

April 3, 1934.

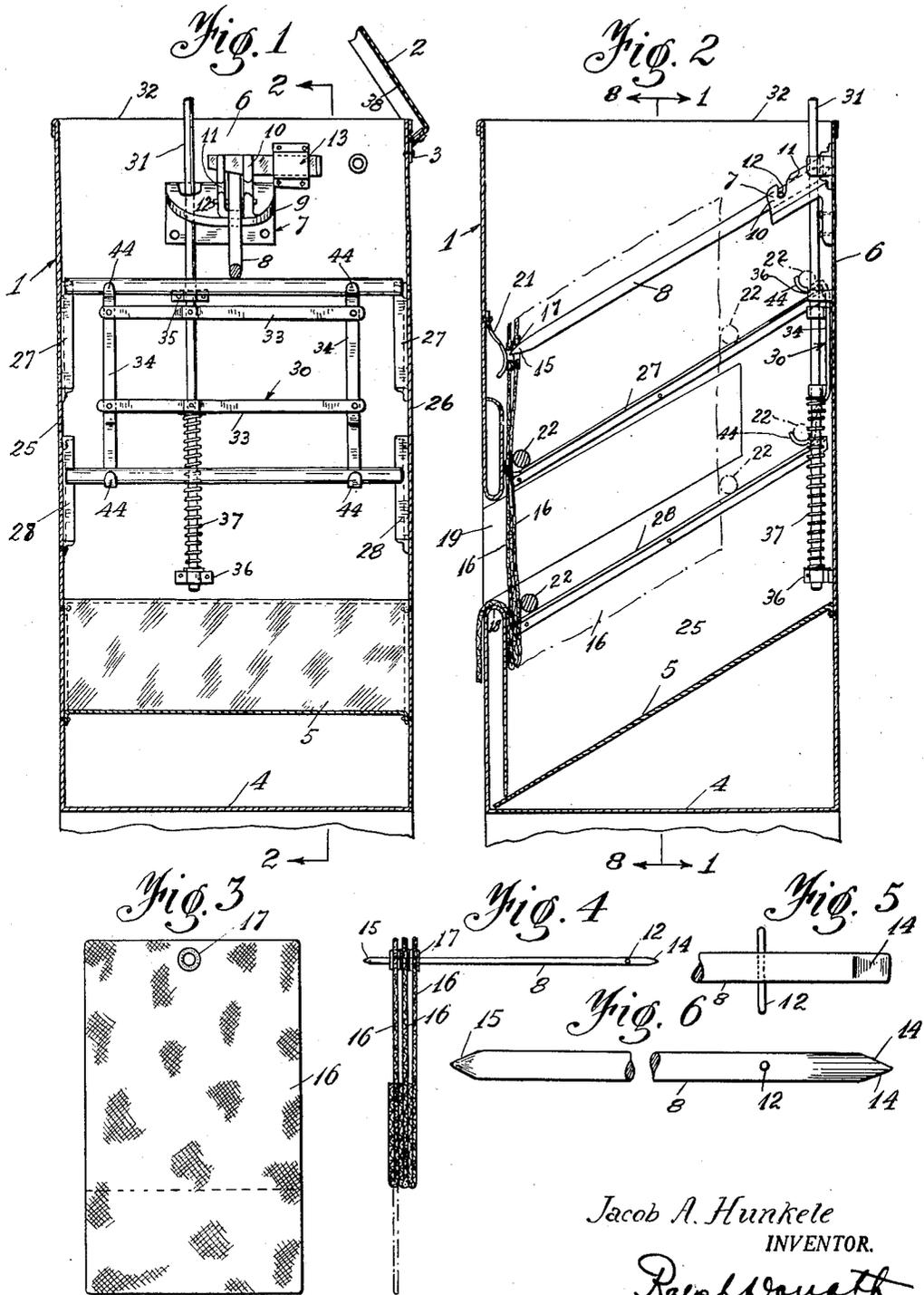
J. A. HUNKELE

1,953,301

TOWEL DISPENSER

Filed Oct. 12, 1932

5 Sheets-Sheet 1



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TOWEL DISPENSER

