Feb. 21, 1933. F. M. STEINER ET AL 1,898,796

TOWEL CABINET

Original Filed June 5, 1922

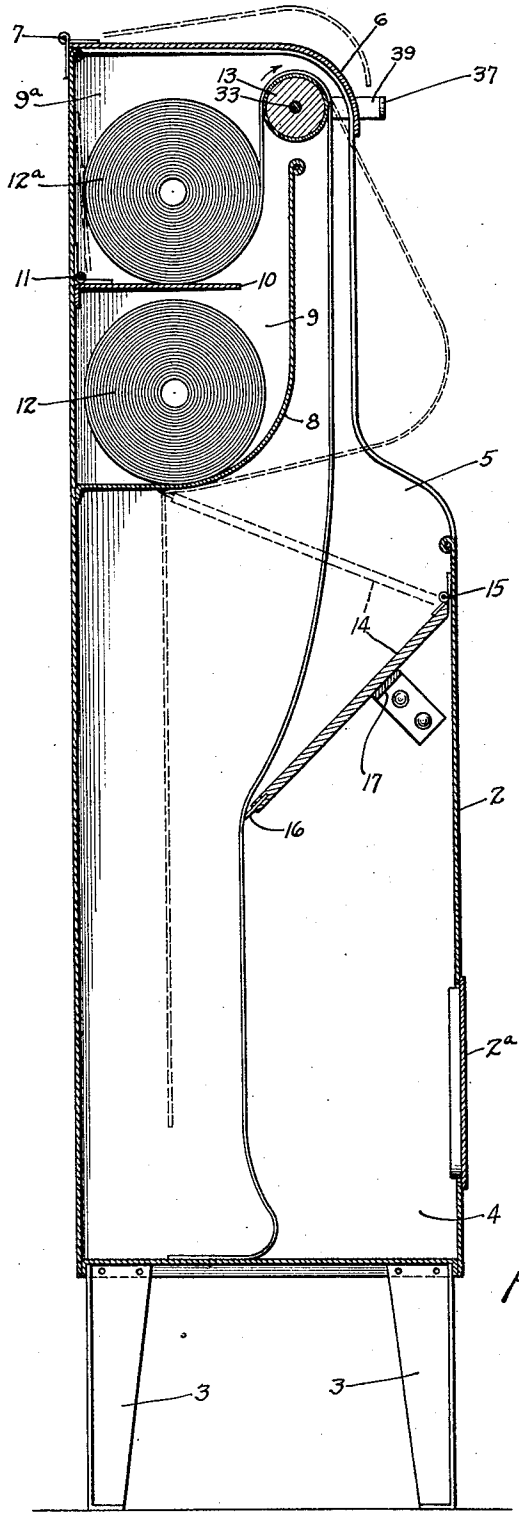


FIG. 1

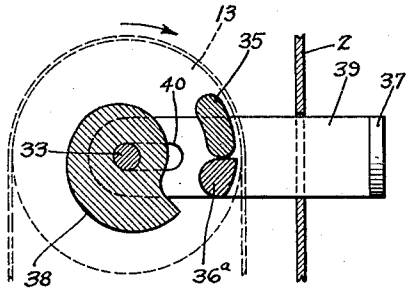


FIG. 2

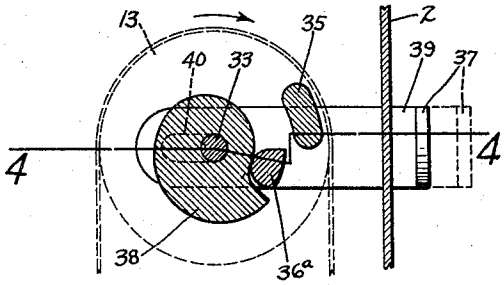


FIG. 3

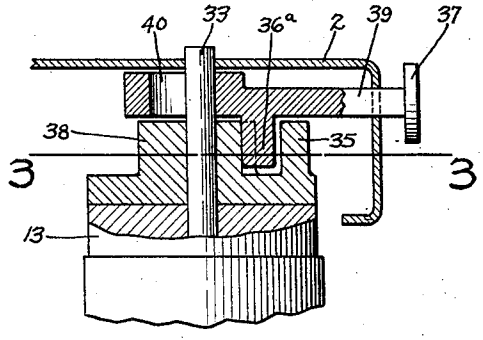


FIG. 4

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UNITED STATES PATENT OFFICE

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TOWEL CABINET

Original application filed June 5, 1922, Serial No. 565,802. Divided and this application filed March 25, 1929. Serial No. 349,831.

