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D. W. HUDSON

NAPKIN DISPENSING DEVICE

Filed April 27, 1922

FIG. 1.

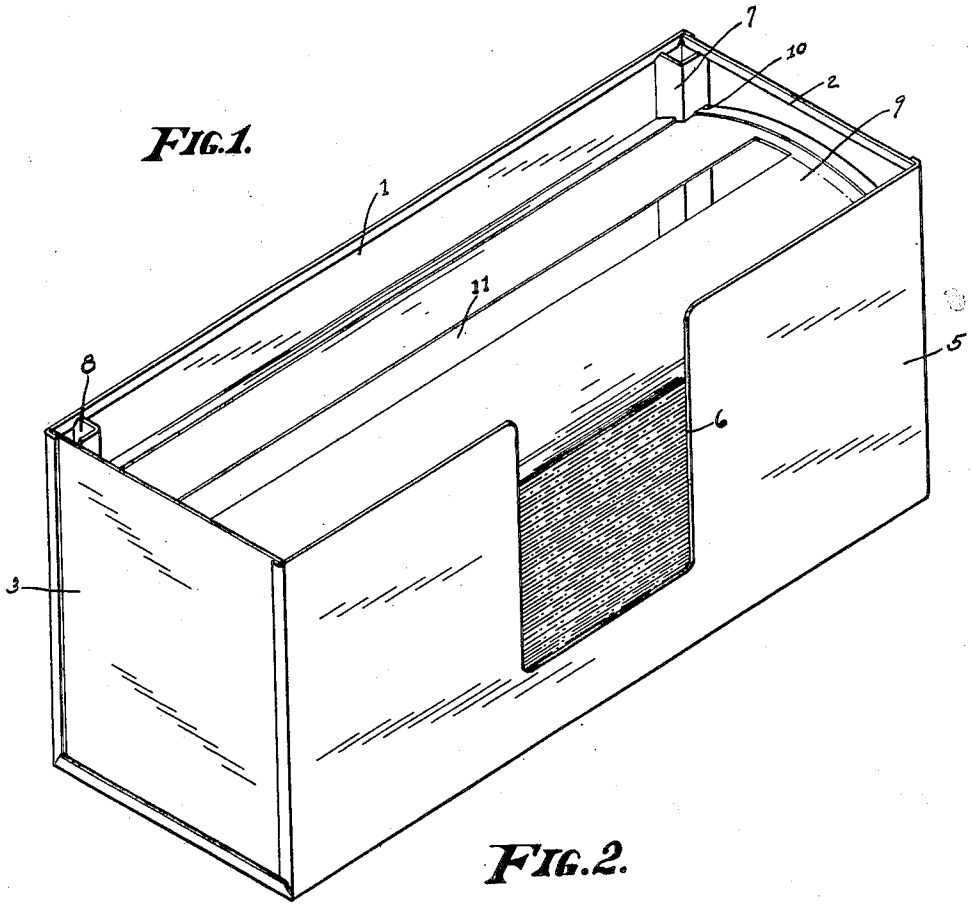
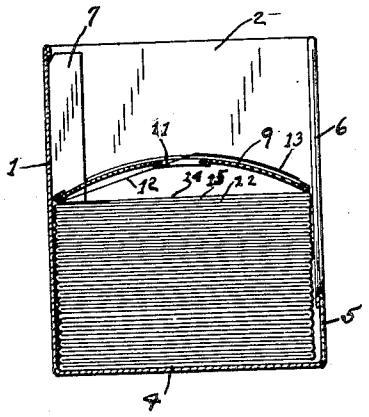


FIG. 2.



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UNITED STATES PATENT OFFICE.

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NAPKIN-DISPENSING DEVICE.

Application filed April 27, 1922. Serial No. 556,933.

To all whom it may concern:

Be it known that DAVID WILLIAM HUDSON, a citizen of the United States, residing at Green Bay, county of Brown, and State of Wisconsin, has invented new and useful Improvements in Napkin-Dispensing Devices, of which the following is a specification.

This invention relates to improvements in napkin dispensing devices. The apparatus disclosed herein may be used for dispensing interfolded sheets of flexible material such as paper towels, toilet paper, and napkins, but for reasons hereinafter to be specified, the device is peculiarly adapted for dispensing napkins and the like.

