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TOILET PAPER CABINET.

APPLICATION FILED AUG. 5, 1911.

1,114,354.

Patented Oct. 20, 1914

Fig. 3.

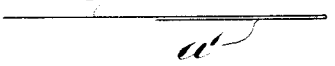


Fig. 4.



Fig. 5.

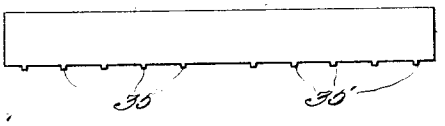


Fig. 2.

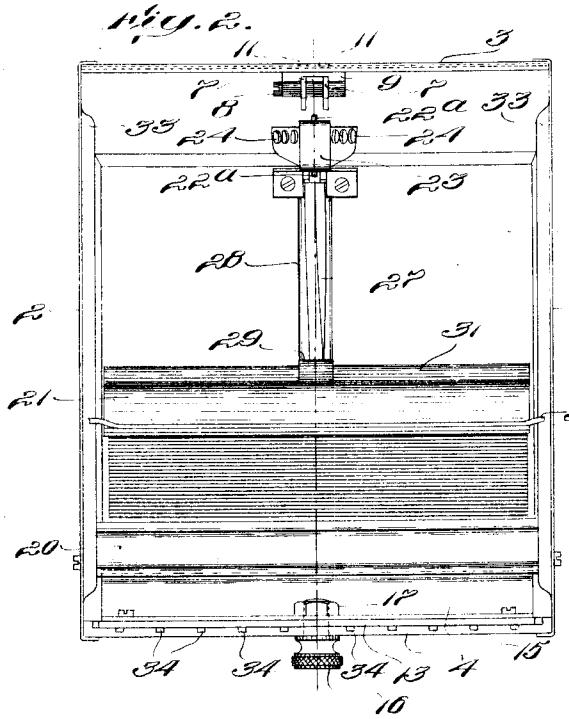
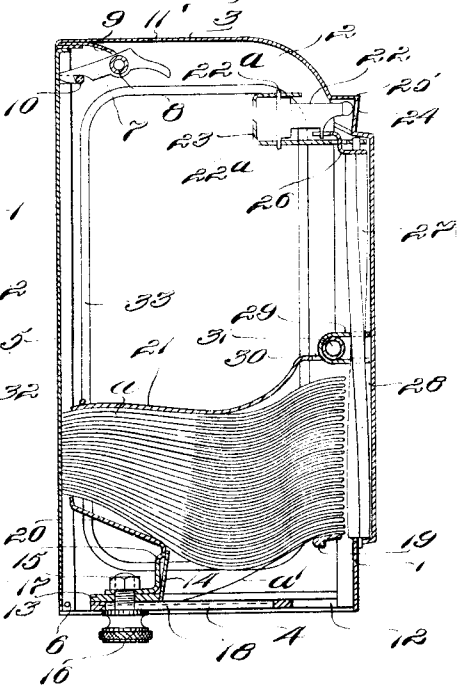


Fig. 1.



Witnesses

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TOILET-PAPER CABINET.

1,114,354. Specification of Letters Patent. Patented Oct. 20, 1914.

Application filed August 5, 1911. Serial No. 642,502.

To all whom it may concern:

Be it known that I, JAMES L. HILDEBRAND, a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Toilet-Paper Cabinets, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention provides a cabinet having a starter for the sheets of paper which are contained therein, and constructed with especial reference to checking too lavish a withdrawal of the paper. By movement given to the starter, a grasping portion of the leading unit of paper may be projected into position to be taken hold of, but until such unit has been withdrawn from the cabinet the next unit cannot be started by movement of the starter, and actuation of the starter will be ineffective and fruitless. The cabinet is constructed to receive a stack or pile of sheet units, each unit being folded to produce a flap constituting a grasping portion, and within the cabinet supports for the stack or pile are so arranged that the flap of the leading unit will pass between such supports into the path of movement of the starter. With the flap thus disposed in the said path, actuation of the starter will project the flap, as aforesaid, but until the leading unit has been drawn out of the cabinet by the user the remainder of the said unit will cover the flap of the next unit, and prevent the starter from engaging with such flap, thereby preventing the second unit from being started into position to be withdrawn. It is impossible to project a number of units at one time to be withdrawn in a mass.

The invention is illustrated in the accompanying drawings in a convenient form of embodiment, Figure 1 being a view partly in section in the plane of line 1, 1, of Fig 2 of a cabinet containing the said embodiment. Fig. 2 is a rear view thereof with the hinged back removed. Figs. 3 and 4 are edge views of different units. Fig. 5 is a front view of the plate 14 of the starter.

In the drawings, the main shell of the cabinet comprises the front 1, ends 2, 2, and top 3.

4 is a bottom.

