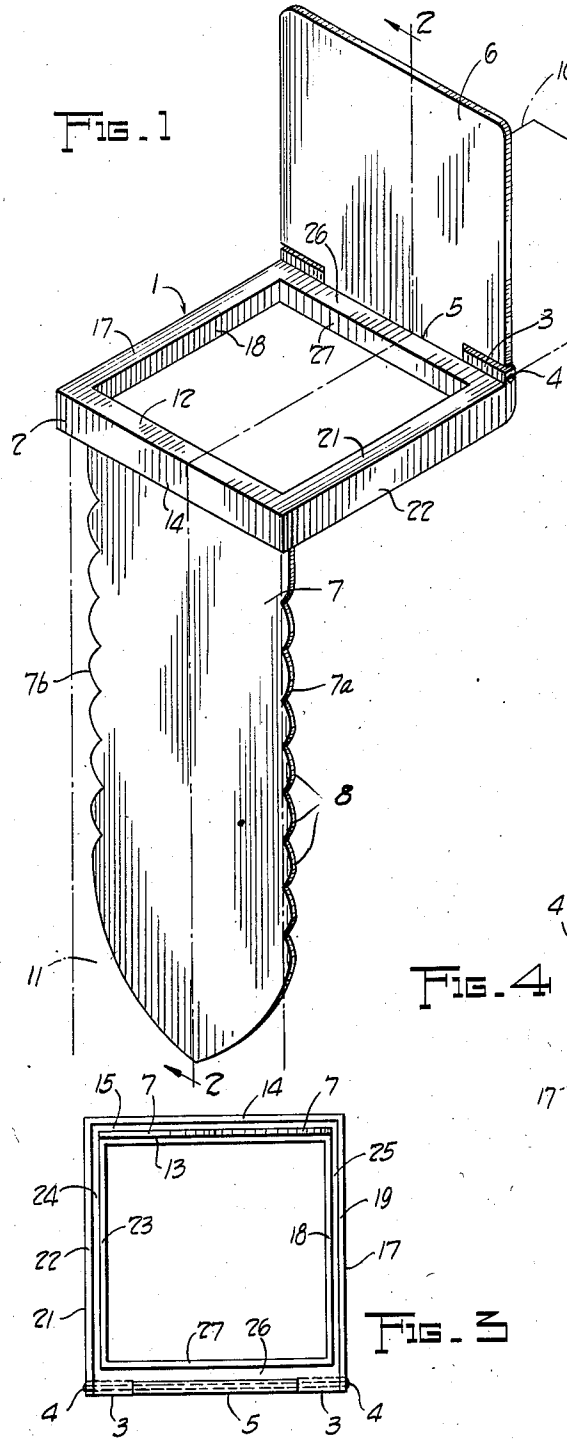
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POURING DEVICE

