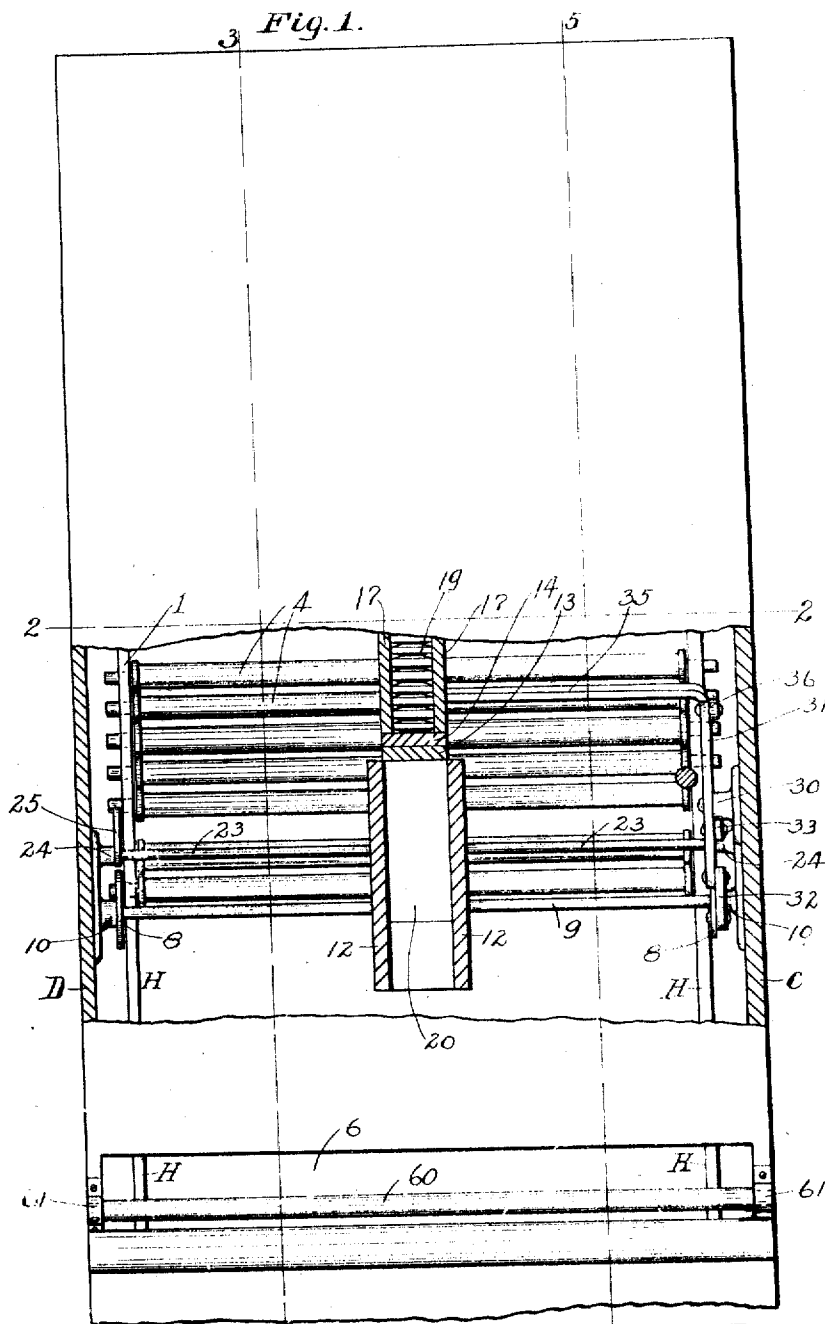


A. E. ACEE.
CHECK CONTROLLED APPARATUS.
APPLICATION FILED NOV. 27, 1908.

950,200.

Patented Feb. 22, 1910.

6 SHEETS—SHEET 1.



Witnesses,
Carrie R. Ivy
Wm. Whaley

Inventor,
Alfred E. Acee
By Cyrus K. W.
Attorney.

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6 SHEETS—SHEET 2.

