Sept. 20, 1927. 1,643,096

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TOWEL CABINET

Filed Feb. 23, 1926 2 Sheets-Sheet 1

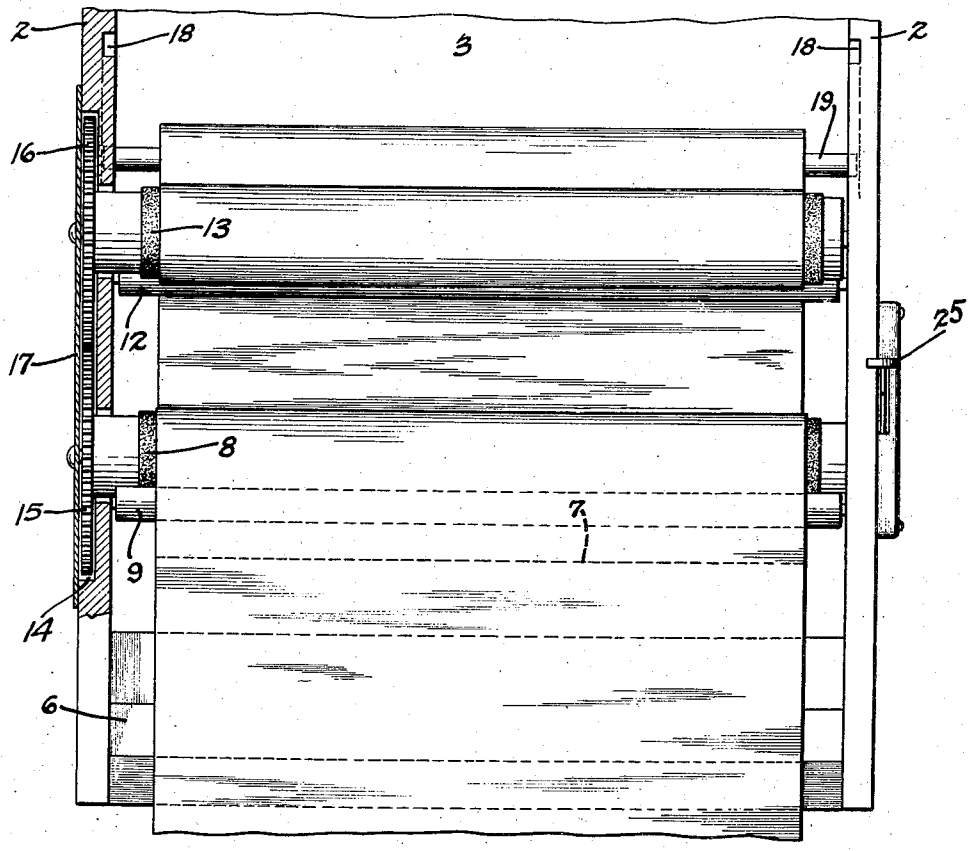


FIG. 1

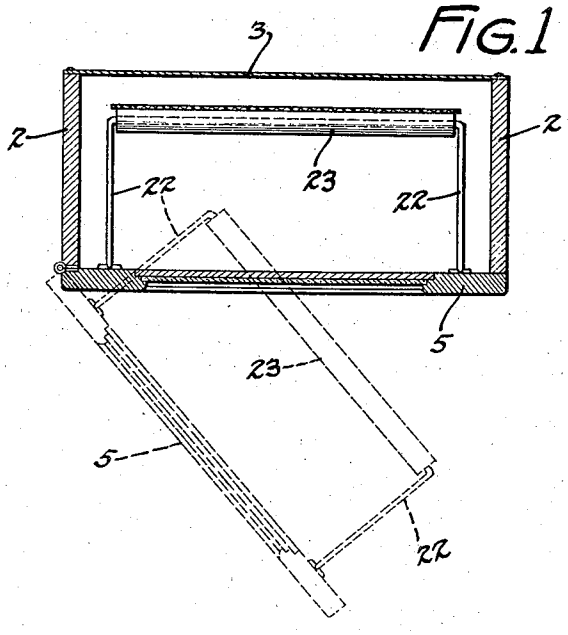


FIG. 4

