May 18, 1965 J. K. BAKER 3,184,145

WRAPPER

Original Filed Aug. 17, 1962

FIG. 1

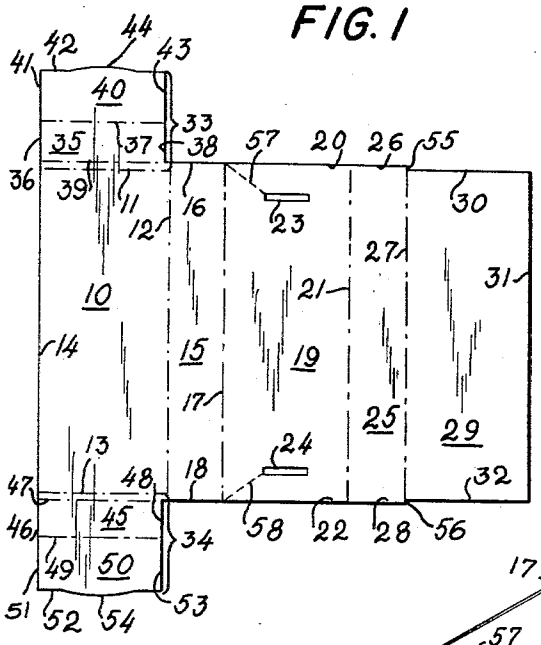


FIG. 2

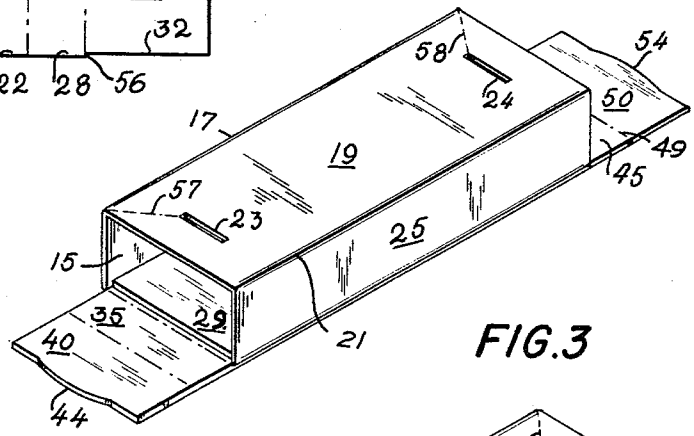


FIG. 4

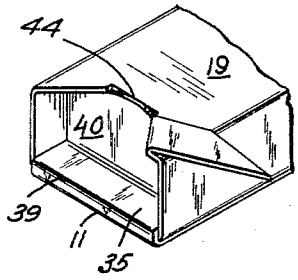


FIG. 3

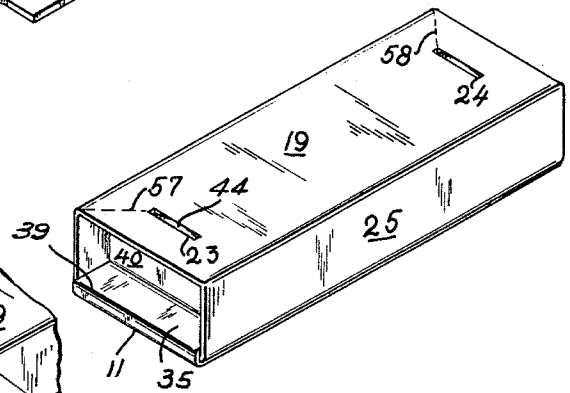
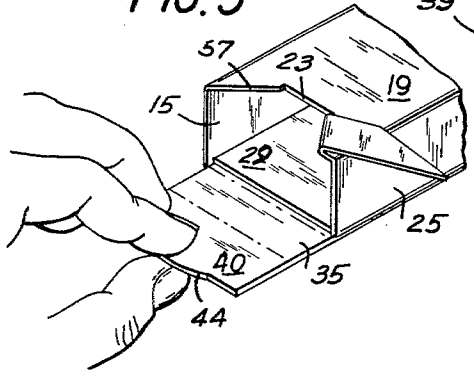


FIG. 5



INVENTOR.
JAMES KYLE BAKER
BY
PATENT AGENT

United States Patent Office 3,184,145 Patented May 18, 1965

3,184,145

WRAPPER

James K. Baker, Celeveland, Ohio, assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

Continuation of application Ser. No. 217,568, Aug. 17, 1962. This application June 1, 1964, Ser. No. 374,554
3 Claims. (Cl. 229—40)

This application is a continuation of application Serial Number 217,568 filed August 17, 1962, and now abandoned.

My invention relates to shipping wrappers and more specifically to a shipping wrapper made of corrugated paperboard. My invention is an economical, pilferproof wrapper, made from a one-piece blank, easily assembled, and once assembled virtually impossible to open without leaving easily detectable signs of tampering; yet the easy open feature allows a legitimate recipient to open the package, remove a desired quantity of goods, and easily reclose the wrapper for storage. One of the uses contemplated for the wrapper of my invention is the shipment of serially numbered items such as bank checks, order forms and invoices, etc. A large volume of commercial transactions are carried on by means of serially numbered documents wherein the integrity of the accounting systems depends upon the serial numbering of the forms. The unnoticed absence of one or more forms imperils the accuracy of the accounting system.

