May 5, 1959 A. F. WILLAT 2,885,112

SHEET PAPER DISPENSING DEVICE

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Fig. 8.

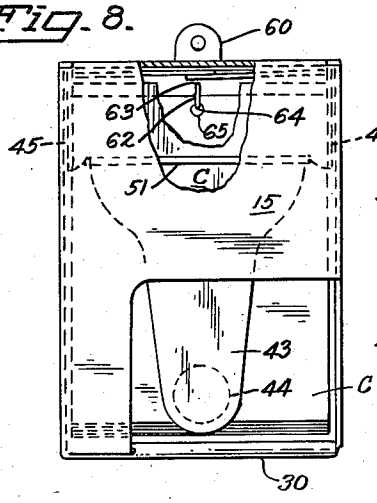


Fig. 7.

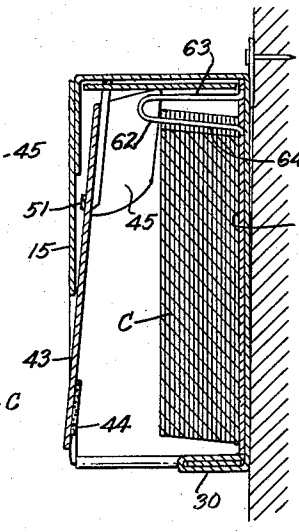
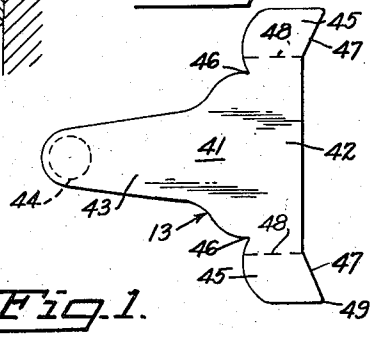


Fig. 2.



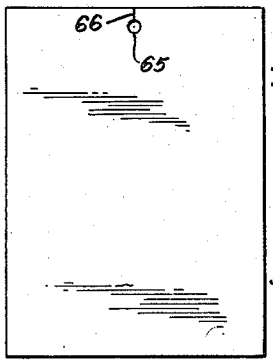
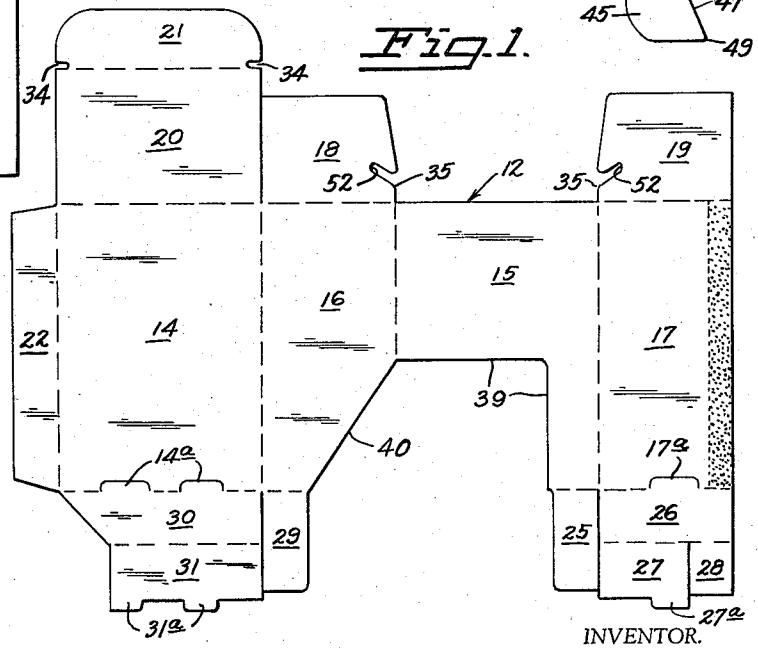


Fig. 9.

Fig. 1.



