Nov. 12, 1929. G. A. STEINER 1,735,514

TOWEL CABINET

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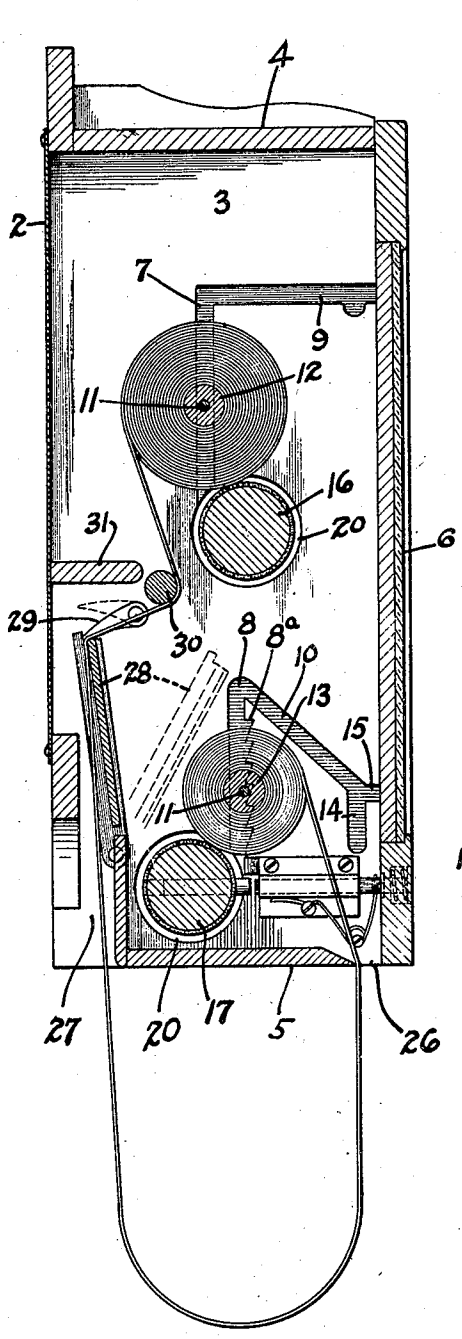