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Fig. 1



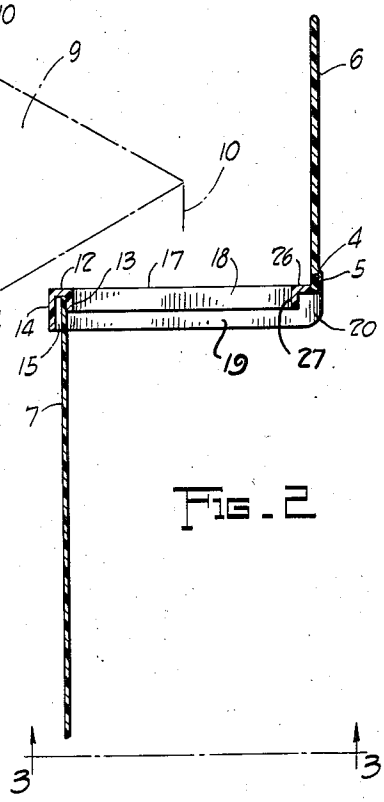


Fig. 2

Fig. 3

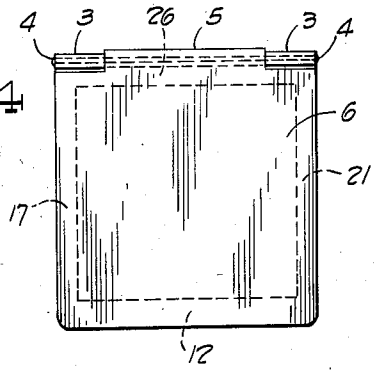


Fig. 4

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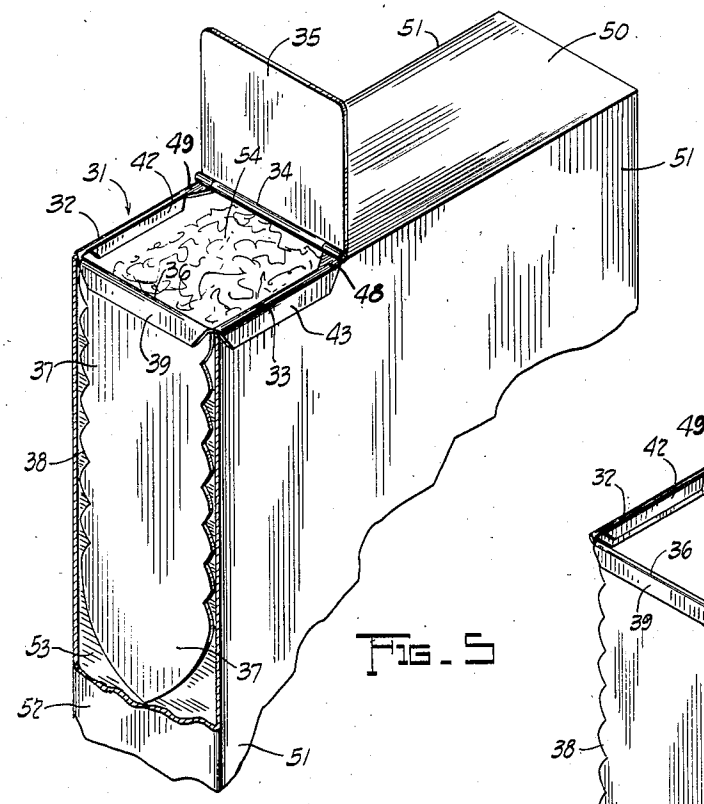


FIG. 5

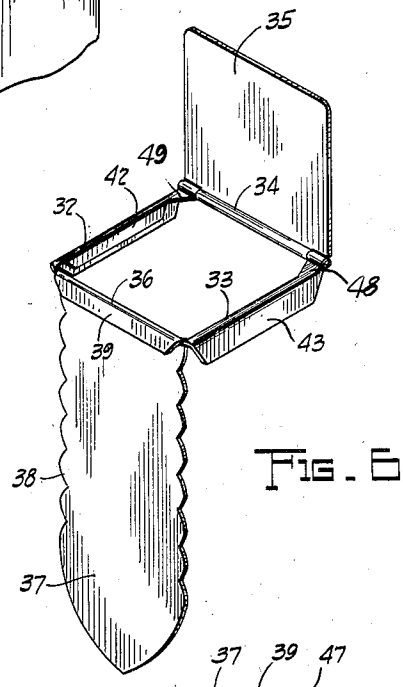


FIG. 6

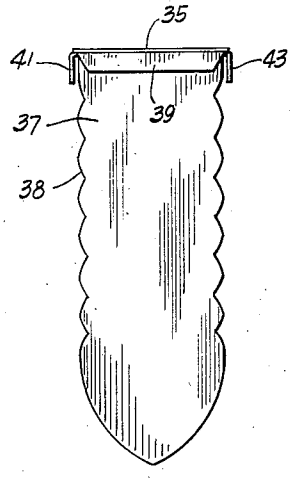


FIG. 7

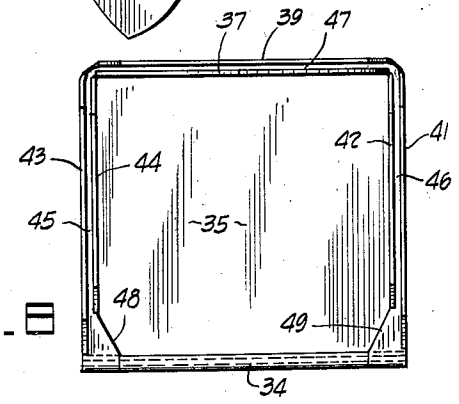


FIG. 8

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POURING DEVICE

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Application July 7, 1955, Serial No. 520,398

3 Claims. (Cl. 229—7)

This invention relates to a pouring device, particularly a pouring device designed for application to a package of cardboard or the like containing a more or less granular material such as an uncooked cereal, prepared breakfast food, kibbled dog food, etc.