In Fig. 1, 5 is a back. The said back closes the opening at the rear of the shell, its lower end being connected with the ends 2, 2, by means of pivots, one of which is shown at 6, Fig. 1. Such back is omitted from Fig. 2 in order to show other parts and features. When the body and back of the cabinet are closed together, they are locked in closed condition by two latches 7, 7, pivoted upon a pin 8 carried by a bracket 9 attached to the top 3 of the case. Such latches are weighted to take hold of a wire loop 10, Fig. 1, projecting inwardly from the back 5 when the cabinet is closed, so as to lock the cabinet in closed condition. To enable the cabinet to be unlocked and opened, two holes 11. 11, are made in the top 3 to admit two branches of a key. Pressure exerted by means of these branches upon the tail portions of the latches will tilt the latter so as to disengage them from the loop 10, thereby rendering the cabinet free to be opened. In case the back 5 should be affixed to a support, which is contemplated, the pivotal connection of the back and main shell of the cabinet with each other will enable the body of the cabinet to be swung relative to the back in opening and closing the cabinet, and while the latches are in engagement with the wire loop the body of the cabinet will be held in place against the back.

The bottom 4 does not extend all the way to the front, and an outlet 12 for paper is provided between the forward edge of such bottom and the lower edge of the front 1 of the casing. Back of the said outlet the starter is mounted upon the inner surface of the bottom, with capacity to slide forward and backward thereon.

The starter consists of a bar 13 resting upon the said inner surface, and extending transversely of the case, a paper-engaging strip 14, a bracing-strip 15, and a thumb-screw 16 and nut 17. The paper-engaging strip 14 is mounted upon the forward edge of the bar 13, in a substantially upright position, it inclining slightly forwardly and upwardly. The inclination tends to deflect the edge of a flap downward when the strip engages with such edge in the movement of the starter toward the front. The bracing-strip backs up the strip 14, as shown in Fig. 1. The stem of the thumb-screw 16 extends up through a slot 18 in bottom 4, and through holes in the bar 13 and base portion of the bracing-strip 15, the nut 17 resting upon the top surface of said base-portion. The bracing-strip is thereby se-

cured in place upon the bar, and the starter in its entirety is held in working position. The slot 18 in the bottom 4 extends in the direction from front to rear, and the head of the thumb-screw projecting below the bottom 4 constitutes a handle by means of which the starter may be operated, so that thereby it may be slid forward and backward within the cabinet.

At the front of the case is a stationary narrow paper-supporting shelf 19 extending transversely of the cabinet, and at the rear is located a wider stationary paper-supporting shelf 20, which is inclined forward and downward. The bundle of paper comprising a stack or pile of sheets is laid upon these two shelves, as shown. The shelves support the stack at the front and rear, but the space intervening between the shelves leaves the intermediate portion of the stack without immediate support, so that such portion of the stack bulges downward, as shown in Fig. 1. A follower 21 rests upon the top of the stack. This follower is movable vertically within the case, and descends as the paper is withdrawn from the cabinet and as the stack in consequence decreases in height. By means of the follower the sheets are pressed toward the bottom of the cabinet.

To indicate the quantity of paper within the cabinet at any particular time, the cabinet is provided with an indicator that is operatively combined with the follower so as to be actuated as the follower moves up or down. The said indicator constitutes a separate improvement or invention, and is not claimed herein. The details of the indicator-devices are as follows: The indicator consists of a finger 22 which is mounted by means of vertical pivots 22^a, 22^a, in a small bracket 23 that is affixed to the upper portion of the case, within the latter, at the front. The forward or indicating end of such indicator is located in close proximity to a horizontal series of holes 24, 24, etc., in a curved forward swell 25 of the front 1 of the case. The indicator is engaged by an arm 26 projecting rearward from the upper end of an upright shaft 27 occupying a narrow, vertically-elongated chamber 28 in a forwardly bent portion of the front of the case. This shaft is journaled at its upper end in the bracket 23, and at its lower end in the bottom of the said chamber 28. It is angular in cross-section, and is twisted, so that the edges form in effect spiral threads. A U-shaped piece 29 has holes in its two limbs, which holes receive the shaft 27 within them, and fit its cross-sectional contour. Such piece constitutes in effect a nut. It is movable upon the shaft 27, up and down thereon, and when it is moved up or down it acts as a nut to produce a turning movement of the shaft. As the shaft turns, it actuates the indicator, swinging it from one side toward the other. The follower 21 is in pivotal engagement with the piece 29, as by the latter having one limb thereof extended through a slot 30 in the forward portion of the follower, and its bend encircling the roll 31 into which the said forward portion of the follower is formed. Consequently the follower 21 is free to swing relative to the piece 29 so as to accommodate itself to the top of the stack of paper, while when the follower ascends and descends it takes the piece 29 with it, thereby turning the shaft 27 and actuating the indicator. The position of the indicator 22 as viewed through the respective holes 24 discloses the quantity of paper contained within the cabinet, or its exhaustion. The rear portion of the follower is guided in the up and down movements of the follower, by means of a wire 32 affixed thereto with its ends projecting at the rear of ribs 33, 33, on the ends 3, 3, of the case.

