

July 23, 1929.

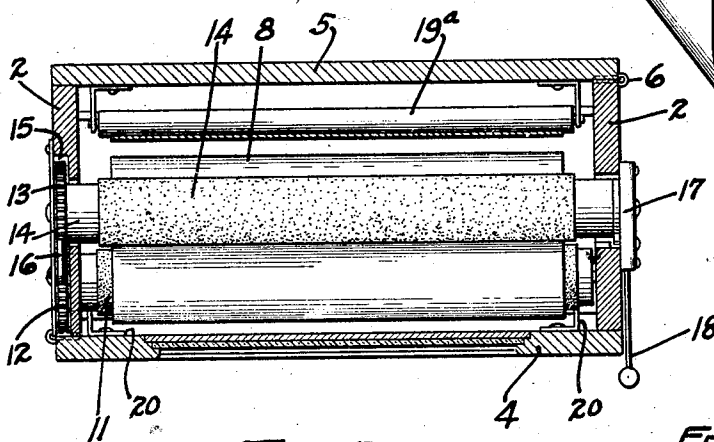
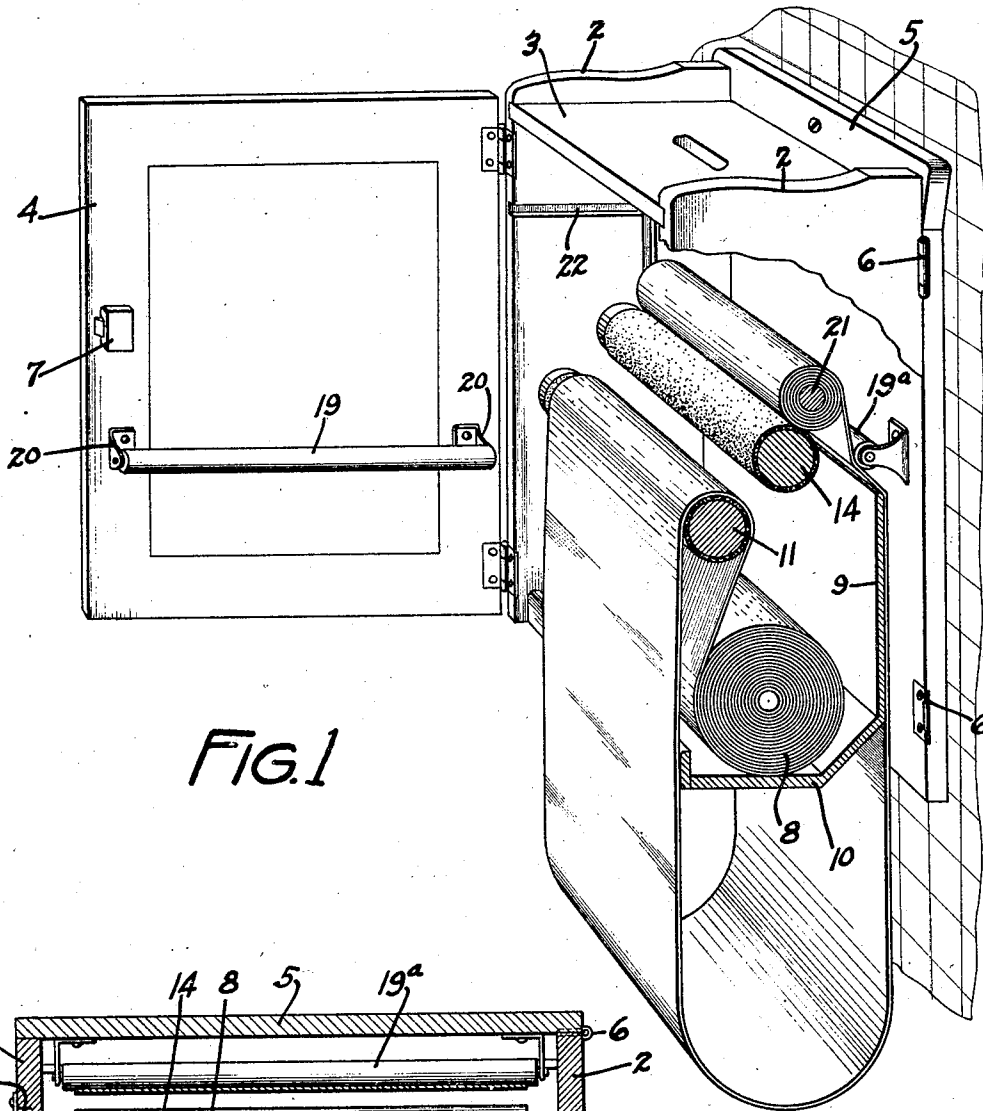
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TOWEL CABINET AND METHOD OF LOADING SAME