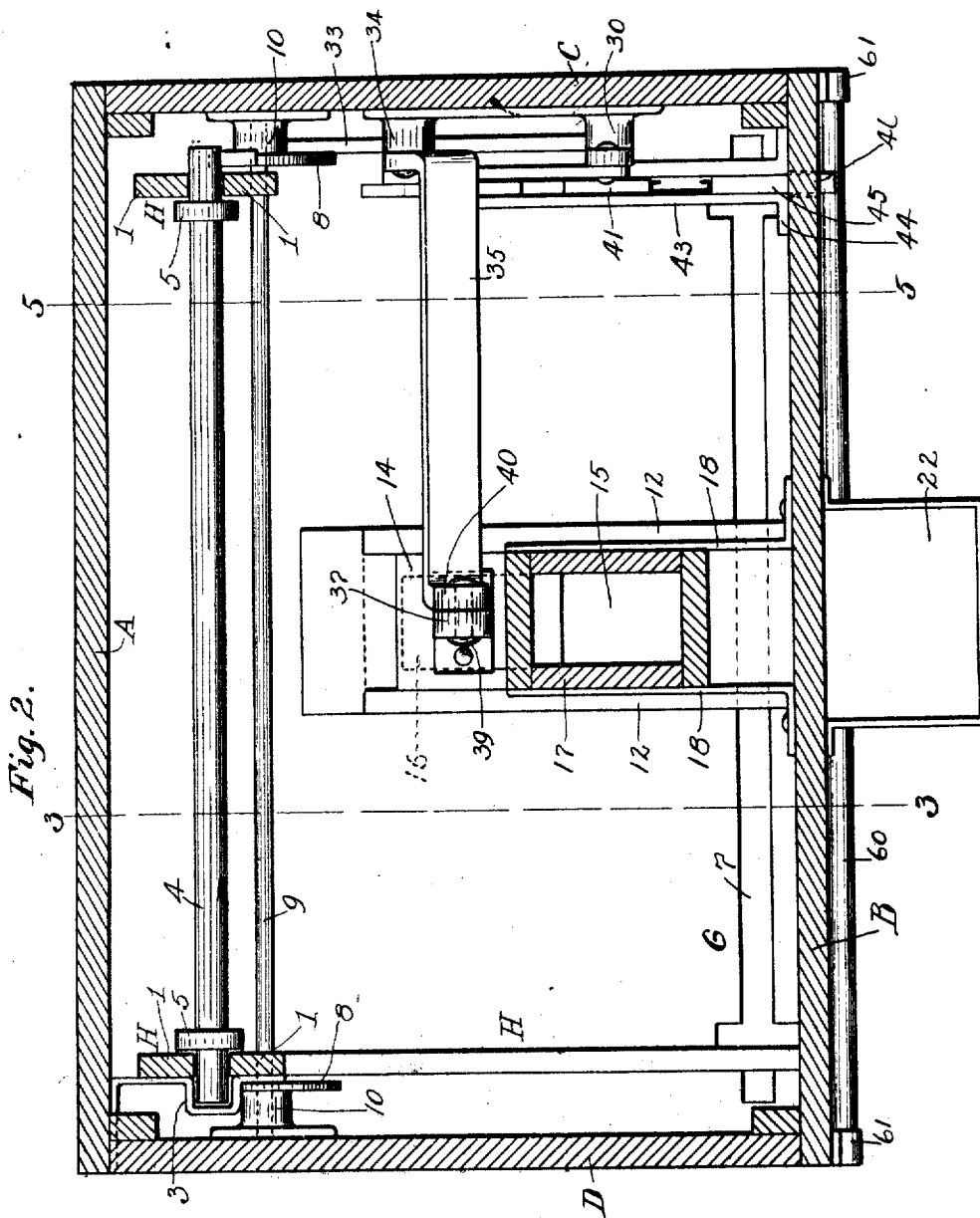


Fig. 2.

Witnesses,
Carrie P. Joy
Wm. Whaley

Inventor,
Alfred E. Acee
By Cyrus K. Lee
Attorney.