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SHEET PAPER DISPENSING DEVICE

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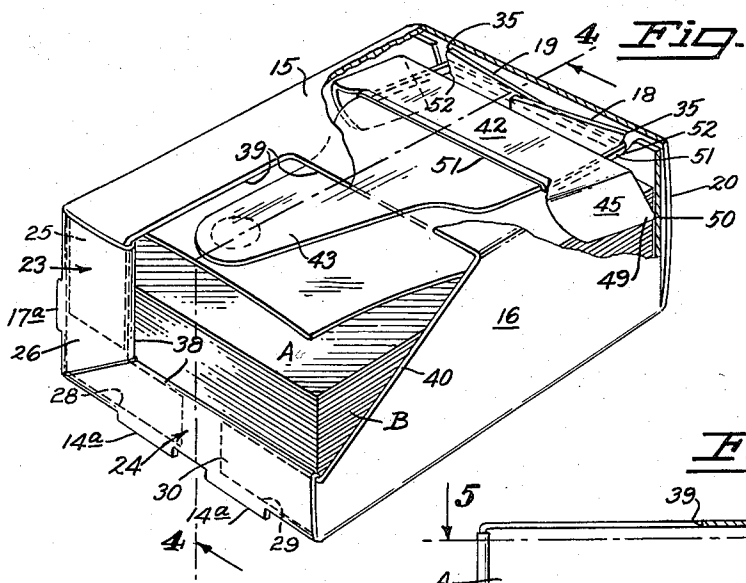


Fig. 3.

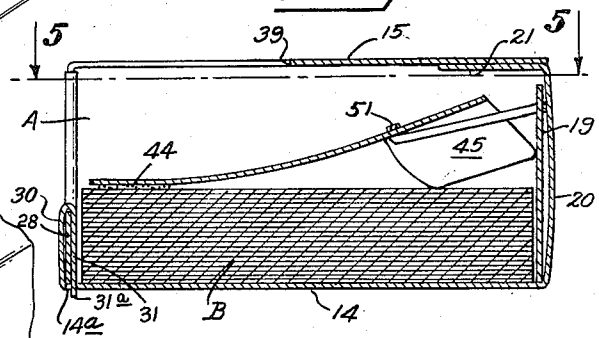


Fig. 4.

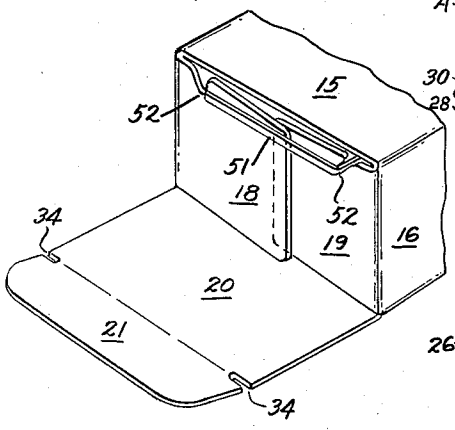


Fig. 6.

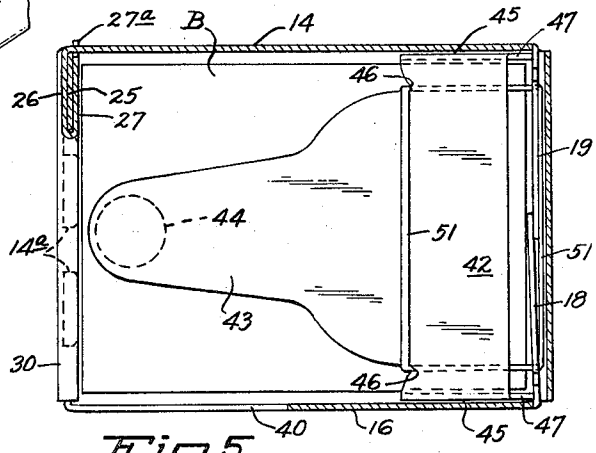


Fig. 5.

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2,885,112

SHEET PAPER DISPENSING DEVICE

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Application October 8, 1957, Serial No. 688,876

9 Claims. (Cl. 221—33)

This invention relates to dispensers for separate sheets of paper and more particularly relates to such dispensers in which separate sheets of paper may be dispensed from a stack in a box by finger manipulation.

In many relations it is desirable to dispense single sheets of flat paper from a stack thereof in a box which maintains the sheets in stacked form, such as in the kitchen, bathroom, garage or in such specialized uses as in barber shops, beauty salons, hairwaving operations, and the like. Advantages of dispensing the flat stacked sheets from a box are that they are maintained orderly and may be dispensed by one-hand operation, one sheet at a time.

Among the objects of the present invention are to provide a dispensing device for stacked single sheets of paper, which is simple and economical in structure, which will maintain the sheets in stacked form, shielded from soil and damage; to provide means for lifting a single sheet at a time from the stack by finger manipulation of one hand; and to provide such a device which may be mounted in either a horizontal or vertical position.

