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NAPKIN DISPENSERS HAVING MEANS FOR FACILITATING WITHDRAWAL

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FIG. 1

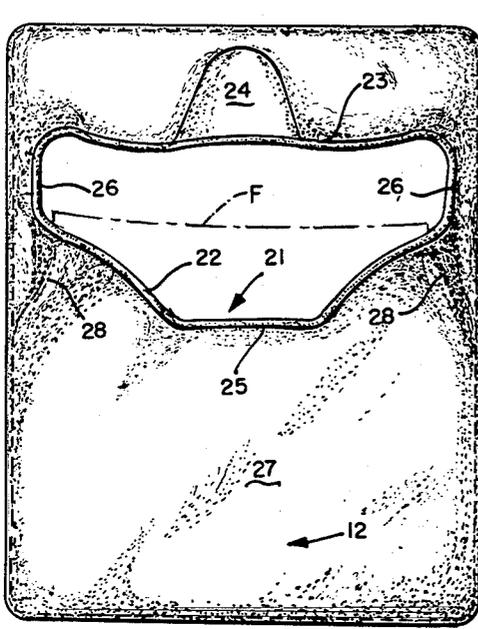


FIG. 2

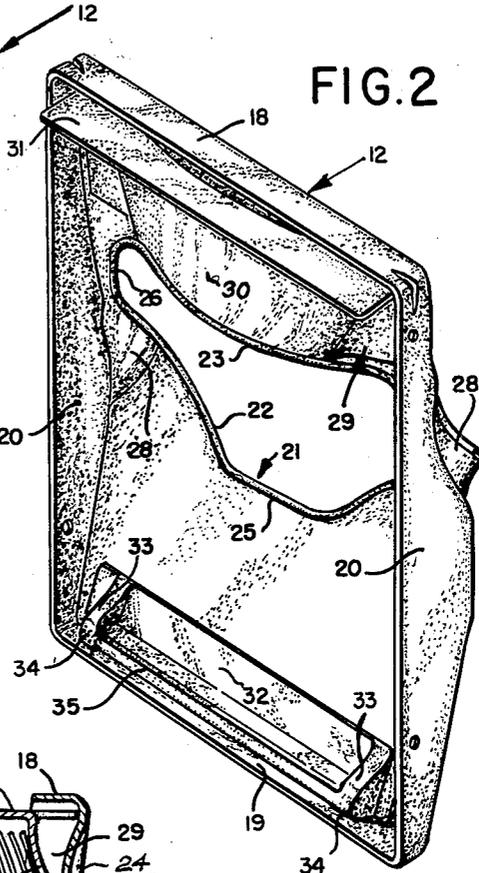
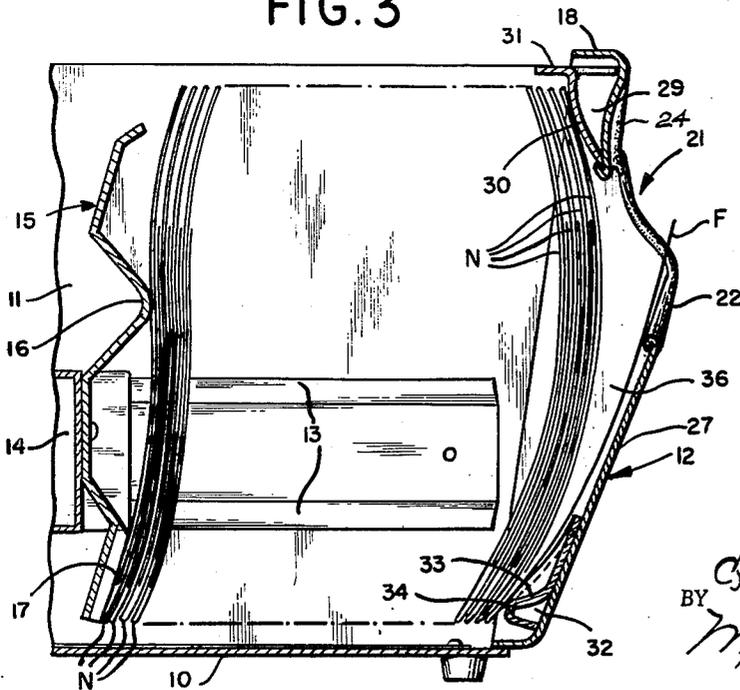


FIG. 3



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1

2

3,203,586

NAPKIN DISPENSERS HAVING MEANS FOR FACILITATING WITHDRAWAL

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2 Claims. (Cl. 221-55)

This invention relates to improvements in napkin dispensers having means for facilitating withdrawal.