At the present time, it is customary to put up these and many generally similar materials, not necessarily foodstuffs, in cardboard packages of rectangular shape. In many instances, as in the case of elbow macaroni, the package is left unlined; in other cases, especially where the material is fragile, of small particle size or inclined to pick up water vapor from the atmosphere at a fairly rapid rate, the package incorporates a bag-like insert, usually of moisture-proof paper, in which the material itself is contained. Sometimes the user severs the top along three sides, leaving it attached along the fourth side, tears open the insert (if there is one), and pours or spoons out the desired quantity of material; on the other hand, it is probably just as common for the user to tear an irregular hole in one corner or at the end of the package top, tear open any insert, and pour the required quantity out of the opening so formed. In the latter case (if not the former), the remainder of the material is not infrequently left exposed to contamination by dust, dirt, insects, etc., which can find access through the opening in the package. A careful housewife usually attempts to guard against this as best she can, as by applying a temporary shield of waxed paper to the package top, often securing it in place by means of an elastic band.

It is an object of the present invention to provide a more convenient way of protecting the contents of the package after it has once been opened and, more particularly to provide a pouring device that may be simply and securely applied to the package, allowed to remain until the contents have been entirely removed, and, in the meanwhile, used and re-used as often as desired with the assurance that the remaining contents of the package will be protected against dust, dirt, insects and other sources of contamination. To this end the invention provides a pouring device which may be applied to almost any rectangular package, lined or unlined, that is sufficiently large but which may be utilized to especial advantage with a package incorporating a loose lining taking the form of a bag-like insert for the material contained in the package.

Other objects, advantages and features of the invention will be apparent from the description which follows and from the accompanying drawings, in which:

Figure 1 is an isometric view of the pouring device of the invention in one of its two preferred forms, the package to which it is applied being indicated in dotted lines;

Figure 2 is a section on line 2—2 of Figure 1;

Figure 3 is a bottom plan of the pouring device seen as if from line 3—3 of Figure 2;

Figure 4 is a top plan of the pouring device as seen with the lid in closed position;

Figure 5 is an isometric view on a reduced scale of an alternative form of the invention, the device being shown in place in a cardboard package provided with an insert containing a granular material;

Figure 6 is a similar view showing the same pouring device independently of the package;

Figure 7 is a front elevation of the pouring device of Figures 5 and 6 seen with the lid in closed position; and

Figure 8 is a bottom plan similar to that of Figure 3 showing on an enlarged scale the pouring device of Figures 5 to 7.

In the embodiment of the invention shown in Figures 1 to 4, the pouring device designated 1, is made largely of plastic materials. Along with certain other components, it consists of a frame-like element 2 molded of any suitable synthetic resin such, for example, as one of the cellulosic resins; e.g., ethyl cellulose, cellulose acetate, cellulose acetate butyrate, cellulose nitrate, etc. Formed integrally with frame-like element 2 are stationary hinge portions 3, of which two are shown in the drawing. Through them passes a metal pin 4 on which is carried a movable hinge portion 5 forming part of a pivotally mounted lid 6. The latter may conveniently be molded of the same synthetic resin that is used in forming frame-like element 2. Except when the device is actually being used for pouring, lid 6 lies flat against the top of frame-like element 2: see Figure 4.

Mounted on the opposite side of frame-like element 2 from lid 6 is a tongue 7 which may be made as long as required, but which, for reasons that will become apparent, must be slightly narrower than frame-like element 2. Tongue 7 may conveniently be molded of the same synthetic resin as frame-like element 2, although it may if desired be stamped from sheet material of the same or a different composition. If, as assumed, all of the plastic parts of pouring device 1 are of a cellulosic resin that lends itself to softening by means of acetone and similar organic solvents, such solvents may be used to cement tongue 7 to frame-like element 2 in the relationship shown in Figure 2. Tongue 7 may also be applied thereto in any other convenient way, as by fusing the parts together under heat and pressure.

Preferably (but not necessarily) tongue 7 is scalloped as at 8 along edges 7*a* and 7*b*.

Shown in dot-and-dash lines in Figure 1 is the package, ordinarily of cardboard or the like, to which pouring device 1 is intended to be applied. To make the package ready for the application of pouring device 1, the near end of top 9 of the package must first be removed. To facilitate this operation, the package top is preferably pre-scored or otherwise weakened along lines marking the edges of the opening to be made therein. At any rate, the appropriate area of the package top is cut away, torn out or otherwise removed, after which pouring device 1 is inserted in such manner that frame-like element 2 straddles side walls 10 and tongue 7 abuts the inside face of near end wall 11. If, as assumed, the package is loosely lined, the pressure of the contents, exerted through the bag-like insert in which they are held, keeps tongue 7 in contact with near end wall 11.