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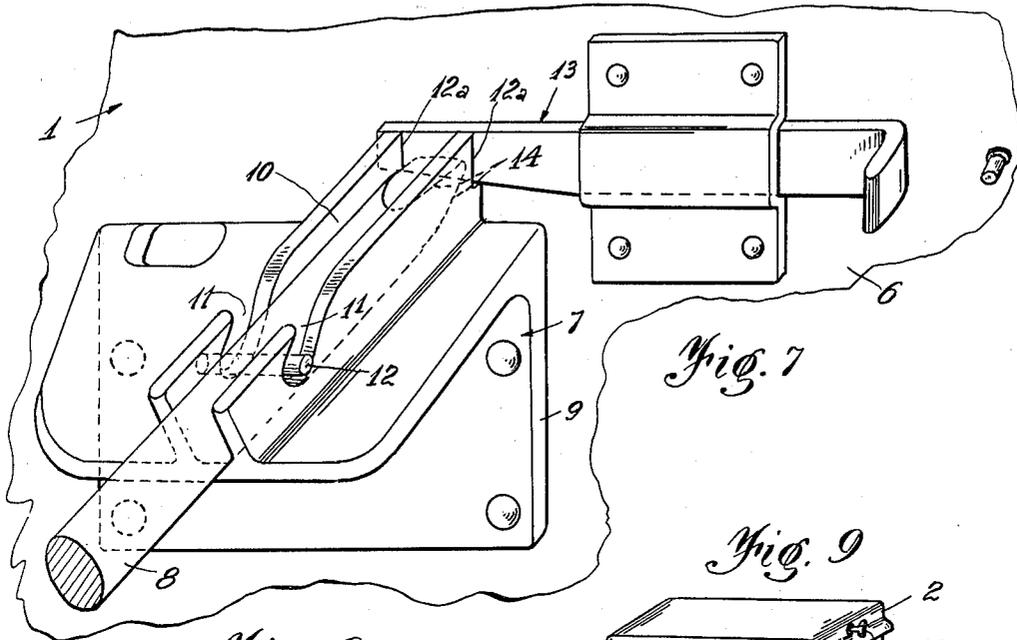


Fig. 7

Fig. 8

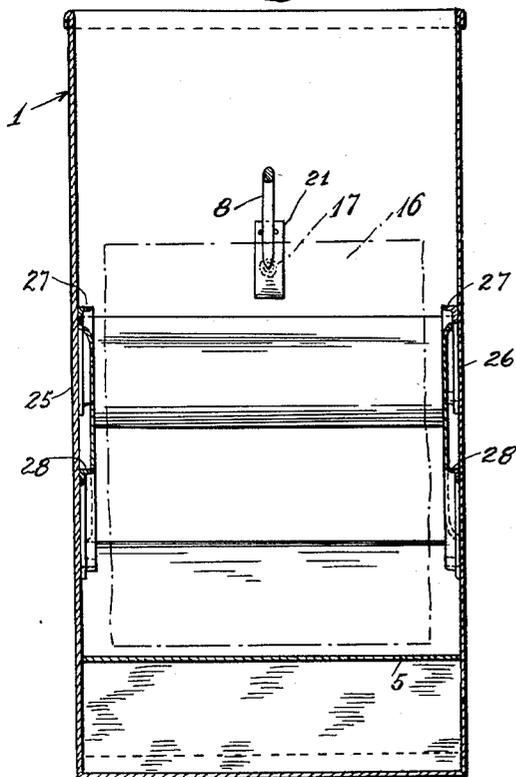
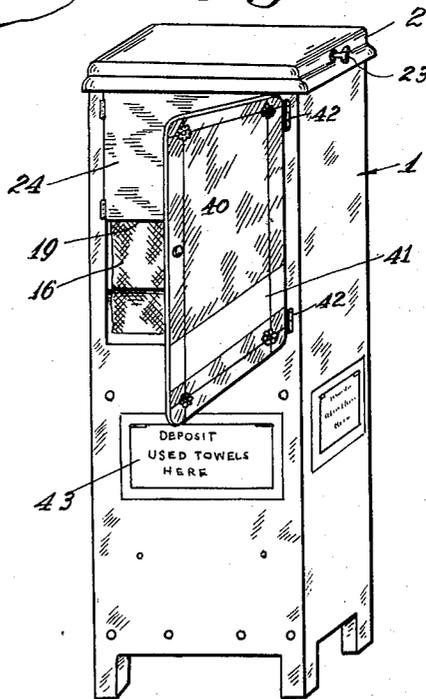