The present invention relates more particularly to that type of paper napkin dispenser which is used in cafeterias or other locations where a rather large stack of napkins must be provided, the napkins being of a type which are so folded as to present upstanding front flaps which are shorter than the rest of the napkin to present a free upper horizontal "tab" edge located at the dispensing opening which is positioned to be grasped by the user. In this type of dispenser it is important that the paper napkins be maintained in proper dispensing position up to the last few napkins, and it is also important that this be accomplished without imposing any undue amount of friction on the napkins to interfere with withdrawal. Problems have frequently been encountered in cafeterias where the patron moving along in line is likely to withdraw a napkin sidewise rather than forwardly from the front of the dispenser. In the past this type of withdrawal has commonly resulted in tearing of the napkin.

It is a general object of the present invention to overcome the above-mentioned difficulties by providing a napkin dispenser having a novel type of dispensing front with novel projections from its inner surface which control the position and amount of friction on the napkins and ensure proper withdrawal regardless of the direction of pull.

A further specific object of the invention is to provide a device of the class described having a novel dispensing front so constructed as to cause the front pull flap of the forwardmost napkin to separate by gravity in a forward direction for easy grasping.

A further object of the invention is to provide a device as above described having means for preventing the last several napkins in the dispenser from riding out in a bunch.

A still further object of the invention is to provide a napkin dispenser having a novel upper adaptor member above the dispensing opening which is shaped to prevent upward movement of the napkins and also to apply regulated frictional contact only.

A further more specific object of the invention is to provide a cabinet having a bottom adaptor below the dispensing opening shaped in a novel manner to frictionally contact the lower portions of the napkins only at spaced points, and shaped to maintain the lower portions of the napkins in a rearwardly retarded position so that when the upper portions are urged forwardly by the carriage there will be a natural tendency for the free "tab" edge of the pull flap to separate in a forward direction for easy grasping.

With the above and other objects in view, the invention consists of the improved napkin dispenser having means for facilitating withdrawal, and all of its parts and combinations, as set forth in the claim. In the accompanying drawing, illustrating one complete embodiment of the preferred form of the invention, in which the same reference numerals designate the same parts in all of the views:

FIG. 1 is a front elevational view of the dispensing front;

FIG. 2 is a perspective view looking at the inner side thereof; and

FIG. 3 is a fragmentary longitudinal vertical section through the forward portion of the cabinet.

Referring more particularly to the drawing, the cabinet is preferably formed of sheet metal and includes a bottom 10, side walls 11, and a dispensing front 12. Secured to the inner sides of the side walls 11 are tracks 13 on which the slide members 14 of a carriage ride. The carriage supports a pusher plate 15, there being means, of any known type, for causing the pusher plate to constantly urge the napkins in a forward direction. This may be means similar to that illustrated in companion application of Edwin A. Filipowicz, Serial No. 255,614 filed February 1, 1963. The pusher plate includes a horizontal bulge 16 above the tracks and horizontally spaced knurled projections 17 below the track. The projections 17 are vertically disposed near opposite sides of the cabinet to apply friction and pressure only at horizontally spaced locations. The knurled projections 17 are positioned to coact with similarly spaced and located projections on the lower portion of the dispensing front, as will be hereinafter described.

The dispensing front or panel 12 is preferably formed of a sheet metal stamping which is rectangular in the view of FIG. 1 and which has inwardly projecting edge flanges consisting of an upper flange 18, a lower flange 19 and side flanges 20, the latter being somewhat triangular in plan view, as shown in FIG. 2.

The front is cut out as at 21 to provide a dispensing opening, the margin of which is preferably bent inwardly and around in the form of a bead, as at 22. The upper margin 23 of the dispensing opening is somewhat concave in form, as shown in FIG. 1. Above the margin 23 the upper portion of the dispensing front is flat, except for a thumb recess 24 which facilitates the grasping of the "tab" edge of the forwardmost napkin. The lower margin of the dispensing opening is generally U-shaped, as at 25, and there are relatively short rounded side marginal portions 26. Below the dispensing opening the metal of the dispensing front is generally flat and angled upwardly and outwardly at an acute angle to the vertical, as at 27, there being rounded contours 28 which round down to the plane of the margins 26.

Secured to the inner side of the dispensing front above the dispensing opening, by welding or other suitable means, is a sheet metal adaptor 29. This adaptor is convex, as at 30, to provide a bulge which projects inwardly its maximum distance at a point intermediate the width of the adaptor and intermediate the width of the cabinet. The upper edge of the adaptor is flanged inwardly, as at 31, to provide a top shoulder beneath which the upper edges of the forwardmost napkins are guided, said shoulder preventing the forwardmost napkins from riding upwardly when a napkin is being pulled out.

A lower adaptor 32 is welded or otherwise secured to the lower portion of the inside of the front. This adaptor is shaped to provide horizontally spaced, rearwardly projecting shoulders 33, the lower portions of which are rounded outwardly, as at 34, to project rearwardly, and said rounded lower portions being connected by a horizontal rib 35. The shoulders 33 are located to substantially match the position of the shoulders 17 on the pusher plate 15.

