May 17, 1938. J. DARMAN 2,117,302

TOWEL VENDING CABINET

Original Filed July 9, 1934 7 Sheets-Sheet 1

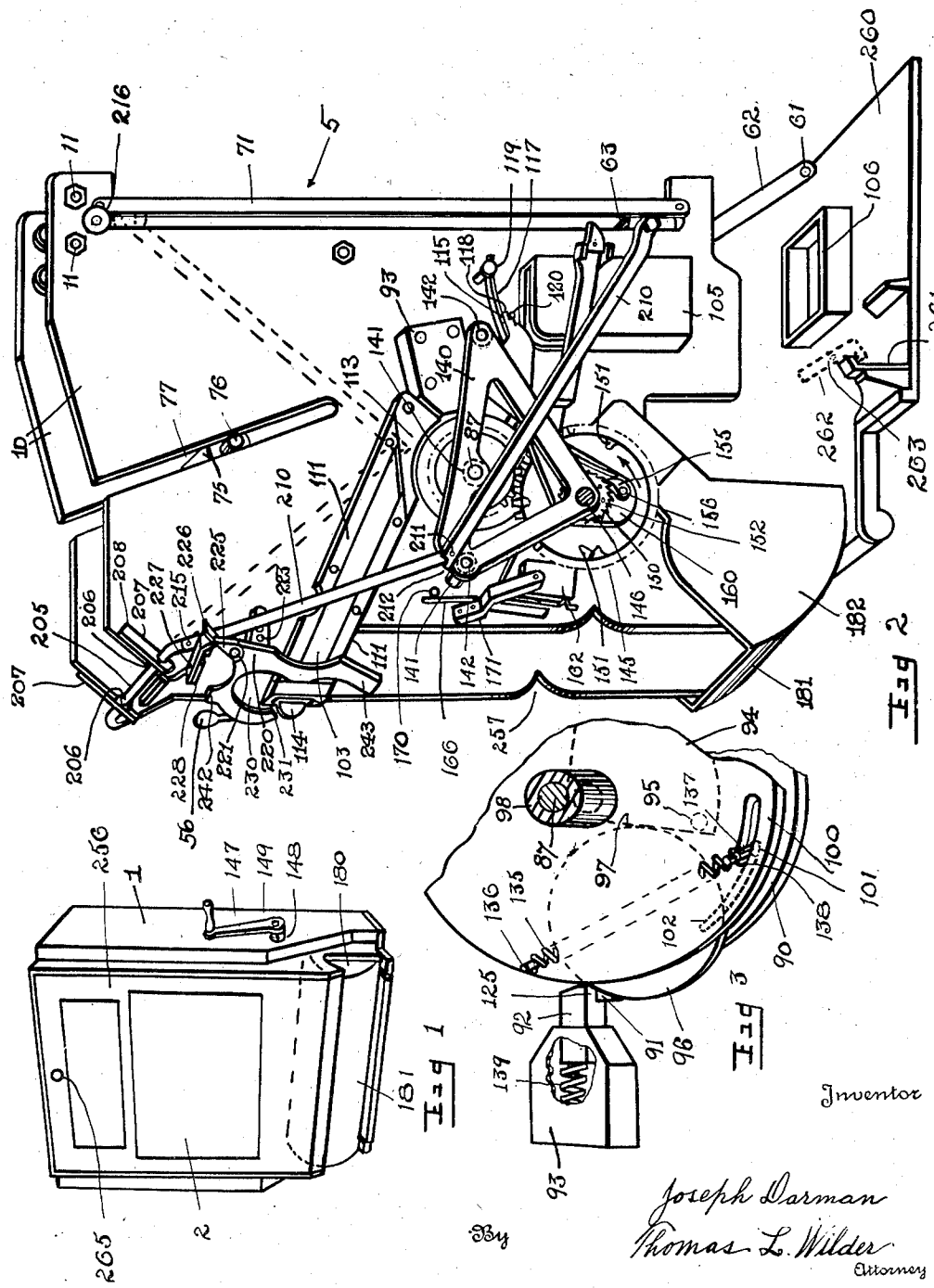


Fig 1

Fig 2

Fig 3

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TOWEL VENDING CABINET

Original Filed July 9, 1934 7 Sheets-Sheet 2

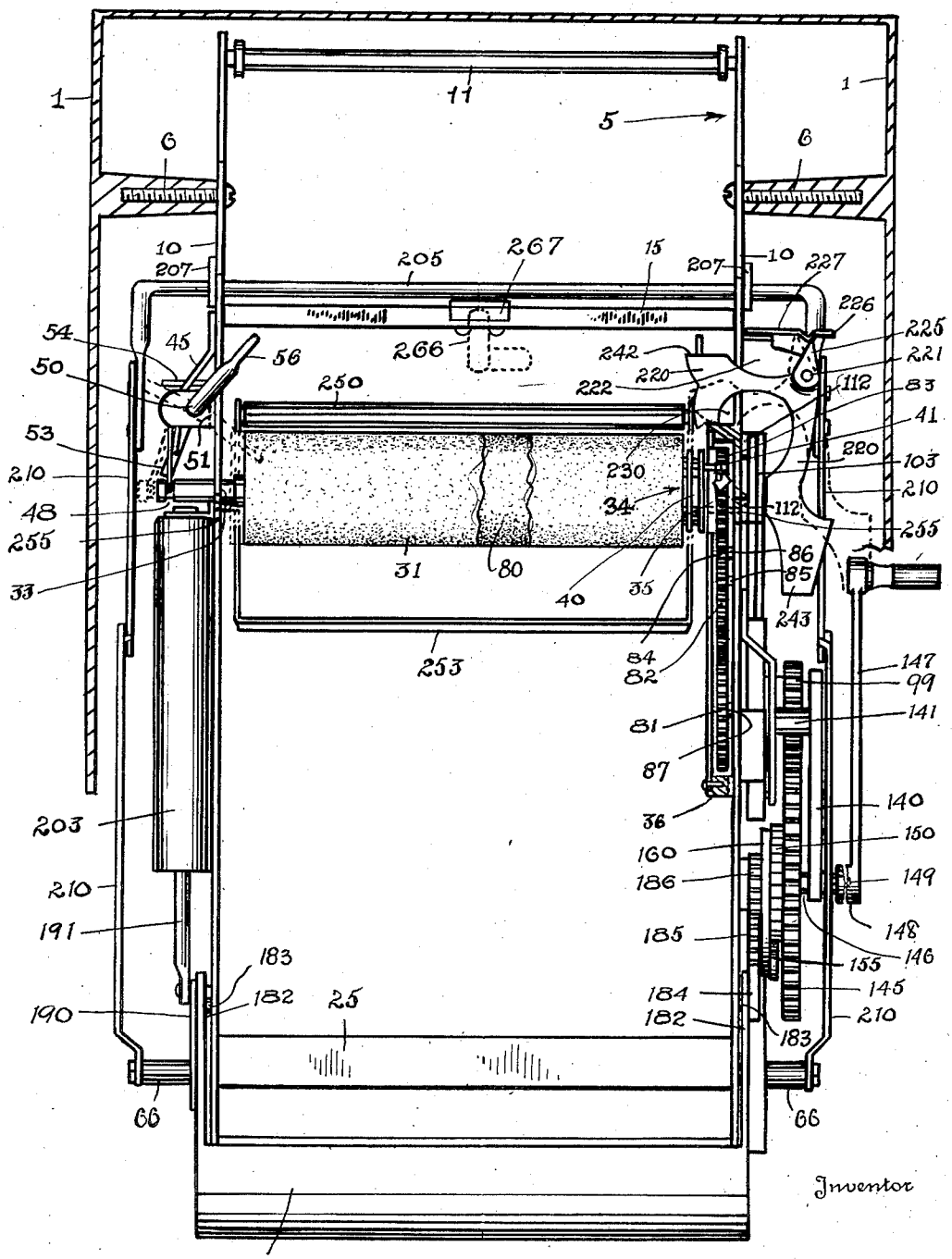


Fig 4

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TOWEL VENDING CABINET

Original Filed July 9, 1934 7 Sheets-Sheet 3

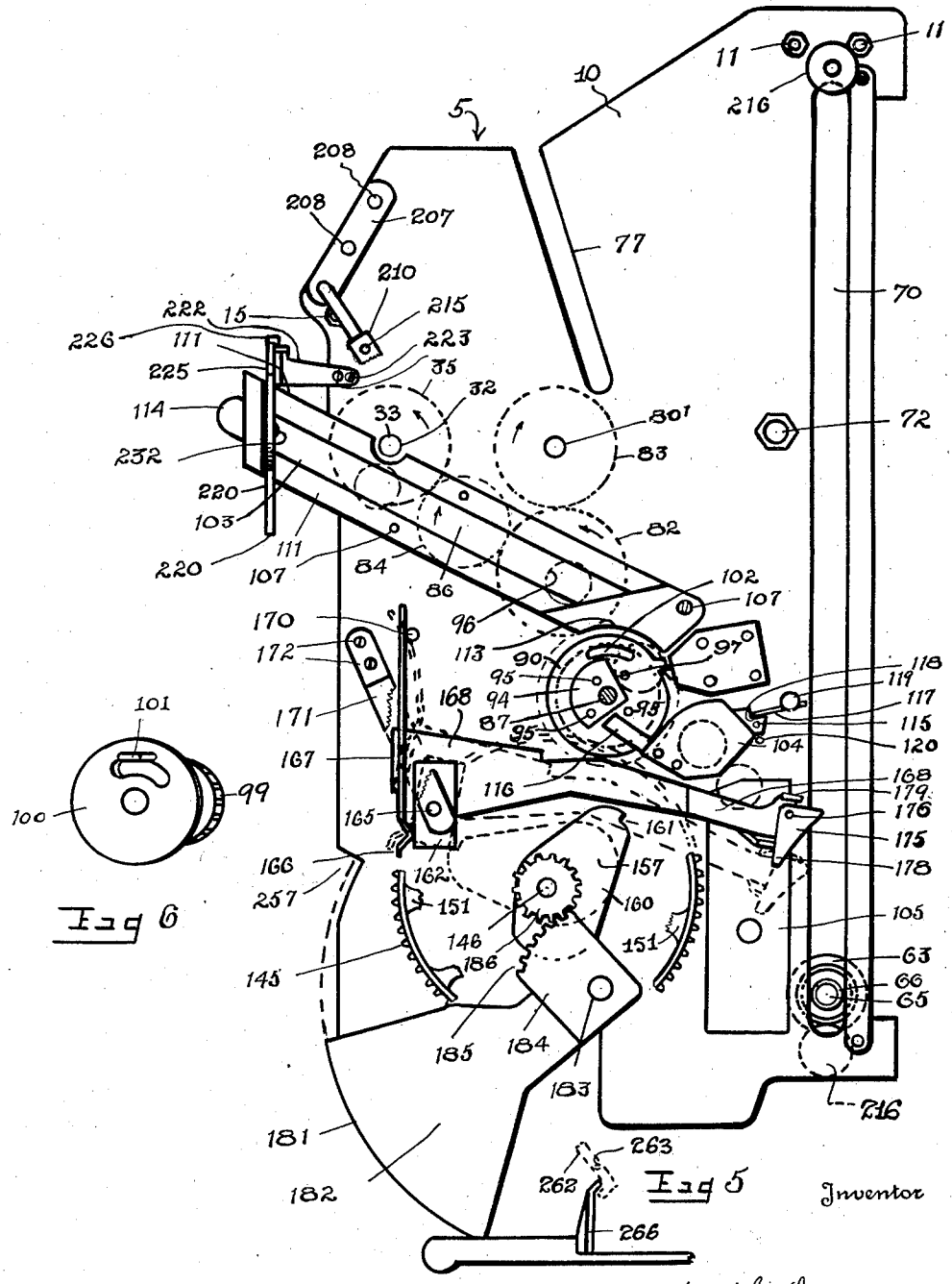


Fig 6

Fig 5

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TOWEL VENDING CABINET

Original Filed July 9, 1934 7 Sheets-Sheet 4

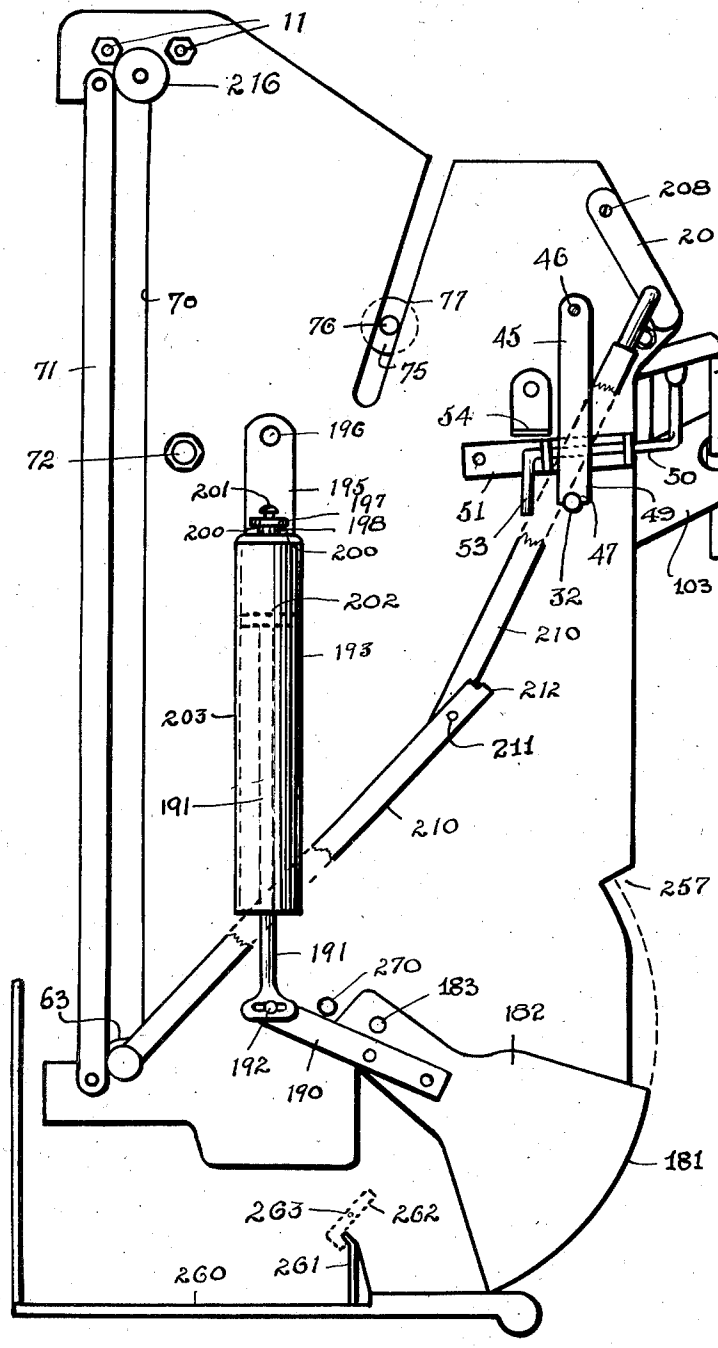


Fig 7

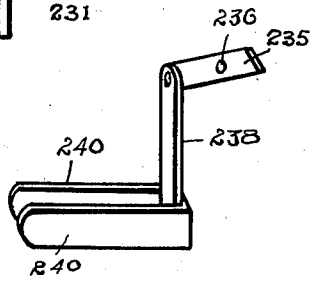


