F. JAGER.

BOX.

APPLICATION FILED JULY 6, 1909.

955,880. **Patented Apr. 26, 1910.**

Fig. 1.

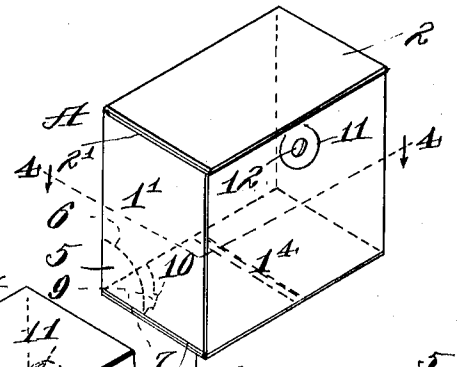


Fig. 2.

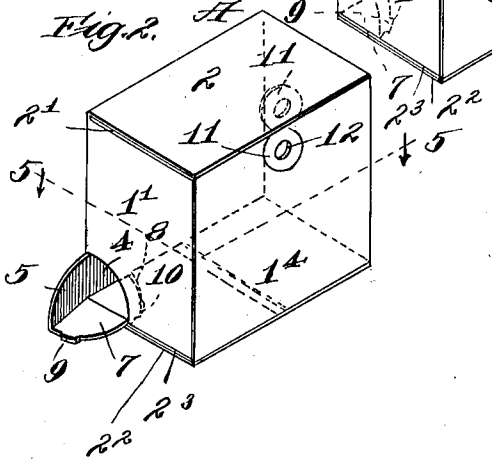


Fig. 4.

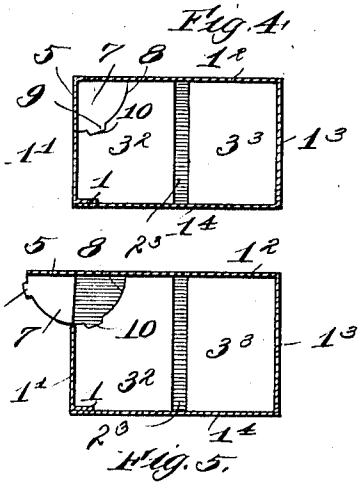
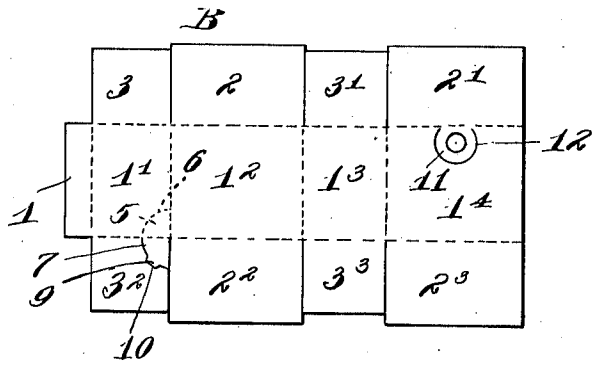


Fig. 5.

Fig. 3.



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UNITED STATES PATENT OFFICE.

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BOX.

955,880. Specification of Letters Patent. Patented Apr. 26, 1910.

Application filed July 6, 1909. Serial No. 505,966.

To all whom it may concern:

Be it known that I, FRANK JAGER, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Boxes, of which the following is a specification.

This invention relates to boxes and relates particularly to boxes formed from folding blanks, usually straw board and the like, all sides of which are permanently closed and which are provided with a suitable discharge opening through which the contents of the box may be removed or discharged and which comprise a suitable hinged closure which controls said discharge opening. I am aware that boxes of this general type are old but, as heretofore constructed, the closures for the discharge openings and the tongues for securing the same in closed position have, so far as I am aware, consisted of extensions at the edges of the blanks for the boxes proper. Not only does the formation of the closures and securing tongues in this manner require the use of more stock for forming boxes of the same size and capacity, but it also results in a large waste of stock due to the fact that the sheets from which the blanks are formed can not be cut with the same economy of stock as where said closure extensions are not present.