In use, a stack of napkins N is constantly urged by the pusher plate 15 toward the front dispensing wall, as shown in FIG. 3, the upper portion of the forwardmost napkin being urged against the convexity 30 of the adaptor 29 and the lower portion of the forwardmost napkin being urged against the rearwardly projecting portions 34 of the spaced shoulders 33 of the adaptor 32. Because of the forwardly bulging form of the lower portion of the dispensing front, there is no support for the napkin intermediate its height and this part tends to bulge

3

into the space 36 (FIG. 3). Due to the fact the entire dispensing front of FIG. 3 is mounted at about a 10° forwardly tilted angle, as shown in FIG. 3, there is a natural tendency for the front flap F of the forwardmost napkin to fall forwardly by gravity, with its free upper "tab" edge projecting through and above the dispensing opening for easy grasping. It is to be noted that the upper portion of the forwardmost napkin has friction applied to it only at a location midway of its width, due to the bulge of the adaptor 30, the rest of said upper portion being relatively free of friction. The lower portion has friction applied only by the spaced projections 33. Thus, when the forwardmost napkin is pulled out of the dispenser, it is necessary to overcome but a minimum of friction. Due to this fact and to the shape of the dispensing opening, including the roundings at 28, the napkin can be pulled out either sidewise or forwardly with a minimum of danger of being torn.

During an upward pull on the "tab" edge of the flap F of the forwardmost napkin, the latter napkin, as well as those immediately behind it, are prevented from riding upwardly by the flange 31 of the top adaptor.

By having the spaced lower shoulders 33 projecting rearwardly, as at 34, and by having the entire cabinet front tilted forwardly at a 10° angle, the lower portions of the forwardmost napkins are maintained in a rearwardly retarded position and the upper portions in a forwardly advanced position, making it easier for the flap F to separate forwardly by gravity to the position shown in FIG. 3. This is particularly important when dealing with napkins having upper and lower horizontal fold lines, each with an upwardly projecting front flap having a raw upper edge, the latter having less weight than a folded edge and therefore being more inclined to resist falling forward by gravity.

When there are only a few napkins left, the last few napkins will be gripped at the bottom, between the spaced shoulders 34 on the lower adaptor 32 and the spaced knurled shoulders 17 on the lower portion of the pusher plate. The latter are knurled to engage the rearmost napkin with greater friction and thereby prevent the last several napkins from riding up and coming out together in a bunch.

Various changes and modifications may be made without departing from the spirit of the invention, and all such changes and modifications are contemplated as may come within the scope of the claims.

What I claim is:

1. In a napkin dispenser of the type having a horizontally disposed container for receiving a stack of folded paper napkins of the type having an upstanding front pull flap of less height than the rest of the folded napkin, said flap having an upper tab edge, and said dispenser being of the type having an upright front dispensing panel for said container with a transverse dispensing opening intermediate its height with a lower margin, the improvement characterized as follows: said panel being bulged progressively farther outwardly from its bottom to said lower margin of the dispensing opening to accommodate a pull flap of the forwardmost napkin in a forwardly separated position with its tab edge projecting above the lower mar-

4

gin of the dispensing opening for easy grasping, means including horizontally spaced upright shoulders projecting inwardly from the inner side of the lower portion of said panel for maintaining the lower portions of the napkins in a rearwardly retarded position in the dispenser to thereby urge said pull flap to fall by gravity to said forwardly separated position, and a pusher plate mounted in the container for sliding movement and having horizontally spaced upright projections on a lower portion thereof positioned correspondingly to said horizontally spaced shoulders of the front panel to coact therewith in preventing the last several napkins from coming out simultaneously.

2. In a napkin dispenser having a horizontally disposed container for receiving a stack of folded paper napkins of the type having an upstanding front pull flap of less height than the rest of the folded napkin, said flap having an upper tab edge, and said dispenser being of the type having an upright front dispensing panel for said container with a transverse dispensing opening intermediate its height with a lower margin, the improvement characterized as follows: said panel being bulged progressively farther outwardly from its bottom to said lower margin of the dispensing opening to accommodate a pull flap of the forwardmost napkin in a forwardly separated position with its tab edge projecting above the lower margin of the dispensing opening for easy grasping, means including horizontally spaced vertical shoulders projecting inwardly from the inner side of the lower portion of said panel for maintaining the lower portions of the napkins in a rearwardly retarded position in the dispenser to thereby urge said pull flap to fall by gravity to said forwardly separated position, each shoulder projecting progressively farther rearwardly toward its lower end, and a pusher plate having a horizontal bulge opposite said dispensing opening and having spaced upright projections near its lower end positioned correspondingly to said horizontally spaced shoulders of the front panel to coact therewith in preventing the last several napkins from coming out simultaneously, portions of said pusher plate above and below said horizontal bulge being dishd inwardly away from the stack of napkins.

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