Fig 8

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TOWEL VENDING CABINET

Original Filed July 9, 1934 7 Sheets-Sheet 5

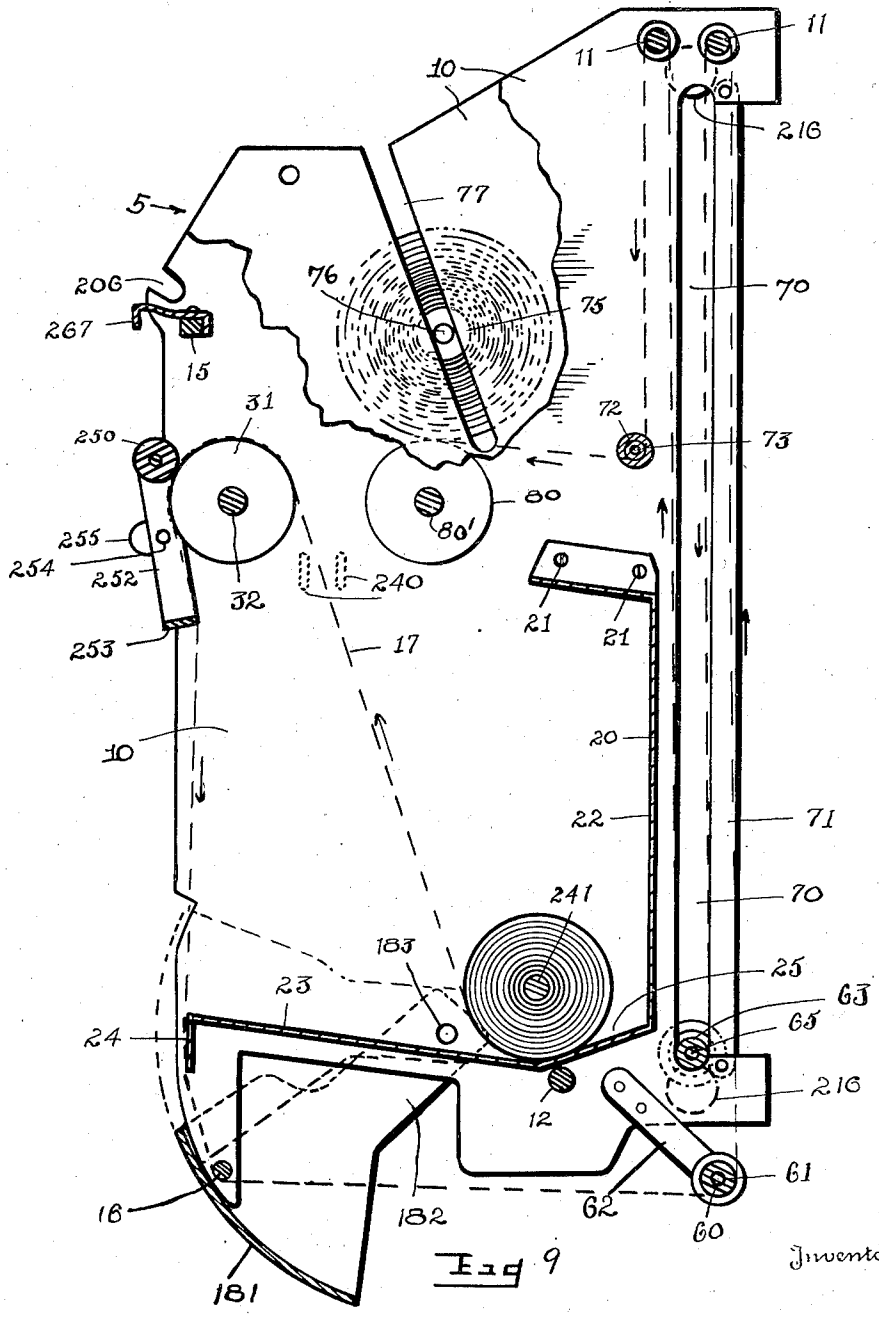


Fig 9

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TOWEL VENDING CABINET

Original Filed July 9, 1934 7 Sheets-Sheet 6

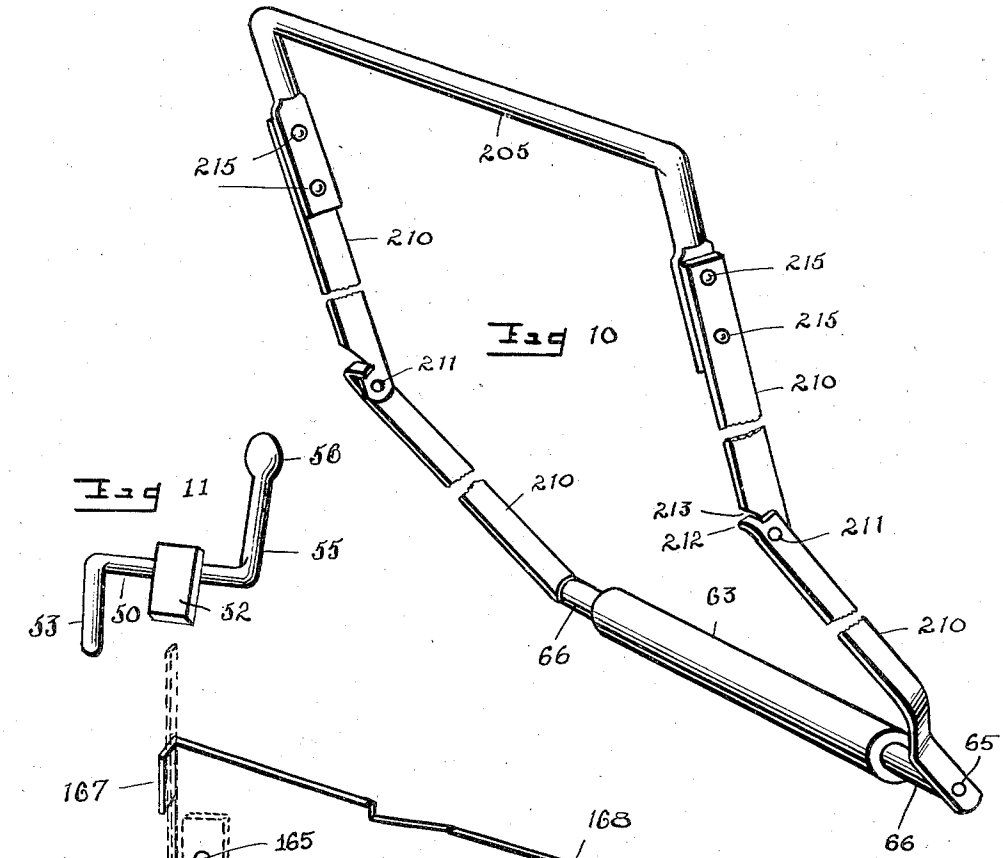


Fig 10

Fig 11

Fig 12

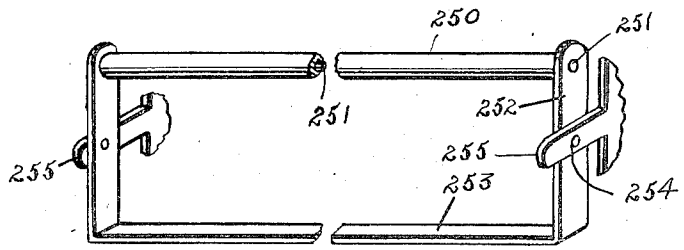


Fig 13

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TOWEL VENDING CABINET

Original Filed July 9, 1934 7 Sheets-Sheet 7

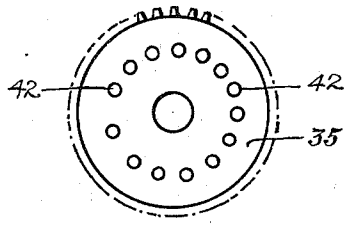


Fig 16

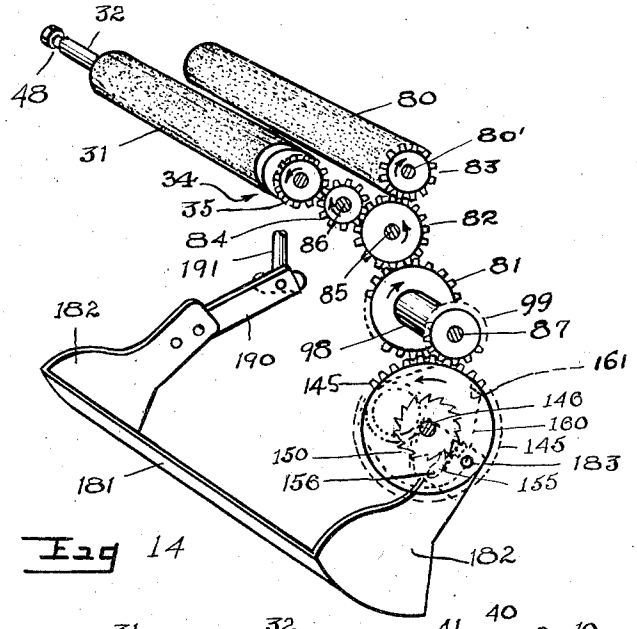


Fig 14

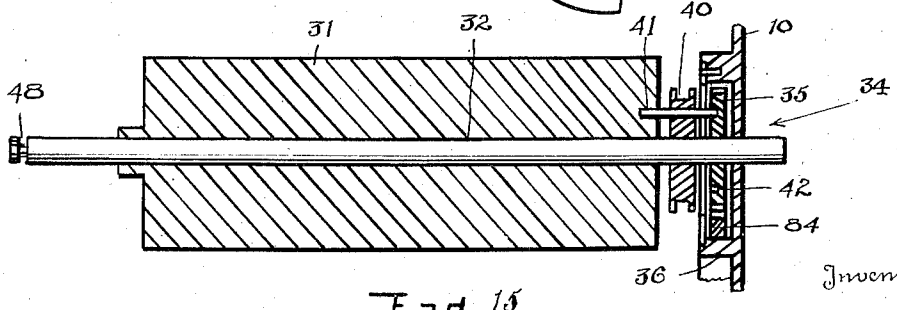


Fig 15

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Patented May 17, 1938 2,117,302

UNITED STATES PATENT OFFICE

2,117,302

TOWEL VENDING CABINET

Joseph Darman, Utica, N. Y.

Refiled for abandoned application Serial No. 734,245, July 9, 1934. This application June 22, 1937, Serial No. 149,704

6 Claims. (Cl. 312—38)

This application is re-filed for my application Serial Number 734,245 filed July 9, 1934.

My invention relates to a towel vending cabinet and I declare the following to be a full, clear, concise and exact description thereof sufficient to enable anyone skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings in which like reference characters refer to like parts throughout the specification.

The object of the invention is to provide a towel vending cabinet which will supply a portion of a towel for use and thereafter withdraw said supply within the cabinet for sanitary reasons.

The invention also contemplates a device for actuating the towel releasing mechanism upon the insertion of a coin in a proper slot.

There is also a means to prevent the insertion of said coin when the clean towel portion has been exhausted.

The object will be understood by referring to the drawings in which

Fig. 1 is a perspective view of the device.

Fig. 2 is an enlarged view showing a perspective of the mechanical parts of the device, parts being broken away.

Fig. 3 is an enlarged view showing a detail of the coin unlocking mechanism employed, parts being broken away.