The particular object of the present invention is to avoid the use of any more stock than is actually required for forming the boxes proper.

Further objects of the invention are to provide a box of this general type of improved and simplified construction and to avoid the formation of loose, exposed edges and corners on the closures and securing tongues, which are liable to catch on other objects in handling and to be opened, thus, where said boxes contain granular material, as cereal foods, soap in granular form, and the like, permitting the contents of said box to run out and to be lost.

To effect the objects of the invention, my improved box consists of the various features and details of construction hereinafter described and claimed.

In the accompanying drawing, in which my invention is fully illustrated—Figure 1 is an isometric view of a box of my invention as it appears in use, filled and completely closed. Fig. 2 is a view similar to Fig. 1 showing the closure for the discharge opening in open position. Fig. 3 is a plan view of a blank suitable for forming one of my improved boxes, showing a desirable manner of scoring, slitting and folding the same; and Figs. 4 and 5 are similar plan sections on the lines 4—4 and 5—5 of Figs. 1 and 2, respectively.

Referring now particularly to Figs. 1 and 2 of the drawing, A designates, as a whole, one of my improved boxes as it appears when finished. Said box A may be made of any suitable shape and size, depending upon the particular merchandise or commodity which it is designed to contain. The box A is preferably made from a blank of straw board or the like slit and scored in proper manner to be quickly and conveniently folded to form said box. Any desired or suitable form of blank may be used from which to make said box A and various forms of blanks suitable for this purpose will readily suggest themselves to persons skilled in the manufacture of such boxes.

For purposes of illustration I have, in Fig. 3 of the drawings, shown a simple form of blank for forming my improved box, said blank, designated as a whole by B, being slit and scored to form sections 1, 1^1, 1^2, 1^3 and 1^4, which form the lateral sides of the box, the sections 1 and 1^4 overlapping each other when the blank is folded; sections 2, 2^1, 2^2 and 2^3 adapted to be folded and overlapped to form the ends of the box; and sections 3, 3^1, 3^2 and 3^3 which form flaps for reinforcing the corners of the box. In folding the blank B to form the finished package A, said blank is first folded to form the body portion of the box, the interfolded sides and flaps thereof being secured together as by gum or glue, one end thereof being left open for the purpose of filling the box. The merchandise or commodity which the box is intended to contain, as matches, tooth picks, cereal foods in granular form, scouring powder, and the like, are then placed in the box A through the open end thereof, after which the sections forming said open end are interfolded and permanently secured together, thus forming a box or package all sides of which are permanently closed. With a box of the described construction it is obvious that the lateral sides thereof will consist of but a single thickness of material, excepting where

the sections 1 and 1^4 overlap, and that the ends of the box will be of double thickness and will be reinforced at the corners by the sections 3, 3^1, 3^2 and 3^3, which will also serve to close the edges of the box between the lateral sides thereof formed by the sections 1^1 and 1^3 and the ends of the box.

To provide for removing or withdrawing the contents of the box A, a suitable hole or opening 4 is formed in a side of said box, as shown, in the side formed by the section 1^1. When said box contains matches, tooth picks and the like, said discharge opening 4 will necessarily be formed at the corner of the box in such manner that the ends of the matches or tooth picks, or the like, contained therein, will be exposed through said opening so that they may be grasped and withdrawn therethrough. Where the box contains granular or powdered material, as granular cereal foods, scouring soaps, and the like, the opening 4 will preferably but not necessarily be formed at the corner of the box.

The discharge opening 4 is controlled by a suitable closure 5 by means of which said discharge opening may be opened and closed as desired. To effect the object of the invention as it relates to avoiding waste of stock in forming said closure, said closure is formed by the portion of the blank B which is severed to form said discharge opening 4. This can be conveniently effected by leaving said closure 5 attached to the blank B at one side of said discharge opening, thus forming a hinge, said attached side being straight and preferably coinciding with an edge of the box.

