

C. B. ORCUTT.
 ROLLER TOWEL CABINET.
 APPLICATION FILED NOV. 22, 1918.

1,353,416.

Patented Sept. 21, 1920.

Fig. 1

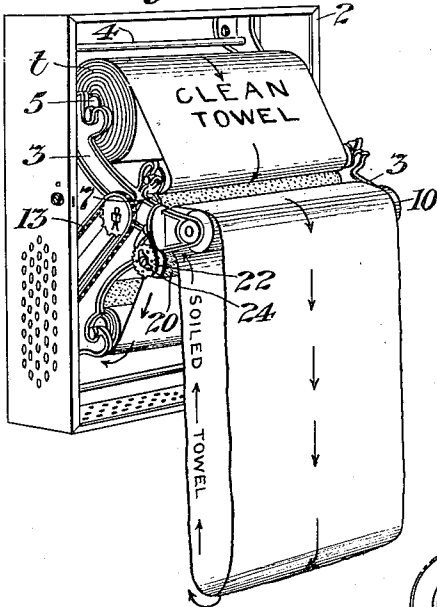


Fig. 2

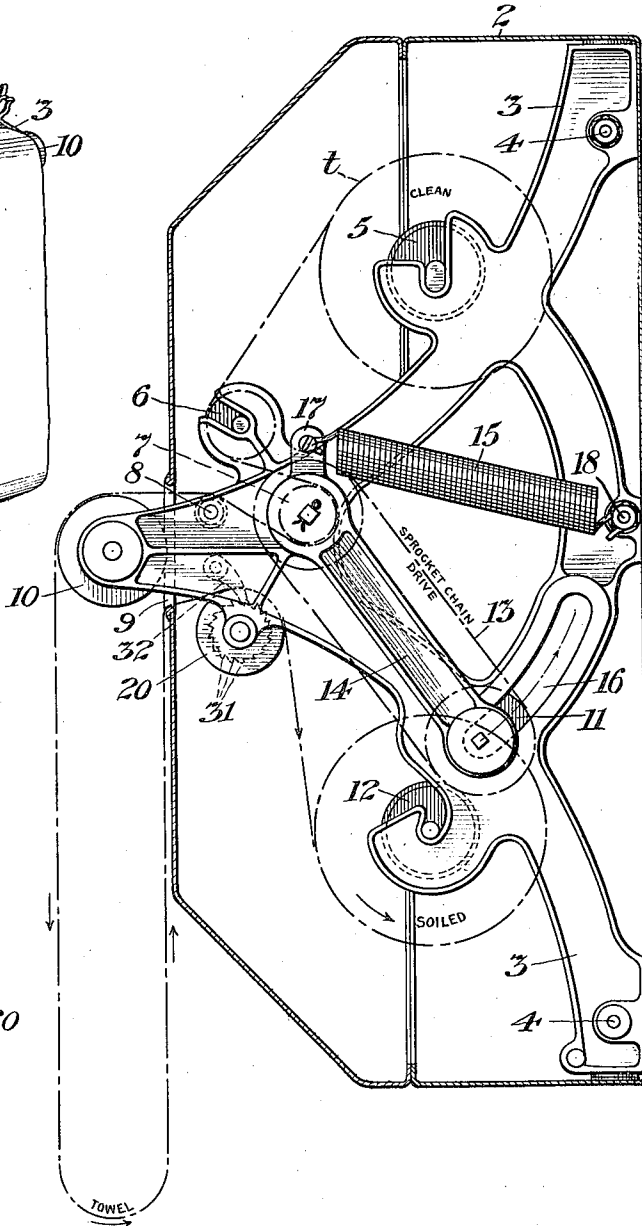


Fig. 3

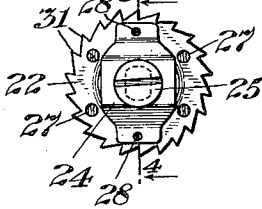
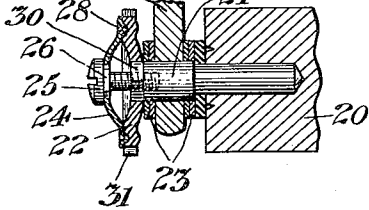


Fig. 4



WITNESSES

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ROLLER-TOWEL CABINET.