Fig. 4 is a detailed view enlarged showing a front elevation of the working parts of the device, members being broken away.

Fig. 5 is a detailed view enlarged showing the side elevation of the working parts, parts being broken away.

Fig. 6 is a detailed view enlarged showing a perspective of the coin pushing member and immediate parts.

Fig. 7 is a detailed view enlarged showing a side elevation, being the reverse of that shown in Fig. 5 of the working parts.

Fig. 8 is a detailed enlarged view showing a perspective of certain parts that operate the member for closing the coin chute at predetermined intervals.

Fig. 9 is a detailed view enlarged showing a central vertical section of the working parts.

Fig. 10 is a detailed enlarged view showing a perspective view of a counterweight roller and immediate parts employed, parts being broken away.

Fig. 11 is a detailed enlarged view showing a perspective of a rock shaft and cam plate attached thereto that is employed.

Fig. 12 is a detailed view enlarged showing a perspective of a trip lever used.

Fig. 13 is a detailed enlarged view showing a perspective of the shaft and immediate parts used to prevent the towel from being withdrawn from the casing beyond a predetermined amount, parts broken away.

Fig. 14 is a detailed enlarged view showing a perspective of the rollers to aid in supplying and accumulating the towel, the gears for operating the same and other immediate parts.

Fig. 15 is a detailed enlarged view showing a section of the roller and clutch actuating mechanism connected thereto.

Fig. 16 is a detailed enlarged view showing a plan view of the gear employed in the clutch mechanism shown in Fig. 15.

Referring more particularly to the drawings, the device embodies a towel cabinet or casing 1 having a mirror 2 in the front part. The cabinet is suspended against a wall to hold it at a convenient height. A frame 5 is mounted within casing 1 and held in suspended position therein by screws 6.

The frame comprises two similar side parts 10, 10 which are held in spaced relation to each other by spacing rollers 11, 11 at the top, rod 12 at the rear bottom and by spacing bar 15 at the upper front, and rod 16 at the lower front. Rollers 11, 11 are mounted in anti-friction bearings and aid in directing towel 17 through the cabinet, as hereinafter described.

A partition member 20 is supported between parts 10, 10 by screws 21 and forms an inner back 22 and base portion 23 and lower front 24. The base 23 inclines downwards towards the back and then at an angle 25 upwards towards the vertical back 22. The inclined base portion 23 provides a pocket or receptacle for the disposition of the clean towel 17.

Towel 17 usually of fabric, is extended up over actuating roller 31. The outer surface of roller 31 is covered with sand paper or other like rough material to effect a draw or pull on towel 17 and thereby aid in moving towel 17 over its several rollers in the cabinet. It is mounted on a shaft 32 having a bearing 33 in one of the side parts 10 and an anti-friction bearing 34 in the other side frame 10.

A spur gear 35 is loosely mounted on shaft 32. It is housed in a casing formed by a wall 36 made integral with the inner surface of side frame 10. Roller 31 is caused to revolve with spur gear 35 by a sort of clutch mechanism embodying a drum 40 mounted on the end of roller

31 and on shaft 32 with which it has a tight fit. A pin 41 projects through drum 40 into the adjacent wall of roller 31, whereby to compel said roller 31 and drum 40 to revolve together. Said pin 41 extends laterally beyond drum 40. This extension is designed to engage any one of the several complementary apertures 42 made in the web part of spur gear 35, whereby to cause said drum 40 and roller 31 to revolve therewith when pin 41 is projected into one of the apertures 42 in gear 35.

The means for shifting roller 31 laterally, whereby to engage and disengage pin 41 from gear 35 embodies a flat spring 45 mounted to frame 10 by screw 46. The free end of spring 45 is bifurcated at 47 to straddle shaft 32 and engages annular groove 48 therein. The free or bifurcated end 49 is actuated, whereby to move roller 31 laterally by a cam movement comprising rock shaft 50 having bearings in bracket 51 fastened to frame 10. A cam plate 52 is secured to rock shaft 50, whereby to rock therewith and either cam the free end 49 of spring 45 outward or allow it to move inward in accordance with the throw of rock shaft 50. Both ends of rock shaft 50 are bent at right angles. The end 53 abuts against the outer edge of shelf 54 to limit the arc or amount of revolution of shaft 50 as shown in dotted lines in Fig. 4. The opposite end 55 of shaft 50 is bent to form a handle 56. Handle 56 will stay in either the full line position where roller 31 is in connection with spur gear 35 and turn therewith or in dotted line position shown in Fig. 4 and be free to turn, independent thereof. The latter position of handle 56 when roller 31 is free to turn is used when replacing a soiled towel 17 with a new one to aid in stringing the new towel 17 throughout the cabinet.

Towel 17 from roller 31 will travel downwards below part 24 of base portion 23 and spacing rod 16 to back roller 60. Roller 60 is mounted on shaft 61 which is carried by arms 62, 62 depending at an angle from side part 10, 10 of the frame, anti-friction rollers being used. Arms 62, 62 are held rigidly in position. From roller 60, towel 17 travels upwards over roller 11 and then downward over counterweight roller 63.

Counterweight roller 63 is mounted to revolve on shaft 65, anti-friction balls being used. The extreme outer ends of shaft 65 are furnished with sleeves 66, 66 that turn thereon and ride up and down in guide slots 70, 70 formed by attaching strips 71, 71 to extended parts of side pieces 10, 10 of the frame.

From counterweight roller 63 towel 17 travels upward over another roller 11 disposed parallel to predetermined roller 11 having bearings in side parts 10, 10 and then downward over roller 72 mounted to revolve on shaft 73, carried between side parts 10, 10 and then upward upon soil accumulating roller 75 the ends 76, 76 of which are free to move up and down in open slots 77, 77 formed at an angle in side parts 10, 10 of the frame.

Accumulating roller 75 is caused to turn by roller 80. To this end, roller 80 has its outer surface covered with sand paper or other like substance. It is situated near accumulating roller 75, whereby to effect a turning of said roller 75 by friction contact with towel 17 as it accumulates thereon. Roller 80 is mounted on shaft 80' and has bearings in parts 10, 10.

Roller 80 for turning the soil accumulating roller 75 is revolved through the following train of gears indirectly connected to the master gear hereinafter mentioned, namely, spur gear 81 housed in the casing formed by wall 36 on inner surface of said part 10; spur gear 82 in mesh with gear 81; and spur gear 83 in mesh with gear 82 and mounted on the end of roller 80.

Spur gear 82 is in mesh with spur gear 84 which in turn is in mesh with spur gear 35 heretofore mentioned. Gears 82 and 84 are mounted on shafts 85, 86 projecting laterally from side part 10, whereas gear 81 is mounted to turn with shaft 87 that projects through side part 10 and supports the coin transferring mechanism now to be described. It will be observed that gear 84 is not in mesh with gear 83.