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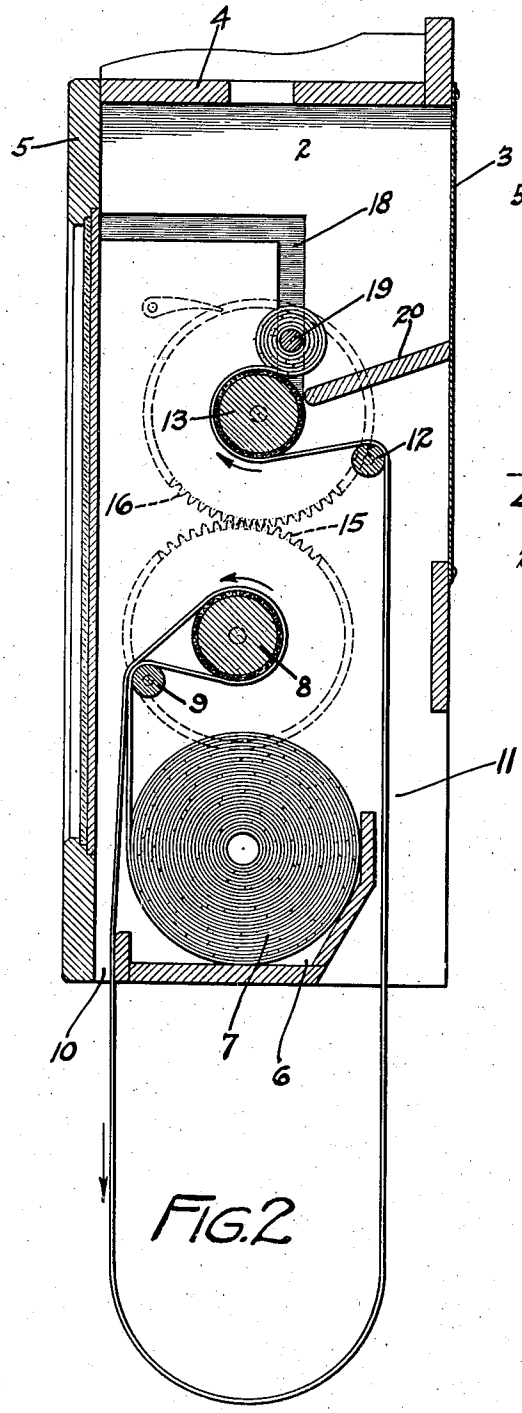


FIG. 2

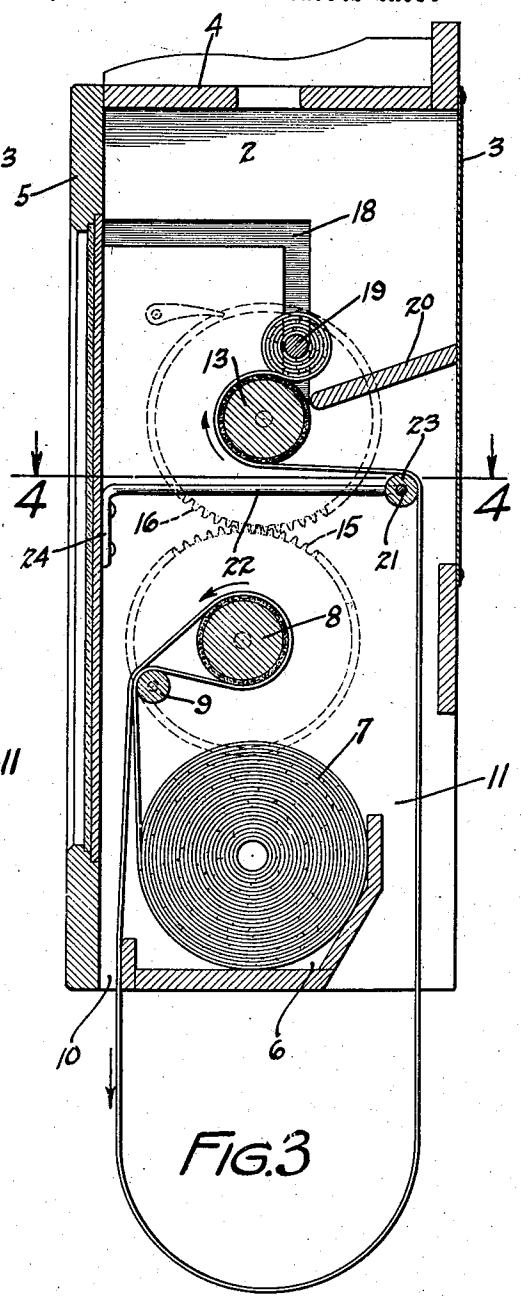


FIG. 3

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UNITED STATES PATENT OFFICE.