1,353,416.

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Application filed November 22, 1918. Serial No. 263,654.

To all whom it may concern:

Be it known that I, C BLAKE ORCUTT, a citizen of the United States, and resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Roller-Towel Cabinets, of which the following is a specification.

My invention has special reference to that class of roller towel cabinets which embody a supply roller for carrying a roll of toweling from which a clean supply can be drawn as required, and a take-up roller operative to take up the soiled toweling at substantially the same rate as that at which the clean toweling is drawn from the supply roller; both of these rollers being mounted within an inclosing cabinet and the toweling for a portion of its length between the same being hung in loop form at the front side of the cabinet in convenient position for use.

In the use of this class of cabinets, more or less trouble has been caused by reason of the soiled end of the toweling being taken up at a substantially faster rate than that at which the toweling is withdrawn from the supply roller, and thereby causing a shortening of the exposed loop at the front of the cabinet beyond that required or desirable for use. It has therefore been one of the objects of my invention to improve towel cabinets of this type in a way to assure a substantially constant or uniform length of toweling being maintained for use at the front side of the cabinet. A further object of the invention is to generally simplify the construction and render more efficient the operation of towel cabinets of the present type. These objects are attained by the novel construction and arrangement of parts embodying my invention as hereinafter set forth in detail in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of a towel cabinet embodying my invention, with the front casing of the cabinet removed in order to show the operating parts of the device.

Fig. 2 is an enlarged sectional elevation of the cabinet, the section being taken vertically through the cabinet adjacent one side thereof.

Fig. 3 is an enlarged end view of a towel braking device or roller removed from its position in the cabinet; and

Fig. 4 is a section of the same, taken on line 4—4 of Fig. 3.

Similar reference characters indicate like parts in the several figures of the drawings.

The several operating parts constituting my improved device may be mounted upon a frame or support of any suitable kind, and are contained within an inclosing casing or cabinet, such as indicated at 2.

The main frame or support for the operating parts comprises a pair of duplicate side brackets 3, 3, connected by suitable tie-rods, such as 4. Supported at their opposite ends by these side brackets 3 are a series of rollers, the upper most of which, indicate at 5, is the so-called supply-roller carrying a roll of toweling, such as *t*, from which the toweling is adapted to be drawn as required for use. From this roller 5 the toweling, as most clearly indicated by the dot-and-dash line in Fig. 2, is passed forwardly over a guide roller 6, then backwardly to and about a roller 7, and from thence forwardly over a guide-rod 8 and on through an opening 9 in the wall of the cabinet to a guide-roller 10 at the front side of the latter, from which it drops in a convenient position for use as shown.

A pair of rollers, indicated at 11 and 12, operate to engage therebetween the soiled end of the toweling, which is led to them through the opening 9 in the wall of the cabinet as shown, and take up the same at substantially the same rate as that at which the clean toweling is drawn from the supply-roller 5, whereby a substantially constant length of toweling in loop form is maintained for use at the front or exterior side of the cabinet. Such operation of the take-up rollers 11 and 12 is effected by means of the roller 7, termed by me the "operating roller," which is rotated by the frictional engagement therewith of the toweling as the latter is withdrawn from the supply-roller, and which imparts such rotative movement to the take-up roller 11 through suitable motion-transmitting means, such as the sprocket-chain connection 13, diagrammatically shown in Fig. 2. The rotative movement thus imparted to the take-up roller 11 causes it to cooperate with the opposing roller 12 and take up the soiled end of the toweling by drawing it therebetween. When the soiled end of the toweling is thus taken up by the take-up roller, it may be