On the opposite side of part 10 is the coin transferring member composed of a cam member 90 mounted to turn with shaft 87. Cam 90 is fastened to the hub of gear 81 by screws 95. A tooth 91 is formed on the periphery of cam 90. It is adapted to engage spring actuated latch or detent member 92 housed in casing 93 that is attached to the outer surface of side part 10. See Fig. 3.

A sector 94 shown in dotted line in Fig. 3 and full lines in Fig. 5 is mounted on the surface of cam member 90. It has an aperture for the projection of shaft 87 and is held in place on cam 90 by two of the aforesaid screws 95. Sector 94 is smaller in diameter than cam 90 to aid in allowing for a passage of penny 96. Furthermore, the beveled side 97 of sector 94 serves as guide to direct the penny 96 in its onward progress. The complementary face 100 of the penny guideway is formed integral with a sleeve 98 mounted on shaft 87. The opposite end of sleeve 98 has formed integral therewith a spur gear 99. The complementary face 100 of the penny guideway is free to turn within a limited arc independent of cam 90. This limitation is fixed by projecting pin 101 formed integral with the adjacent face of member 100 extending into an arc shaped elongated recess 102 made in cam 90. It is thus apparent that cam 90 and facing member 100 with sector 94 between them cooperate to form a penny guideway transferring member that facilitates the passage of penny 96 from chute 103 to rock guideway 104 and thence to vertically disposed chute 105 to container 106. Chute 103 is fastened by screw 107 to side part 10 of the frame and is disposed at a downward angle to cause coin or penny 96 to gravitate or roll downwards towards the coin transferring member just above described.

It is made by placing together a back or wall piece 110, front pieces 111, 111 with spacing members 112, 112 not so wide in between. The lower facing 113 is formed with a circular recess to conform with the periphery of the coin transferring member.

The upper end of coin chute 103 extends beyond the casing 1 in a convenient location for dropping a penny 96 therein. A locating or facing plate 114 formed integral with wall piece 110 of the chute aids the person in directing the penny 96 towards the opening of said chute.

The rock guide 104 above mentioned has an open passageway therethrough to allow for the passage of penny 96 as it drops from the coin transferring member to the lower vertically disposed chute 105. Rock guide 104 is pivotally mounted at 115 on a screw secured to face plate 10 of the frame. Its lower end has a finger or coin directing member 116 extending in between cam 90 and face plate 100, whereby to eject penny 96

from in between cam 90 and facing member 100. This prevents penny 96 from going around with cam 90 and thereby allowing a continual operation of the mechanism. The free end 116 is held yieldingly against sector 94 by a flat spring 117 fastened at one end to a projecting part 118 of guide 104 and extending beneath the shank of a screw 119 projecting laterally from side part 10 at the other. A stud 120 extending outward from part 10 and beneath projecting part 118 limits the revolving motion of rock guideway 104 in one direction.

Projection 101 above mentioned serves also to push penny 96 against plunger 92 and thereby press said plunger 92 into its casing 93 against its spring 94 whereby to release tooth 91 of cam 90. It will be observed that the lost motion between facing member 100 and cam 90 because of the elongated recess 102 in cam 90 for the free motion of projection 101 of member 100 before it causes cam 90 to begin to revolve therewith will allow projection 101 to press against penny 96 and force the opposite edge thereof to contact with plunger 92 and thereby move it back out of the way of tooth 91 before said cam 90 begins to turn.

Cam 90 and facing plate 100 are held in relative position to each other by coiled spring 135 secured at one end to pin 136 projecting from plate 100 and at the other to pin 137 projecting from cam 90 and extending through elongated slot 138 formed in plate 100, whereby to allow penny 96 to drop between cam 90 and plate 100 and lodge between edge 97 of sector 94 and the adjacent edge of plunger 92.

The pull of spring 135 on plate 100 will hold said plate 100 in such position relative to cam 90 that projection 101 will lie normally at the near edge of elongated recess 102 in cam 90 as shown in full lines in Fig. 3, whereby to permit a predetermined amount of lost motion between said cam 90 and plate 100 before said parts with sector 94 in between begin to move together.

This lost motion is sufficient to allow projection 101 to move forward and push penny 96 thereahead, whereby said penny 96 will force plunger 92 backward against the tension of its spring 139, and clear of the path of tooth 91 formed integral with the peripheral edge of cam 90. When plunger 92 is pushed thus backward, it will permit the further downward progress of penny 96 to its ultimate destination into a receptacle hereinafter mentioned and will also release the actuating mechanism, whereby a clean part of the towel 17 is supplied and the soiled part rolled up. The part of towel 17 for use, however, is held temporarily within the cabinet 1 by counterweight roller 63.

Latch or detent member 92 is sufficiently wide to cover the width of cam 90 and sector 94. That part of the width thereof as at 125 which extends beyond the width of cam 90 will be available to bar the pathway of coin or penny 96 until said penny under the influence of projection 101 heretofore described forces said detent 92 back against its spring 139 to allow for the further passage of penny 96 and the actuation of the towel feeding and accumulating mechanism.

The outer end of shaft 87 rests in a loose bearing in bracket 140 held in spaced relation to side plate 10 by sleeves 141, 141, 141 mounted upon bolts 142, 142, 142, screw mounted to face plate 10.

Spur pinion 99 is in mesh with spur or master gear 145 mounted to turn independently on shaft 146. Shaft 146 has a bearing in side plate 10 and the other end in bracket 140. A handle 147 having a sleeve 148 formed integral therewith is mounted on the outer end of shaft 146. A set screw 149 mounted in sleeve 148 and engaging at its inner end a flattened part of shaft 146 causes shaft 146 to turn on its own axis when sleeve 148 and handle 147 are actuated.

A ratchet 150 is mounted also on shaft 146. It is attached to the inner web or spokes 151 of spur or master gear 145 by screws 152, whereby to turn with said gear 145. A dog or pawl 155 pivoted at 156 to locking plate 160 engages the teeth of ratchet 150, whereby to cause locking plate 160 to turn with master gear 145 and shaft 146 in one direction only indicated by the arrow in Fig. 2 and to allow said master gear 145 to remain stationary when shaft 146 and locking plate 160 fast thereto return to their original position indicated in full lines in Fig. 5.

Locking plate 160 which is fast to shaft 146 is provided with a notch 161 in its upper end. Locking plate 160 is held in towel supply position indicated by dotted lines in Fig. 5, when the adjacent edge of locking pawl 162 engages said locking plate 160 at the location of notch 161. Locking pawl 162 is pivotally mounted on shaft 165 and is held in predetermined position by the lower end of flat spring 166 which rests against the lower surface of pawl 162. The upper end of spring 166 is fastened by rivets or otherwise to the end 167 of trip member 168, said end 167 being bent at right angles to main part of trip member 168. The free upper end of spring 166, rests behind the shank of a screw 170 extending laterally from side part 10. It will be observed that flat spring 166 aids to hold trip member 168 as well as pawl 162 in predetermined position. A bearing bracket 171 fixed to side part 10 by screws 172 and having its lower end spaced therefrom supports the outer end of shaft 165. The inner end of shaft 165 rests in a bearing in side part 10.

