P. J. McGRATH.

CLOSURE FOR PAPER BOXES.

APPLICATION FILED JUNE 5, 1920.

1,362,332. **Patented Dec. 14, 1920.**

Fig. 1

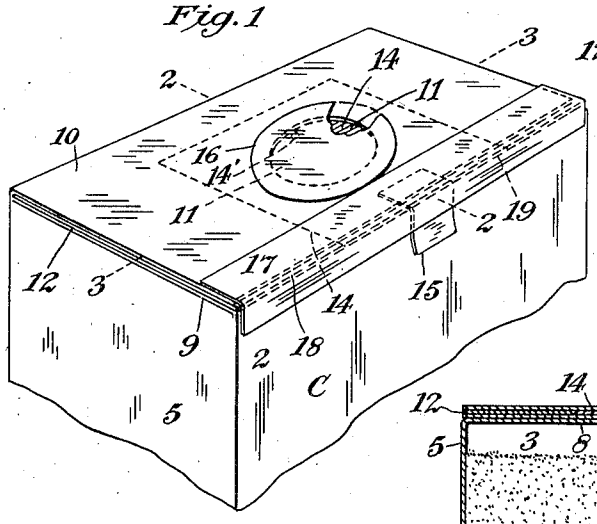


Fig. 2

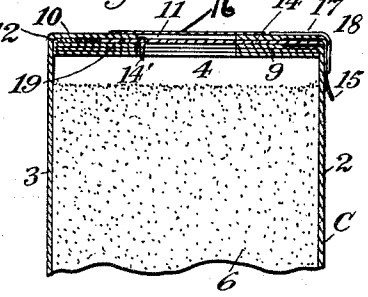


Fig. 3

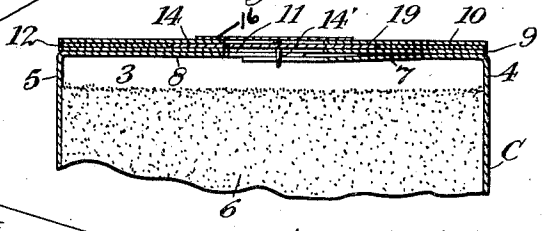


Fig. 4

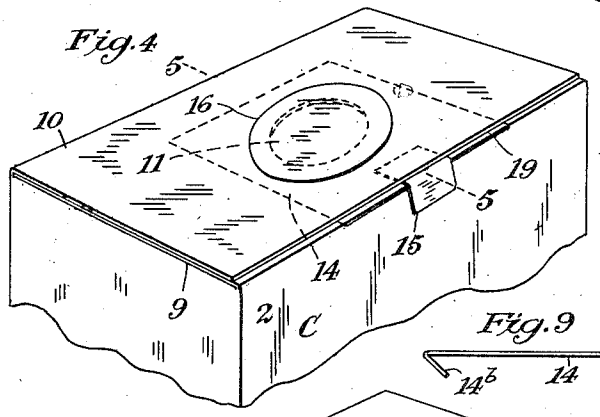


Fig. 5

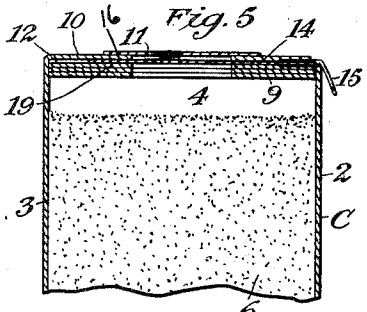


Fig. 9

Fig. 6

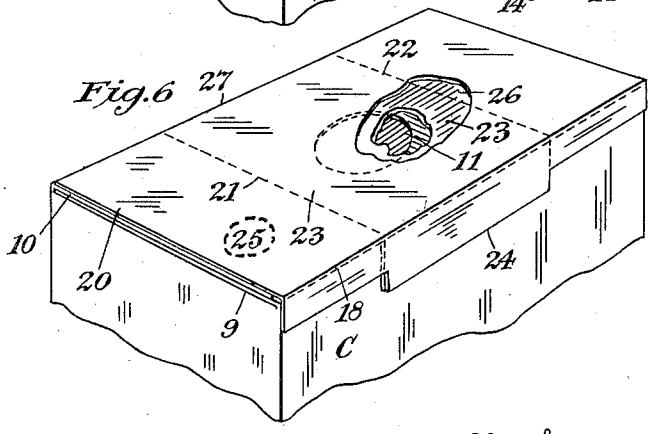


Fig. 7

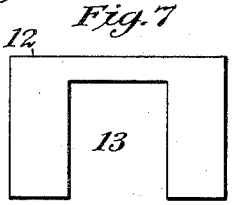
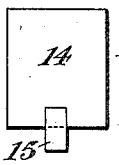


Fig. 8



Inventor

Patrick J. McGrath

By his Attorney

Charles D. King.

UNITED STATES PATENT OFFICE.

PATRICK J. McGRATH, OF BROOKLYN, NEW YORK.

CLOSURE FOR PAPER BOXES.

1,362,332. Specification of Letters Patent. Patented Dec. 14, 1920.

Application filed June 5, 1920. Serial No. 386,889.

To all whom it may concern:

Be it known that I, PATRICK J. McGRATH, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Closures for Paper Boxes, of which the following is a specification.

This invention relates to closures for paper boxes or cartons such as are ordinarily used for holding cereals, sugar, washing and cleaning powders, and many other powdered, flaked, and granular substances.

The main object of the invention is to provide improved means to discharge the contents of such boxes, and to protect the contents of partly discharged packages when allowed to stand until used, as well as to provide means to protect full packages.