Fig. 9



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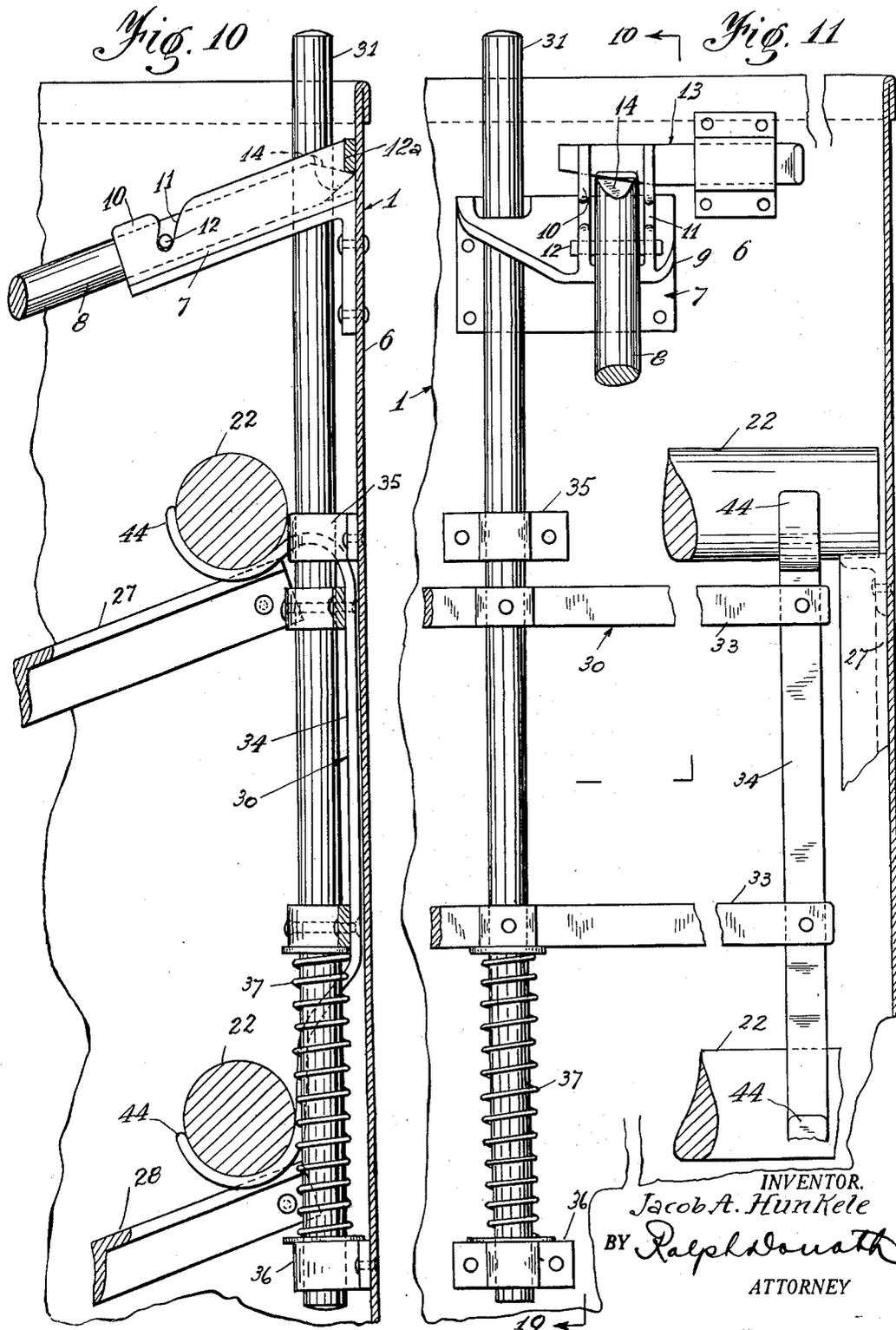
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TOWEL DISPENSER