It is an object of this invention to provide a napkin dispensing case of similar construction, whereby the napkins withdrawn from the case will be, at the time of withdrawal, under substantially constant pressure. The device hereinafter to be disclosed is so arranged that individual napkins are drawn by the user from the top of an interfolded stack disposed within a case. Means is provided for exerting a constant downward pressure upon the stack or pile of interfolded sheets, and inasmuch as each sheet is drawn from the top of the pile, the pressure upon each successive sheet at the time of withdrawal must necessarily be constant regardless of the number of sheets remaining in the pile or the weight of such sheets.

It is a further object of this invention to provide means for applying pressure to the top of a pile of interfolded sheets, whereby a single sheet may readily be withdrawn from said pile without interference from said pressure applying means, and without danger of tearing the sheet withdrawn.

Further objects of this invention are to provide a napkin dispensing case which can readily be filled, which is particularly adapted for use with interfolded sheets, which has no operating mechanism to get out of order, and which affords opportunity for visually ascertaining at any time the degree to which the dispensing device remains supplied with napkins.

In the drawings:

Figure 1 is an isometric view of a device embodying this invention.

Figure 2 is a transverse vertical section through the same.

Like parts are identified by the same reference characters throughout the several views.

The container body of the device includes a rear wall 1, end walls 2 and 3, a solid bottom 4, and a front wall 5 cut away at 6 in the manner indicated in the drawings. The opening shown at 6 serves to permit the operator to fill the case readily by maintaining his fingers in sustaining position beneath a pile of interfolded sheets while lowering said sheets into the case. Said opening also serves to permit the operator to see at a glance whether or not the case needs to be replenished with napkins.

At its corners, and particularly at its rear corners, the spacing members 7 and 8 are provided. The length of the container is so proportioned to the length of the interfolded sheets to be dispensed therefrom that such sheets may be disposed between members 7 and 8. In other words, the interior length of the container exceeds by the width of members 7 and 8 the length of the sheets to be dispensed therefrom.

Disposed within the container, and freely removable therefrom, is the gravity actuated plate 9 which is perferably constructed, as shown, to conform to a segment of a cylinder. The rear corners of plate 9 are cut away at 10 to accommodate the guides 7 and 8. As is clearly apparent in Figure 1, the ends of plate 9 extend beyond said guides to the end walls 2 and 3 of the container. The plate 9 is provided with a centrally disposed, longitudinally extending slot 11 through which the interfolded sheets are withdrawn in the operation of the device.

In Figure 2 the single line 12 represents the edge of a napkin or similar sheet of material, the side margin 13 of which is projected through the opening 11 in plate 9, and lies conveniently at hand upon the top of said plate. The sheet 12 of material is folded as shown, and included in the fold thereof is the end 14 of the next sheet in the series. Within the fold of sheet 14 and adjacent the lower portion of sheet 12 lies the end 15 of the third sheet in the series. This interfolded relation, however, is well known and need not further be discussed here.

The arrangement is such that when the end 13 of sheet 12 is grasped and sheet 12 is pulled from the container, the end 14 of the second sheet will be caught in the fold of sheet 12 and will be drawn upwardly through the opening 11 where it will be exposed for use subsequent to the complete withdrawal of sheet 12. The upwardly

bowed or cylindrically formed pressure plate 9 applies pressure to the stack of sheets only adjacent their folded margins, whereby as soon as the withdrawal of any sheet is commenced, said sheet will immediately be relieved of pressure, the space within the cylindrically bowed pressure plate 9 affording room for the bending of the material of the adjacent sheet, whereby the withdrawal of the interfolded end of said adjacent sheet through the slot 11 may readily be effected.

As each sheet is withdrawn to the point indicated in Figure 2, so that one of its margins lies upon the outside of the pressure plate 9, it will be noted that the exposed margin of said sheet falls flat upon the gently rounded surface of the pressure plate. The curve of said plate facilitates the grasping of the sheet, enabling the user to obtain a firm hold upon the sheet despite the smoothness of the surface upon which the sheet is at rest.