GEORGE A. STEINER, OF SALT LAKE CITY, UTAH, ASSIGNOR TO STEINER SALES COMPANY, OF SALT LAKE CITY, UTAH, A CORPORATION OF UTAH.

TOWEL CABINET.

Application filed February 23, 1926. Serial No. 90,020.

A careless or indifferent person loading a cabinet of this type with a clean towel preparatory for use, may not pass the loose end of the towel web under the takeup feed roll as he should do and one object of this invention is to provide means which will compel the person putting the towel in the cabinet to pass the loose end of the web under the upper feed roll instead of stretching it directly from the supporting, tensioning or guiding means to the takeup roll. Obviously, in a device of this kind for the successful operation of the cabinet, the web must be put in properly in order that the feed rolls may perform their functions and it is essential that provision be made whereby there is only one way of connecting the loose web to the takeup roll; that is, only one direction in which the web may be stretched for winding on this roll.

A further object is to provide means for holding the loose web and consequently the soiled portion of the towel out of contact with the clean web.

Other objects of the invention will appear from the following detailed description.

The invention consists generally in various constructions and combinations all as hereinafter described and particularly carried out in the claims.

In the accompanying drawings forming part of this specification,

Figure 1 is a front elevation partially in section of a towel cabinet embodying my invention;

Figure 2 is a vertical sectional view through the cabinet showing the towel in position for use therein;

Figure 3 is a similar view illustrating a modified construction;

Figure 4 is a sectional view on the line 4—4 of Figure 3.

In the drawings, 2 represents the side walls of the cabinet, 3 the rear wall thereof, 4 the top and 5 a suitable door through which, when opened, access may be had to the interior of the cabinet. In the lower portion of the cabinet, I provide a suitable receptacle 6 substantially trough-like in form adapted to receive a web of clean towel herein shown in the form of a roll 7 but it will be understood that it may be folded instead if preferred. This roll rests loosely in the receptacle and is free to turn and unwind the web therein, the front and rear walls of the receptacle holding the roll in place therein. Above the web of clean towel, is a feed roll 8 having a suitable roughened surface and near this feed roll is a tension roll or guide 9, both of said rolls being suitably supported in the side walls of the cabinet, the roll 9 being preferably in front of and slightly below the feed roll 8. The web of clean towel is carried up over the roll 9 and from thence under the feed roll and downwardly through an opening 10 provided in the lower portion of the cabinet between the door and the roll receptacle through which this web of clean towel depends in position to be grasped and pulled by the user, the act of pulling rotating the feed roll 8 as the web clings to its surface and also serving to unwind the web of towel from the roll 7. The loose end of the web of towel in loading the cabinet is carried up through an opening 11 at the rear of the cabinet separated from the clean roll by the wall of the receptacle 6 and is passed over a tension supporting or guide member 12 mounted preferably in the side walls of the cabinet above the feed roll 8 and preferably at a point adjacent the rear wall of the cabinet. A second feed roll 13 is mounted in the side walls of the cabinet and the wall on one side has a recess 14 therein to receive intermeshing gears 15 and 16 mounted on the spindles of the feed rolls 8 and 13 and having a suitable dog to prevent backward movement. This recess 14 is normally covered by a plate 17. Through these gears, movement of the feed roll 8 is transmitted to the roll 13 and as these feed rolls are of substantially the same diameter, they will have the same surface speed but through the movement of the gears, will be revolved in opposite directions as indicated by the arrows in Figure 1. The side walls of the cabinet preferably have grooves 18 therein adapted to receive a takeup roll or tube 19, the ends of which are inserted into said grooves and slide through the horizontal portion thereof and then drop by gravity in the vertical portion to contact with the surface of the feed roll. When, therefore, the loose end of the web of towel is wrapped around the takeup roll 19, its contact with the feed roll

will revolve the takeup roll and wind up the soiled portion of the towel with the same surface speed that the roll is operated.

In filling the cabinet or placing the clean towel therein, the attendant should pass the loose end of the web under the roll 13 so that the web will contact with a considerable portion of this roll surface and when the roll is revolved the frictional contact of the web with the roll will draw the web upwardly and the takeup roll will be revolved to wind this web thereon. A person in a hurry or of indifferent or careless disposition might pass the loose web directly from the guide roll or member 12 to the takeup roll 19 and this would defeat the takeup operation and the successful use of the cabinet. To prevent any possibility of such mistake in filling or loading the cabinet, I provide a plate or shelf 20, or a device of a similar nature, extending across the cabinet from side to side above the guide roll 12 and at a point where it will compel the person loading the cabinet to carry the loose end of the towel down under the feed roll 13, the edge of the plate extending to a point near the surface of the feed roll, so near that it would not be possible to pass the towel web between them. In this way, I compel the person loading the cabinet to carry the loose end of the web down under the feed roll 13 as he should do before winding it on the takeup roll.