To render the box tight until it reaches the consumer and to prevent the closure 5 from being accidentally opened by catching on other objects in handling, the closure 5, instead of being entirely severed at its free edge, in the manner intended in the first instance, is only partially severed, as by means of perforations, or the desired line of severance may be indicated by a line marked on the box or blank, complete severance being performed as a final act, as by the consumer when it is desired to open the box to remove the contents thereof, which can be quickly and conveniently done by means of a pen knife or the like. In the drawings, the dotted line 6, Figs. 1 and 3, indicates the line of severance, whether defined by perforations or a line marked on said box or blank. As the securing tongue for the closure, presently described, is inclosed when the closure 5 is in closed position, said securing tongue will necessarily be completely severed in the manner intended in the first instance, as otherwise it would be impossible to sever the same without mutilating the box, and it would thus be impossible to open said closure after a complete severance had been effected in the manner just described. Necessarily, also, the line of severance, indicated by the perforations or mark 6, must have proper relation to the line of severance of said tongue, in order that when the closure 5 is severed, both said closure and tongue will be detached, except for the hinged connection of said closure to the box.

The hinged closure 5 is adapted to be secured in closed position by means of a tongue 7 adapted to be inserted through the discharge opening 4 so that it will frictionally engage a wall of the box and thus hold said closure in position to close the discharge opening 4. Like the closure 4, the securing tongue 7 is formed by a properly cut out or severed portion of the blank B. As shown, said tongue 7 is cut out from the end flap 3^2 of said blank. As shown, also, the section 3^2 from which the tongue 7 is cut is folded so that it will be exposed at the inside of the box, the edge of said section 3^2 along the line of severance of said securing tongue 7 thus forming a shoulder 8 adapted for engagement by the corresponding severed edge of the tongue 7 when the closure 5 is closed, which will operate to define the closed position of said closure and will prevent the same from being pushed inwardly beyond the surface of the side of the box in which the discharge opening 4 is formed.

As a further safeguard against accidental opening of the closure 5, after the same has been fully severed in the manner intended, my invention contemplates the use of a yielding catch adapted for engaging the tongue 7 with a rigid portion of the box, the relation being such that said catch may be disengaged by a pull on the closure in a direction to open the same. As shown, said catch consists of a short lug 9 formed on the severed edge of the securing tongue 7 which is adapted to engage a corresponding notch 10 formed in the corresponding edge of the blank section 3^2, both said lug and recess being stamped or cut in the process of forming said blank. While the lug or projection 9 will extend slightly beyond the side of the discharge opening 4, the spring of the parts will permit said lug or projection 9 to be forced through said opening so as to engage the recess 10 and to be withdrawn when it is desired to uncover said discharge opening.

Where the box A is designed for containing matches, tooth picks and similar articles for household and office use, means are preferably provided for suspending said box so that the contents thereof will fall by gravity so as to be exposed through the opening 4 as long as there are any matches remaining in the box, and my improved box preferably comprises simple means for this purpose which consist of a flap 11

stamped or cut from a section of the blank B other than that in which the discharge opening is formed, as shown, in the section 1^4, said section 11 being attached to the blank B at one edge, which preferably coincides with the edge of said section 1^4 at the end of the box opposite to the discharge opening, so that said section 11 may be swung outwardly and upwardly so as to project above the box, as shown in dotted lines in Figs. 1 and 2. Formed in said flap 11 is a suitable hole or opening 12 designed and adapted for engagement with a pin or peg secured in the wall or other support.

