This invention relates to a device for starting the dispensing of sheet material that is about to be payed out from a dispensing container. It is particularly useful for transmitting finger thrust to dispensable sheet material having a slippery surface such as aluminum foil.

An object of the invention is to avoid the need for manipulating a dispensing box in a way that must distort or make gaps opening into the box for gaining access to the contained foil or other dispensable sheet material in order to regain finger tip grasp of a margin of the foil for pulling a subsequent length of foil out of the box after a dispensed sheet of the foil has previously been pull out and torn off flush with the outer surface of the box.

Another object is to preserve cleanliness and sanitation of the contents of the dispensing box by eliminating unshielding apertures in or between the box walls which heretofore have been made necessary to enable box confined sheet material to be reached for finger manipulation to sart its ejection from the box.

A related object is to provide a wall of a dispensing box with a device capable of transmitting a finger thrust impellingly to the slippery surface of box contained foil, which device shall perform the additional function of completely or substantially closing and sealing an aperture in the box wall.

A still further object is to utilize in the structure of such device a sheet of resilient membranous material having a frictional non adhesive surface, such as a foil of moderately tenacious nature which while imperforate, tough and durable nevertheless is so thin and flexible as to be freely capable of bulging, wrinkling and stretching so as to permit substantial movement of the foil impelling frictional surface of the device in a plurality of directions when caused by finger thrust and then operate automatically to restore the frictional surface of the device to normal starting position after displacement by such finger thrust.

The foregoing and other objects of the invention will appear in greater detail from the following description of a successful embodiment of the improvements having reference to the appended drawings wherein:

Fig. 1 is a perspective view of a dispensable sheet of material that has been pulled out from a dispensing box incorporating the invention and partially torn off flush with the outer surface of the box.

Fig. 2 shows a margin of the foil that remained in the box partially ejected by finger application of the dispensing starter of these improvements.

Fig. 3 shows the projected margin of the foil grasped by the finger tips preparatory to withdrawing from the box any selective length of foil which can then be torn off as shown in Fig. 1.

Fig. 4 is a fragmentary perspective view of the dispensing box drawn on an enlarged scale containing a roll of foil with parts broken away to expose the construction.

Fig. 5 is a fragmentary view on a still larger scale taken in section on the plane 5-5 in Fig. 4 looking in the direction of the arrows.

Fig. 6 is a detail view of the aperture closing membrane showing its wrinkling and stretching action when manipulated as in Fig. 2.

Figs. 7, 8 and 9 are views corresponding respectively with Figs. 4, 5 and 6 showing a modification of the aperture closing membrane.

Fig. 10 is a fragmentary view similar to Fig. 7 with parts differently broken away to show a slippery surface of the tuck flap of the box cover.

The dispensing container chosen to illustrate the present invention is a conventional elongate folded cardboard box 12 of sufficient cross-sectional size to house a continuous rolled length of aluminum foil 9 wound on and to be payed off from a core tube 10. Aluminum foil serves many domestic purposes such as the protection of ovens from foods that boil over, the covering of bowls that contain food in refrigerating storage, the lining of broiler pans, casseroles, etc., the direct wrapping of food such as turkeys or chickens to reduce oven shrinkage, and for covering leafy vegetables or cut fruit to keep them garden fresh in the refrigerator. Foil so used comes into intimate contact with the foods concerned and needs be kept sanitarily clean and free from soil or dust collection. The metallic surface of such foil is slippery to the touch, particularly when only one face of the foil is accessible to be reached by the user's fingers when no margin of the foil projects from the dispensing box.

Dispensing box 12 as shown in the drawings has a folding pasteboard cover 13 terminating in a downward directed flap 14 that tacks in between the outer front wall 15 of the box and the front edges of the inward bent top flanges 20 of the box ends 21 when the cover 13 is folded into closed position. In being withdrawn from the box the foil slides between box wall 15 and tuck flap 14. For convenience in tearing off the foil without the use of a separate tool such as shears or a knife, the free top margin of the front box wall 15 is equipped with fine saw-like teeth 16 which may be formed in the edge of a thin metal strip 17 fastened broadside against the inner surface of the top margin of box wall 15.

A dispensing box as above described has now become conventional but entails bothersome maneuvering by the finger tips in order to regain access to foil that remains inaccessible confined within the box after a dispensed length of the foil has been torn off flush with the box by ripping it against the oblique 16 of the strip 17 as shown in Fig. 1. The present improvement makes instantly accessible, just prior to withdrawing an additional length of foil from the box, the projecting margin of a new run of the foil. Such margin by means of the present invention becomes accessible for finger grasp outside the box as shown in Figs. 2 and 3.

