a downwardly turned end 6 in which is slidably mounted

an intermediate tube 7. A locking dog 8 is pivoted in a slot 9 in tube 7 and is arranged with its lower end normally resting in engagement in a notch 10 in tube end 6. The upper end of dog 8 is curved as shown and normally rests in a notch 11 in the inner tube 12 which is slidable in tube 7. The upper end 13 of slot 11 is rounded as shown to coöperate with the upper end of dog 8. Tubes 7 and 12 are given a slot and pin connection 14 which permits of vertical movement of said tubes relatively to each other but prevents rotation of said tubes relatively to each other. By this arrangement it will be observed that upon the descent of tube 12 in tube 7 dog 8 will be forced to swing into slot 9 and thus release tube 7 to permit of its descent.

Secured to tube 7 is a casing 15 carrying an annular flange 16 provided with diametrically disposed notches 17, as shown in Fig. 5. Hinged to the lower end of tube end 6 are two diametrically disposed stops 18 normally held in extended positions by means of springs 19 and arranged to pass through notches 17 when casing 15 is in its normal or central position on tube end 6. Projecting from opposite sides of casing 15 are hook arms 20 to which the ends of steel bands 21 are secured. The other ends of bands 21 are wrapped upon spring rollers 22 which are secured in suitable brackets at the front of casing 1 and are provided with intermeshing gears 23. By this arrangement it will be observed that as casing 15 is moved to different positions in case 1 the bands 21 will serve to maintain the diameters of casing 15 at constant angles to the front of case 1, or in other words will maintain arms 20 in planes parallel to the front of said case. This being so it will be observed that as tube end 6 is moved to different positions at either side of the central position tube end 6 will rotate in casing 15 thus causing stops 18 to pass out of registration with notches 17. Thus it will be seen that there is but one relative position of casing 15 and tube end 6, namely; a central position, in which flange 16 may pass upwardly beyond stops 18.

Tube 7 carries at its lower end a weight 24 which serves to insure descent of said tube when released and also serves as a rest for the end of pin 25 upon descent of tube 7. Pin 25 projects through a slot in the side of tube 12 and is carried by a lever 26

pivoted in a bracket 27 within tube 12 and connected with a push rod 28 projecting through the bottom of tube 12 and provided with a contact foot 29, as shown in Fig. 3.

5 By this arrangement it will be observed that upon descent of tube 12 upon an object, such as a cigar, push rod 28 will be forced upwardly in tube 12, thus causing the retraction of pin 25 and the consequent release

10 of tube 7 for further descent on tube 12. Upon further descent tube 7 rests upon brackets 30 secured at either side of tube 12 on a disk 31 which is vertically slidable on tube 12. Disk 31 rests upon the upwardly turned upper ends of levers 32 which

15 are pivoted in brackets secured to the sides of tube 12 and have their lower ends pivoted to grappling members 33 which are provided at their outer ends with downwardly and inwardly extending grappling

20 arms or fingers 34. Compression springs 35 interposed between the lower portions of levers 32 and the sides of tube 12 serve to normally hold grappling members 33 in

25 extended positions. By this construction it will be observed that upon descent of disk 31 under the influence of weight 24, levers 32 will be operated to cause grappling fingers 34 to approach each other to grasp an

30 article such as a cigar between them.

Secured to one side of tube end 6 is a downwardly extending stationary arm 36 having an inwardly turned rounded end 37. On one side of weight 24 is formed a wedge-shaped projection 38 arranged to contact

35 with the arm end 37 when said weight descends. A discharge apron 39 is mounted in the forward central portion of casing 1 and is adapted to conduct articles such as a

40 cigar outwardly through an opening in the front of said casing for delivery to the purchaser. The arrangement is such that when tube end 6 is in any position other than a

45 central position, one or the other of the lower inclined edges of projection 38 contacts with arm end 37, so that when tube 7 is turned back to the central position by bringing tube end 6 to a central position, projection 38 is caused to ride upwardly on arm

50 end 37 and thus effect the release of an article carried between fingers 37. It will be observed that this releasing action of projection 38 can occur only in central position which insures that the article grasped between

55 fingers 34 will not be released until in position to be received by apron 39.

Secured to the upper end of tube 12 is a chain 40 extending upwardly through the tube limbs 4 and 5 and connected at its

60 upper end to a vertically slidable plunger 41 mounted in the upwardly turned end 42 of limb 5. Secured to the front side of tube end 42 is a coin chute 43 leading downwardly to a suitable coin receptacle 44, as shown.