Filed March 20, 1926

2 Sheets-Sheet 1



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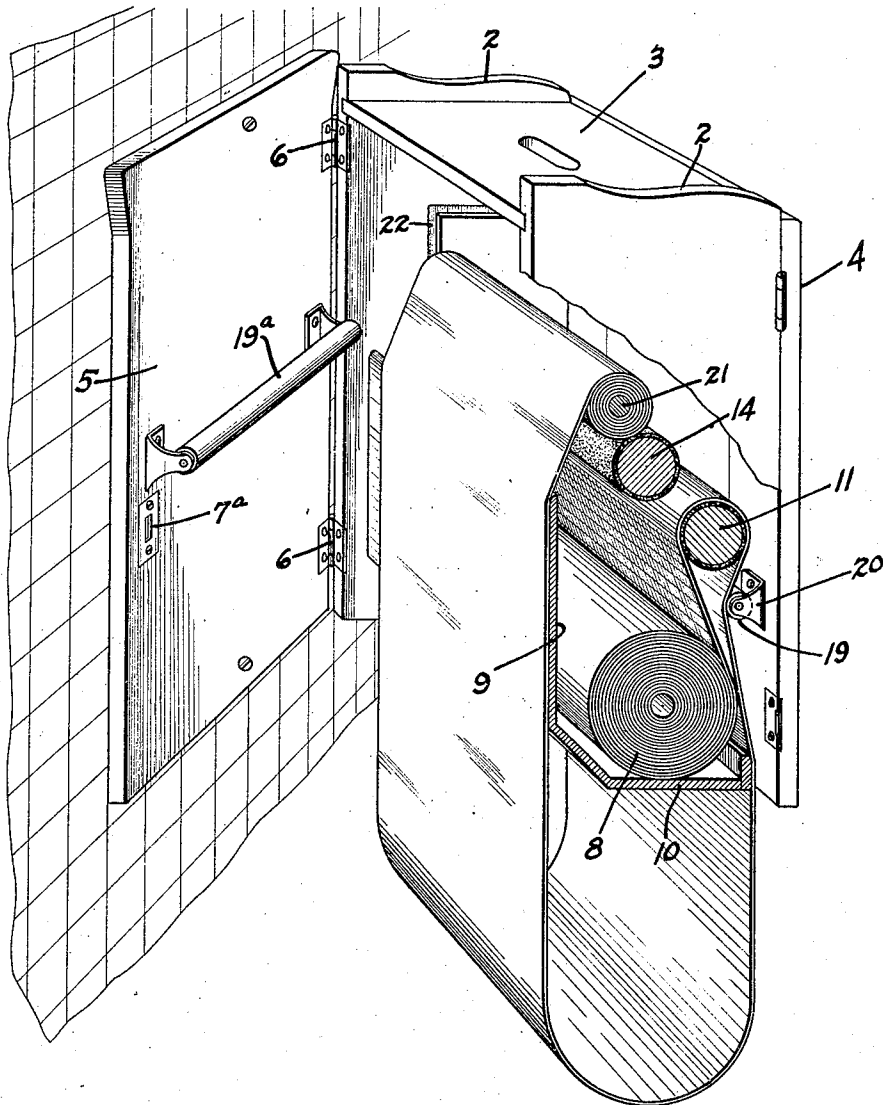


FIG. 2

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UNITED STATES PATENT OFFICE.

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TOWEL CABINET AND METHOD OF LOADING SAME.

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This invention relates to a cabinet for delivering a predetermined length of web of clean towel to the user or person standing in front of the cabinet who, with one hand, will release the locking device by means of which the length of the web of clean towel delivered is controlled and with the other hand, will grasp and pull downwardly on the towel web to deliver it in convenient position for use and at the same time operate a winding or takeup mechanism for the used or soiled portion of the towel.

When the roll or fold of clean towel is exhausted, the cabinet is loaded or filled by the laundry man or the janitor or attendant of the building or washroom where the cabinet may be located, and the first step is to open the door of the cabinet, a closed casing being preferably provided for this purpose to protect the towel from dust and dirt, and place the roll or fold of clean towel in the cabinet and carry the loose end up over the delivery roll for frictional contact therewith so that when a downward pull is exerted on the clean web, the delivery roll will be revolved and simultaneously a corresponding movement will be imparted to the takeup roll to wind up the soiled portion of the towel.

When the web of clean towel has been passed over the delivery roll and carried down through the bottom of the cabinet, the person loading the cabinet must stretch this loose end up through the back of the cabinet to the takeup roll and provision must be made for doing this work conveniently and expeditiously, as obviously a laundry man or a janitor cannot take the time to thread or stretch a web of towel through a narrow confined space and particularly when it may be the duty of one person to attend to the filling or loading of a number of cabinets.