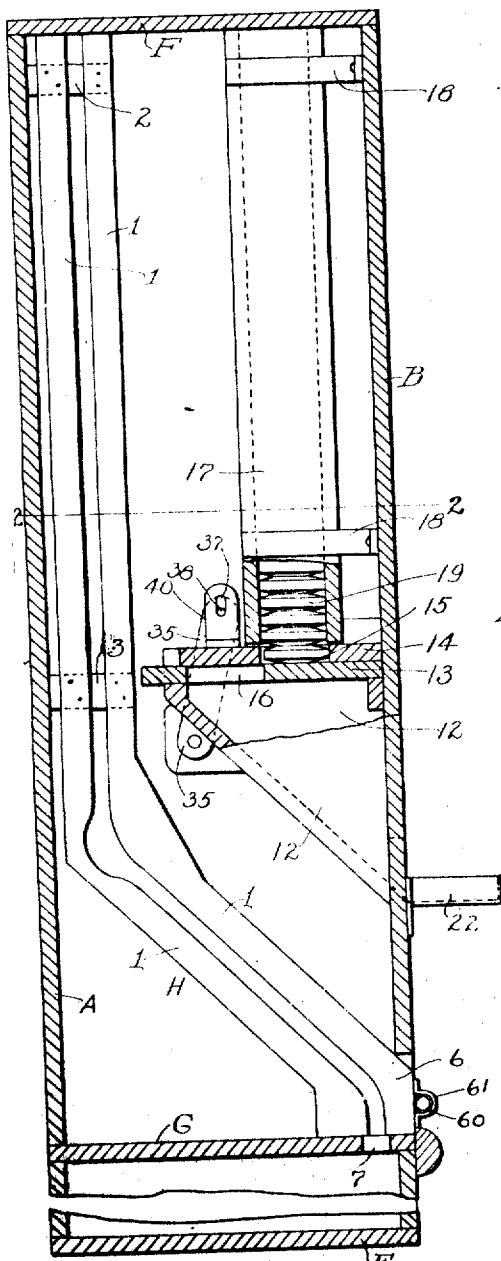
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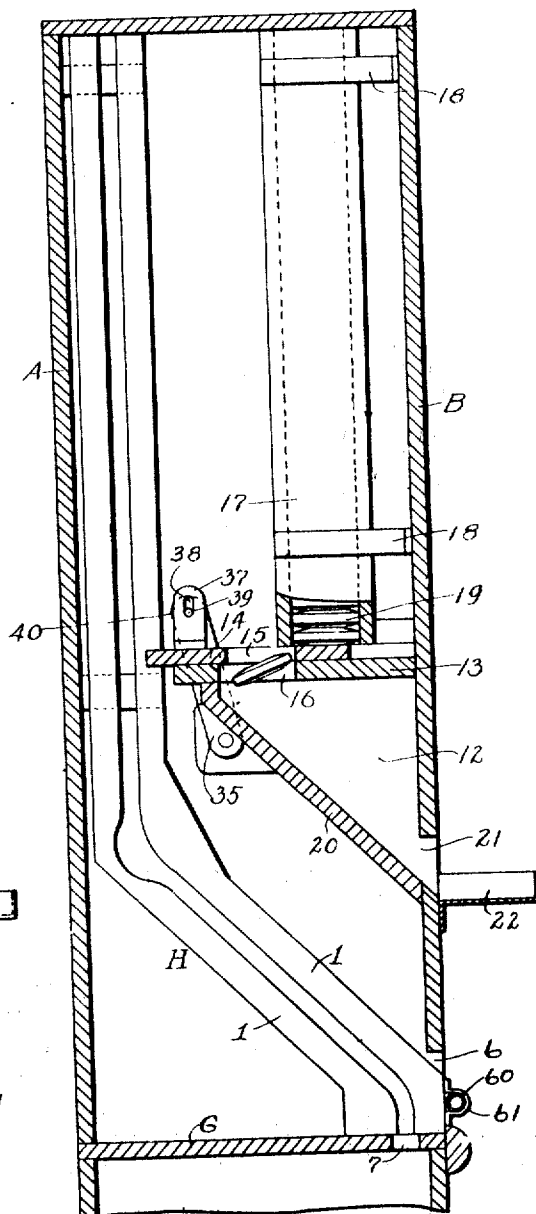
6 SHEETS--SHEET 3.

Fig. 3.



Witnesses,
Carrie R. Ivy
Wm. Whaley.

Fig. 4.



Inventor,
Alfred E. Acee
By Cyrus K. Kell
Attorney.

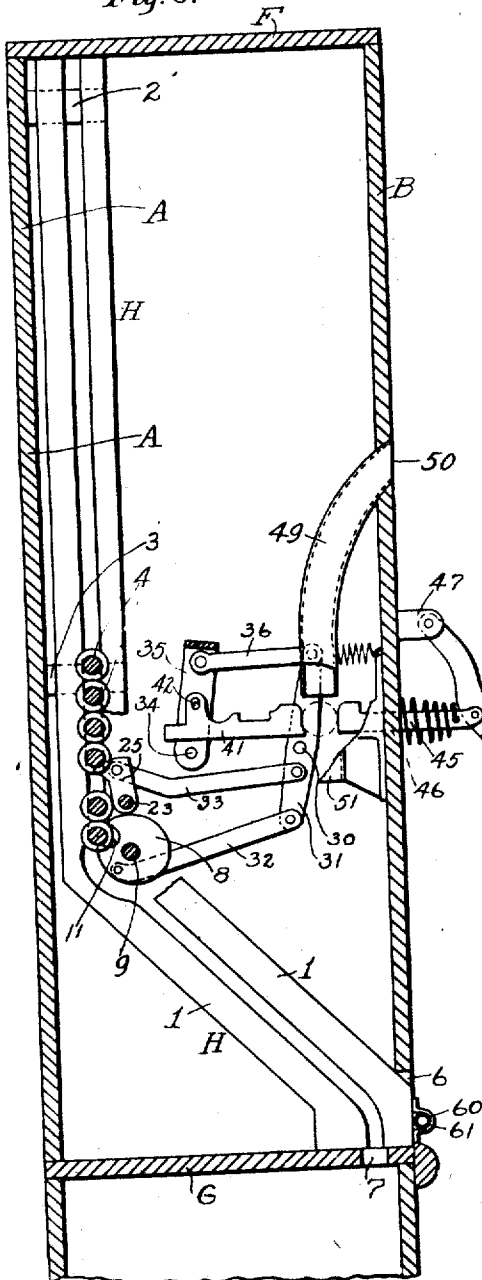
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6 SHEETS—SHEET 4.