The improved device for accomplishing this is located at an aperture 18 in the front wall 15 of box 12. Completely covering all of this aperture there is an elastic membrane 19 of thin, tough and flexible material capable of considerable bulging, wrinkling and stretching, simultaneously without rupturing. Membrane 19 may or need not be secured all around the border of the aperture in a manner completely to seal the interior of the box, but will be such as to exclude dust, dirt and foreign substances from entrance to the box.

Membrane 19 may comprise a small panel of ordinary deposited latex or Pará rubber as thin as .001" to .004" having the usual stretchable and resilient properties that characterize surgeon's gloves which properties render the membrane highly flexible, resilient and tough with a nonslippery or minutely creviced surface texture of frictional clinging nature. If desired it may be transparent or translucent. Normally the panel 19 is held meat across
the aperture without slack by securing a major extent of its combined margins in overlapping relation to the inner surface of box wall 15, as with the aid of an adhesive. As to provide for the stretched extent of the membrane 19, or bare margins of the panel may be bonded directly to the box wall as in Figs. 7, 8, and 9. A suitable approximate size for aperture 18 is 3/8" x 3/4", it being found that an aperture a little longer than it is wide best accommodates application of finger or thumb therewith and facilitates the desired protrusion of the membrane 19, or bare margins of the surface that is to be flush with the front surface of box wall 15. Preferably there is applied a colored marking 25 around aperture 18 on the outside surface of the box to make the location of the aperture more conspicuous.

In the understanding that the roll of foil 9 inside of box 12 is loose and free to turn on its own axis, a dispensing container embodying the improvement when constructed as above described will be used as follows. A previously withdrawn length of foil 9 is unwound and stretched flush with the box by ripping it against the fine toothed severing edge 16 as shown in Fig. 1. This leaves no accessible portion of the remaining foil projecting outside the box. Now while the left hand of the user holds the box as shown in Fig. 2, the thumb or a finger of the right hand can be applied to the nubbin 24 in a manner to press the friction patch 23 inward and upward against the front face of the foil as is permitted by the elasticity of membrane 19 which makes the membrane capable of bulging inward of the box and wrinkling contractively crosswise in its portions above the nubbin at W while stretching expansively in vertical and lateral directions below the nubbin at S as shown in Fig. 6.

The frictional grab of patch 23 against the front surface of foil 9 while the latter is supportingly backed up by the stiffness of flap 14 has been found to seize the face of the foil with sufficient impelling force to eject a narrow margin of the foil to the exterior of the box where it becomes accessible to be grasped by the thumb and fingers of the user's hand as shown in Fig. 3. This enables as much more length of the foil to be withdrawn from the box as is desired which length can then be torn off for use as shown in Fig. 1.

In Figs. 3 and 5, it also is shown that the patch 23 and nubbin 24 have been returned automatically to their original location near the bottom of aperture 18 by the resilience in membrane 19 and are ready for the described operations to be repeated.

If it is found desirable to increase the stiffness of the tuck flap 14 for stronger support of the foil against inward pressure by patch 23 the tuck flap may be reinforced by one or more laminations of cardboard or stiffer material as indicated at 26 in Fig. 5. If the principles of this invention are to be incorporated for help in dispensing a sheet material that has a strong clinging affinity for the front surface of tuck flap 14, I prefer to surface the front face of the flap as shown in Fig. 10 with a slippery coating or covering 50 such as holland cloth or a superpolymer as described in U.S. Patent 2,291,623, or to dust it with a permanent surface lubricant such as stearate of zinc or powdered soap stone at least in the area where the membrane 19 or 19' presses the sheet 9 backward therewith while being dispensed. For instance in Figs. 5, 7, 8 and 9, the projecting patch 23 and nubbin 24 are both omitted but when alone might be omitted, when the nature of the surface of the sheet material 9 to be dispensed and the nature of the sheet impelling surface of the membrane 19 are such as to produce sufficient frictional drag unaided therebetween and by mere pressure of the operator's finger to impel the sheet material to its position shown in broken lines in Figs. 7 and 8 as by pushing backward at the same time lifting upward on the bare membrane as shown in Fig. 9.

Nonsticky and nonadhesive textures of surfaces of membrane 19 that will produce sufficient rubbing frictional cling against the face of aluminum foil, without resort to any patch or nubbin as at 23 or 24 projecting from the face of the membrane, including not only that of natural coagulated Pará rubber but also such for instance as the minutely pitted or microscopically wrinkled surface textures produced by molding or fretting operations employed in vulcanized rubber manufacture in ways well known to glove making and allied arts. Also the spongy and easily distortable nature of minutely intersticed surfaces of certain porous plastics, which results from the laying open of tiny fractured surface cells, can also possess a sufficiently high degree of non-adhesive impelling cling against the face of aluminum foil but this type of surface texture is more subject to a wearing away to an undesirable smoothness in use, especially where there are tiny facial pockets or crevices that may become clogged with foreign substance.