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5 Sheets-Sheet 3



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TOWEL DISPENSER

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5 Sheets-Sheet 4

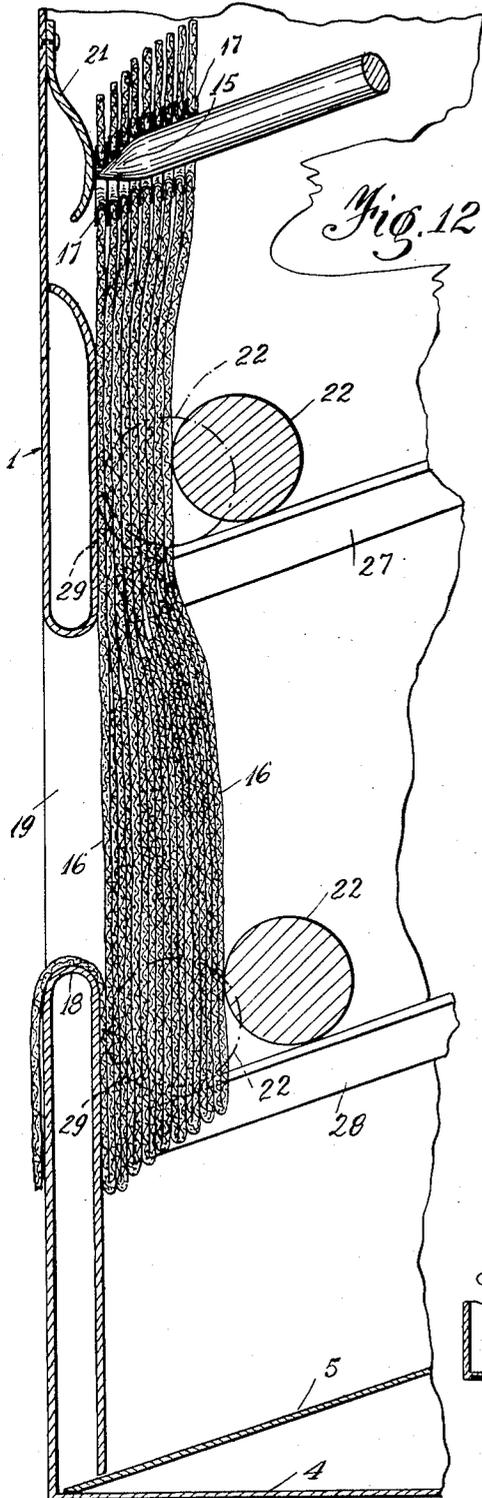


Fig. 12

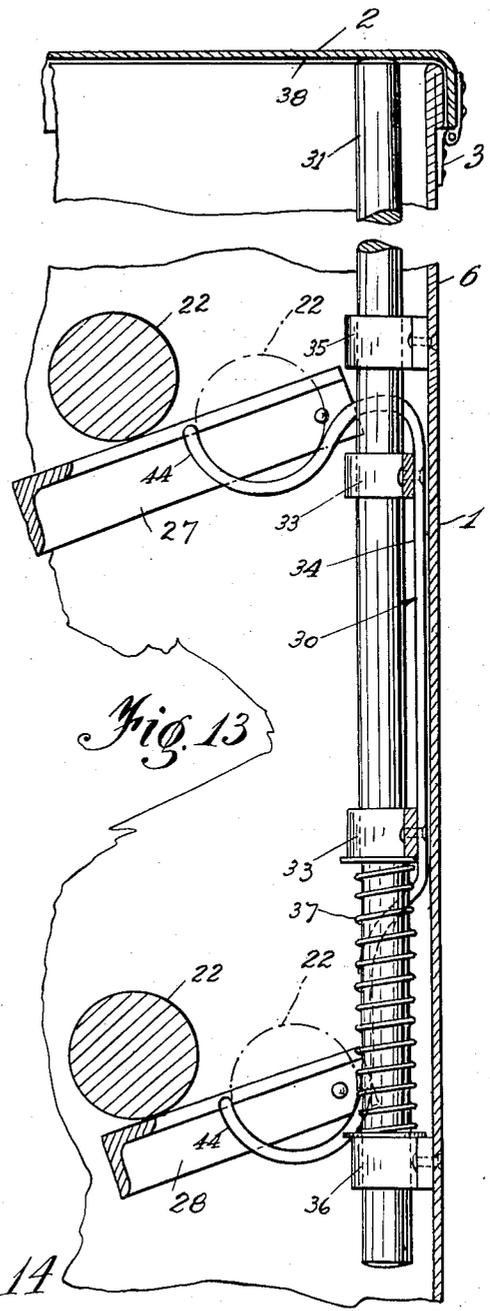


Fig. 13

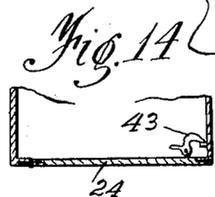


Fig. 14

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TOWEL DISPENSER

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Fig. 15

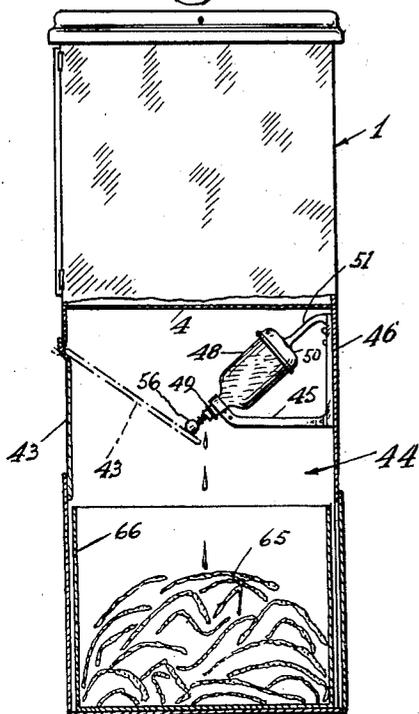


Fig. 16

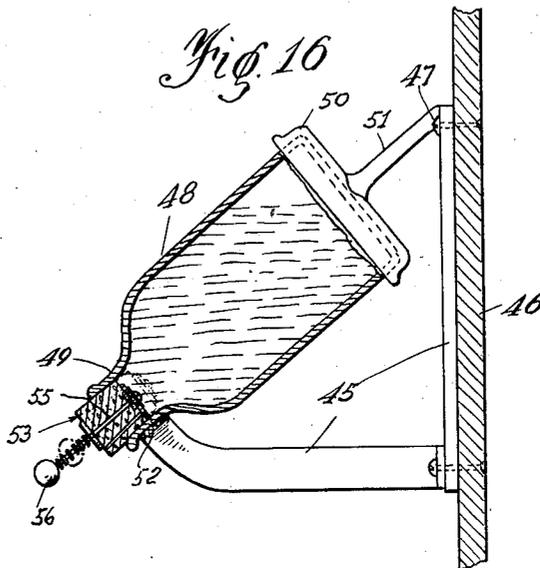


Fig. 17

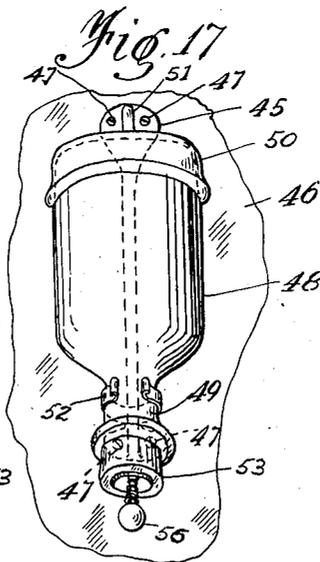


Fig. 18

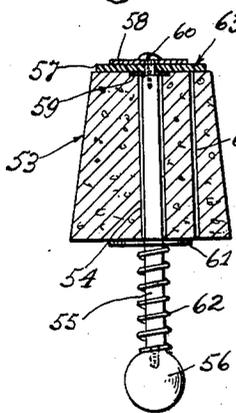
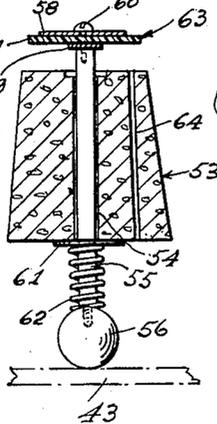


Fig. 19



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UNITED STATES PATENT OFFICE

1,953,301

TOWEL DISPENSER

Jacob A. Hunkele, Pittsburgh, Pa.

Application October 12, 1932, Serial No. 637,425

4 Claims. (Cl. 312—37)

This invention relates to improvements in individual towel dispensing devices and one of the objects of my invention is to provide means for holding a comparatively large supply of towels within a cabinet in such manner that they are protected and may be dispensed one at a time, as needed. Another object of my invention is to hold the towels efficiently and in convenient position for use. Still another object of my invention is to provide a removable loading bar on which the towels are placed. Yet another object of my invention is to provide novel means to retain the towels in proper relation to the dispensing opening at a uniform pressure. Another object of my invention is to provide means to automatically release follower rollers against the towels, when closing the top cover. Still another object of my invention is the provision of locking or retaining means of the loading bar after same has been put in operative position. Another object of my invention is to provide automatic means whereby the soiled towels are disinfected when disposed of in the soiled towel compartment. Yet another object of the invention is to provide a simple, inexpensive and efficient towel dispensing device for use in doctors' offices, barber shops, etc., which will permit the towels to be entirely removed from the container or dispenser.