The construction described renders it possible, when the cabinet is open, to lift the follower 21 and place a stack of paper between the follower and the two shelves 19, 20, and at any time when the cabinet is open to add a greater or less number of sheets to the quantity inside the cabinet, merely by slipping the fresh supply into place between the follower and the stack already within the cabinet. Any desired quantity may thus be added, without it being necessary to remove any remainder that may already be in the cabinet. In thus introducing additional supplies, the fresh units are merely laid in place, without it being necessary to interlock them with any of the units already in the cabinet.

Fig. 3 shows a paper unit a consisting of a single sheet having a portion thereof folded back to produce a flap a'. For convenience, the stack in Fig. 1 is represented as composed of single sheet units on the order of that of Fig. 3. Fig. 4 shows a paper unit consisting of a single sheet doubled upon itself to produce two thicknesses a^2, a^2, and both thicknesses folded to produce the flap a^3. The number of sheets composing a unit may be greater than two, especially when the cabinet is built to serve as a slot machine.

The flaps of the units making up a stack contained within the cabinet all face downward, the free edges of the flaps being turned toward the back of the case. The distance between the shelves 19, 20, is such that the free edge of the flap of the bottom unit is unsupported and is permitted to drop. Consequently, when the starter is retracted into its position shown in Fig. 1, such edge of the said flap falls in front of the starter. If, now, the starter is advanced toward the front of the cabinet, it will en-

gage the said edge, and push the flap forward, so that the edge will be carried to the outlet 12 and caused to project therethrough into position to be grasped. If now the starter should be moved rearwardly and then immediately pulled forward again, without the partly leading protruding unit being pulled out of the cabinet, the upper edge of the starter will merely slide along the under surface of the main portion of such unit. Such portion will intervene between the starter and the next succeeding unit. Consequently the flap of the latter will be held up, and the starter cannot engage therewith. Movement communicated to the starter will merely cause it to slide back and forth under the main portion of the bottom unit, which has been placed in condition to be withdrawn, but without any effect until such unit has been withdrawn, whereupon the flap of the next unit will fall in front of the starter when the latter occupies its fully retracted position.

To prevent the edge of the flap from working in between the starter and the bottom 4, the said bottom is formed with a series of grooves 34, 34, etc., in its upper surface, extending from front to rear, and the starter-strip 14 is furnished with a series of pins 35, 35, etc., or other projections entering the said grooves. The said pins bridge the interval between the starter and the bottom 4, and prevent the edge of a flap from entering into such interval.

The bulging of the stack downward between the supporting shelves causes a tendency of the flap of the bottom unit to spring downward into the position occupied by it in Fig. 1. In case the withdrawal of the bottom unit should take place while the starter is in its advanced position, the flap of the succeeding unit will fall upon the top of the starter. In the next rearward movement of the starter to its position in Fig. 1 the top part of the starter will sweep under the flap, pressing the bulge upward. The frictional engagement of the top of the starter with the flap during this movement, will tend to work the flap loose from the remainder of the second unit, in case it tends to cling thereto. After the starter passes, the spring of the bulge downward will tend to throw down the flap. The weight of the stack and follower keeps the stack compact and forms the bulge thereof. In the most forward position of the starter, which is determined by engagement of the stem of the screw 16 with the corresponding end-wall of slot 18, the starter is separated from the shelf 19 by a narrow space, permitting the withdrawal of the leading unit.

The invention is not restricted to the precise form and constructional details which are shown in the accompanying drawings.

It will be observed that the respective units of the stack of toilet-paper are individual and unconnected to one another. In other words they are not interleaved, interfolded, or otherwise engaged with one another, and the leading or bottom unit is not required, in being withdrawn, to draw the flap of the next succeeding unit into position to be grasped, as in the case of packaged toilet-paper at present in the market. The toilet-paper shown and described herein is the subject of a separate application for patent.

What is claimed as the invention is:—

1. In a dispensing cabinet, a case having a restricted outlet, rests for a mass of sheet-units adjacent the said outlet, separated by an opening which permits an unsupported portion of the said mass between the rests to bulge through the opening so as to present a folded-back flap on the leading unit in the path of a starter, and a starter outside said rests slidable across said opening and the said bulging intermediate portion and operating to swing the said flap into position at the outlet to be grasped by hand for the withdrawal of the sheet-unit.

2. In a dispensing cabinet, a case having a restricted outlet, stack-supporting shelves at front and rear above the said outlet and separated by an opening through which an intermediate portion of the stack of sheet-units may bulge between said shelves so as to present a folded-back flap on the bottom unit in the path of a starter, and a starter adapted to be reciprocated below said opening to make contact with the bulging intermediate portion of the mass and to deflect such flap into the outlet into position to be grasped by hand for the withdrawal of the sheet-unit.

3. In a dispensing cabinet, a case having a restricted outlet, stack-supporting shelves at front and rear above the said outlet and separated by an opening permitting the intermediate portion of the stack to bulge downward and through which a folded-back flap on the bottom unit of said stack may enter into the path of a starter, and a starter adapted to be reciprocated below said opening and in such reciprocation engaging such flap and turning it into the outlet.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES L. HILDEBRAND.

Witnesses:

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