I claim:—

1. As a new article of manufacture, an original shipping and dispensing box for merchandise, the sides of which are of single thickness and the ends of which comprise a plurality of interfolded and overlapping sections, said box being provided with a discharge opening formed by severing a portion of a side wall of said box, leaving said severed portion attached to the body of the box at one side of said discharge opening, whereby said severed portion will form a hinged closure for said discharge opening, and a tongue on said closure formed by a severed portion of an inclosed fold of an end wall of said box, said fold forming an extension of the side wall in which said discharge opening is formed, said tongue being adapted for engagement with the end wall of the box from which it is formed for the purpose of securing said closure in closed position, substantially as described.

2. As a new article of manufacture, an original shipping and dispensing box for merchandise, said box being provided with a discharge opening formed by severing a portion of a wall of said box, leaving said severed portion attached to the body of the box at one side of said discharge opening, whereby said severed portion will form a hinged closure for said discharge opening, and a tongue on said closure formed by a severed portion of a fold of a wall of said box adjacent to the wall thereof in which said discharge opening is formed, said tongue being adapted for engagement with the wall of the box from which it is formed so as to bring the severed edge thereof into bearing with the edge of the fold of said wall from which said tongue is severed along the line of severance of said tongue, thereby securing said closure in closed position and defining the fully closed position thereof, substantially as described.

3. As a new article of manufacture, an original shipping and dispensing box for merchandise, said box being provided with a discharge opening formed by severing a portion of a wall of said box, leaving said severed portion attached to the body of the box at one side of said discharge opening whereby said severed portion will form a hinged closure for said discharge opening, and a tongue on said closure formed by a severed portion of a fold of a wall of said box adjacent to the wall thereof in which said discharge opening is formed, said tongue being adapted for engagement with the wall of the box from which it is formed for the purpose of securing said closure in closed position, and a catch for yieldingly engaging said tongue with the wall of said box which it is designed to engage, substantially as described.

4. As a new article of manufacture, an original shipping and dispensing box for merchandise, said box being provided with a discharge opening formed by severing a portion of a wall of said box, leaving said severed portion attached to the body of the box at one side of said discharge opening, whereby said severed portion will form a hinged closure for said discharge opening and a tongue on said closure formed by a severed portion of an inclosed fold of a wall of said box adjacent to the wall thereof in which said discharge opening is formed, said tongue being adapted for engagement with the wall of the box from which it is formed so as to bring the severed edge thereof into bearing with the edge of the fold of said wall from which said tongue is formed along the line of severance thereof, thereby securing said closure in closed position and defining the fully closed position thereof, and a short projection at the severed edge of said tongue adapted for engagement with a corresponding notch formed in the edge of the fold formed by the severance of said tongue, substantially as described.

5. As a new article of manufacture, an original shipping and dispensing box for merchandise, the sides of which are of single thickness and the ends of which comprise a plurality of interfolded and overlapping sections, said box being provided with a discharge opening formed by severing a portion of a side wall of said box, leaving said severed portion attached to the body of the box at one side of said discharge opening, whereby said severed portion will form a hinged closure for said discharge opening, and a tongue on said closure formed by a severed portion of an inclosed fold of an end wall of said box, said fold forming an extension of the side wall in which said discharge opening is formed, said tongue being fully severed as designed in making the box and said closure being unsevered in the first instance, the proper line of severance being designated on the box and severance of said closure being performed as a final act when it is desired to remove the contents of the box, substantially as described.

6. As a new article of manufacture, an original shipping and dispensing box for matches and the like, said box being provided with a discharge opening located at a corner of one side thereof through which the ends of the matches and the like will be exposed and may be grasped for the purpose of withdrawing said matches and the like, and a suspending flap for said box, formed by severing a portion of the wall of said box other than that in which the discharge opening is formed, leaving said flap attached to the box at one edge, said suspending flap being located at the opposite end of said box from said discharge opening and being provided with a suitable hole for engaging the same with a supporting pin or the like, substantially as described.

In testimony, that I claim the foregoing as my invention, I affix my signature in presence of two subscribing witnesses, this 1st day of July, 1909.

FRANK JAGER.

Witnesses:

K. A. COSTELLO,

M. A. REIHAUSPERGER.