Shaft 165 also forms a fulcrum for the rocking motion of trip member 168. Trip member 168 extends towards the rear and is of irregular shape to clear the various parts lying adjacent. Its free end carries a pawl 175, pivoted at 176 to member 168. Pawl 175 is held in predetermined position relative to member 168 by shoulder 178 formed by bending the lower outer edge of member 178 at right angles. To this end the lower end of pawl 175 rests against said shoulder. Pawl 175 is free to turn on its pivot 176 relative to member 168 within a limited arc determined by the upper bent over edge 179 of member 168. This rocking movement of pawl 175 is sufficient to allow for the free upward passage of counterweight roller 63, the operation of which is hereinafter described.

The lower part of casing 1 has an opening 180 through which the free part of towel 17 can be pulled when utilizing the same for drying the hands or face. The opening 180 is normally closed, however, to prevent the use of towel 17 or its exposure to the dust in the air by movable arc shaped over cover 181.

Cover 181 has formed at right angles to each end fan shaped parts 182, 182 which are pivoted at 183, 183 to studs outstanding from said parts 10, 10. A plate 184 is attached to inner reduced end of part 182. Plate 184 has formed on the arc of a circle gear rack 185. Rack 185 meshes with gear pinion 186 mounted to turn with shaft 146, whereby the turning of shaft 146 by means of

handle 147 will move cover 181 up into the dotted line position illustrated in Fig. 1, and thereby expose the opening 180 to allow for withdrawing the free portion of towel 17.

The inner end of the opposite fan shaped member 182 has a link 190 attached thereto by rivets or otherwise. A piston rod 191 is pivotally attached at 192 to the outer end of link 190. Piston rod 191 is part of a pneumatic shock absorbing device 193 mounted in a removable manner to the lower horizontal bifurcated part of bracket 195. The upper end of bracket 195 is secured by a screw 196 to side part 10 of the frame.

The upper part of device 193 has an extension 197 with an annular groove 198 formed therein to allow for the projection of parts 200, 200 of the lower bifurcated portion of bracket 195 to hold the shock absorber in position. A screw 201 is threaded into the upper part of casing 193, whereby to release the pressure in the shock absorber if found desirable.

Piston 202 is attached to piston rod 191 and plays up and down in the cylindrical casing 203. The air pressure in casing 203 will cause piston 202 to move downward slowly, whereby movable cover 181 will return gradually to closing position and not with a bang.

The means for tripping member 168 whereby to allow locking plate 157 and inter-related parts to return to original position under the influence of fall of cover 181 is effected by the descent of counterweight roller 63. When roller 63 descends one of the sleeves 66 on the end of shaft 65 which supports roller 63 will strike against the extended part of pawl 175 and rock trip member 168 against the tension of spring 166. This movement of member 168 will rock pawl 162 free of notch 161 in locking plate 160, whereupon plate 160 will return to original position indicated by full lines in Fig. 5 under the influence of the fall of cover 181 to which it is indirectly connected through gear 186 and gear rack 185.

The fall of counterweight roller 63 will also draw into the cabinet the released portion of towel 17 which has just been soiled by the user.

Counterweight roller 63 which moves up and down in slots 70, 70 is controlled somewhat by rod 205 held to rock in open slots 206, 206 formed in the upper edges of sides 10, 10 and held therein by bearing brackets 207, 207 fastened to sides 10, 10 by screws 208. Rod 205 is connected to roller 63 by a pair of links 210, located at each side of the frame. Each pair of links 210 is pivoted together at 211. One of the links having its connected end reduced and bent inward at 212 to engage a notch 213 in the other, whereby to limit their movement relative to each other at the joints.

The upper ends of each pair of links 210 are riveted or otherwise secured at 215, 215 to the depending portions of rod 205 which is turned at an angle at each end for this purpose.

Rubber washers 216 acting as buffers are mounted on side parts 10, 10 at the upper and lower ends of slots 70, 70 to break the force of counterweight roller 63 at those locations.

The means for preventing the insertion of a coin 96 in chute 103 when the clean towel portion has been exhausted contemplates a rocking or latch member 220. Latch member 220 is fulcrumed at 221 to bracket 222 fastened by screw 223, 223 to side plate 10. A member 225 formed integral with latch member 220 and tapering towards its upper edge is engaged by the free end of spring 226 to hold it in either closed or open chute position. To this end the free end of spring 226 is bent into a V shape. Spring 226 is fastened by screw 227 to a shelf 228 formed on bracket 222.

Latch member 220 has an opening at 230 to permit it to straddle chute 103. A depending prong 231 is formed on latch member 220. The free end of prong 231 will move through an opening 232 formed in the back or wall piece 110 of chute 103 into the passageway of said chute, whereby to prevent the coin 96 from fully entering.

The means for actuating latch member 220 into coin stopping position embodies a lever 235 fulcrumed at 236 on an appropriate stud provided on the inside of plate 10. A link member 238 is pivoted to the inner end of lever 235. The lower end of link 238 has U shaped or parallel arms 240, 240 attached. These parallel arms 240, 240 will engage therebetween the paper roller 241 on the end of the towel 17 as it is pulled upwards to supply roller 31. This will rock lever 235 and thereby cause its forward end to strike against the flat upper surface 242 of latch member 220 and rock it into chute closing position.

It will be rocked manually into open position by pushing on depending handle 243. This is done after a new or clean towel 17 is inserted.

The operation is effected by dropping a penny in chute 103. This can be done if chute closing member 220 is in full line position illustrated in Fig. 4. Penny 96 will roll down chute 103 and come to rest against the projecting edge of latch 92 within the recess between cam 90 and complementary face 100 and against the edge 97 of sector 94 which latter three parts comprise the coin transferring member.

By now pulling on handle 147, master gear 145 will turn therewith because of the engagement of pawl 155 with ratchet 150. The turning of master gear 145 will turn gear 99 and hence face plate 100 of the coin transferring member. The turning of face plate 100 will cause projection 101 thereof to press against penny 96 and thereby force it against latch 92 and thereby cause latch 92 to move back against its spring to clear tooth 91 on cam 90. At this instant, projection 101 will have reached the end of recess 102 in cam 90 and cause said cam 90 to revolve with the other parts of the coin transferring member comprising facing member 100 and sector 94, one complete revolution or until tooth 91 reengages latch 92 which in the meantime or as soon as penny 96 has passed beyond will have returned to its original projected position to intercept the further progress of tooth 91.