FIG. 1

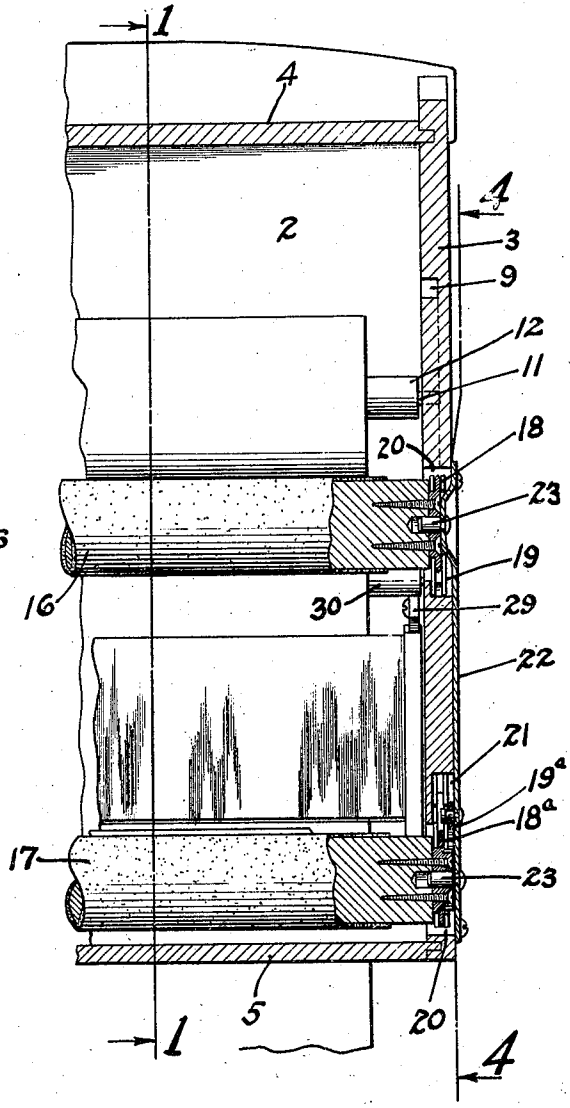


FIG. 2

Inventor
GEORGE A. STEINER
By Towl, Towl & Woodard
Attorneys

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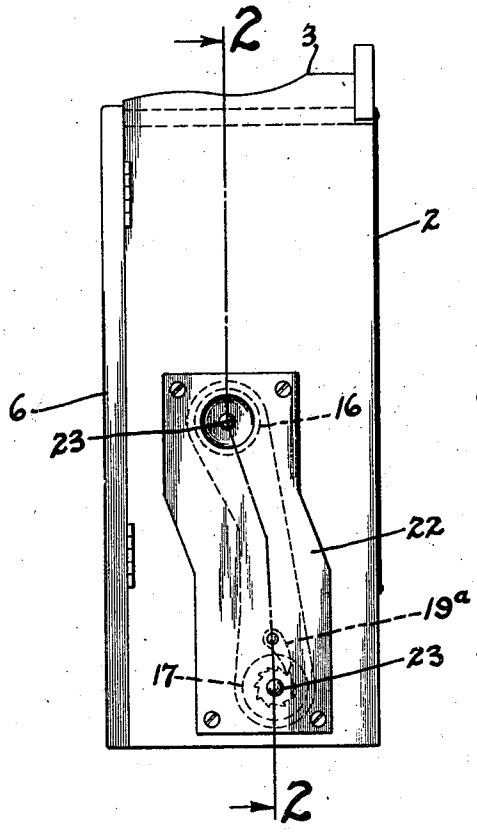


FIG. 3

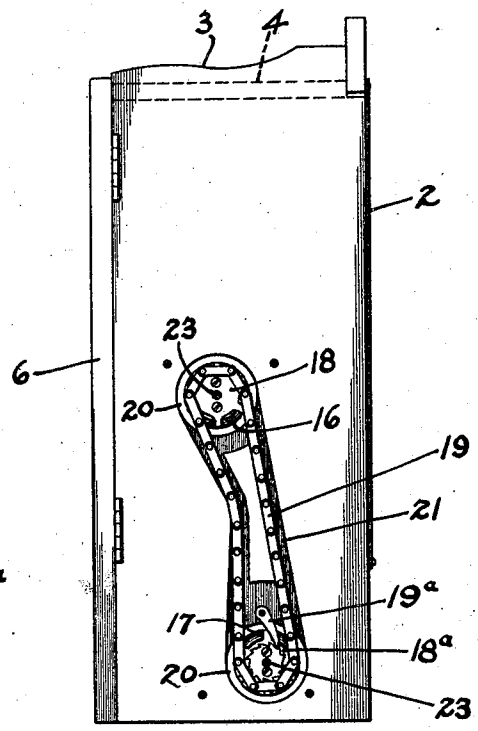


FIG. 4

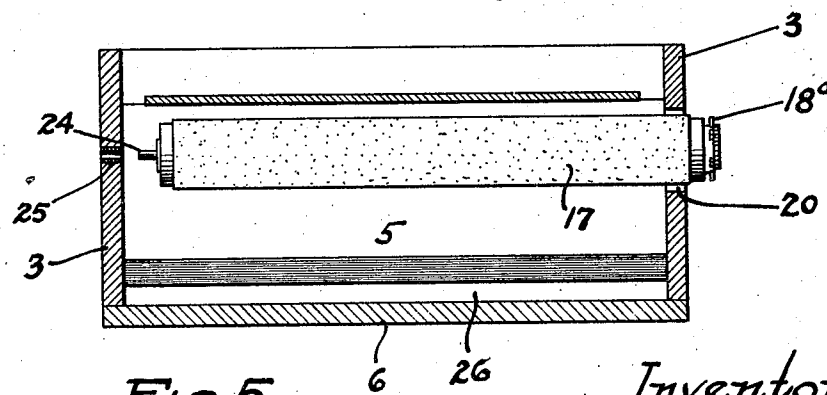


FIG. 5

Inventor
GEORGE A. STEINER
By Paul, Paul & Woodard
ATTORNEYS

Patented Nov. 12, 1929 1,735,514

UNITED STATES PATENT OFFICE

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

TOWEL CABINET

Application filed March 16, 1925. Serial No. 15,883.

