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2,981,408

DISPENSER FOR PAPER SHEETS

Filed Feb. 6, 1959

2 Sheets-Sheet 1

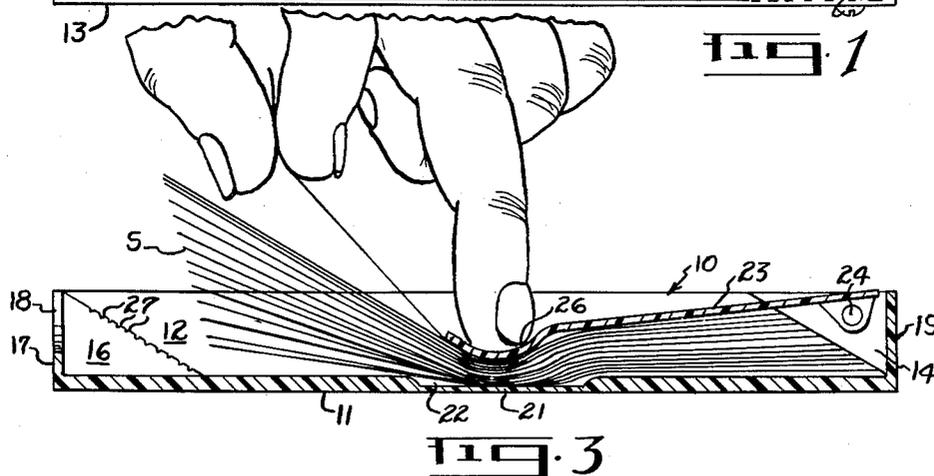
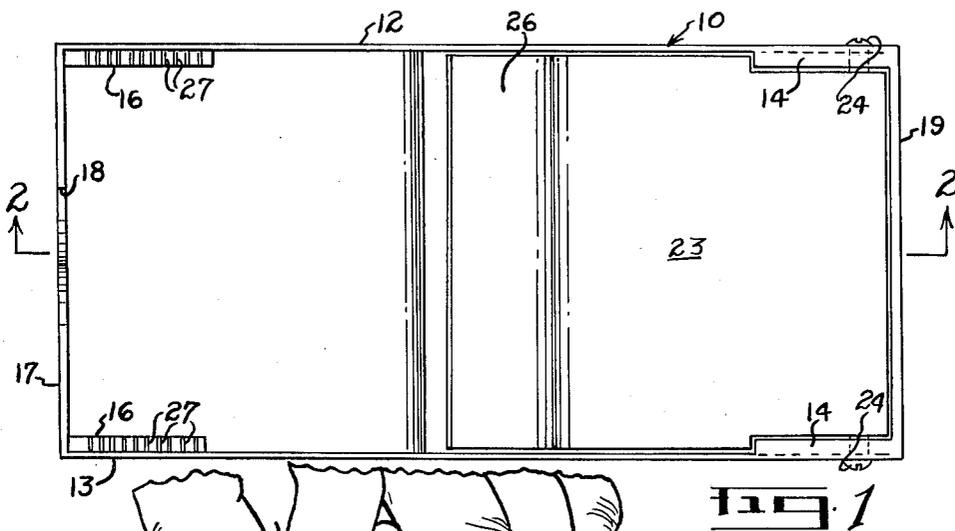
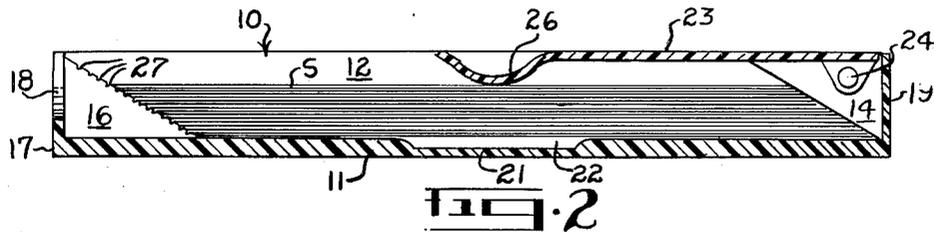