In devices hitherto constructed for similar purposes, the sheets have commonly been withdrawn from the bottom of the device, and the weight upon the sheet withdrawn is varied in accordance with the height of the stack of sheets superimposed thereon. At times when such containers were completely filled with sheets, the pressure has been such that the sheets have torn readily during the manipulation necessary to effect their removal. Furthermore, under such conditions the pressure of the superimposed sheets remained until the sheet was entirely withdrawn from the case. Containers of the type referred to have the further disadvantage that they are ordinarily so constructed that it is difficult to fill them with a new charge of interfolded sheets.

In using the type of containers disclosed herein the pressure plate 9 is readily removed when it is desired to insert a fresh charge of interfolded sheets. The use of a pressure plate is desirable in order to obtain the greatest service from a container of a given capacity. Without the pressure plate the interfolded sheets tend to expand, and it will be obvious that by maintaining them under slight compression a far greater number can be stored in a given container.

The pressure plate 9 being removed from the container, a pile of sheets may be placed therein, the opening 6 permitting the fingers supporting said pile to remain in place during the introduction of the pile into the container. The pile of sheets is positioned within the container between the guides 7 and 8, the ends of the container being thereby left unobstructed.

When the sheets are in place within the container, the pressure plate 9 is restored to its place upon the top of the pile, and the free end of the top sheet of the pile is passed through slot 11, which is of sufficient length to permit the free passage of the sheet therethrough. When the projecting end of a sheet is seized and said sheet is withdrawn from the pile, the cylindrically curved pressure plate 9 maintains its constant pressure upon the remaining sheets of the pile while relieving the first sheet from pressure as soon as its withdrawal has been commenced. As previously stated, the withdrawal of each of the interfolded sheets of the pile is adapted to bring forth, through slot 11, the free margin of the following sheet in the series. It will be obvious, therefore, that the objects specified for this invention are satisfied by the device above described.

It has been indicated that this device is particularly suitable for napkins and the like. It is equally well adapted for use with paper towels but is not as suitable for dispensing towels since the wet hands of the user would be apt to drip water through slot 11.

I claim:

1. A dispenser for interfolded sheets, said dispenser including a receptacle adapted to permit the withdrawal of a sheet from the top of an interfolded pile therein, and a gravity actuated pressure device mounted for movement within the receptacle and provided with an opening adapted to permit the withdrawal of sheets therethrough.

2. A container for interfolded sheets of material, said container including a receptacle, and means slotted to permit the withdrawal of sheets therethrough for maintaining a substantially constant pressure upon sheets within the receptacle.

3. A dispenser of interfolded sheets of material including a receptacle, means for positioning interfolded sheets intermediate of the ends thereof whereby an unoccupied area is left adjacent each end, and a slotted pressure plate guided for vertical movement within the receptacle, the portions of said plate upon either side of the slot therein being joined above the unoccupied areas adjacent the ends of the receptacle.

4. A dispenser for interfolded sheets of material including a receptacle, means for positioning the material intermediate of the ends of said receptacle, a pressure plate in the receptacle arranged to maintain the material therein under pressure, said plate being cylindrically bowed, and means for permitting the withdrawal of single sheets of material from the receptacle.

5. A napkin dispenser including a receptacle open at its top, guides spaced from the ends of said receptacle and adapted to position interfolded material centrally therein, and a pressure plate cylindrically bowed about an axis parallel with the folded margins of material contained in the receptacle, said plate being provided with a slot likewise parallel to said margins of a length

to permit the withdrawal of sheets of material therethrough.

6. A dispenser for interfolded sheets of material including a receptacle provided with an open top and an opening in its face, guides within the receptacle adapted to position material intermediate of the ends thereof, and a pressure plate within the receptacle cylindrically curved about an axis parallel with the folded margins of the sheets therein, said plate being provided with a slot intermediate of its sides, whereby the withdrawal of sheets from beneath said plate is facilitated.

7. A dispenser for interfolded sheets of material including a rectangular receptacle open at its top, and a transversely bowed and longitudinally slotted pressure plate arranged for free vertical movement within the receptacle, whereby material therein is maintained under constant pressure equal to the weight of said plate.

8. A dispenser for paper napkins including a receptacle open at its top, and a gravity actuated pressure device guided for vertical movement within the receptacle and provided with an opening adapted to permit the withdrawal of napkins therethrough.

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