Further objects of my invention will appear from the following detailed description taken in connection with the accompanying drawings, wherein:

Fig. 1 is a cross-sectional view of the device taken on line 1—1, Fig. 2.

Fig. 2 is a cross-sectional view of the invention taken along line 2—2, Fig. 1.

Fig. 3 is a plan view of a towel as used in my invention.

Fig. 4 shows the loading bar removed from the cabinet and carrying a few folded towels.

Figs. 5 and 6 show a side and a front elevation of the loading bar.

Fig. 7 is a front perspective view of the loading bar support, a portion of the loading bar and the locking means of the loading bar.

Fig. 8 is a sectional view along line 8—8, in Fig. 2.

Fig. 9 is a perspective view of the towel dispensing cabinet, the mirror-door being partly opened for the removal of a towel.

Fig. 10 shows a vertical section on an enlarged scale of the follower releasing mechanism, along line 10—10 in Fig. 11.

Fig. 11 is a front view of Fig. 10, also on an

enlarged scale, with certain parts being broken away.

Fig. 12 is a vertical transverse section of the front part of the dispenser, showing the manner of mounting the individual towels on the loading bar and the followers pressing against the towels.

Fig. 13 is a vertical transverse section of the rear part of the dispenser, showing the followers released from the follower releasing mechanism by means of the dispenser cabinet cover, the loading bar and support therefor being eliminated.

Fig. 14 is a top plan view of the upper front part of the cabinet showing a spring-catch for locking the door.

Fig. 15 is a side elevation of the dispensing cabinet, with the lower part of the same in section, showing the soiled towel compartment including an automatic disinfecting device operable by the swinging door.

Fig. 16 is an enlarged cross-sectional side view of the disinfecting device.

Fig. 17 is an enlarged front view of the disinfecting device.

Fig. 18 is a cross-sectional detail view of the cork-valve, the valve being in closed position.

Fig. 19 is a similar view as Fig. 18, the valve being in open position.

The apparatus comprises a towel cabinet container 1 to hold clean towels, a lid or cover 2 hinged at, shown in open position in Fig. 1 and in closed position in Figs. 9 and 13. Said cabinet is provided with a sub-bottom 4 and an upwardly inclined bottom 5, said sub-bottom may be eliminated if used in connection with a soiled towel compartment, as indicated in Fig. 9.

The rear wall 6 of the cabinet is provided near its upper edge with the loading bar support 7 on which is detachably mounted the loading bar or towel supporting bar 8. As best seen in Figs. 1, 2, 7, 10 and 11 said loading bar support 7 consists of an angle piece 9, inclined downwardly from the rear toward the front. In about the middle of said support 7 is located the U shaped loading bar receiving portion 10, which is provided with notches 11 for the reception of the pin 12, which extends on both sides of the bar 8 (see Figs. 5 and 6). Said U shaped portion 10 is provided at its rear end with cut-outs 12a for the reception of a common lock-bolt 13. This lock-bolt 13, when brought in registry with said cut-outs 12a will serve to retain the loading bar 8 in locked position. To permit the locking of the loading bar 8 by means of said lock-bolt 13, the rear portion of the loading bar is flattened to a point, as indicated by the reference numeral

14, to permit the lock-bolt 13 to be slid over said flattened portion 14 and thus confine the loading bar securely in place. The front part of the loading bar, as indicated by the numeral 15, is preferably tapered, as shown in Figs. 6 and 12.

The parts just described, serve to support a stack of towels strung upon the loading bar 8. Each towel 16 has a gromet 17 near one end and at the center of the towel and is folded over as shown in Figs. 4 and 12, so as to permit the free end of the towels to hang over the rounded portion 18 of the opening 19, so as to make the edge of the foremost towel rest accessible to the user in withdrawing the same.

In order to permit the towels to be freely withdrawn from the loading bar 8 and yet be sufficiently held, to prevent the towels from sliding off of said bar 8, I provide a flat spring 21, which serves as a retaining means for the towels.