A great volume of commercial transactions are carried on by means of negotiable paper known as bank checks. Checks are supplied to depositors by banks directly from the supplier in pads of 25 or 50, perhaps 5 to 10 pads making one order. The checks are shipped from a supplier direct to the depositor upon order of the depositor's bank.

My invention is a shipping wrapper made from a one-piece paperboard blank having several wall panels and an overlapping bottom panel, and a pair of end wall panels, locked into the top panel by means of locking tabs for holding the wrapper in an assembled condition. The wrapper may be opened by destruction of a portion of the top panel along a line of weakened resistance.

The wrapper of my invention makes the unnoticed pilfering of the wrapped goods virtually impossible. This is an asset to shippers of blank serially numbered forms.

In the drawings, FIGURE 1 illustrates a blank from which the wrapper may be assembled. FIG. 2 illustrates a wrapper partially assembled from the blank of FIG. 1. FIG. 3 illustrates a completely assembled wrapper and showing the locked end construction. FIG. 4 illustrates the manner in which the wrapper may be opened. FIG. 5 illustrates a completely opened wrapper and further illustrates the pilferproof opening feature.

The paperboard blank FIG. 1 includes a bottom panel, 10, a side panel 15, foldably connected to bottom panel 10 along fold line 12. The blank of FIG. 1 also includes adjacently disposed and contiguous top panel 19, secondary bottom panel 29 and second side panel 25. Bottom panel 10 has end flaps 33 and 34 foldably attached along fold lines 11 and 13 respectively. End flap 33 is made of two panels, end bottom panel 35 foldably attached to bottom panel 10 and end wall panel 40 which is foldably connected along fold line 37 to panel 35. End wall panel 40 has tab portion 44 integrally attached. End bottom panel 35 has an additional fold line 39 near the fold line 11. End flap 34 has end bottom panel 45 and end wall panel 50. Panel 50 is foldably attached to panel 45 along fold line 49. End bottom panel 45 has fold line 47 near fold line 13. End wall panel 50 has tab 54 integrally attached.

The wrapper of my invention may be assembled from

the blank of FIGURE 1 by folding side panel 15 along fold line 12 at approximately right angles to panel 10. Panel 19 is folded along fold line 17 in a plane approximately parallel to bottom panel 10. Panel 25 is folded along fold line 21 in a plane approximately parallel to panel 15. Secondary bottom panel 29 will now lie in a plane parallel and in apposition with bottom panel 10 in the inner surface of the bottom panel.

End flap 33 is folded upwardly along fold line 11 and downwardly along fold line 39, and again upwardly along fold line 37, causing end bottom panel 35 to lie in apposition with the inner surface of secondary bottom panel 29. End wall panel 40 is now substantially perpendicular to panel 19, and tab 44 is engaged into transverse locking slot 23, serving to lock end wall panel 40 in a position at approximate right angle to top panel 19 and secondary bottom panel 29, serving to form a closure for the wrapper. When the end flaps 33 and 34 are folded as described above the secondary bottom panel 29 is in apposition with panel 10. This locking action of the end flaps serves to keep the body of the container as formed by panels 10, 15, 19 and 25 in a closed position. The secondary bottom panel 29 rests on the inner surface of panel 10. The end flaps 33 and 34 serve to clamp panel 29 to bottom panel 10 and the tabs 44 and 54 of panels 40 and 50 respectively are then inserted into transverse locking slots 23 and 24. The pressure exerted upon panel 29 when the closure is fully formed is termed as a "springing action." This springing action of both closure panels serves to keep the container in a fully formed condition. End flap 34 is folded in a similar manner along fold lines 13, 47 and 49. Tab 54 is engaged into transverse locking slot 24, locking end wall 34 in a closed position and forming a closure for one end of the wrapper.

Second side panel 25 is formed by edges 26 and 28 and fold lines 21 and 27, and secondary bottom panel 29 is formed by edges 30, 31 and 32 and fold line 27. Edges 26 and 28 are offset outwardly from edges 30 and 32. Panel 15 is formed by fold lines 12, 17 and edges 16 and 18. Top panel 19 is formed by fold lines 17 and 21 and edges 20 and 22. Bottom panel 10 is formed by fold lines 11, 12 and 13 and edge 14. Fold lines 11 and 13 are offset inwardly from edges 16 and 18.

The secondary bottom panel 29 is formed by edges 30, 31, 32 and fold line 27. The dimension of secondary bottom panel 29 along fold line 27 is less than the corresponding dimension of second side panel 25 along fold line 27. This difference creates free edges 55, 56 in second side panel 25. This offset relative to the second side panel provides a structure which enables the end flap to fit into a recessed portion eliminating any bulge when the end flap locks over the secondary bottom panel.

Top panel 19 has lines of weakened resistance 57 and 58 intersecting the locking slots and a free edge of the top panels. When the wrapper is to be opened, the lines of weakened resistance are easily torn from the panel, allowing the tabs 44 and 54 to be disengaged from locking slots 23 and 24 respectively. The tabs may then be re-engaged; thus serving to keep the wrapper in a reclosed condition.