65 Pivoted in a slot in the front wall of tube

end 42 is a dog 45 having its upper arm extending into a tube end 42 to limit the downward movement of plunger 41 and its lower end 46 extending through a slot in the rear wall of chute 3 in position to contact with a

70 coin in said chute. Arm 46 is yieldingly held in operative position by means of a light compression spring 47 of such resistance that when a coin is first deposited in chute 43 dog 45 will be sufficiently rocked

75 upon its pivot to withdraw its upper end from tube end 42 so as to permit the passage of plunger 41 but will be held from further movement and in a position to prevent the actual passage of said coin by means of a

80 second and stronger compression spring 48 with which said dog comes in contact in this position. Plunger 41 is yieldingly held in elevated position by means of a compression

85 spring 49 and also carries two fingers 50 projecting through corresponding slots in the front wall of tube end 42 and in the rear wall of chute 43, the said fingers 50 being

90 positioned somewhat above the lower end of plunger 41 and arranged to contact with the upper edges of a coin held in chute 43 by dog 45 to force said coin past said dog upon further descent of plunger 41 in tube end

95 42. At its upper end chute 43 is provided with an outward bend 51 which carries this portion of the chute outwardly beyond the ends of fingers 50 and thus permit the passage of a coin while plunger 41 is in elevated position. By this arrangement it will be

100 observed that upon deposit of a suitable coin in chute 43, plunger 41 may be depressed in tube end 42 thus permitting the operation of tubes 7 and 12 for the purpose of grasping an article in case 1 as above

105 described and discharge the same over apron 39.

While I have illustrated and described the preferred form of construction for carrying my invention into effect this is capable of variation or modification without departing

110 from the spirit of the invention. I therefore do not wish to be limited thereto as there might be various changes made in the details of construction and arrangement of parts described without departing from the spirit

115 of the invention comprehended within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

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1. In a vending machine, the combination with a transparent case having an opening in its back, of a U-shaped tube arranged with its lower limb projecting into said case through said opening and its upper limb

125 projecting forwardly over the top of said case; a grappling device on the end of said lower limb; operatable means on the end of said upper limb; and an operative connection between said grappling device and said

130

operatable means passing through said tube, substantially as described.

2. In a vending machine the combination
5 in its back, of a U-shaped tube arranged with its lower limb projecting into said case through said opening and its upper limb projecting forwardly over the top of said case; a grappling device on the end of said
10 lower limb; operatable means on the end of said upper limb and an operative connection between said grappling device and said operatable means consisting of a flexible element passing through said tube, substantially
15 as described.

3. In a vending machine, the combination with a transparent case having a ring pivoted to swing horizontally in an opening in the back thereof, of a U-shaped tube arranged
20 with its lower limb projecting into said case through said ring and its upper limb projecting forwardly over the top of said case; a grappling device on the end of said lower limb; operatable means on the
25 end of said upper limb; and an operative connection between said grappling device and said operatable means passing through said tube, substantially as described.

4. In a vending machine, the combination
30 with a transparent case having a ring pivoted to swing horizontally in an opening provided in the back of said case, of a U-shaped tube arranged with its lower limb projecting into said casing through said
35 ring and turned downwardly at its end, and its upper limb projecting forwardly over the top of said case and turned upwardly at its end; a movable member mounted to slide vertically in said downwardly turned end;

a grappling device carried by said movable
40 member and arranged to be operated by vertical movements thereof; a spring held plunger slidably mounted in said upwardly turned end; operatable means for controlling the movements of said plunger; an operative
45 connection between said plunger and movable member; and means of discharge from said case, substantially as described.

5. In a vending machine, the combination
50 with a transparent case having a ring pivoted to swing horizontally in an opening provided in the back of said case, of a U-shaped tube arranged with its lower limb
55 projecting into said casing through said ring and turned downwardly at its end, and its upper limb projecting forwardly over the top of said case and turned upwardly at its end; a movable member mounted to
60 slide vertically in said downwardly turned end; a grappling device carried by said movable member and arranged to be operated by vertical movements thereof; a spring
65 held plunger slidably mounted in said upwardly turned end; operatable means for controlling the movements of said plunger; an operative connection between said plunger and movable member consisting of a chain passing through said tube; and means
70 of discharge from said case, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE R. HAMMOND.

Witnesses:

HELEN F. LILLIS,
JOSHUA R. H. POTTS.