Although the loading bar 8 is forwardly and downwardly inclined, to permit the clean towels to freely slide toward the dispensing front when removing towels, I have found, that, by using the novel means of a pair of round followers 22, a uniform pressure will be exerted against the towels at all times, disregarding the number of towels on the loading bar 8. By this arrangement, the bundle of towels is always maintained in compact and orderly form, notwithstanding careless or rough usage.

In the operation of the followers 22, the loading rods or bars 8 are supplied in the laundry with clean towels and then distributed by the drivers or employees to the customers. The employee unlocks the cabinet by using a key 23. As he unlocks said cabinet the cover 2 may now be opened. To facilitate a better and convenient loading of the towels a hinged door 24 is provided and located at the upper part of the front of the cabinet. This door 24 incloses the upper part of the cabinet when the cover 2 is closed and it is desirable to provide the same with a locking device or spring-catch 43 of conventional make, which may be opened by hand when the cover 2 is lifted, but which can not be opened when the said cover is closed.

Arranged upon the respective interior sides of the side walls 25 and 26 are pairs of parallel downwardly inclined guide rails 27 and 28 providing guide-ways for the ends of the followers 22. The lowermost part of these guide rails is bent up to form a circular hook portion 29 which produce a stop for said followers 22.

Before the cabinet is loaded with a new supply of clean towels said followers 22 are placed on the follower releasing device 30, as best shown in Figs. 1, 2, 10 and 11. The said follower releasing device 30 comprises an operating rod 31, which extends, when the cover 2 is opened, above the upper edge 32 of the towel cabinet and is securely fastened on horizontally disposed parallel cross-strips 33. On each end of said cross-strips are also securely fastened the parallel and vertically disposed follower carriers 34, the upper and lower ends 44 of which are bent upwardly to form a hook, to conform to the shape of the followers 22. This follower releasing device 30 is guided for up and down movement by means of the guide clamps 35 and 36. A coil spring 37 is inserted over the operating rod 31 and between the lower horizontal cross-strip 33 and the guide clamp 36.

When loading, the follower releasing device 30 is in a position as shown in Figs. 1, 2, 10 and 11, and the ends of the followers 22 are resting

in the upwardly bent portion 44 of the vertically disposed follower carriers 34.

As described before, the loading rod 8 is filled with clean towels at the laundry and the attendant is then placing said towel filled loading bar 8 in the loading bar support 7 and locking the same by means of the lock-bolt 13, as shown in Fig. 7. It will be noted, that the front part of the loading bar 8, when in operative position, comes in contact with a flat spring 21, thereby exerting a slight pressure against said spring.

The cover 2 of the towel cabinet is now closed and locked, whereupon the cabinet is charged ready for dispensing of the towels. By closing the cover 2, the follower releasing device 30 assumes a position as best shown in Fig. 13 of the drawings. As the cover is closed, the same has been brought in registry at 38 with the operating rod 31 of the follower releasing device 30, thereby forcing said device 30 downwardly and at the same time compressing the coil spring 37.

The moment the releasing device 30 is thus forced downwardly the followers 22 automatically lose their hold and roll down by gravity over the guide rails 27 and 28 until stopped by the towels suspended on the loading rod 8.

A person desiring to make use of a towel 16 will open the mirrored door 40 with one hand and with the other hand will grasp the downwardly projecting free end 39 of the towel 16, which hangs over the horizontal opening 19 and by jerking upon the towel, the flat spring 21, which normally presses against the pointed part 15 of the loading bar 8 is depressed so that the eyelet or gromet may now slip past this hindrance. As the user lets go said door 40, the same closes automatically, due to the spring hinges 42 of standard design provided therefor.

Directly opposite the overhanging free end of the towel, the mirror on the door has part of the silvering removed, as indicated by the numeral 41, in Fig. 9, so as to permit to see said overhanging free end of the towel when the door is closed.

My improved device as heretofore described is not intended to be of the type in which provision is made to lock the supply of towels to prevent stealing or misuse of the same, but the device is chiefly intended for doctors, dentists, barber-shops, beauty parlors etc. or wherever towels must be entirely detached for use.

After the person is through using the towel, the same is deposited by means of the door 43 in the lower compartment of the cabinet and the soiled towels are removed by the laundry attendant and returned to the laundry.

In view of the fact that only one towel is partly exposed and the balance of the towels are entirely enclosed in the cabinet, the towels are protected from dust and dirt at all times.