Heretofore it has been customary to cut or tear open the end of the box to allow the contents to be poured out. This tends to waste the materials, and in the case of cereals frequently allows them to spoil before they are used up. It also allows dust and dirt to enter the package and is altogether unsanitary when foods are in the boxes.

My improved paper box closure prevents all the above objectionable features and practices, with practically no additional cost.

My improved closure consists primarily in forming a discharge opening directly through the end of the box, through the folded end flaps thereof where they are pasted together, in a central position therein, providing a seal for the opening, and a movable closure for use after the seal is broken through and the box allowed to stand partly filled.

The means I prefer to employ to accomplish the foregoing objects together with other features of my improved paper box closure which will appear during the progress of the description, are illustrated in the drawing accompanying and forming part of this specification, and in which,—

Figure 1 is a perspective view of the preferred form of my improved paper box closure.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Fig. 3 is a section on the line 3—3 of Fig. 1.

Fig. 4 is a perspective view of a modified form of my improved paper box closure.

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

Fig. 6 is a perspective view of another modified form of my improved paper box closure.

Fig. 7 is a detail plan of a spacing member for the closure.

Fig. 8 is a detail plan of one form of the closure, and

Fig. 9 is a side elevation of a modified form of closure.

Like characters refer to like parts in all the figures of the drawing.

Referring to Figs. 1, 2, and 3, the letter C designates the paper box or carton of which the upper part only is shown, 2, 3, 4, and 5 refer respectively to the front, rear, right side, and left side walls of the box, and 6 designates the contents thereof. In this form, the flaps attached to the four walls are folded down so as to form four plies of paper or cardboard at the central part as shown in Figs. 2 and 3. 7 designates the right hand side flap, 8 the left hand side flap, 9 the front flap, and 10 the rear flap of the box.

In this form I provide a circular discharge opening passing through all four of said flaps near the middle portion of the top end of the box and designated by 11. This opening can readily be formed in the box blank by perforating each flap simultaneously with the punching of the blank, when the latter is formed in a punch press.

Between the front and rear flaps are placed a spacing member 12 having a slot or opening 13, and a closure member 14, the spacing member being pasted to the flaps and the closure member being free to slide backward and forward so as to cover and uncover the opening 11 in the front and side flaps, that part of said opening 11 in the rear flap being above the closure. A tab 15 is attached to the closure member by means of which it is moved to and fro.

In this form of my invention two sealing members are employed, one of which is designated by 16 and seals the opening 11, and the other of which is designated by 17 and placed on the corner 18 of the box, normally covering the front end of the closure 14. This last seal is of very thin paper and can readily be broken through to free the closure

14. The seal 16 is readily broken through by pressing it in with a knife handle or other convenient means after pulling out the closure until the stop pin 14′ prevents further movement. The contents of the box can now be poured out, and when all of said contents are not required for immediate use, the closure 14 is pushed back in the slot 19 between the two flaps 9 and 10 and the box is thus conveniently closed until it is desired to use the remaining material, whereupon the closure can be again pulled out and the contents poured out as before.

The form of the invention illustrated in Figs. 4 and 5, differs from the form already described in having but one sealing member, which is the sealing member 16 to close the opening 11. In this form the spacing piece 12 is omitted the closure member 14 is thinner and fits rather tightly in the slot 19 when first assembled so that it will not readily slip out and spill the contents of the box through the slot 19. On using a little pressure however the closure will work readily. The closure for both forms is illustrated in detail in Fig. 8 and will be seen to consist merely of a rectangular piece of paper board having the tab 15 attached. The tab consists of a slip of paper gummed on one side, creased, and attached to both sides of the central front part of the rectangular paper board member 14. The portion extending out from the member 14 is finished by pressing the two plies together to form an integral member.

Fig. 6 illustrates a form of the invention having a single sealing member 20 which covers the opening 11 through the flaps 7, 8, 9, and 10. The rear flap 10 is slit at 21 and 22, and the closure portion 23 has a front portion 24 bent over the front edge 18 of the box. The side portions 25 and 26 of the flap 10 are pasted down onto the flap 9. The sealing member 20 is pasted to the portions 23, 25, and 26, and extends from the back edge 27 of the box to the front edge 18, over the latter, down a short distance, which is greater at the central part to cover portion 24 of the closure and is then pasted to the latter and to the front wall 2.

To break the seal, the paper of the member 20 is slit opposite the slits 21 and 22, whereupon the portion 23 can be swung upward, uncovering the discharge openings 11, thus allowing the contents of the box to be poured out. To close the box again, the closure portion 23 is lowered and secured by moistening a gummed portion on the back of the portion 24. This form may be still further modified by inserting one of the closures 14 under the member 23 wider than said member with the tab 15 underneath the portion 24.

Fig. 9 illustrates a closure having the tab 15 integral, and a stop 14^b also made integral with 14 which is preferably of card board, the said stop being somewhat narrower than the tab 15, bent downwardly and forward at about 45 degrees to the horizontal plane.

What I claim is:—

1. The combination with a paper box having folded down end flaps forming one end of the box and a discharge opening through said end, of a slidable closure for said opening and means to limit the opening and closing movements thereof.

2. The combination with a paper box having folded down end flaps forming one end of the box and a discharge opening through said end, of a closure for said opening which is slidable between two of said flaps, and embodies a stop portion to limit its opening and closing movements.

3. The combination with a paper box having folded down flaps forming one end of the box and a discharge opening through said end, of a slidable closure for said opening and a slotted spacing member for the closure both located between two of said flaps.

Signed at New York city in the county of New York and State of New York this 2d day of June A. D. 1920.

PATRICK J. McGRATH.