The wrapper when assembled is virtually impossible to open without showing distinct signs of tampering and yet is easily opened by the proper recipient and is then easily reclosed.

The springing action as described above makes it possible to form a wrapper without the use of adhesive, tape, or any other extraneous fastening means. The wrapper is quickly and easily formed from a one-piece blank and is held in a formed position by the springing action as described above.

While a preferred embodiment of this invention has been described, it will be evident that other modifications

and improvements may be made thereto. Such of these modifications and improvements as incorporate the principles of this invention are to be considered and included in the appended claims.

What is claimed is:

1. A paperboard blank for a pilferproof wrapper comprising:

(*a*) a bottom panel;

(*b*) a side panel foldably connected to said bottom panel;

(*c*) a top panel foldably connected to said side panel, the top panel having a pair of locking slots disposed in a portion immediate to the free edges thereof;

(*d*) a second side panel foldably connected to said top panel;

(*e*) a secondary bottom panel foldably attached to the second side panel;

(*f*) a pair of end bottom panels foldably connected to opposite ends of said bottom panel;

(*g*) an end wall panel foldably connected to an other end of each end bottom panel, said end wall panel having a tab integrally formed from a portion of a free edge thereof, the tab engageable with said locking slots, when the wrapper is formed said secondary bottom panel overlying said bottom panel and in apposition therewith, the end bottom panels overlying the inner surface of said secondary bottom panel and in apposition therewith, said end wall panels being approximately perpendicular to the inner surface of said secondary bottom panel, said tabs being in locking engagement with the locking slots, a surface of each of said end bottom panels being in apposition with a portion of said secondary bottom panel and clamping the secondary bottom panel in apposition and superimposed to a portion of said bottom panel, positioning the secondary bottom panel against the bottom panel and holding the wrapper in a closed position by the springing action of the end wall panels upon the secondary bottom panel.

2. A paperboard blank for a pilferproof wrapper comprising:

(*a*) a bottom panel;

(*b*) a side panel foldably connected to said bottom panel;

(*c*) a top panel foldably connected to said side panel, the top panel having a pair of locking slots disposed in a portion immediate to the free edges thereof;

(*d*) a second side panel foldably connected to said top panel;

(*e*) a secondary bottom panel foldably attached to the second side panel said secondary bottom panel being of less length than the corresponding side of said second side panel;

(*f*) a pair of end bottom panels foldably connected to opposite ends of said bottom panel;

(*g*) an end wall panel foldably connected to an other end of each end bottom panel, said end wall panel having a tab integrally formed from a portion of a free edge thereof, the tab engageable with said locking slots, when the wrapper is formed said secondary bottom panel overlying said bottom panel and in apposition therewith, the end bottom panels overlying the inner surface of said secondary bottom panel and in apposition therewith, said end wall panels being approximately perpendicular to the inner surface of said secondary bottom panel, the said tabs being in locking engagement with the locking slots, a surface of each of said end bottom panels being in apposition with a portion of said secondary bottom panel and clamping the secondary bottom panel in apposition and superimposed to a portion of said bottom panel, positioning the secondary bottom panel against the bottom panel and holding the wrapper in a closed position by the springing action of the end wall panels upon the secondary bottom panel.

3. A paperboard blank for a pilferproof wrapper comprising;

(*a*) a bottom panel;

(*b*) a side panel foldably connected to said bottom panel;

(*c*) a top panel foldably connected to the side panel and having a pair of locking slots, a line of weakened resistance intersecting a portion of a locking slot and extending to a free edge of said top panel;

(*d*) a second side panel foldably connected to said top panel;

(*e*) a secondary bottom panel foldably attached to the second side panel said secondary bottom panel being of less length than the corresponding side of said second side panel;

(*f*) a pair of end bottom panels foldably connected to opposite ends of said bottom panel;

(*g*) an end wall panel foldably connected to an other end of each end bottom panel, said end wall panel having a tab integrally formed from a portion of a free edge thereof, the tab engageable with said locking slots, when the wrapper is formed said secondary bottom panel overlying said bottom panel and in apposition therewith, the end bottom panels overlying the inner surface of said secondary bottom panel and in apposition therewith, said end wall panels being approximately perpendicular to the inner surface of said secondary bottom panel, the said tabs being in locking engagement with the locking slots, a surface of each of said end bottom panels being in apposition with a portion of said secondary bottom panel and clamping the secondary bottom panel in apposition and superimposed to a portion of said bottom panel, positioning the secondary bottom panel against the bottom panel and holding the wrapper in a closed position by the springing action of the end wall panels upon the secondary bottom panel.

References Cited by the Examiner

UNITED STATES PATENTS

1,334,687	3/20	Wilson	229—39
1,996,997	4/35	Inman	229—39
2,002,564	5/35	Bergman	229—51
2,537,151	1/51	Mires	229—39
2,583,211	1/52	Fleming	229—51
2,984,401	5/61	Herkender	206—15.1

FRANKLIN T. GARRETT, *Primary Examiner.*