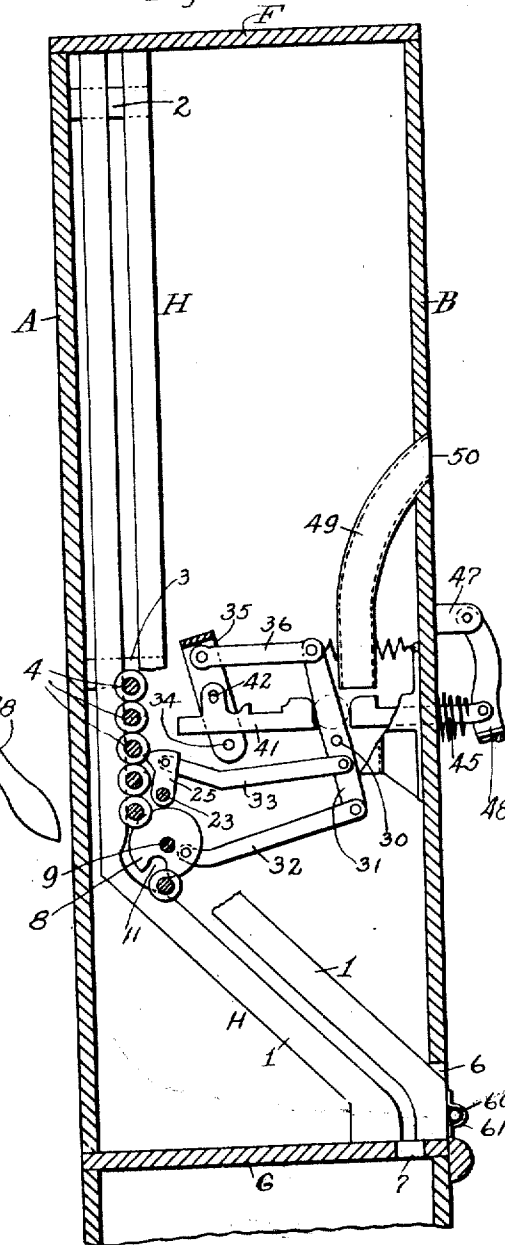
950,200.

Fig. 5.



Witnesses,
Carrie P. Iry,
Wm. Whaley

Fig. 6.