This application is a division of our pending application #565,802, filed June 5, 1922, and allowed November 5, 1928, which has matured into Patent No. 1,756,839, issued April 29, 1930.

The purpose of this application is to separate or divide from the parent case the drawing and description relating to the modified means for regulating the feed of the towel, as illustrated specifically in Figures 8, 9 and 10, sheet two, of application #565,802.

As described in this application, it is essential in a cabinet of what is known as the continuous towel type, to provide means for arresting or checking the revolution of the feed roll when a certain predetermined length of towel suitable for wiping purposes has been delivered. Normally the roll is locked and the user upon approaching the cabinet, will trip the locking mechanism and release the feed roll and then a slight pull on the towel web will revolve the roll until it has completed its stroke when it will become automatically locked, ready to be tripped again to allow further delivery of the towel.

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

In the accompanying drawing forming a part of this specification,

Figure 1 is a vertical sectional view through a towel cabinet embodying our invention;

Figure 2 is a detail sectional view showing the feed limiting device in its locking position;

Figure 3 is a similar view showing the device when tripped by the user to allow the delivery of the towel;

Figure 4 is a horizontal view, partly in section, taken on the line 4—4 of Figure 3.

In the drawing, 2 represents the base of the cabinet, having suitable supporting legs 3 and a chamber 4 for the soiled toweling, said chamber having a door 2^a for the removal of said toweling. The front of the cabinet near the top has an opening 5 through which access may be had to the clean toweling and at the top of the cabinet is a cover 6 hinged to the rear wall at 7 and adapted to be raised to allow access to the clean towel containing compartments and the feed roll. In the rear of the opening 5 and adjacent thereto is a curved partition 8 co-operating with the rear wall of the cabinet to form a clean towel chamber 9. A shelf 10 is hinged at 11 to the rear wall of the cabinet and above this shelf is a second clean towel chamber 9^a corresponding substantially to the one below the shelf. Within these chambers clean towel rolls 12 and 12^a are placed. A feed roll 13 journaled at its ends in the side walls of the cabinet is provided beneath the cover 6, near the opening 5 and slightly above the roll 12^a and over this feed roll the web of clean towel may be stretched to depend within the cabinet in the rear of the opening 5 in position to be conveniently grasped by the user and drawn forward through the opening to a using position. The opening in the front of the cabinet is a suitable distance from the floor to allow the user to apply the web of clean towel to the hands or the face, as desired. In this type of cabinet we prefer to provide a feed controlling device or stop which must be manipulated by the user before any clean towel can be obtained.

Many owners of buildings renting cabinets of this type prefer to have a stop device which must be released, or tripped by the user, as they have found it effects a considerable economy in the amount of toweling used. Many persons, rather than take the trouble of operating the stop device to obtain an additional feed of the towel, will use a clean area of the towel that has been already drawn out by the previous operator and thus a roll of towel will last much longer than when the feed is entirely automatic and only a pull on the towel is required to obtain a predetermined length.

Below the opening 5 in the upper portion of the soiled towel compartment, a plate 14 may be hinged at 15 to the front of the cabinet and having its inner end provided with a series of pins 16 which engage the webbed towel and prevent the soiled portion

from being withdrawn from the cabinet. If the user applies a pull to the soiled web, the plate will be moved upwardly to the position indicated by dotted lines in Figure 1 and prevent the user from pulling any considerable portion of the towel out of the cabinet. Stops 17 are mounted on the side walls of the cabinet and engage the plate 14 and limit its downward movement.

At one end of the feed roll 13 we provide a cam 38 on the shaft of the feed roll and a slide 39 is movable horizontally in the wall of the cabinet and has a slot 40 to receive the feed roll shaft and move back and forth thereon. A stop 36^a is formed on the slide and projects laterally therefrom and normally is in the path of a lug 35 attached to the cam 38 through the medium of a common base integral with both the cam and lug at the end of the feed roll 13, thereby locking the roll and preventing delivery of the clean towel web, all as shown in Figure 8 of application #565,802 above referred to.