The object of my invention is to provide improved means for mounting the feed or sanded rolls in the cabinet to the end that they may be easily and quickly removed without disturbing the towel rolls and without separating or removing the walls of the cabinet.

A further object is to provide an improved manner of mounting the clean towel roll in the cabinet and adapting it for conveniently placing the clean towel roll thereon, provision being made to prevent separation of the clean towel roll from the feed roll during the feeding operation.

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 pointed out in the claims.

In the accompanying drawings forming part of this specification,

Figure 1 is a vertical sectional view through a towel cabinet embodying my invention, taken on section line 1—1 of Figure 2;

Figure 2 is a sectional view on the line 2—2 of Figure 3;

Figure 3 is a side view of the cabinet showing the driving mechanism in dotted lines;

Figure 4 is a view with the cover plate removed showing the manner of mounting the feed rolls and the driving belt between them in the wall of the cabinet taken on section line 4—4 of Figure 2;

Figure 5 is a detail sectional view showing the manner of moving one of the feed rolls in its bearing to take it out of the cabinet or insert it therein.

In the drawing, 2 represents the rear wall of the cabinet, 3 a side wall thereof, 4 the top and 5 a bottom wall, access to the interior of the cabinet being had through a suitable door 6 in the front wall. The side walls of the cabinet have vertical guides 7 and 8 therein communicating with forwardly extending guides 9 and 10 which are adapted to receive gudgeons 11 provided in the ends of the towel rolls 12 and 13. The guides 9 extend through to the front of the cabinet and allow the insertion of the roll 12 into the vertical guide 7 wherein the roll 12 lies normally during the use of the cabinet. The extensions 9 thereof allow the convenient removal of the rolls and the re-insertion thereof whenever desired. The guides 9 and 10 are downwardly and forwardly inclined, as indicated in Figure 1 and have vertical extensions 14 which are adapted to receive the roll 13 during the operation of putting a clean towel in the cabinet, the roll lying in the guides 14 close to the front of the cabinet and allowing convenient access during the operation of placing the towel on the roll. The inclined guides 10 allow a quick transfer of the roll 13 from the guides 14 to the vertical guides 8. Notches 15 in the side walls of the cabinet allow the convenient insertion of the roll 13 into the guides and its ready removal therefrom when the cabinet door is opened. The guides 8 preferably have notches 8a on one or both sides with which the gudgeons 11 of the roll 13 engage and thereby the clean towel roll is prevented from riding or sliding up in the guides 8 and moving out of contact with the feed roll beneath. This tendency of the roll 13 to creep or climb up the vertical guideways is particularly noticeable when the roll is small and light or when the web of clean towel has been nearly used up.

The pull of the user on the depending web of clean towel will exert a forward and upward pull on the roll and this will have the effect of raising the roll of clean towel in the guideways out of contact with the feed roll. The engagement of the gudgeons 11 with the teeth in the walls of the guideways will prevent this undesirable upward movement of the towel roll and tend to hold it in contact with the feed roll so that the pull of the user on the web of clean towel will revolve the lower feed roll and transmit its movement through the sprocket belt to the upper feed roll and cause the soiled towel roll to move synchronously with the clean towel roll. Below the towel rolls, as described, are the feed rolls 16 and 17 having preferably sanded peripheral surfaces for frictional contact with the web of towel that is wound upon the rolls 12 and 13, the towel rolls resting by gravity upon the feed rolls, the roll 17 being

driven by frictional contact when the user pulls the web of towel and the roll 16 being synchronously driven from the roll 17 by the mechanism which I will now describe in detail.

On one end of each feed roll is secured a sprocket wheel 18 and 18ª and these wheels are connected by a sprocket drive chain 19. The side wall of the cabinet has openings 20 therein of sufficient size to allow the feed rolls to be moved endwise therethrough for the purpose of inserting them into the cabinet or removing them therefrom and the cabinet wall has a recess 21 therein to receive the sprocket belt and preferably the outer face of this belt lies within the plane of the cabinet wall, and a plate 22 is placed over this recess concealing it and the ends of the feed rolls as shown in Figure 3. This plate is provided with studs 23 for the sprocket wheels of the feed rolls, said studs forming bearings for these wheels and the adjacent end of the rolls. The opposite ends of the feed rolls have gudgeons 24 adapted to enter bearings 25 in the opposite wall of the cabinet. With this construction, when the plate 22 is removed access may be easily had to the drive belt and both rolls may be pulled endwise out of the cabinet for any purpose desired and as readily re-inserted when it is again desired to put the cabinet in operative condition. As shown in Figures 2 and 4, I provide a dog 19ª carried by the plate 22 and adapted to engage the teeth of a ratchet wheel on the outer face of one of the sprocket wheels when the plate is put in position on the cabinet and prevent backward movement of the sprockets and the said rolls while permitting freedom of movement in one direction.