Inventor,
Alfred C. Acee
By Cyrus Kehr
Attorney

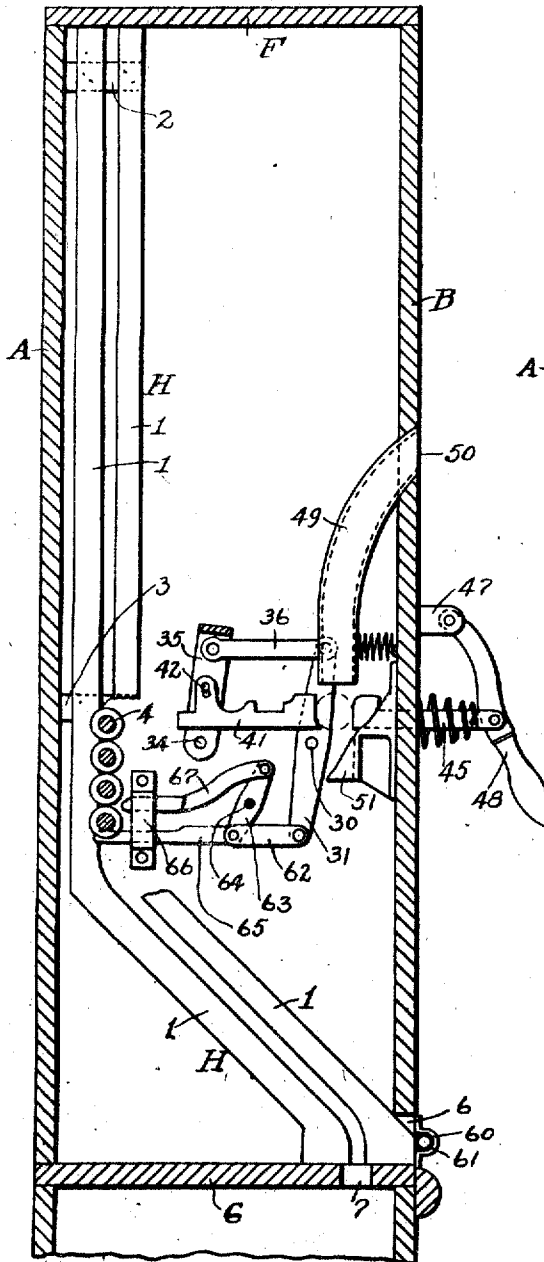
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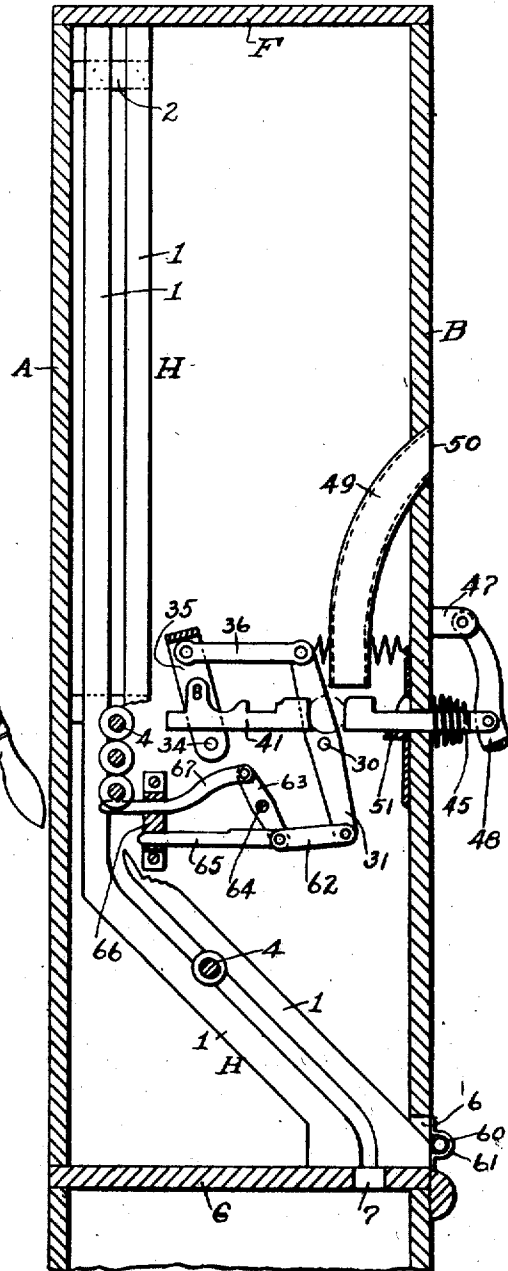
6 SHEETS—SHEET 6.

Fig. 11.



Witnesses,
Carrie R. Ivy
Wm. W. Haley

Fig. 12.



Inventor,
Alfred E. Acee
By Cyrus H. Ke
Attorney.

UNITED STATES PATENT OFFICE.

ALFRED E. ACEE, OF KNOXVILLE, TENNESSEE.

CHECK-CONTROLLED APPARATUS.

950,200.

Specification of Letters Patent. Patented Feb. 22, 1910.

Application filed November 27, 1908. Serial No. 464,598.

To all whom it may concern:

Be it known that I, ALFRED E. ACEE, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented a new and useful Improvement in Check-Controlled Apparatus, of which the following is a specification, reference being had to the accompanying drawing.

My improvement relates particularly to check-controlled apparatus which is designed for the delivery of soap and towels upon the insertion of a coin or check into the apparatus.

The object of the apparatus is to provide for the absolute delivery of a small cake of soap and the delivery at the same time of the greater portion of a towel through an opening in the apparatus and the subsequent withdrawal of said towel into the apparatus before another towel is thus delivered or presented, one coin or check actuating the mechanism controlling both the soap and the towels.

In the accompanying drawings, Figure 1 is a front elevation of the upper portion of an apparatus embodying my improvement, the lower portion, which is merely a portion of a base forming a chamber, being broken away; Fig. 2 is a horizontal section on the line 2—2 of Figs. 1 and 3; Fig. 3 is a section on the line 3—3 of Figs. 1 and 2; Fig. 4 is the same section showing a cake of soap being discharged; Fig. 5 is a section on the line 5—5 of Figs. 1 and 2; Fig. 6 is the same section showing a towel rod being discharged; Figs. 7, 8, 9, and 10 are detail views of the check mechanism; Figs. 11 and 12 show an alternate form.