In Figs. 7 and 9 it further is to be noticed that membrane 19 is adhered to the front wall of the box along only its top and side margins, its bottom margin being left free to move relatively to the box wall. The bonding adhesive is indicated at 27 in Fig. 7. The membrane could be adhered to the outer instead of the inner surface of the front wall 15 of the box. This application is a continuation-in-part of my copending application, Serial No. 741,581 filed June 12, 1938, now forfeited.

The appended claims are intended to be interpreted as covering all fair equivalents of the embodiments of the invention herein chosen to illustrate the principles thereof.

I claim:

1. A dispensing starter adapted to completely close a container aperture and transmit finger push impellingly to the surface of a sheet within the container to be dispensed therefrom comprising, a container wall having an aperture flanking the surface of the sheet to be dispensed, an elastic membrane capable of bulging inward of the box and wrinkling contractively in its portions above the nubbin at W while stretching expansively in vertical and lateral directions below the nubbin at S as shown in Fig. 6.

2. A dispensing starter as defined in claim 1, in which said sheet guiding abutment surface is stationary, and fixed in spaced relation to the said membrane.

3. A dispensing starter as defined in claim 1, in which the said membrane overlaps and is secured to all margins of the said container wall that border the said aperture.

4. A dispensing starter as defined in claim 1, in which the said aperture is shaped to expose a rectangular area of said membrane longer than it is wide, wherein to accommodate simultaneous wrinkling and stretching of different portions of the area of the said membrane exposed in said aperture.

5. A dispensing starter as defined in claim 1, in which the said friction patch and the said nubbin are opposite faces respectively of the said stretchable membrane in mutually registering locations whereby no entirely bare portion of said stretchable membrane is depended
upon to transmit finger induced movement of said nubbin to said sheet impelling patch.

6. A dispensing starter as defined in claim 1, in which the said nubbin projects from the said membrane substantially no further than the thickness of the said container wall that borders the said aperture whereby to permit the container to be stacked with its apertured wall in flat face-to-face abutment against the wall of a like container without danger of damage to said nubbin.

7. A dispensing starter as defined in claim 1, in which the said container wall is an outer wall of the container terminating in a sheet severing edge, and the said sheet guiding abutment comprises the flap of another wall of the container flanking the said outer wall at the interior of the container.

8. A dispensing starter as defined in claim 1, in which the said membrane is composed of Pará rubber from 0.01" to 0.02" thick and the area of the said aperture is approximately % by %.

9. A dispensing starter as defined in claim 1, in which the said nubbin is normally located proximate one boundary of the area of the said membrane exposed in the said aperture whereby to give maximum room for sliding of the nubbin toward the opposite boundary of said area.

10. A dispensing starter as defined in claim 1, together with an adhesive layer of thin flat material framing and overlapping and in direct adhering contact with the margins both of the said membrane and of the said container wall that borders the said aperture.

11. In a dispensing box having a cover with a tuck flap underlapping a wall of the box to form a passageway between said flap and wall through which said passageway box contained sheet material can be withdrawn from the box, a portion of said wall containing an aperture closely flanked inwardly by said tuck flap, and membraneous means completely covering said aperture carrying a sheet impelling projection inward of said wall and also carrying a manipulable projection exposed in said aperture.

12. A dispensing starter adapted to cover a container aperture and transmit finger push impellingly to the surface of a sheet within the container to be dispensed therefrom, comprising a container wall having an aperture flanking the surface of the sheet to be dispensed, a sheet guiding abutment surface located within the container closely at the rear of said aperture affording a narrow passageway therebetween, and an elastic membrane capable of bulging, wrinkling and stretching mounted on said wall so as to span and cover said aperture having a friction affording inner surface facing said abutment to be pushed toward said abutment surface into impelling engagement with the surface of a sheet to be dispensed from the container threaded through said passageway, and having a friction affording outer surface at said aperture accessible for finger contact and manipulation in a manner to cause sheet impelling movement of said inner friction affording membrane surface.

13. A dispensing box having a cover with a tuck flap underlapping a wall of the box to form a passageway between said flap and wall through which box contained sheet material can be withdrawn from the box, a portion of said wall containing an aperture closely flanked inwardly by said tuck flap, and membraneous means covering said aperture having a friction affording surface facing inward of said wall and a friction affording surface exposed outward of said wall at said aperture.

14. A dispensing box as defined in claim 13, together with a lubricating substance covering at least a partial area of the said tuck flap facing and bordering on the said passageway, whereby to increase the ease with which slipping of the said sheet material can take place past said tuck flap in comparison with the impelling power of the said inward facing friction affording surface of said membranous means against said sheet material.

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