Referring now to Figures 2 and 3, it will be noted that frame-like element 2 is channel-shaped in cross section along three of its four sides. Referring first to cross member 12 at the front of the pouring device, it will be observed from Figure 2 that it includes a short inner lip 13 and a long outer lip 14, both of which depend from it. Lips 13 and 14 are separated from each other sufficiently to receive tongue 7 and yet leave room to accommodate the top edge of near end wall 11

of the package. After tongue 7 has been fastened in place, space 15 should be of such magnitude that the upper edge of near end wall 11 will fit snugly between tongue 7 and outer lip 14, neither so loosely as to permit it to slip out nor so tightly as to make it difficult to introduce near end wall 11 into space 15.

Cross member 12 serves as means connecting a channel-shaped side member on the far side of the package as represented in Figure 1 and a similar channel-shaped side member on the near side. Far side member 17 is characterized by a short inner lip 18 and a long outer lip 19, best seen in Figure 2. For reasons which will appear hereinafter, long outer lip 19 extends rearwardly beyond short inner lip 18 as indicated at 20, where it is rounded off as shown. On the near side of the package, the second channel-shaped side member, designated 21, consists of the similarly formed outer lip 22 and inner lip 23 (Figure 3).

In both cases, the two lips are spaced apart just enough to accommodate the thickness of side walls 10 of the package, the fit being neither too tight nor too loose. Thus between lips 22 and 23 is left a space 24 that is intended to accommodate the top edge of the near side wall of the package with neither too little nor too much clearance. Between lips 18 and 19 on the opposite side of frame-like element 2 is a like space 25 for the top edge of the far side wall.

As previously brought out, channel-shaped cross member 12 at the front of pouring device 1 connects side members 17 and 21. In very much the same way, cross member 26 intervenes between and connects the same two side members at the rear of the pouring device. However, unlike front cross member 12, rear cross member 26 is not channel-shaped: as shown in Figure 2, it has only one depending lip, the latter being short inner lip 27. It will be noted from Figure 3 that the four inner lips 13, 18, 23 and 27 are continuations of each other. Each is integral with each of the others. This construction gives a characteristically neat appearance to frame-like element 2.

After the necessary opening has been made in the top of the package to which the pouring device is to be applied, tongue 7 is pushed down endwise between near end wall 11 and the bag-like insert (not shown) containing the material put up in the package. Although narrower than frame-like element 2, tongue 7 should not be so narrow that scallops 8 will not be able to exert a gripping effect on side walls 10. It should be wide enough so that its scalloped edges will fit snugly between them. After tongue 7 has been pushed down as described into the space between the insert and the near end wall of the package, frame-like element 2 is urged into position on the top edges of the package, on which it seats along three of its four sides.

In use, the package with the pouring device in place is angled in such manner as to cause the contents to seek to escape over near end wall 11. At this stage, the pressure of the contents forces open lid 6, which swings open enough to allow the contents to pour out through the opening in the package top. In ordinary circumstances, lid 6 will not open by as much as 90°, although for purposes of illustration it is represented in Figures 1 and 2 as standing at right angles to the plane of frame-like element 2. After the required quantity of material has been poured out of the package, the package is righted, whereupon lid 6 closes by gravity against frame-like element 2. It seats sufficiently closely against the top of frame-like element 2 to preclude the later entry of dust, dirt, insects and rodents.

In the form of the invention shown in Figures 1 to 4, it is obviously not necessary that the lid 6 be molded of a synthetic resin; instead, it may, if desired, be formed of sheet metal. Similarly there is no reason why tongue 7 must necessarily be formed of a synthetic resin. It may be formed of sheet metal, if desired, being held in place against inner lip 13 of cross member 12 in any convenient way. It is not even necessary that tongue 7 be formed of a sheet material, metallic or non-metallic, for it is apparent that it may, if desired, be formed of heavy wire of a shape corresponding to the outline of tongue 7 as seen in Figure 1.

Referring now to Figures 5 to 8, what is there shown is a sheet metal pouring device 31 having the same function and much the same shape as the plastic pouring device of Figures 1 to 4. As indicated in Figure 5, pouring device 31 consists of a generally frame-like element made up of two channel-shaped side pieces 32 and 33 that are connected together at their ends. At the rear of the device, a hinge 34 supporting a pivoted lid 35 forms part of the generally frame-like element. At the front of the device is a cross member 36, likewise channel-shaped, which connects two channel-shaped side pieces 32 and 33.