The apparatus comprises a casing having a rear wall, A, a front wall, B, right hand wall, C, (as viewed from the front), a left hand wall, D, a bottom, E, and a top, F. In the lower portion of the casing is a horizontal cross wall, G. To the inner face of each side wall, C and D, is applied a guide way, H, said guide way being composed of two parallel bars or strips, 1, 1, said bars being secured by their upper ends to a bracket, 2, which is secured to the casing, and the lower ends of said bars being secured to the cross partition, G, and another bracket, 3, is joined to said bars approximately at the middle of the latter and to the rear wall, A. The upper portion of each of said guide ways is adjacent the rear

wall, and the lower portion is inclined forward so as to meet the front wall just above the cross wall, G, and in the front wall immediately above said cross wall is an opening, 6, through which the towel attached to the towel rod may extend. Said guide ways receive the ends of the towel rods, 4. Each towel rod has a collar, 5, adjacent each guide way to prevent endwise movement. Said rods are preferably made of metal in order that they may have sufficient weight to move the towel as will be hereinafter described. Below said guide ways, the cross partition, G, has a slot, 7, extending from one of said guide ways to the other. After the towel has been used, it and its rod pass downward through said slot into the space below said cross partition, as will be hereinafter described, said slot being too narrow to let said rod pass when the towel is wound around the rod, but large enough to let the rod pass when the towel is not so wound. Said cross partition constitutes a support for the towel rod adjacent the opening, 6, the rod remaining there until the customer releases his hands from the towel, as more fully hereinafter described.

For charging the apparatus with towels, each towel is wound upon its rod, so as to form a cylindrical body of the rod and towel. The top, F, being removed, the towel rods, having towels wound around them, are placed into the guide ways from above until the upright portion of said guide ways is filled. Adjacent said guide ways is a duplex check-controlled mechanism for engaging said rods at two different stages on said ways for controlling the movement of said rods along said ways, said duplex mechanism consisting, in the form shown by the drawings, of a pair of notched wheels placed at one elevation and a pair of pawls placed a little higher, as will be next described. At the lower termination of said upright portion, adjacent each guide way and in position to engage the adjacent end of each successive towel rod is a notched wheel 8, mounted rigidly on a shaft, 9, resting in bearings, 10. Each of said wheels has in its periphery a notch, 11, large enough to receive the end of the towel rod; and each of said wheels is large enough to extend across the passage in the adjacent guide way far enough to prevent the downward passing of the towel rods excepting when said wheels are so turned as to permit the lowermost towel rod to fall

into said notches. Hence, as will be readily understood from an inspection of the drawings, each partial rotation of the shaft, 9, and the notched wheels, 8, contra-clockwise (so that the notches, 11, move downward behind the shaft, 9,) will result in the movement of the then lowermost towel rod downward into the lower section of the guide ways, such towel rod being then free to move to the opening, 6, in the front wall.

A little way above the shaft, 9, which supports the notched wheels, 8, and parallel to said shaft, 9, is another shaft, 23, resting in bearings, 24, and supporting at each end a pawl, 25, rising from said shaft and adapted to lean into the path of the towel rods and prevent the downward movement of all such rods as are above said pawls. In the form shown in the drawings, said pawls are at such height as to permit room for two towel rods below the rod engaged by said pawls and above the notched wheels, 8. As will be readily understood by an inspection of the drawings, each partial rotation of the shaft, 23, so as to move the pawls, 25, forward (toward the front of the case) will permit all the towel rods above said wheel, 8, to rest upon the rim of said wheel, thus placing a rod ready to drop into the notches of the wheel, 8, when the latter is reversed so as to bring said notches upward into the position shown in Fig. 5.

In the middle forward portion of the apparatus is an upright well or magazine for cakes of soap. A little way above the level of the lower, inclined portions of the guide ways are two bracket plates, 12, attached to the front part of the front wall, B, and extending thence rearward parallel to each other. (Figs. 2, 3, and 4.) Upon said bracket plates rests a floor plate, 13; and on said floor plate rests a slide plate, 14, which has an opening, 15, adapted to register with a similar opening, 16, in the floor plate, 13. From between the opening, 15, and the front wall, B, rises the tubular magazine or well, 17, the lower end of said magazine being free from said slide plate and said magazine being supported by two pairs of brackets 18, secured to the front wall, B. The upper end of the magazine extends to the top, F, and when the latter has been removed, said magazine may be filled with cakes of soap, 19.

Between the sloping rear edges of the bracket plates, 12, is a sloping wall, 20, which, with said bracket plates, forms a chamber or chute into which the soap falls after passing through the opening, 16. At the lower portion of said chamber, the front wall, B, has an opening, 21, through which the soap slides. In front of said opening is shown a box-like receptacle, 22, into which the pieces of soap will slide.

As will be readily understood from an inspection of the drawings, each reciprocation

of the slide plate, 14, will take the lowermost cake of soap from the magazine and allow it to fall through the opening, 16, in the floor plate, 13, and thence on into the box, 22. Said slide plate, 14, and the two notched wheels, 8, and the pawls, 25, which, as above described, control the towel rods, are operated simultaneously by manual, check-controlled mechanism.