The towels are permitted to be easily withdrawn in a natural manner through the narrow discharge slot 19 at a convenient height.

The device as described may be supplemented by coin controlled mechanism, so that its use shall depend on the insertion of a coin in the slot.

As shown in Figs. 15, 16 and 17 I have provided within the lower part 44 of the dispensing cabinet 1 and directly opposite the swinging door 43 a bracket 45, which is mounted rigidly to the rear wall 46 by means of screw 47 and which carries a tilted bottle 48 having a neck 49.

The said bracket 45 comprises a cap member 50, which fits over the bottom part of a bottle 48 and is held at a desired angle by means of a centrally disposed connecting piece 51. On the

lower end of said bracket I have provided a spring-clamp 52, which fits snugly around the neck-part 49 of the bottle 48 so as to permit convenient removal of the bottle when filling or replacing the same with an antiseptic liquid.

I claim:

1. A towel cabinet of the class described, provided with a loading bar for supporting a bundle of folded towels removably secured to a support at the upper interior wall of said cabinet, the free end of said loading bar being pointed and in contact with spring yielding means to hold said towels thereon.

2. A towel cabinet of the class described, provided with a loading bar for supporting a bundle of folded towels removably secured to a support at the upper interior rear wall of said cabinet, the free end of said loading bar being pointed and in contact with spring yielding means to hold said towels thereon, rotatable follower means to exert a uniform pressure against the rear part of said bundle of folded towels and means secured to the interior side walls of said cabinet to guide said rotatable follower means.

3. A towel cabinet of the class described, provided with a loading bar for supporting a bundle of folded towels removably secured to a support at the upper interior rear wall of said cabinet, the free front end of said loading bar being pointed and in contact with spring yielding means to hold said towels thereon, rotatable follower means to exert a uniform pressure against the rear part of said bundle of folded towels, means for guiding said follower means, means for automatically releasing said rotatable follower means from its inoperative position, said means being operable by closing movement of the cover of said cabinet.

4. A towel cabinet of the class described, provided with a loading bar for supporting a bundle of folded towels removably secured to a support at the upper interior wall of said cabinet, the free end of said loading bar being in contact with spring yielding means to hold said towels thereon, the upper front part of said towel cabinet having a door for conveniently loading said cabinet with clean towels, the part directly below said door of said towel cabinet having a dispensing opening, the lower edge of which is adapted to support the free end of a towel, means to fully conceal said door and partly conceal said towel from view, said last mentioned means including a door provided with a mirror and having part of the silvering of said mirror removed for the purpose of viewing the free end of said towel when said mirrored door is closed.

JACOB A. HUNKELE.

5 The cork 53 has a centrally disposed aperture 54 for the reception of a plunger rod 55. The latter is provided on one end with a ball 56 and on the other end with a rubber gasket 57 held between the large outer washer 58 and the small inner washer 59. The cork 53 is recessed at 60 for the reception of washer 59 when in closed position. The plunger rod 55 is reduced at its gasket end and the washers 58, 59 and gasket 57 fitted over and held together by a screw 60. An additional washer 61 and a coil spring 62 is provided for on the outer part of the cork 53.

When a user is depositing a soiled towel, the normally closed swinging door 43 is pushed inwardly, thereby forcing the door against the ball 56 on the plunger rod 55, which momentarily opens the valve 63 in the cork 53. As said valve 63 opens, it discharges a small quantity of disinfectant from the bottle through a substantially small aperture 64 provided for in the cork and drips on the soiled towels 65 deposited in the used towel compartment of the dispenser. The door 43, being of the self-closing type, automatically assumes its closed position when released and consequently the valve 63 also closes and it retains that position until again opened by the door when a soiled towel is deposited in the soiled towel compartment.

As shown in Fig. 15 of the drawings, a removable receptacle 66 may be provided for in said compartment, in which the soiled towels drop when deposited, so as to enable the laundry employee to remove said receptacle and contents and return to the laundry for washing. In case it is desired to provide individual towels to the user, a label with the name and address of the user may be attached to said receptacle.

The provision of a disinfecting device as heretofore described is of great sanitary importance especially when the soiled towels remain a long time in the compartment before removing to the laundry.

While I have illustrated and described my invention, I do not desire to be limited to the structural details so illustrated and described; but intend to cover all forms and arrangements which fall within the terms employed in the definitions of my invention constituting the appended claims.

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