Briefly described the device of the invention comprises a rectangular cardboard box of folded paper panels closed at a rear end by suitable foldable end flap panels and being partially open at the front and end walls and top wall to provide a confluent opening for finger access to one end of the sheets of stacked paper in the box, the box having marginal end portions around the forward end for engaging a corner of the stacked paper and maintaining it in the box against casual dislodgement. A resiliently mounted tongue is provided for overlying the stacked paper, the tongue having a wafer of non-drying pressure-sensitive adhesive at its free end which may be manually pressed, to lift the end of a sheet which may then be gripped manually by the fingers at said confluent opening and removed from the box.

A preferred form in which the invention may be embodied is described herein and illustrated in the accompanying drawings in which:

Fig. 1 is a plan view of a paper board wall-forming blank of the invention, the view being of the inner face of the formed box.

Fig. 2 is a plan view of a blank for a finger-press lever and tongue member.

Fig. 3 is a perspective view of the invention in box form, partly broken away.

Fig. 4 is a longitudinal vertical section on line 4—4 of Fig. 3, but showing lever and tongue member at a different operative position.

Fig. 5 is a horizontal section on line 5—5 of Fig. 4.

Fig. 6 is a fragmentary perspective view of a rear end of the box of the invention, closing panels being partly folded.

Fig. 7 is a longitudinal central section on line 4—4 of Fig. 3, showing the box at a vertical position and a modified form of paper stock therein.

Fig. 8 is a front elevational view of the dispenser illustrated in Fig. 7, partly broken away, and

Fig. 9 is a vertical front elevation of the paper stack of Figs. 7 and 8.

Referring to the drawings in which like reference characters indicate corresponding parts in the several views, 12 indicates generally a blank of paper board from which the walls of the dispensing box may be formed, and 13 indicates a blank from which a finger-press lever may be made. In the blank 12 there is a bottom panel 14, a top panel 15, opposite side panels 16, 17, rear end flaps 18, 19 and a rear end closure panel 20 to which is connected a rear end locking flap 21. It is to be here noted that the top panel 15 has a rectangular cutaway portion at one corner providing edges 39, and that the side wall panel 16 has a triangular cutaway corner portion providing a diagonal edge 40, which provides respective edges for a confluent opening A in the formed box as will be further described. A suitable gluing flap 22 is provided for holding the bottom, top and side walls rectangularly disposed in box-forming relation. In the formed box (see Fig. 3), a front wall is provided formed of a vertical edge portion 23 at one side edge of the front wall, and a horizontal edge portion 24 at the lower edge portion of the front wall, said edge portions of the front wall comprising a plurality of interfolded panels. The vertical edge portion 23 of the front wall comprises a vertical ear 25 foldable from the top panel 15, an outer front vertical panel 26 and a vertical lock panel 27, which folds inwardly to overlie panel 26 and enclose vertical ear 25 therebetween. The horizontal edge portion 24 of the front wall comprises a horizontal locking ear 28 which is foldably connected to the forward end of the front panel 26 and a horizontal locking ear 29 which is connected to and foldable from a forward end of side panel 16, said two horizontal locking ears being foldable between an outer front wall panel 30 and an inward front wall lock panel 31 which is foldable inwardly to overlie the front wall panel 30 and engage the horizontal panels 28, 29 therebetween. Suitable lock slots 14*a* and 17*a* and locking tabs 27*a* and 31*a* are provided for locking the respective front wall lock panels in their respective wall-forming positions. It is to be assumed that the respective panels are suitably scored and slit for bending as would be well understood from the drawing and the following description in forming the box.

In forming the box, the side walls, top and bottom are rectangularly bent on suitable score lines and the gluing flap 22 at one edge of said group of panels suitably glued to the opposite edge of said group of panels.

To close the rear end, the rear fold flaps 18 and 19 are folded inwardly toward each other, and the rear end closure wall 20 is folded thereover and the locking flap 21 inserted over the upper edge of the two infolded end flaps 18, 19, a slot socket 34 being provided at each end of the fold line between the rear closure wall 20 and lock flap 21, which securely locks over the shoulders 35 of each of the rear end flaps for preventing the rear end of the box closure from opening inadvertently.