On a lug or bracket, 30, on the right hand upright wall is pivoted a lever, 31, in an upright plane. A link, 32, is pivoted by one end to the lower end of said lever and by the other end to the lower portion of the adjacent notched wheel, 8, so that the oscillation of said lever, 31, will reciprocate said link and partially rotate said wheel. The rotation of said wheel, of course, rotates the shaft, 9, and the other notched wheel, 8. The two positions of said link and said notched wheels are shown in Figs. 5 and 6. In Fig. 5, the notch, 11, is in position to receive a towel rod, and in Fig. 6 said notch has passed downward at the rear of the shaft, 9, in position to discharge a towel rod. Between the link, 32, and the pivot, 30, one end of a link, 33, is hinged to the lever, 31, while the other end of said link is hinged to the upper portion of the adjacent pawl, 25. The arrangement of the parts thus described provides for the simultaneous downward movement of the notches, 11, and forward movement of the pawls, 25, so that after the notches, 11, have started in their downward movement, carrying one towel rod with them, all the other towel rods in the magazine will be supported by the edges of the wheels, 8. Upon the reverse movement of the lever, 31, the notches, 11, are again moved upward and at the same time the pawls, 25, are forced rearward between the second and third towel rods which are then above the wheels, 8, so that thereafter only two towel rods are supported upon said wheels, the lower of said two rods falling into the notches, 11, when the latter reach their upper limit.

At 34 is pivoted the lower end of a rocking member, 35; and a link, 36, is pivoted by one end near the upper end of the upright portion of the rocking member, 35, while the other end of said link, 36, is hinged to the upper end of the lever, 31, so that the rocking of the member, 35, will rock the lever, 31. The horizontal portion of the member, 35, is coupled to a standard, 37, on the rear portion of the slide plate, 14, said standard having an upright slot, 38, which receives a wrist, 39, on the upturned end, 40, of the horizontal arm of the member, 35. The purpose of said slot is to adapt the parts for the horizontal movement of said standard and the arc movement of said wrist.

From the foregoing it will be understood that the rocking of the member, 35, will

simultaneously operate the wheels, 8, the pawls, 25, and the slide plate, 14. Said member, 35, is turned rearward by the rearward movement of a bar, 41, which is coupled to the upright portion of the member, 35, at 42. Said bar is guided for horizontal rearward and forward movement in a trough, 43, having at one end flanges, 44, secured to the front wall, B. In line with said bar, 41, and forward thereof is a bar, 45, which extends through an opening, 46, in the front wall, B. Above said opening is a bracket, 47, supported on the outer face of said wall, and a hand lever, 48, is hinged by one end to said bracket and extends thence downward across the outer end of said bar, 45, and is hinged thereto. By pressing said hand lever rearward, toward the wall, B, said bar, 45, is forced lengthwise rearward toward the bar, 41; but the space between the adjacent ends of said bar is such as to allow the full movement of the bar, 45, and the lever, 48, without having said ends meet. Above said space is located a coin or check tube, 49, the lower end of which opens immediately above said space and the upper end of which extends to an opening, 50, in the front wall, B. In the bottom of the trough, 43, is an opening, 51, in position to register with the space between the adjacent ends of the bars, 41 and 45, when said bars are in their rearmost position. A check or coin put into said opening, 50, falls through the tube, 49, into the space between the adjacent ends of the bars, 41 and 45, the lower portion of said space being sufficiently contracted to stop the check or coin between said bars. Then by pushing the hand lever, 48, rearward, rearward movement of the bar, 45, is transmitted through the check or coin to the bar, 41, and from the latter through the mechanism already described to the wheels, 8, pawls, 25, and slide plate, 14. When the two bars are in their rearmost position, with the check or coin between them, as above described, it is desirable to have the rear bar, 41, held stationary until the forward bar, 45, has moved forward a sufficient distance to allow the check or coin to become released and fall by gravity through the opening, 51, in the bottom of the trough, 43. To attain such action, a horizontal rock shaft, 52, is hinged in bearings, 53, seated on the right hand side wall, C; and said rock shaft has at its rear end an arm, 54, which extends across the bar, 41, and is adapted to fall in front of a shoulder or lug, 55, on the bar, 41; and at its forward end, said rock shaft has an arm, 56, which extends across the bar, 45. Said arm is broadened and inclined upward and rearward and is in proper position to be engaged by a shoulder, 57, on the bar, 45, when the latter approaches its limit of forward movement. When the arm, 54, rests in front

of the shoulder, 55, the bar, 41, is locked against forward movement. When the shoulder, 57, moves forward it forces the arm, 56, upward, whereby the shaft, 52, is partially rotated and the arm, 54, lifted simultaneously with the arm, 56, until the arm, 54, is freed from the lug or shoulder, 55. Then the bar, 41, is free to move forward. Such forward movement is effected by a contracting spring, 58, attached by one end to the upper end of the lever, 31, and by its other end to the front wall, B. The forward movement of the bar, 45, is effected by an expanding coiled spring, 59, surrounding said bar between the front wall, B, and the handle, 48.

