Aug. 28, 1928. 1,682,580

E. D. PRATT

METHOD AND APPARATUS FOR DISPENSING NAPKINS

Filed July 18, 1923

Fig. 1.

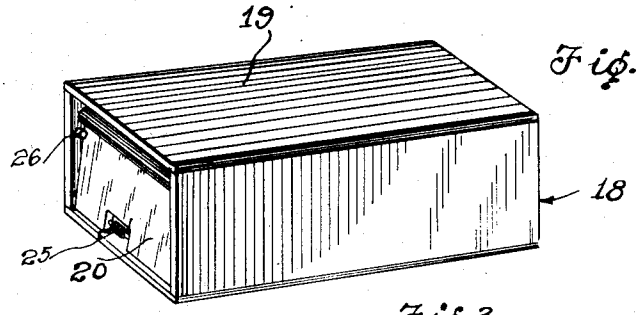


Fig. 2.

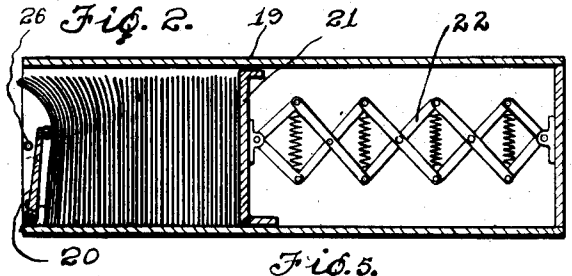


Fig. 3.

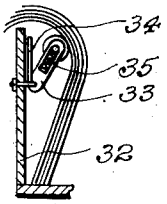


Fig. 9.

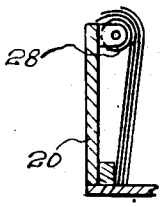


Fig. 4.

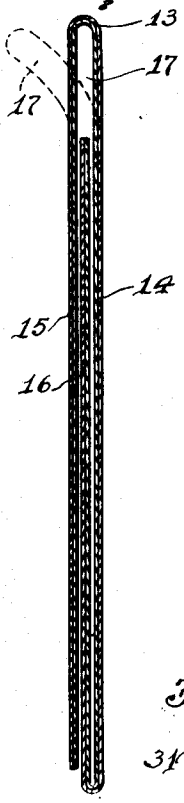


Fig. 5.

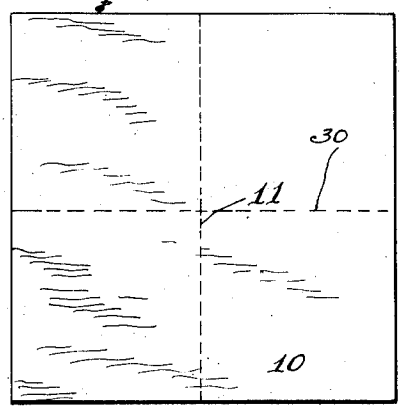


Fig. 6.

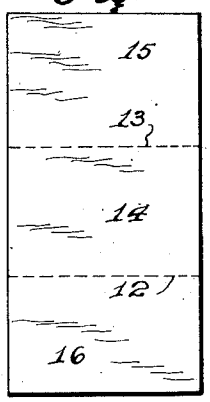


Fig. 7.

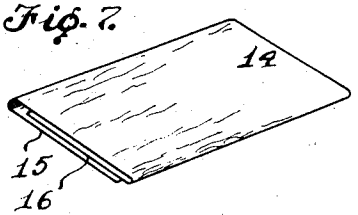


Fig. 8.

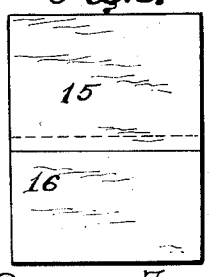
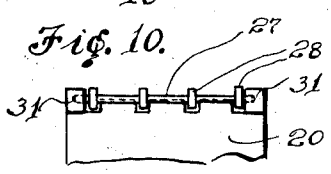


Fig. 10.



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UNITED STATES PATENT OFFICE.

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METHOD AND APPARATUS FOR DISPENSING NAPKINS.

Application filed July 18, 1923. Serial No. 652,400.

In restaurants where paper napkins are used, an undue number of napkins are wasted because the napkins are displayed and dispensed in such a manner that it is troublesome to select and withdraw one napkin from the stack. It is the object of this invention to obviate this waste by displaying and dispensing the napkins in such a manner that it becomes easy to grasp and withdraw one napkin out of the stack, speedily.

In the accompanying drawings which form a part of this specification Fig. 1 is a perspective view of the dispensing device filled with napkins. Fig. 2 is a longitudinal section thereof and Figs. 3 and 9 are modified constructions of the end of the dispensing device. Fig 4 is a sectional view of one of the napkins folded. Figs. 5, 6, and 8 illustrate the method of folding the napkins, Fig. 7 is a perspective of a folded napkin, and Fig. 10 is a fragmentary view, in elevation, of the end plate of the dispensing device.