The bottom of the cabinet has an opening 26 through which the web of clean towel depends within convenient reach of the user standing in front of the cabinet and the loop of towel is then passed up through an opening 27 provided near the rear wall of the cabinet and over a swinging gate 28 that is hinged at its lower portion and is normally held with its upper edge adjacent the rear wall of the cabinet by a dog 29, the web of towel passing from the upper edge of the gate forwardly into contact with an idle roll 30 and from thence to the soiled towel roll 12. A horizontal shelf 31 is preferably provided above the swinging gate 28 and adjacent to the idle roll 30. This gate 28, the shelf and the adjacent feed roll are all shown and described in my pending application for United States patent filed June 24, 1922, Serial #570,703 and I make no claim to the same herein, this application having for its subject matter the particular manner of mounting the towel rolls in the cabinet and the means for making the feed rolls easily accessible and readily removable from the cabinet.

At the bottom of Figure 1, I have shown a device for controlling the revolution of the feed rolls, operable by means of a push pin mounted in the door of the cabinet. This controlling device, however, forms the subject matter of a companion application of even date herewith, filed jointly by me, George Wasileski and William Murdo, and I make no claim, therefore, to the same in this application.

I claim as my invention:

1. A towel cabinet comprising a casing and clean and soiled towel rolls mounted therein, feed rolls having a driving connection mounted to engage said clean and soiled towel rolls, a side wall of said casing having openings therein through which said feed rolls are movable endwise, and said side wall having a recess between said openings adapted to receive the driving connection between said feed rolls, and removable means for normally covering said openings and said recess, said means providing a mounting for the adjacent ends of the feed rolls.

2. A towel cabinet comprising a casing and clean and soiled towel rolls mounted therein, feed rolls having a driving connection between them mounted for contact with said towel rolls respectively, said feed rolls having sprocket wheels on one end thereof, and connecting mechanism between the wheels, a wall of said casing having openings through which said feed rolls are movable endwise, said sprocket wheels having sockets therein and a plate removably secured to said casing wall over said openings having studs thereon to enter said sockets and support one end of said feed rolls, the removal of said plate permitting withdrawal of the feed rolls with the sprocket wheels.

3. A towel cabinet comprising a casing having guideways in its side walls, a towel roll having ends to slide in said guideways, the web of towel wound on said roll depending in position to be grasped and pulled by the user, and said guideways having teeth therein for engaging the ends of said towel roll and resisting upward movement therein resulting from the pull on said web.

4. A towel cabinet comprising a casing having guideways in its side walls, a towel roll having ends to slide in said guideways, the web of towel wound on said roll depending in position to be grasped and pulled by the user, and said guideways having means therein for engaging the ends of said towel roll and resisting upward movement therein resulting from the pull on said web, said means comprising a series of teeth formed in the wall of said guideways and engaging the ends of said towel roll.

5. A towel cabinet comprising a casing with side walls and slots therein, clean and soiled towel rolls with journals operating in said slots, said slots extending from the front of the cabinet inwardly and thence down-

wardly, the inwardly extending portion of the slot having near its front end a short branch extension for convenience in holding the roll axis in said downwardly extending portion while the towel is being threaded into the casing and the downwardly extending portion having teeth to prevent upward creeping of the roll.

6. A towel cabinet comprising a casing and clean and soiled towel rolls, therein, feed rolls cooperating with the towel rolls and having a driving connection between them mounted in the walls of said casing, said walls having openings through which said feed rolls may be moved endwise for insertion into said cabinet, said walls have a recess connecting the openings to receive the driving connection between the feed rolls, and a cover for the openings and recess removable on the walls, said cover providing a mounting for the ends of the feed rolls.

In witness whereof, I have hereunto set my hand this nineteenth day of February, 1925.

GEORGE ADOLPH STEINER.