deposited in the cabinet in any desired manner, that is, after being drawn between the rollers it may be deposited loosely in the cabinet, or it may be wound directly upon one of the take-up rollers. The latter is the preferable way and the way here shown. When the toweling is wound upon one of the take-up rollers, one of the latter should be yieldingly supported for radial movement relative to the other in order to accommodate the increasing thickness of the toweling as it is wound on the roller. To provide for this, the roller 11 is carried at each end by a link 14 which is mounted to turn about the axis of the roller 7 and operated by an engaging spring 15 to yieldingly hold the supported roller 11 against the roller 12 or the toweling thereon; the said spring 15 as here shown being connected at one end to a short arm 17 at the upper end of the link and at its opposite end to a fixed pin 18 on the frame. As a means for steadying and guiding the roller 11 when being moved about the axis of the roller 7, its end journals project through segmental slots 16 in the side brackets of the frame, as shown.

In order to assure a more positive cooperation between the toweling and the rollers, whereby undue slippage between them will be avoided, certain of the rollers, particularly those indicated at 6, 7, and 11, are provided with a roughened or sanded surface, as shown.

If the soiled toweling taken up by the roller 12 is permitted to wind too loosely thereon, the diameter of the roll of toweling thus formed increases so rapidly as to cause it to take up the toweling in such excess over that pulled off from the roll of clean toweling as to substantially decrease the length of clean towel hanging from the roller 12 beyond that required. To avoid this, I provide a means for causing the soiled toweling to wind tightly about the roller 12 as it is taken up by the latter. Such means, in the form here shown, comprises a roller 20 supported by the side frames 3 in a position to engage the run of soiled toweling at a point in advance of the take-up roller and having a roughened or sanded surface capable of effecting such a firm hold on the engaged toweling as to prevent slippage of the same relative thereto, and braking means for so retarding the rotative movement of said roller 20 under the pull of the toweling being wound upon the take-up roller as to maintain the toweling between said rollers under sufficient tension to cause it to wind tightly upon the take-up roller. Any suitable braking means may be employed for so retarding the rotative movement of the roller 20. As here shown, the journal pin 21 fixedly connected with one end of said roller 20 projects outwardly beyond its bearing in

the bracket frame 3 and has mounted thereon a disk 22, between which and the adjacent side of the frame 3 as well as between the end of the roller and the opposite side of said frame, are interposed washers, such as 23. A spring plate 24 held under tension against said disk 22 by means of a headed screw 25 threaded into the end of the journal pin and engaging the outer side of said spring plate through an opening therein, serves to produce such frictional engagement between the roller and the frame—through the interposed washers—as to brake the rotative movement of the roller. Such braking action may be varied as desired by regulating the pressure of the spring plate 24 against the disk 22, and this of course is accomplished by a proper adjustment of the screw 25.

The adjustment of the pressure of the spring plate 24 against the disk 22 is effected in the present case by connecting said spring plate with the screw 25 whereby it will be turned therewith, and this connection is here made by an irregular or flat-sided boss 26 on the under side of the screw-head engaging the spring plate within a similarly shaped opening therein, shown by dotted lines in Fig. 3. A series of notches 27 in the face of the disk 22 receiving projections 28 on the adjacent side of the plate 24 serve as a means to hold or lock said parts in adjusted position.

The disk 22, which is fitted on a squared end 30 of the roller journal 21 (see Fig. 4) so as to turn therewith, is formed with ratchet teeth 31 which are engaged by a ratchet 32 pivoted to the frame 3. This ratchet prevents rotation of the roller in a direction counterwise to the normal direction of movement of the toweling in its passage to the take-up roller, and so acts to prevent withdrawal or unwinding of the soiled toweling from the take-up roller.

What I claim is:—

1. The combination with a roller towel cabinet, of a supply roller, a take-up roller, means adapted to be operated by the towel as it is drawn from the supply roller and impart movement to the take-up roller, braking means engaging the towel in advance of the take-up roller and causing it to feed to the latter under tension, and means for locking said braking means against reverse movement.

