This invention relates to improvements in a box and more particularly to a type of "flip-top" box having simplified folding parts and sealing operations resulting in increasing the speed of box assembly.

The term "flip-top box" has significance in the packaging industry and refers to a box having a continuous interior enclosed by two box sections hinged together by a common wall. For purposes of this application, the term "flip-top" shall be used in the sense above defined.

It is a primary object of my invention to provide a new and improved flip-top folding box that may be stored flat until ready for use.

Another object of this invention is to provide a type of flip-top folding box which lies flat after manufacture and which may be expanded then filled and the ends subsequently closed.

A further object is to provide a flip-top folding box having each of the two box sections assembled along a single glue area for simplified and improved speed of assembly.

These and other objects and advantages will be more apparent from the following detailed description and drawings, wherein:

FIG. 1 is a plan view of a die-cut blank of paperboard illustrating a preferred embodiment of the invention before being folded and secured in a pre-setting up position;

FIG. 2 is a plan view like in FIG. 1 having the bottom section glued into position as the first stage of assembling;

FIG. 3 is a plan view like in FIG. 2 having the top section now folded over and glued into position as the second stage of assembling;

FIG. 4 is a side elevational view of the completely assembled and set-up box showing the top section in the open position and closed in broken line;

FIG. 5 is a front elevational view of the box of FIG. 4; and

FIG. 6 is a perspective view of the collapsible folding box in the open position.

Referring now more particularly to the drawings wherein like numerals designate similar parts throughout, there is shown in FIGURES 4 through 6 an assembled flip-top folding box 10 ready for use, comprising generally a top box section 11 which is hinged along a fold line 12 intermediate the ends of a back wall 13 to a bottom box section 14. Both the top and bottom sections consist of several folding panels and together define a continuous article receiving space having closable openings at the top and bottom.

The top box section 11 consists of a series of upright scornfully connected walls foldably formed from a sheet of material shown in FIG. 1 including: a side wall 15, a top portion 16 of the back wall 13, a side wall 15a, and a front wall 17. A flap 18, extends from edge 19 of the front wall and is adhesively joined to the outer face of side wall 15 to complete the top section. The flap 18 is joined by any suitable commercial adhesive.

The bottom box section 14 likewise consists of a series of scornfully connected walls formed from the same sheet of material and foldably connected along their sides including: a bottom portion 20 of the back wall 13, a side wall 21, a front wall 22, and a side wall 21a. A flap 23 extending from an edge 24 of the side wall 21a, is adhesively joined to the back wall bottom portion 20 to complete the bottom section. Glue as indicated at 25, can be used to secure the joint.

A plurality of tuck-in flaps 26, 27, 28 on the top section 11 and 26a, 27a, and 25a on the bottom box section 14 provide means for closing the top and bottom openings of the box in a known manner. A tab 29 extends from side wall 21a in the plane thereof and has a curved edge 30 to guide the front wall 17 of the top section 11 in its opening and closing movements. To increase access to goods within the flip-top box without sacrificing structural stability, the front wall 22 is cut away as shown in FIG. 5, leaving the menacing wall unaffected.

One of the features of the present invention is the flip-top box construction enabling storage of the box in the flat. As shown in FIG. 3, the box is flat with the end closure flaps in their unassembled position. The boxes can thus be stacked very efficiently for storage and shipping purposes.

As shown in FIGS. 2 and 3, manufacture of the folding box required adhesively joining the walls together in only two areas, one for each box section. The minimized gluing operation enables the box to be quickly manufactured. First, in sequence, the front wall 22 and rear wall portion 20 of the bottom box section 14 are placed flat upon each other as are side wall 15 and back wall 16 and the flap 23, previously glued is joined to the right margin of the back wall portion 20 in the area 25 as shown in FIG. 2. Next, the front wall portion 17 of the top section 11 is folded over and the flap 18, previously glued is joined to the face of side wall 15 as shown in FIG. 3.

The box is then completed flat and easily storable. To set up the box for the insertion of goods, the operator need only erect the side walls by swinging them normal to the back wall. After the insertion of goods, the box can be completely closed by tucking-in the flaps of the top and bottom closures. Subsequent access to the goods is obtained by pivoting back the flip-top section along fold line 12.

Although a specific embodiment of the invention has been shown and described, it is to be understood that the description is for illustrative purposes only. The invention is limited only by the appended claim.

I claim:

A folding flip-top box comprising: top and bottom box sections, said sections having a common back wall with a score line extending thereacross for movement of said sections relative to each other; said top section additionally having a front wall integrally connected to the back wall by a side wall and a pair of flaps one on each of said back and front walls joinable to form another side wall; said bottom section having front wall connected to the back wall by a side wall, another side wall adjacent said bottom section front wall and having a flap joinable to a marginal portion of the back wall; and tuck-in flaps associated with each box section for closing the ends of the box.

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