In the lower portion of the opening, 6, in the front wall, B, is a horizontal roller, 60, resting by its ends in bearings, 61. Said roller turns idly in said bearings and serves as an anti-friction device for the outward and inward movement of the towel through said opening.

When a towel roller has fallen into the space behind the opening, 6, at the bottom of the guide ways, H, the customer reaches into said opening and pulls on the loose end of the towel, unrolling the latter and leaving only the inner end attached to the roller. When the customer has used the towel and releases his hands from it, the roller falls through the slot, 7, (being thin enough for this when the towel is unwound) and draws the towel after it.

In Figs. 11 and 12 is shown another form of the mechanism for controlling the movement of the towel rods downward in the guide ways. The pawls, 25, and the notched wheels, 8, are omitted from each end of the machine and two approximately horizontal, reciprocatory bars or fingers are substituted. To the lower portion of the lever, 31, is coupled one end of a horizontal link, 62, the other end of said link being coupled to the lower end of an approximately upright lever, 63, which is rigidly jointed between its ends to a horizontal rock-shaft, 64. A similar lever, 63, is attached to the opposite end of the rock-shaft, 64. To the lower end of each lever, 63, is coupled one end of an approximately horizontal finger, 65, the other end of said finger extending through a guide-plate, 66. To the upper end of each lever, 63, is coupled one end of an approximately horizontal bar or finger, 67, the other end of said bar passing through said guide. The fingers, 65 and 67, are of proper length to project into the path of the towel rods when the ends of the levers, 63, to which they are attached are turned rearward.

The operation will be readily understood from an inspection of the drawings. In Fig. 11, the lower end of the lever, 31, is in its rear position, and the levers, 63, are accordingly tilted so as to bring their lower

ends rearward and their upper ends forward. This brings the fingers, 65, rearward into the path of the towel rods, and all the rods above said fingers are supported by the latter, the upper fingers, 67, being then drawn forward out of engagement with said rods. When the lever, 31, is reversed, in the manner already described in connection with the other figures, the position of the levers, 63, is reversed, and the fingers, 65, are thereby drawn forward and the fingers, 67, are forced rearward. This results in the releasing of the lowermost towel rod from the fingers, 65, and placing the others upon the fingers, 67.

I claim as my invention:

1. In an apparatus of the nature described, the combination with a casing having an outer opening, of towel rods too large to pass through said opening, means within said casing and adjacent said opening for supporting said towel rods when towels are wound around them but permitting such rods to pass downward by gravity when the towels applied thereto are unwound, and mechanism for successively presenting said rods to said supporting means, substantially as described.

2. In an apparatus of the nature described, the combination with a casing having an outer opening, of towel rods too large to pass through said opening, a towel rod support within said casing and adjacent said opening, said support having a slot too small for the passage of said rods when towels are wound around them but large enough for the passage of said rods when the towels applied thereto are unwound, and mechanism for successively presenting said rods upon said support at said outer opening, substantially as described.

3. In an apparatus of the nature described, the combination with a casing having an outer opening, of towel rods too large to pass through said opening, a towel rod support within said casing and adjacent said opening, said support having a slot too small for the passage of said rods when towels are wound around them but large enough for

the passage of said rods when the towels applied thereto are unwound, guide ways leading to said outer opening and adapted to receive and conduct said towel rods, and mechanism for controlling the movement of said rods along said guide ways, substantially, as described.

4. In an apparatus of the nature described, the combination with a casing having an outer opening, of towel rods too large to pass through said opening, guide ways leading to said opening and adapted to receive and conduct said rods, and duplex mechanism comprising a pair of notched wheels and a pair of pawls for engaging said rods at two different stages on said ways for controlling the movement of said rods along said ways, substantially as described.

5. In an apparatus of the nature described, the combination with a casing having an outer opening, of towel rods too large to pass through said opening, guide ways leading to said opening and adapted to receive and conduct said rods, and duplex mechanism comprising a pair of notched wheels and a pair of pawls for engaging said rods at two different stages on said ways for controlling the movement of said rods along said ways, and a moving member in operative relation with said wheels and pawls, substantially as described.

6. In a check-controlled apparatus, a magazine for rods to which towels are secured and a magazine for holding pieces of soap, openings through the casing adjacent each of said magazines, towel rods larger than the opening adjacent said rod magazine and a mechanism for simultaneously discharging one of said rolls and one of said pieces of soap from the respective magazines.

In testimony whereof I have signed my name, in presence of two witnesses, this 19th day of November, in the year one thousand nine hundred and eight.

ALFRED E. ACEE.

Witnesses:

W. F. H. FINKE,

P. H. QUINN.