2. The combination with a roller towel cabinet, of a supply roller, a take-up roller, means adapted to be operated by the towel as it is drawn from the supply roller and impart movement to the take-up roller, and braking means engaging the towel in advance of the take-up roller and causing it to feed to the latter under tension, braking means comprising a roller and means yieldingly retarding movement of said roller in

the direction of feed of the engaged towel and means for locking said retarded roller against reverse movement.

3. The combination with a roller towel cabinet, of a supply roller, a take-up roller, means adapted to be operated by the towel as it is drawn from the supply roller and impart movement to the take-up roller, and braking means engaging the towel in advance of the take-up roller and causing it to feed to the latter under tension, said braking means comprising a roller having a frictional surface for preventing slippage of the engaged towel relative thereto, and an adjustable spring for yieldingly retarding the movement of said roller in the direction of feed of the engaged towel.

4. The combination with a roller towel cabinet, of a supply roller, a take-up roller, means adapted to be operated by the towel as it is drawn from the supply roller and impart movement to the take-up roller, and braking means engaging the towel in advance of the take-up roller and causing it to feed to the latter under tension, said braking means comprising a roller, a spring yieldingly retarding movement of said roller in the direction of feed of the engaged towel, and means for adjusting the braking tension of said spring.

5. The combination with a roller towel cabinet, of a supply roller, a take-up roller, means adapted to be operated by the towel as it is drawn from the supply roller and impart movement to the take-up roller, and braking means engaging the towel in advance of the take-up roller and causing it to feed to the latter under tension, said braking means comprising a roller having a frictional surface for preventing slippage of the engaged towel relative thereto, and means locking said roller against reverse movement.

6. The combination with a roller towel cabinet, of a supply roller, a pair of take-up rollers, a pair of pivoted links carrying one of said take-up rollers whereby it may be movable in a radial direction toward and from the other, means operative to yieldingly hold the link supported take-up roller toward the other, and means adapted to be operated by the towel as it is drawn from the supply roller and impart movement to one of said take-up rollers.

7. The combination with a roller towel cabinet, of a supply roller, a pair of take-up rollers, a pair of pivoted links carrying one of said take-up rollers whereby it may be movable in a radial direction toward and from the other, means operative to yieldingly hold the link supported take-up roller

toward the other, and means adapted to be operated by the towel as it is drawn from the supply roller and impart movement to said link supported take-up roller.

8. The combination with a roller towel cabinet, of a supply roller, a pair of take-up rollers, a pair of pivoted links carrying one of said take-up rollers whereby it may be movable in a radial direction toward and from the other, means operative to yieldingly hold the link supported take-up roller toward the other, means adapted to be operated by the towel as it is drawn from the supply roller and impart movement to said link supported take-up roller and means for guiding the link-supported roller in its movement radially of its cooperating take-up roller.

9. The combination with a roller towel cabinet, of a supply roller, a pair of take-up rollers, a pair of pivoted links carrying one of said take-up rollers whereby it may be movable in a radial direction toward and from the other, means operative to yieldingly hold the link supported take-up roller toward the other, means adapted to be operated by the towel as it is drawn from the supply roller and impart movement to said link supported roller in its movement radially of its cooperating take-up roller, and braking means engaging the towel in advance of the take-up roller and causing it to feed to the latter under tension, said braking means comprising a roller having a roughened surface for preventing slippage of the engaged towel relative thereto.

10. The combination with a roller towel cabinet, of a supply roller, a pair of take-up rollers, a pair of pivoted links carrying one of said take-up rollers whereby it may be movable in a radial direction toward and from the other, means operative to yieldingly hold the link supported take-up roller toward the other, means adapted to be operated by the towel as it is drawn from the supply roller and impart movement to said link supported roller in its movement radially of its cooperating take-up roller, and braking means engaging the towel in advance of the take-up roller and causing it to feed to the latter under tension, said braking means comprising a roller, a spring yieldingly retarding the movement of said roller in the direction of the feed of the engaged towel, and means for adjusting the braking tension of the said spring.

Signed at New York, in the county of New York, and State of New York, this 21st day of November, A. D. 1918.

C BLAKE ORCUTT.