In Figures 3 and 4, I have shown a slightly modified construction which consists in taking a rod of suitable gauge and bending the end portions to form a middle section 21 and end portions 22, a roll 23 having been put on the rod before the bending operation so that when the ends 22 are folded they will form stops for the ends of the roll, allowing it, however, to turn freely on the rod. The extremities 24 of the rod are bent downwardly and secured by suitable means to the frame of the door as indicated in Figure 4 so that the rod and the roll will swing back and forth with the door into and out of the cabinet. The roll 23 takes the place of the roll 22 and has the function when the door is closed of pushing the loose web of the towel backwardly to the rear of the cabinet and holding it out of any possible contact with the clean portion of the towel, thereby preventing possible infection or contamination of the clean portion of the web from a used or soiled portion. The plate or shelf 20 will also be used in this combination to prevent any possibility of the clean web being carried directly to the takeup roll. The length of feed of the towel is regulated by the control device 25.

In the operation of the cabinet, the person loading it will place the clean roll in the receptacle at the bottom, carry the clean web up over the roll 8 and the tension roll 9 and thence downwardly through the passage 13 to a point where it can be conveniently reached by the user of the cabinet. The loose end of the web is then carried up over the roll 12 and under the feed roll 13 to the takeup roll. When the user pulls down on the clean web, the feed roll 8 will be operated by its frictional contact with the web and motion transmitted through the gears 15 and 16 to the feed roll 13 and from thence to the takeup roll to wind up the soiled portion of the towel simultaneously with the delivery of the clean portion. In various ways the details of construction herein shown and described may be modified and still be within the scope of my invention.

I claim as my invention:

1. A towel cabinet adapted to receive a supply of clean towel and having a door in its front portion, a feed roll over which the web of clean towel passes downwardly to a point below the cabinet within reach of the user, a second feed roll having a driving connection with said first-named roll, a takeup roll operated from said second feed roll to wind up the soiled towel, and means supported by the cabinet door extending above the towel supply and to the rear of the cabinet and adapted to normally hold the web of towel toward and near the rear wall of the cabinet and be withdrawn from such holding position when the door is opened.

2. A towel cabinet adapted to receive a supply of clean towel, and having a door normally closing the cabinet, a feed roll for the web of clean towel adapted to deliver it to the user below the cabinet, a takeup roll for the web of soiled towel and a feed roll therefor geared to said first-named feed roll, a substantially U shaped rod mounted on said door and adapted to normally hold the web of towel to a point near the rear of the cabinet and over which the web of towel is carried to said second feed roll and takeup roll.

3. A towel cabinet adapted to receive a supply of clean towel, a feed roll adapted to deliver a web of clean towel to the user, a takeup roll for the soiled towel and a feed roll therefor intergeared to said first-named feed roll, a rod having a middle portion and a roll thereon, the ends of said rod being bent at right angles substantially to its middle portion and supported transversely of said cabinet, said roll being adapted to support the web of soiled towel out of contact with the clean towel and guide the web of towel to said takeup roll and its feed roll.

4. A towel cabinet adapted to contain a supply of clean towel, a feed roll adapted to deliver a web of clean towel to the user, a takeup roll for the web of soiled towel, a feed roll therefor having a driving connection with said first-named roll, a guide

over which the web of towel is carried under said second feed roll, and a shelf above said guide adapted to prevent the web of towel from being carried direct from said guide to said takeup roll.

5. A towel cabinet having a receptacle in its lower portion for a roll or fold of clean towel, a feed roll above said receptacle adapted to deliver the web of clean towel downwardly to the user, the loose end of the web being carried upwardly in the rear of the clean towel, a guide adapted to support the loose towel web above said feed roll, a takeup roll and feed roll therefor above said guide and geared to said first-named feed roll, and a guard arranged between said second-named feed roll and the rear wall of the cabinet and adapted to prevent the web of towel from being carried direct from said guide to said takeup roll.

In witness whereof, I have hereunto set my hand this twentieth day of February, 1926.

GEORGE A. STEINER.