The turning of handle 147 will also revolve gear pinion 186 fast on shaft 146. Gear pinion 186 being in mesh with gear rack 185 on plate 184 will cause cover 181 to move upwards into open position as illustrated in dotted lines in Figs. 5 and 9. Cover 181 will be locked temporarily in this open position by the engagement of the shouldered or notched part 161 of locking plate 160 with the lower adjacent edge of spring pressed locking pawl 162.

Moreover the turning of master gear 145 will have turned also the train of gears namely, 81, 82, 84 and 35, whereby to revolve actuating roller 31 to supply a portion of towel 17, and the train 81, 82, and 83 to turn roller 80, whereby to aid in winding the soiled towel upon accumulating roller 75.

The operator can now put his hands in through opening 180 of casing 1 and pull outward a limited portion of towel 17. In pulling on towel 17, counterweight roller 63 under which towel 17 passes in its windings through casing 1 will move upward in slots 70, 70 sleeve 66 on the end of shaft 65 rocking pawl 175 idly on the end of trip member 168 but not otherwise moving member 168.

Immediately the user of the towel 17 lets go thereof, counterweight roller 63 will drop and draw down with it that portion of towel 17 between rollers 11, 11 suspended above as heretofore mentioned. This will take up and draw within casing 1 the portion of towel 17 that has been used and soiled by the operator. It is important for sanitary reasons that this be effected.

The falling of counterweight roller 63 will also cause sleeve 66 on shaft 65 to strike against the projecting portion of pawl 175 and thereby rock tripping member 168, upon its fulcrum 165. The rocking of member 168 and pawl 162 mounted thereon will release the shoulder or notched part 161 of locking plate 160 from said pawl, 162, thereby allowing said plate 160 to return to original position illustrated in full lines in Fig. 5. Plate 160 will return to normal position under the influence of a gravity force caused by the dropping of cover 181 which reacts thereon through gear rack 185 and gear pinion 186 mounted to turn with plate 160. The return movement of plate 160 and immediate parts will be gradually under the influence of piston 202 heretofore mentioned and will be arrested at the proper or normal location when cover 181 reaches its lowermost position and can not be again moved to dotted line position until another penny 96 has been dropped in chute 103. In this return movement pawl 155 will ride over the teeth of ratchet 150, whereas master gear 145 will remain stationary.

The penny 96 heretofore mentioned with respect to its operation will after passing through the coin transferring member and passing latch 92 will be directed by finger 116 through rock guide 104 to vertically disposed chute 105 into container 106 where it can be removed at will.

There is also means shown for preventing towel 17 from being pulled from the supply beyond the part allowed by the vertically movable counterweight roller 63. This means embodies a roller 250 mounted to turn on shaft 251 having bearings in end members 252, 252 of the U shaped rock member 253. End members 252, 252 are pivotally mounted at 254, 254 to laterally projecting arms 255, 255 extending from the front edges of parts 10 or extending inwardly from the inside surface of door 256. It will be observed that the towel in passing downward from actuating roller 31 passes behind the U shaped member 253, whereby a pull on the towel downwards from roller 31 will rock U shaped member 253 and cause roller 250 carried in its ends 251, 251 to press more firmly on roller 31, thereby pinching towel 17 between its surface and the roughened surface of roller 31.

The front edges of side parts 10 are provided with recesses 257 to allow for clearance of adjacent edges of cover 181 when in closed position.

The lower part 260 of the cabinet or casing 1 is provided with upstanding members 261, adapted to be engaged by hook members 262 pivotally mounted to the upper part of casing 1 at 263.

Door 256 is removably mounted to front part of casing 1 and can be locked in position by lock 265 having a rock member 266 engaging the back of member 267 fastened to bar 15 as shown in dotted lines in Fig. 4.

A stud 270 projecting from the side 10 of the frame 5 lies in the path of link 190, whereby to limit the closing movement of cover 181.

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

1. In a towel vending cabinet, a casing having an opening for exposing towel, a cover pivotally mounted off center and above said opening within said casing, whereby to close said opening, a gear rack attached to said cover, a pinion meshing with said gear rack, locking plate connected to turn with said pinion, a trip member having a pawl pivotally mounted thereto for engaging said locking plate, and means for actuating said trip member, whereby said pawl will release the locking plate to allow said cover to fall into closed position.

2. In a towel vending cabinet, a casing having an opening for exposing the towel, a cover pivotally mounted off center, above said opening and within said casing, for closing said opening, a gear rack attached to said cover, a pinion meshing with said gear rack, a plate member fixed to turn with said pinion, a trip member having a pawl pivotally mounted thereto for engaging said plate member, whereby to hold said cover in open position, a movable roller engaging said towel, whereby to withdraw said towel within said casing, and means carried by said roller for engaging said trip member, to actuate said pawl to releasing position, whereby to allow the cover to fall by its own weight into closed position.

3. In a towel vending cabinet, a casing having an opening for exposing a towel, a cover pivotally mounted off center, above said opening and within said casing for closing said opening, a gear rack mounted on said cover, a pinion meshing with said gear rack, a plate member connected to turn with said pinion, a pawl engaging said plate member, a trip member for supporting said pawl, a second pawl mounted on said trip member, a roller mounted to move in said casing and said roller causing the actuation of said second named pawl, whereby to move said first named pawl to releasing position and thereby allow the cover to fall.

4. In a towel vending cabinet, a casing having an opening for exposing the towel, a cover pivotally mounted within said casing, for closing said opening, a gear rack mounted on said cover, a pinion meshing with said gear rack, a locking plate fixed to turn with said pinion, a pawl engaging said locking plate, a trip member supporting said pawl, a movable roller mounted in said casing for actuating said trip member, whereby to disengage said pawl from said locking plate to allow the cover to move into closed position.

5. In a towel vending cabinet, a casing having an opening for exposing a towel, a movable cover pivotally mounted in said casing for closing said opening, a gear rack attached to said cover, a pinion meshing with said gear rack, a handle for turning said pinion, a locking plate having a notch therein mounted to turn with said pinion, a pawl for engaging the notch in said locking plate, whereby to hold said cover in open position, a trip member pivotally supporting said pawl and a movable roller mounted in said casing for engaging said trip member, whereby to

actuate said pawl to allow the cover to fall into closed position.

6. In a towel vending cabinet, having an opening for exposing a towel, a movable cover pivotally mounted in said casing for closing said opening, a gear rack attached to said cover, a pinion meshing with said gear rack, a locking plate mounted to turn with said pinion, a pawl for engaging said locking plate, a trip member pivotally supporting said pawl, another member pivotally mounted on said trip member and a movable roller mounted in said casing for actuating said last named member pivotally mounted to the trip member, whereby to move the pawl to releasing position to allow the cover to fall.

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