The front wall consisting of one vertical side edge portion 23 and one lower horizontal edge portion 24, may be folded by first folding down the vertical ear 25, then folding toward each other the horizontal ear 29 and the panels 26, 27, and 28, whereby the panel 26 thus will overly the downfolded vertical ear 25, whereupon the vertical fold panel 27 may be folded inwardly to overlie the panel 26 and enclose therebetween the vertical ear 25, the locking tab 27*a* engaging in lock slots 17*a*. It will be noted that this forming of the vertical edge portion of the wall has thus far left the horizontal locking ear 28 extending horizontally towards the opposed horizontally extended ear 29 at the lower edge portion of the front edge of the box, whereupon the front end wall 30 may be folded upwardly against said two ex-

tended horizontal ears, and the front lock panel 31 folded inwardly to overlie the panel 30 and engage the lock tabs 31*a* in the lock slots 14*a*, thus engaging therebetween the horizontal ears 28, 29. The panel 31 is of lesser length than panel 30 whereby the vertical edge portion 23 of the front end wall does not interfere with the infolding of the horizontal lock panel 31.

Since the folded vertical edge panels 26, 27 and the folded horizontal edge panels 30, 31 of the front wall are relatively narrow compared with the height of the side walls 16, 17 and the width of the top and bottom walls 14, 15, respectively, there is a rectangular opening defined by the edges 38 at the front wall of the box. There is also a rectangular opening defined by edges 39 at one forward corner portion of the top panel 15, and a further triangular opening defined by line 40 providing a diagonal cut in the sidewall 16, all of said open portions being confluent at one forward upper corner portion A of the formed box as best shown in Fig. 3.

To carry out the dispensing purpose of the invention, means are provided for lifting a top sheet of paper from a stack of such sheets in the box, such means comprising a planar resiliently mounted finger-press lever generally indicated 41. This lever is preferably loosely mounted and its rearward planar area 42 closely underlies and generally parallels the top panel of the box against which it is tensioned. The lever may be of paper board sheet substantially similar to the box material, and at its rearward or base portion 42 it is relatively wide, substantially as wide as the inner width of the rear end of the box into which it is mounted. The lever irregularly tapers from its rearward portion 42 towards its opposite or forward end to provide a relatively narrow tongue 43 which extends beyond the edge of the confluent opening of the top panel and substantially to the opposite or forward end of the box, and thus is normally substantially in the same plane of the top panel, and extends into the congruent open area A formed by the wall edges 38, 39 and 40. Closely adjacent its tapered terminal end, the underface of the tongue which faces the interior of the box has an adhering wafer 44 of non-drying pressure-sensitive adhesive.

The opposite outermost side portions of the rear end 42 of the lever member includes transversely extended wing tabs 45, the lead edges of which incline forwardly providing at each side of the lever an angled socket 46, the reverse or rear edge of the wings being inclined rearwardly beyond the rear edge of the lever as at 47, the wing tabs having longitudinal bending lines 48 upon which the outer portion of the wing is bent downwardly providing a pivot angle 49 on an axis parallel to and spaced from the plane of the lever so as to pivot against the rear wall of the formed box as at 50. The lever 41 is normally maintained at an upward position closely paralleling and underlying the top panel by any suitable tension means, exemplified herein as an elastic loop or rubber band 51 engaged in the angle sockets 46, extending across the upper face of the lever and rearwardly under the wings and thence engaged in the slot sockets 52 of the infolded rear fold flaps 18 and 19.

A stack of loosely disposed sheets of paper B are inserted in the formed box from the rear end before closing thereof, the sheets being of substantially the same shape and size as the interior dimensions of the bottom panel, allowing for loose side wall clearance, the forward end of the stack abutting the vertical and horizontal edge portions of the front wall 23, 24 and having one edge portion underlying the elongated strip 15*a* of the top panel. The stack is thus prevented from casual forward movement, one forward corner of the stack however extending into the confluent opening A. Upon depression of the tongue 43 and lever 41 by finger manipulation the lever pivots downwardly on pivot points 49 and the adhesive wafer 44 engages the top sheet of paper by superficial contact, and upon release of such pressure the lever and tongue rebound upwardly responsive to elastic loop 51 and lift a single

engaged sheet so that it may be gripped separately by the fingers and pulled from the box.