The slide 39 is adapted to be pushed in by the user to the position indicated by full lines in Figure 3 and when this has been done, the stop 36^a will be moved out of the path of the lug 35 and the feed roll will then be free to revolve and feed the towel. See Fig. 9 of the parent case. The revolution of the feed roll will correspondingly revolve the cam 38 in the direction indicated by the arrow in Figure 3 and when the high side or peripheral edge of the cam engages the stop 36^a, which it will do when the cam approaches the end of its stroke, the pressure of the cam on the stop will force the slide outwardly to the position indicated by full lines in Figure 2 and move the stop 36^a into the path of the lug 35 and thereupon the feed roll will be automatically locked until the slide is again operated. The relative position of the parts of the slide and the cam are indicated clearly in Figure 4, the lug 35 being formed on the cam plate as indicated in this figure, with a gap between it and the peripheral edge of the cam sufficient to receive the stop 36^a and allow it to pass between the lug 35 and the cam upon the initial movement of the feed roll. The edge of the cam is so formed that it will ride on the surface of the stop and at a predetermined point in the revolution of the feed roll will exert sufficient outward pressure on the stop to move the slide outwardly to its original locking position and in this position the delivery of the towel will be automatically checked until the user again moves the slide to its release position.

We claim as our invention:

1. A towel cabinet having a towel roll and a cam element rotatable therewith, a lug also rotatable with the feed roll, a locking bar having a stop thereon provided with an upper face normally contacting said lug, said bar being longitudinally and bodily movable relatively to said lug to unlock said element, said stop having an inner face cooperative with the periphery of said cam element to restore the bar to its locking position.

2. A towel cabinet and a towel feed roll therein, said feed roll having at one end a journal and around the journal a cam, a lug mounted on said feed roll, a slide operable transversely of said journal and having thereon a stop, said slide projecting outside the cabinet and movable inwardly relatively to the cabinet to move the stop to a position between the lug and cam out of the path of movement of said lug, the cam being so shaped as to contact the stop and push back the slide and bring the stop in line with the lug when a towel user pulls on the towel to rotate the feed roll.

3. A towel cabinet and a feed roll therein over which a web of clean towel may be stretched from a suitable supply, a cam connected to and operated from said feed roll and a lug attached thereto but remote from said cam, a longitudinally slidable locking member for said feed roll having a stop normally in the path of said lug, said member being adapted to be moved bodily endwise by the towel user to a position between said cam and said lug and disengage the stop from said lug, said cam having means to positively return said member to its locking position as said cam and feed roll approach the limit of their normal stroke.

4. A towel cabinet and a feed roll therein over which a web of clean towel may be stretched, a cam connected to and operated from said feed roll and a lug rigid with the cam but remote therefrom, a longitudinally slidable springless locking member for said feed roll having a stop normally in the path of said lug, said member being adapted to be moved bodily by a push of the towel user to a position between said cam and lug, and move said stop from the path of said lug, said cam having peripheral means to automatically return said member to its locking position when said cam is rotated before said cam and feed roll reach the limit of their normal movement.

5. A towel cabinet and a feed roll therein over which a web of clean towel may be stretched from a suitable supply and said feed roll automatically rotated by a pull on said towel, a revoluble cam, a lug mounted on the end of said feed roll for simultaneous movement therewith, a member projecting outside the cabinet and manually operable bodily by a towel user and having a stop in the path of said lug to normally arrest movement of said feed roll and cam, said member having a longitudinal movement transversely of the axis of said feed roll to disengage said stop from said lug,

said cam having a peripheral edge shaped to positively return said member to its locking position immediately prior to the completion of a revolution of said feed roll and cam.

6. A towel cabinet having a towel delivery opening, a feed roll mounted in said cabinet and automatically rotated by a pull on the towel through said opening, a cam and lug mounted on the end of said feed roll and rotatable therewith, a slide supported at one end by said feed roll and at the other end by said cabinet and having a limited longitudinal movement transversely of said feed roll, said slide being provided with a stop which when moved to its outward position would be in the path of said lug, said slide being adapted to be pushed inwardly by the towel user to move said stop between said cam and lug and said cam having a peripheral edge to engage said stop when the feed roll is rotated by a pull on the towel, and positively restore said slide and stop to their normal locking position as said feed roll and cam complete their revolution.

In witness whereof, we have hereunto set our hands, FRANK M. STEINER at Minneapolis, Hennepin County, Minnesota, this 21st day of March, 1929, and WALTER S. GRAVES at Kansas City, Jackson County, Missouri, this 20th day of March, 1929.

FRANK M. STEINER.
WALTER S. GRAVES.