Fig. 1

Fig. 3

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2 Sheets-Sheet 2

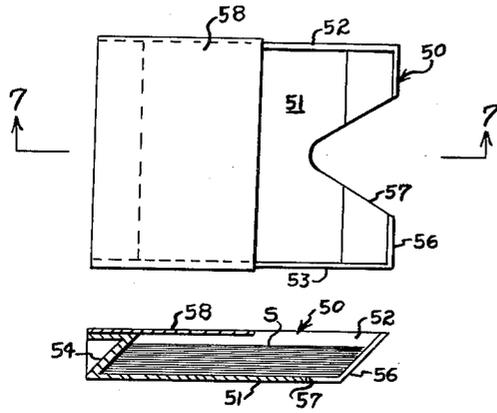


FIG. 6

FIG. 7

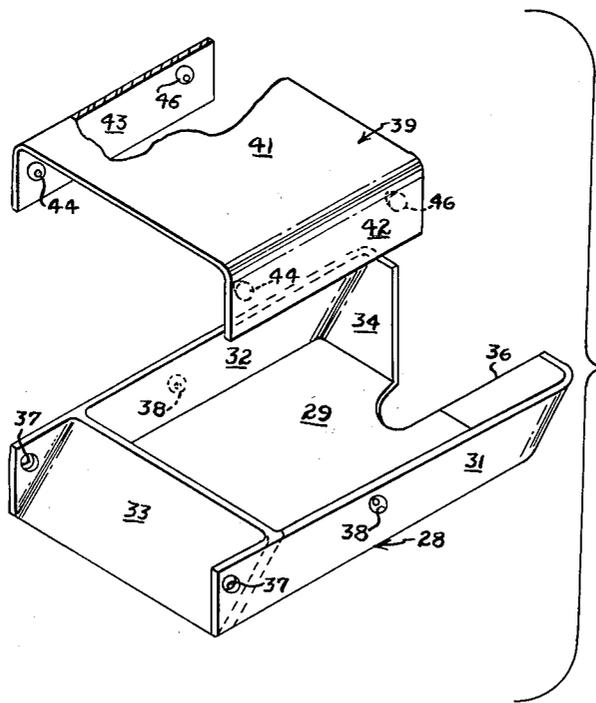


FIG. 4

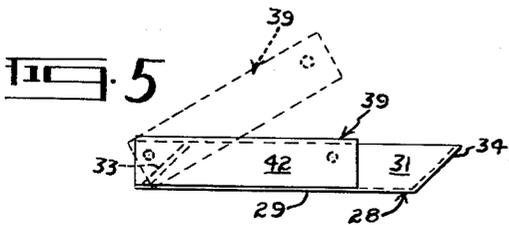


FIG. 5

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2,981,408

## DISPENSER FOR PAPER SHEETS

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4 Claims. (Cl. 206—73)

This invention relates to a dispenser for paper sheets and more particularly to a dispenser in which a stack of paper sheets is loosely retained, ready for being removed one at a time.

Heretofore, in such dispensers for retaining paper sheets loosely, it has been common to have a forwardly inclined front end wall to permit the withdrawal of the uppermost sheet of the stack, but no inclined member adjacent the rear edge of the stack has been provided to maintain the forward edge in an inclined position. Thus, upon a settling of the paper sheet stack within the tray, the stack tended to assume a generally rectangular shape as viewed in side elevation.

It is an object of the present invention to provide a paper sheet dispenser having a rear stack engaging wall inclined forwardly in a generally parallel relation to the inclined front end wall. Thus, the stack of loosely arranged paper sheets is held in a generally parallelogram shape as viewed in side elevation with the uppermost sheet slightly advanced beyond the next lower sheet facilitating removal of the uppermost sheet in the stack.

It is a further object of this invention to provide a pivotally mounted cover having a downwardly extending projection or rib in contact with the stack of paper sheets intermediate to the ends thereof, with the support or bottom under the stack having a depression or lowered section intermediate the length of the sheets so that downward pressure on the cover pushes an intermediate portion of the sheets into the depression, thereby raising the front ends of the sheets fan-wise to permit the uppermost sheet to be easily grasped between the thumb and forefinger.

Features of my invention are shown in the accompanying drawings, forming a part of this application, in which:

Fig. 1 is a top plan view of an embodiment of my dispenser for holding a stack of paper sheets;

Fig. 2 is a sectional view taken generally along the line 2—2 of Fig. 1 and showing a stack of paper sheets in position within the dispenser;

Fig. 3 is a sectional view similar to Fig. 2 but showing the dispenser as it is used in the removal of the uppermost sheet of a stack;

Fig. 4 is an isometric view of a further embodiment of my dispenser, the cover shown removed;

Fig. 5 is a side elevational view of the dispenser shown in Fig. 4 with the cover indicated in full lines in lowered position on the dispenser, the dotted lines showing the open position thereof;

Fig. 6 is a top plan view of another embodiment of my invention embodying a paper sheet dispenser having a cover secured to the sides thereof; and,

Fig. 7 is a sectional view taken generally along the line 7—7 of Fig. 6.

Referring now to the drawings for a better understanding of my invention, and more particularly to Figs. 1—3, I show my paper sheet dispenser formed from a plastic material such as polyethylene, wood or metal, etc., and comprising a tray indicated generally by the numeral 10 having a bottom wall 11 on which a stack of paper sheets S is supported. Side walls 12 and 13 are secured to bottom wall 11 and extend generally perpendicular thereto.