The object, therefore, of my present invention is to provide a cabinet of such construction that the laundry man or the janitor can first open the front of the cabinet to insert the roll of clean towel, and at the same time expose the delivery feed roll for convenient passing of the web of clean towel thereover with its loose end depending below the bottom of the cabinet. Then, having placed the clean roll in the cabinet in position for use and closed the front door, can move or swing the body of the cabinet outwardly from the wall to expose the space therein in the rear of the feed rolls so that the loose end

of the towel can be easily and quickly carried up in the rear of these rolls to the takeup roll, and thus the operation of loading or filling a cabinet with a clean towel greatly facilitated.

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

In the accompanying drawings forming part of this specification,

Figure 1 is a perspective view of a towel cabinet embodying my invention showing the front door open for conveniently stretching the web of towel over the delivery feed roll;

Figure 2 is a similar view showing the body of the cabinet swung outwardly from the rear wall or support to expose the space at the rear of the interior of the cabinet;

Figure 3 is a horizontal sectional view through the cabinet above the feed rolls showing the driving connection between them and the device for controlling the delivery of the towel.

In the drawing, referring to Figure 1, 2 represents the side walls of the cabinet, 3 the top thereof, 4 a suitable door normally closing the open front of the cabinet hinged preferably to one of the side walls and 5 a rear wall that is secured by suitable means to an upright support or wall of the room where the cabinet may be located and is hinged at 6 to one of the side walls 2 and has a suitable locking device 7^a on its inner face controlled by means of a key, a similar locking device 7 being provided on the corresponding face of the front door 4. These locks prevent any mischievous or unauthorized person from obtaining access to the interior of the cabinet, the laundry man or the janitor, however, having a suitable key can easily and quickly manipulate the lock and obtain access to the cabinet.

Within the cabinet, I provide a suitable support or container for the roll or fold of clean towel 8. This support comprises, preferably, a rear wall 9 supported between the side walls of the cabinet and spaced from the rear wall 5 thereof and having a forwardly extending substantially horizontal portion 10 upon which the roll or fold of clean towel 8 is loosely placed, access being had conveniently to this container or support when the front door of the cabinet is opened. The roll

or fold of clean towel will lie on the horizontal floor of the support and move back and forth thereon to allow the convenient unwinding of the towel web as it is pulled by the user. 11 represents a delivery feed roll having a roughened surface over which the loose web of towel is passed, a space being provided between the wall 10 and the front door of the cabinet through which the towel web depends below the cabinet to form a loop within convenient reach of the user. The roll 11 has bearings in the side walls of the cabinet, and is provided with a gear 12 adapted to mesh with a similar gear 13 on a takeup feed roll 14 that is mounted in bearings in the side walls of the cabinet, a recess 15 being preferably provided in one of the side walls to receive the gears. The feed rolls are of substantially the same size and their inter-gear relation insures the operation of the rolls simultaneously, the delivery feed roll revolving in one direction through the pull of the user on the towel web and the takeup roll being revolved in the other direction at the same peripheral speed, a suitable dog 16 being provided for locking the feed rolls against backward movement. The takeup feed roll also has a feed control device 17 and a manually operated lever 18 by means of which the user of the towel can release the rolls and obtain a predetermined length of clean towel, the locking device automatically returning to its normal position to check the feed of the towel when a certain length has been delivered. To insure the proper frictional contact between the web of clean towel and the delivery roll 11, I prefer to mount a roll 19 in brackets 20 on the door 4 so that when the door is closed, the roll 19 will press inwardly on the web of towel and hold it snugly against the surface of the delivery roll, thus insuring sufficient frictional contact between the web of towel and the delivery roll to drive the roll when the user exerts a downward pull on the towel.

When the laundry man or the janitor has placed the roll of clean towel in the cabinet and stretched the web over the delivery feed roll, he will close the front door, release the lock at the rear, and swing the main body including the side walls, top and front door of the cabinet, outwardly on the hinges 6 away from the rear wall 5 and expose the entire interior of the cabinet at the rear thereof. He will then grasp the loose end of the towel web and pass it upwardly in the rear of the wall 9 to a takeup roll 21 that is mounted in guides 22 in the side walls of the cabinet above the takeup feed roll and when the loose end of the towel web is wound on this takeup roll, it will rest by gravity on the feed roll 14 and revolution of this feed roll through the movement of the delivery feed roll will, through frictional contact, drive the takeup roll 21 to wind the web of towel thereon.

Preferably, a tension roll 19^a corresponding to the one on the front door is mounted on the rear wall of the cabinet to bear on the web of towel adjacent to the takeup roll and cooperate with the upper edge of the wall 9 to smooth and guide the web of towel and exert a slight tension thereon to insure the proper winding of the web on the takeup roll through the revolution of the feed roll 14.