Also located at the front of the pouring device is a tongue 37 which, if desired, may be provided with scallops 38 to enhance the gripping effect on the side walls of the package.

Lying outwardly of tongue 37 is an outer lip 39 which is separated from tongue 37 by a space just sufficient to receive the top of the near end wall of the package. Outer lip 39 constitutes one wall of channel-shaped cross member 36. Tongue 37 constitutes the other. Side members 32 and 33, tongue 37 and lip 39 may be formed integrally with each other from the same piece of sheet metal by stamping it as required and appropriately binding the various portions so as to give the indicated channel-shaped contours to side members 32 and 33 and cross member 36.

As best appears in the bottom plan, Figure 8, side member 32 includes an outer lip 41 and an inner lip 42; similarly, side member 33 includes an outer lip 43 and an inner lip 44. Of these, outer lips 41 and 43 are relatively long; inner lips 42 and 44, relatively short. On each side of the pouring device, the inner and outer lips are spaced from each other by the thickness of the package walls. Thus spaces 45 and 46 provide a snug fit for the side walls of the package. A similar space 47 intervenes between tongue 37 and outer lip 39 at the front of the pouring device. The top edges of the side walls of the package enter into openings 45 and 46; similarly, the top edge of the near end wall of the package enters into opening 47.

At the rear of the pouring device, where hinge 34 connects side members 32 and 33, gussets 48 and 49 forming part of the side members 32 and 33 are utilized as shown as part of hinge 34.

In practice, before applying the pouring device to the package, an opening of suitable size and shape must first be formed in the package top. The latter, designated 50, appears in solid lines in Figure 5. Preferably, score lines (not shown) outlining the material to be cut away, torn or otherwise removed are formed in the top of the package when it is being manufactured. After opening the package, which can best be done by applying the pointed end of tongue 37 to the score lines in the package top, tongue 37 is inserted between side walls 51 in the space between near end wall 52 and bag-like insert 53. The close fit provided by openings 45, 46 and 47 serves to anchor the pouring device firmly in place on the package. The granular material 54 contained in the package helps hold tongue 37 in place, this even if no insert is present.

It is evident that a metal pouring device such as that shown in Figures 5 to 8 may be fabricated in any one of a wide variety of ways. It need not necessarily be integrally formed, as is that illustrated in the drawings. If formed largely or entirely of sheet metal, it may be enamelled, as with white or colored enamel, to give it an attractive finish. It is obviously not necessary that lid 35 be formed of the same material as the remainder of the pouring device; for example, even though the remainder of the device may be of metal, lid 35 may

be of plastic. Other changes will suggest themselves to those skilled in the art.

Thus the invention provides a pouring device which is simple to make and apply, sturdy, and capable of serving repeatedly in pouring out the contents of the same and different packages. It lends itself to ready transfer from an empty package to a filled package that is about to be put into use. It obviates the necessity for applying to the top end of an open package a shield of wax paper or the like which must be held in place by an elastic band and, as a rule, replaced after each use. It effectively excludes dust, dirt, insects, etc. In position on the package, with the tongue concealed behind the end wall of the package, it presents a neat, attractive appearance.

It is intended that the patent shall cover, by summarization in appended claims, all features of patentable novelty residing in the invention.

What is claimed is:

1. A pouring device for application to a generally rectangular package the top, side and end walls of which package are formed of a heavy material such as cardboard and the interior of which may be loosely lined with a separately formed insert of light material such as waxed paper, comprising a rectangular lid adapted to cover and uncover an end opening extending over part but less than all of the top of the package, said opening being formed by removal of an end portion of the package top; a hinge along one edge of the lid; a rigid frame-like element of which the hinge forms part, said rigid frame-like element being of rectangular shape,

having substantially the same lateral dimensions as the lid, and having at most three downwardly facing sides of channel-shaped configuration for engagement by the walls of the package none of which downwardly facing sides underlies the hinge; and, depending from that one of said downwardly facing sides located across the opening from the hinge, an elongated tongue adapted for endwise introduction between the insert and the package wall, said tongue being slightly narrower than the end wall of the package and serrated along each of its two side edges.

2. A pouring device as in claim 1 in which the tongue is formed integrally with that one of the three channel-shaped sides of said frame-like element which is located opposite the hinge.

3. A pouring device as in claim 1 in which the tongue is bonded to that one of the three channel-shaped sides of said frame-like element which is located opposite the hinge.

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