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The stack of paper sheets S is supported on bottom wall 11 between side walls 12 and 13.

Inwardly extending positioning members 14 to guide and position the rear edge of the stack S are secured or formed integrally with side walls 12 and 13 and are inclined forwardly from bottom wall 11 as shown in Figs. 2 and 3. Thus, the rear edge of stack S engages the inclined surfaces of the positioning members and is inclined thereby. Inwardly extending front positioning members or guides 16 are secured to or formed integrally with walls 12 and 13 adjacent the forward ends thereof and are inclined forwardly from bottom wall 11 in the same direction as the rear members 14. The front members 16 may preferably be of a slightly greater forward slope from bottom 11 than rear members 14 in order to provide a better contact surface with the forward edge of the stack. Thus, the stack S of paper sheets is positioned between the front and rear positioning members 14 and 16, and the stack S assumes a generally forwardly pitched parallelogram shape as viewed in side elevation.

A front wall 17 joins side walls 12 and 13 adjacent the forward end of the tray and has a notch 18 centrally located therein between side walls 12 and 13. Notch 18 is of a sufficient size to permit the forefinger and thumb of a person to grasp the uppermost sheet of stack S. A rear end wall 19 extends between the side walls 12 and 13 adjacent the rear ends thereof.

Bottom wall 11 is formed with an elongated depression 21 extending the width of the bottom and located intermediate the length of the stack of sheets S to provide beneath the sheets S intermediate the ends thereof an interruption in sheet supporting surface for a purpose to be described further.

A cover 23 is pivotally mounted to side walls 12 and 13 on pins 24. Cover 23 pivots to open position to facilitate loading the tray with paper sheets. Gravity holds the cover in closed position, with the free end resting on the top of the stack of sheets. A downwardly extending transverse rib 26 is provided on the underside of cover 23 on the free end thereof and overlies the cavity 22. As shown in Fig. 3, when downward pressure is exerted against the free end of cover 23, the intermediate portion of the stack S is pressed downwardly into cavity 22 thereby moving the forward end edges of the stack S upwardly and tending to cause the forward ends of the sheets S to "fan-out" or separate. Therefore, the uppermost sheet of the stack S is easy to remove as the uppermost sheet is both raised and forwardly staggered relative to the next subjacent sheet. In the position of Fig. 3 the stack is a forwardly leaning parallelogram as viewed in side elevation with the forward ends of the sheets separated from each other. The front guide or positioning members 16 are serrated at 27 to catch the forward edge of the sheets as there is a tendency at times for some of the sheets below the uppermost sheet to slip forwardly from the dispenser with the uppermost sheet. Thus, when pressure is released from the forward end of cover 23 after the uppermost sheet is grasped, the remaining sheets S settle within the tray 10 and the uppermost sheet is then slid forwardly. Any other sheets tending to slide forwardly with the uppermost sheet are caught by the serrations 27.

Referring now to Figs. 4 and 5, I show a further modification of my paper sheet dispenser comprising a tray indicated generally by the numeral 28 and having a bottom wall 29 on which a stack of sheets is supported. Side walls 31 and 32 are secured to bottom wall 29 and extend perpendicularly thereto. The stack of paper sheets is supported on bottom wall 29 between side walls 31 and 32. The positioning means for the stack of sheets comprises a forwardly inclined rear wall 33 and a forwardly

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inclined front wall 34 arranged generally in parallel relation to each other. A notch 36 is centrally located in front end wall 34 and extends into bottom wall 29 to permit the lowermost sheets to be easily grasped. Notch 36 is of a size to permit a person to grasp the uppermost sheet between the thumb and forefinger. Openings 37 are provided adjacent the rear ends of side walls 31 and 32 and inwardly extending indentations 38 are provided in the outer surface of side walls 31 and 32 forwardly of openings 37.

A cover indicated generally by the numeral 39 is shown removed from tray 28 in Fig. 4 and comprises top wall 41 and side walls 42 and 43 extending downwardly therefrom. Inwardly extending pins 44 are provided on the inner surface of side walls 42 and 43 and are adapted to enter openings 37 so that cover 39 can be pivoted to an open position such as shown in dotted lines in Fig. 5. Pins 46 are also formed on the inner surface of side walls 42 and 43 forwardly of pins 44 and are adapted to snap into indentations 38 when cover 39 is closed. Sides 42 and 43 are flexible to a certain extent as the dispenser 23 is commonly formed of a plastic material such as polyethylene, and when the cover is closed, the sides 42 and 43 move outwardly until pins 46 engage indentations 38 at which time sides 42 and 43 return to their original position.