From the foregoing description, it will be noted that the person loading or filling the cabinet can, when the front door is open, easily and quickly place the roll or fold of clean towel in the cabinet and stretch the loose end thereof over the delivery feed roll to depend in a position below the cabinet when the front door is closed. Then, he can with equal convenience, release the body of the cabinet from its rear wall and swing it outwardly and expose the rear of the interior of the cabinet and easily and quickly stretch the loose end of the towel up through the rear of the cabinet to the takeup roll, the soiled roll of towel being of course first removed from the cabinet preliminary to filling it with a clean towel. When this has been done, the main body of the cabinet is swung back against the wall and locked and the work of loading or filling the cabinet with clean towel is complete.

It will be understood that various ways may be devised for mounting the cabinet to open up in the manner described, and I do not therefore wish to be confined to the particular construction and arrangement herein shown.

I claim as my invention:

1. A towel cabinet having sides, an opening in its front and bottom and a door hinged at one side, a support at the rear of the cabinet to which the sides are hinged, and away from which the other side may be horizontally swung, a delivery feed roll over which a web of clean toweling deposited in the cabinet may be carried, a takeup feed roll having a driving connection with said delivery roll, a takeup roll adapted to have the loose end of the towel web wound thereon in constant contact with said takeup feed roll to be driven thereby whereby the cabinet including one side may be swung away from the support to expose the back of the cabinet, and when said door is opened the loose end of the toweling deposited in the cabinet may be drawn up over said feed roll, then passed through said opening in the bottom of the cabinet and looped under said bottom to the rear of the feed roll and to said takeup roll.

2. A towel cabinet having a support, a side wall hinged to said support so as to be capable of swinging the other side from the support, a door hinged to a side wall for opening and closing the cabinet, delivery and feed rolls mounted in the cabinet, and a bottom between the side walls adapted to sup-

port a supply of toweling whereby the toweling may be deposited on said bottom of the casing after the door is open and the web of toweling extended over the delivery roll and
5 looped beneath the bottom, then the cabinet swung on its hinges to give access to the rear thereof, a takeup roll mounted so as to remain in constant contact with the delivery roll accessible from the back of the cabinet
10 when the same is swung on its hinges from the support to provide convenient access for attaching the web to the takeup roll.

3. A towel cabinet having sides, an open front and a door hinged to one side, a support at the rear of the cabinet and to which
15 the other side is hinged, a delivery feed roll over which a web of clean towel may be carried, a take up feed roll having a driving connection with said delivery roll, a take up roll adapted to have the loose end of the towel
20 web wound thereon for contact with said take up feed roll and resting against the same to be driven thereby said cabinet having an opening in its bottom and the construction
25 being such that on opening the door of the cabinet the towel web may be passed over said delivery feed roll, thence downwardly through said opening in the bottom of the cabinet and the cabinet swung on its side
30 hinges to allow access to the rear of the roll and the toweling passed upwardly to said feed roll and the casing then swung back to its normal position.

4. A towel cabinet having a rear and side
35 walls the rear wall being adapted to be secured to an upper support one of the side walls of the cabinet being hinged to one side of the rear wall to swing horizontally, a take up roll and a feed roll pivoted in the cabinet,
40 driving connections between said rolls, a support for a clean towel roll in the bottom of

the cabinet, a door hinged to one side of the cabinet there being an open space between the bottom of the cabinet and said door when closed, the construction being such that a
45 web of towel may be passed up from the clean towel supply over the feed roll and down through said open space and when the cabinet is swung outwardly from its support, access may be had to the rear of the cabinet to
50 pass the looped portion from below the cabinet to the rear of the take up roll and when attached thereto the cabinet may be returned to normal position with its rear portion against said support.
55

5. A towel cabinet comprising a rear support with a friction roll attached to its front surface said cabinet having side walls and a door also having a friction roll attached to its inner surface one of the side walls of said
60 cabinet being hinged to said support to swing horizontally towards and away from said support said cabinet having in its bottom portion a support for its clean towel supply and an opening in its bottom portion when
65 said door is closed, feed and take up rolls pivoted in the cabinet sides the construction being such that the towel may be passed from the clean towel supply upwardly over the feed roll, thence downwardly through the
70 opening in the bottom of the cabinet and looped below the towel support, thence passed up to said take up roll when the cabinet is swung outwardly from the support to give access to the rear of the rolls and when the
75 door is closed and the cabinet swung to normal position said friction rolls will be brought in contact with the towel web.

In witness whereof, I have hereunto set my hand this 16th day of March, 1926.

FRANK G. STEINER.