In Figs. 7, 8 and 9 there is shown a modification in the stacked sheets of paper in which the invention is particularly adapted for being positioned vertically so that, if desired, it may be hung upon a vertical wall by means of a hanging tab 60. In this modification all of the walls and parts of the dispenser box may be similar to those heretofore described, the modification being in providing a stack of loosely superimposed sheets of paper C in which there is provided a relatively stiff backing board 61 at the upper end of which is mounted a looped upstanding wire bracket 62 having spaced legs securely mounted to the backing board, one leg 63 of the loop being substantially normal to the backing board and turned upon itself at its outer free end to provide a retroverted second leg 64 which returns to the board at a downward and rearward incline, the sheets of paper being mounted on the downwardly inclined leg 64 by means of a perforation 65 adjacent to the upper transverse end edge, and a slot 66 extending to said adjacent edge so that the sheets will not tear when being removed. The purpose of the downward incline of leg 64 is to prevent the upper portion of the stacked paper from falling forward when the device is hung vertically and a stack of paper has been partially consumed, the downward and rearward incline causing the paper stack to work rearwardly rather than forwardly by the repeated manipulation or agitation of the stack in the dispensing of the paper. The stack of this modification is inserted in the box in the same manner as the stack of loosely disposed sheets, as heretofore described.

Having thus described the invention, what is claimed as patentable is:

1. A paper dispensing device for separate sheets comprising a substantially rectangular box for receiving a supply of loosely stacked paper sheets, said box having wall panels at opposite sides, top, bottom, front and rear, relatively adjacent portions of the front, top and one side panel being cut away at one upper and forward corner of the box providing a confluent opening at said corner, and a resiliently mounted finger-press lever member having its rearward end portion mounted in the box closely underlying the closed portion of the top panel and having an integral tongue extending into said confluent opening substantially in the same plane as the top of the box whereby it may overlie one end of a stack of paper in the box, said lever member having at the free end portion of the tongue a wafer of pressure sensitive adhesive at the face thereof which would oppose a stack of paper in the box.

2. A device for dispensing separate sheets of paper as set forth in claim 1, the said lever being pivoted on an axis parallel with the plane of the lever member.

3. A device for dispensing separate sheets of paper as set forth in claim 1, and in which said lever has side wings depending from its outermost side portions closely adjacent to the rear end of the lever and providing pivot ends below the plane of the lever adapted for bearing against the rear wall.

4. A paper dispensing device for separate sheets as set forth in claim 1, and in which said rear wall is provided with sockets at an upper edge thereof for engaging an elastic band member, and an elastic band member providing a loop one portion of which engages in the socket in the rear wall and another portion of which engages the lever member.

5. A device for dispensing separate sheets of paper as set forth in claim 1, the said lever member having side wings depending from its outermost side portions closely adjacent to the rear end of the lever and providing pivot end points below the plane of the lever adapted for bearing against the rear wall, said rear wall having sockets therein at its upper edge portion and a tension member having one portion engaging the wings of said lever adjacent its rearward end and having another por-

tion engaged in the sockets of the rear closure wall whereby the lever is resiliently tensioned towards the inner face of the top panel.

6. A paper dispensing device including a paper board substantially rectangular box of relatively foldable panels for receiving a supply of loosely stacked paper sheets, said box having wall panels at opposite sides, top, bottom, front and rear, relatively adjacent portions of panels at top, front and one side of the box being cut away at one corner of the box providing a confluent opening at said corner, and a resiliently mounted finger-press lever member pivotally mounted at its rearward end in the box, the lever member having a planer rearward portion closely underlying the top panel and being of a width substantially similar to the inner width of the box, said lever member having a tongue extending into said confluent opening substantially in the plane of the top of the box whereby it may overlie one end of a stack of paper in the box, said lever member having a wafer of pressure-sensitive adhesive at the free end portion of the tongue at the face thereof which would be opposed to a stack of paper in the box.

7. A device for dispensing separate sheets of paper as set forth in claim 6, and in which one of said side wall panels has at its end adjacent to said confluent opening a pair of relatively foldable front wall panels adapted, when folded, for providing a vertical edge portion of the front wall at one edge of said confluent opening, and said bottom panel having at its end adjacent said confluent opening a pair of relatively foldable front wall panels

adapted when folded, for providing a horizontal edge portion of the front wall adjacent to the bottom panel at one edge of said confluent opening.

8. A paper dispensing device for a separate sheet as set forth in claim 6, and in which the rear wall of the box has sockets therein at its upper edge for engaging an elastic band member, and an elastic band engaging said fingerpress lever adjacent its rearward end and being engaged in the sockets of the rear wall whereby the lever is resiliently tensioned towards the inner face of the top panel.

9. A paper dispensing device as set forth in claim 6, the said finger-press lever member having side wings depending from its outermost side portions closely adjacent to the rear end of the lever, and providing pivot end points below the plane of the lever adapted for bearing against the rear wall, and an elastic band engaging the wings of said finger-press lever adjacent its rearward end and being engaged in the sockets of the rear wall whereby the lever is resiliently tensioned toward the inner face of the top panel.

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