My invention resides in the manner of folding the napkins in combination with the manner of displaying and dispensing them. I have discovered that when the paper napkin is folded twice, the folds being at right angles, the unit double fold edge formed thereby is stiff and does not cling to the adjacent napkin. The material contiguous to the edge is flexible, so that under the conditions under which I stack and display the napkins, the displayed strip of the napkin bends, giving each napkin a lip formation. This together with the stiffness of the unit double fold edge causes the displayed portions of the napkins to separate each from the other and thus make it possible for the user to grasp and withdraw one napkin out of the stack without any inconvenience or difficulty whatever.

The preferred manner of folding is illustrated in Figs. 4 to 8. Fig. 5 shows the unfolded napkin. The napkin 10 is first folded along the dotted line 11 into the form shown in Fig. 6. The napkin is now divided by lines 12 and 13 into a body portion 14, and upper flap 15, and a lower flap 16. The lower flap 16 is preferably shorter than the body portion 14, while the flap 15 may be the same length as or shorter than the body portion. The lower flap 16 is now folded over the body portion along the line 12 as shown in Fig. 8, and the flap 15 is folded over the flap 16 along line 13, thus giving the folded napkin as shown in Fig. 7. Fig. 4 shows a section of the folded napkin. 13 is a unit double fold edge and is the dispensing edge.

The same results may be obtained by merely folding the napkins twice, as indicated by line 30 in Fig. 5. A dispensing device is shown in Figs. 1, 2, and 3. It comprises a box 18 having a cover plate 19. The cover plate 19 is of the same length as the box. The end plate 20 at the dispensing end of the box is cut away so as to fall short of the height of the box. All other plates of the box are of the dimensions of the box. Thus all the edges of the napkins are completely enclosed and inaccessible to the user except the dispensing edge 13 of a small number of napkins disposed at the dispensing end of the box. Feeding means comprising a follow up plate 21 and extensible pressure exerting means 22 are enclosed within the box.

In order to minimize the frictional resistance to the removal of the napkins, the end plate 20 may be constructed in one of the manners shown in Figs. 2, 3, and 9. Fig. 2 shows the end plate 20 hinged and spring pressed toward the interior of the box by means of hinge 25, so that the end 20 is normally disposed at a slight angle to the bottom of the box. The upper edge of the end plate 20 is provided with two integral lugs 31. See Fig. 10. A rod 27 having discs 28 mounted thereon is pivoted in lugs 31. The discs 28 bear against the napkins. When the user grasps and withdraws a napkin, the slight pressure exerted by him acts against the pressure of the spring hinge 25, thus relieving the pressure exerted against it. At the same time the discs 28 and rod 27 are rotating, thus minimizing the frictional resistance to the withdrawal of the napkin. A teat 26 on one of the side plates of the box serves to prevent excessive movement of the end plate when the napkin is being withdrawn.

Fig. 3 shows another means for accomplishing the same end. The end plate 32 is normally fixed, a bracket 33 is pivotally mounted at each end of the plate 32, the leaf spring 34 serving to hold the bracket in yieldable position at an angle to the end plate. The bracket 33 is slotted, a spring and a rod and discs like that shown in Fig. 10 are mounted in the slot. A helical spring 35 is mounted in the slot, bears against the

end of the rod 27, and normally holds the rod 27 at the upper end of the slot. When a napkin is being withdrawn, the bracket is forced in the direction of plate 32 while the discs are rotated and at the same time forced downward against the pressure of spring 35, thus minimizing the pressure and friction against the napkin.

The structure shown in Fig. 9 is like that shown in Figs. 2 and 10 except that the end plate is fixed and does not yield when the napkin is being withdrawn.

When a plurality of napkins folded in the manner described above are stacked, the edges 13, because of their stiffness do not cling to each other. The strip of material 17 contiguous to the edge is yielding, so that when the napkins are stacked in the dispenser shown and in the manner shown the strip 17 bends and assumes a lip form as shown in Figs. 2 and 4. This makes it easy for the user to select and withdraw one napkin out of the stack, thus avoiding unnecessary waste.

The invention is not limited to the specific disclosure given herein. The essential principle of my invention resides in a method of dispensing paper napkins or similar sheet material wherein only a unit double fold edge of the sheet or napkin is made accessible to the user, and where they are stacked and dispensed in such a manner as to aid and take advantage of the tendency of the unit double fold edge of one sheet or napkin to separate from a similar double fold edge of the adjacent napkin.

I claim:

1. A device for dispensing paper napkins consisting of a casing, adapted to enclose a stack of folded napkins, means within the casing for applying a feeding pressure to the rear end of the stack, an end-plate shorter than the height of the casing mounted on the casing at the dispensing end thereof and normally inclined inwardly to engage and apply a counter-pressure on said stack between the upper and lower edges thereof to cause a folded edge of one of the napkins to lip-over said end-plate, and means cooperating with said end-plate to facilitate withdrawal of the napkin having such lipped-over edge.

2. A device for dispensing paper napkins consisting of a casing open at the dispensing end, pressure feeding means disposed within the casing, an end plate shorter than the height of the casing oscillatably and yieldingly mounted on the casing at the dispensing end thereof and normally inclined inwardly of the casing, a projection on the side plate of the casing disposed in the path of the end plate, and antifriction means mounted on said end plate.

In testimony whereof I hereunto affix my signature.

EDWIN D. PRATT.