Referring now to Figs. 6 and 7, a further embodiment is shown in which the cover is secured to the dispenser and the dispenser preferably is formed of a paperboard material. The dispenser or tray is indicated generally by the numeral 50 and comprises a bottom wall 51 having side walls 52 and 53 extending upwardly therefrom. A rear end wall 54 extends between side walls 52 and 53 and is inclined forwardly from bottom wall 51. A front end wall 56 extends between the forward ends of side walls 52 and 53 and is inclined forwardly in generally parallel relation to rear end wall 54. A notch 57 is provided in front wall 56 for the same purpose as the notch in the embodiment shown in Figs. 4 and 5. A cover 58 is positioned over side walls 52 and 53 and may be secured thereto by gluing or other suitable securing means. The stack of paper sheets S placed in the dispenser shown in Figs. 6 and 7 assumes a general parallelogram shape as viewed in side elevation and the uppermost sheet of the stack may be easily withdrawn.

From the foregoing, it is understood that I have provided a paper sheet dispenser in which a stack of paper sheets is loosely positioned in parallelogram shape as viewed in side elevation. Positioning walls or guides are positioned adjacent both the front and rear edges of the stack of paper sheets and maintain the stack in generally parallelogram shape. The uppermost sheet of the stack may be easily removed one at a time by gripping it between the thumb and forefinger. The dispenser may be made of any desired type of material, plastic and paperboard materials being preferred. By having the stack of paper sheets maintained in a parallelogram shape as viewed in side elevation, the uppermost sheet is slightly advanced beyond the next lower sheet and thus presents an exposed edge which may be easily gripped.

If desired, the bottom support member may be provided with a depressed or lowered section of decreased thickness intermediate the ends of the stack of sheets. Thus, when pressure is exerted against the top of the stack over the lowered section, an intermediate portion of the stack is depressed and the forward edge of the stack is raised. While the stack may be depressed downwardly into the depressed section by any suitable means, such as by a finger, I provide a cover having a downwardly extending rib or projection thereon which may be positioned over the sheets with the projection disposed over the depressed section. Thus, upon exerting downward pressure on the free or non-pivoted end of the cover, an intermediate section of the stack is pushed downwardly into the space or cavity afforded by the depressed sec-

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tion, thus raising the ends of the sheets and tending to "fan-out" the forward end of the stack, making it easy to remove the uppermost sheet. The cover may be hingedly connected to pivot between open and closed positions to facilitate insertion of new sheets.

While I have shown my invention in several forms, it will be obvious to those skilled in the art that it is not so limited but is susceptible of various other changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations be placed thereupon as are specifically set forth in the appended claims.

What I claim is:

1. A dispenser for a stack of paper sheets comprising a bottom support member on which the sheets are supported, a pair of side supports extending upwardly from said bottom support member and adapted to receive the paper sheets therebetween, a rear positioning member inclined forwardly relative to the bottom support member and engaging the rear edge of said stack of sheets, a front positioning member inclined forwardly at about the same inclination as the rear positioning member and engaging the front edge of said stack of sheets to maintain said stack in the shape of a parallelogram as viewed in side elevation, said bottom support member having a depressed inner surface extending the width thereof and positioned intermediate the length of said stack, and means mounted on said dispenser and movable in a generally vertical direction, said means being positioned adjacent the top of said stack over the depressed surface whereby upon a downward pressure exerted on said means an intermediate portion of said stack is pushed downwardly in said depressed surface thereby separating the forward edges of the sheets to permit the uppermost sheet to be easily grasped between the thumb and forefinger.

2. The dispenser defined in claim 1 further characterized in that said means comprises a cover pivotally mounted on said side supports and extending therebetween, and a downward extending projection on said cover positioned adjacent the top of said stack over the depressed surface.

3. A tray for holding a stack of paper sheets comprising a bottom wall on which the sheets are supported, a pair of parallel side walls secured to and extending generally perpendicularly to the bottom wall and adapted to receive the paper sheets therebetween, rear and front positioning members engaging the rear and front edges, respectively, of the stack and being inclined forwardly relative to the bottom wall in generally parallel relation whereby the stack of sheets positioned within the tray assumes the shape of a forwardly leaning parallelogram as viewed in side elevation, a cover pivotally mounted adjacent its rear end to the side walls and extending between said side walls to cover the rear portion of said stack and aid in retaining the sheets in the tray and with its free forward end in contact with the stack of sheets, there being a depression in the bottom wall located generally beneath the free end of the cover, whereby upon pressing said free end onto the top of the stack of sheets the forward edges of the sheets separate in fan-like fashion, and said front positioning member having a central opening to permit the uppermost sheet of said stack to be easily grasped between the thumb and forefinger.

4. The tray defined in claim 3 further characterized in that said cover pivots between an open position to permit loading of the tray with paper sheets and a closed position in covering position over the stack.

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