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CONTAINER

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This invention relates to dispensing containers and more specifically to a portable box for successively releasing bulk packed relatively small articles from the box while the remaining articles are retained therein.

Dispensing containers which expose and release a predetermined number of articles such as tablets or pills while retaining the remaining tablets in the box have previously been constructed and have gone into common use. As an illustration of the type of structure above mentioned reference is made; to United States Patent 1,962,860 issued June 12, 1934, on the joint application of Charles H. Duell, Edith E. Brisbane, and Douglas C. Clarke; and also to the co-pending application of Charles H. Duell, Serial Number 320,717 filed February 24, 1940. The disclosures of the above applications, although not limited thereto, show a box particularly adapted for dispensing articles packed in a single layer and in which the thickness of the box retains the articles from piling upon each other. Such a box, if used for relatively small bulk packed articles, will either dispense a plurality at one time or in some cases will not operate in a satisfactory manner for such service.

It is therefore a primary object of the present invention to provide a dispensing container which will dispense bulk packed small articles one at a time even though the container may be deeper than the thickness of the articles.

It is a further object to provide a dispensing container which will dispense bulk packed small articles, a desired number at a time, from a container in which the articles may be packed, or become arranged, one on top of another in an irregular manner.

The above and other objects of the invention will appear more fully from the following more detailed description, and by reference to the accompanying drawing forming a part hereof and wherein:

Fig. 1 is a perspective view of a complete container, or box, having an article exposed for dispensing and the box cover open to allow the release of the article.

Fig. 2 is a cross section taken on line 2—2 of Fig. 3.

Fig. 3 is a section taken on line 3—3 of Fig. 2.

Fig. 4 is a cross section taken on line 4—4 of Fig. 3.

Referring to the drawing there is shown a container or box 10 with a sliding cover 11. The cover 11 of the box here used for illustration is secured for sliding movement by a suitable flanged

construction 12 on the box and lugs 13 on the cover although there are many standard methods of accomplishing the sliding of the cover. The cover 11 of the box is provided with a downwardly projecting flange or barrier 14 which extends across the inside of the box and sufficiently close to the bottom thereof to prevent movement of any of the articles for which the box is to be used between the lower edge of the flange and the bottom of the box. Near one side of the box the barrier 14 merges with a filler member 16 which extends back from the face of the flange or barrier 14 in the form of a block which extends downwardly from the inner face of the cover as shown in Figs. 1, 2 and 3, the block being preferably of triangular or wedge shape as shown best in Fig. 3.

Referring to Fig. 4 there is shown another element of the barrier extending across the box, i. e., a wedge shaped block like projection 15 somewhat similar to the member 16 and which is secured or formed inside the box 10 and extends out from the side and up from the bottom so that when the box is open as shown in Figs. 1 and 4 the projection 15 fits closely under the block portion 16 of the barrier which moves with the cover. Thus when the box is open and the flange 14 contacts a stop 18, the flange 14, block 16, and projection 15 cooperate to form an effective division or complete barrier across the box for retaining articles in the covered portion thereof. While the upper block 16 extends to the end of the cover to merge with the flange or barrier 14 which depends downwardly from said end, the block 15, as will be noted from an inspection of Figs. 2 and 3 of the drawing, terminates short of and is spaced from the adjacent end wall of the bottom portion of the box. The block 15 instead of being strictly speaking wedge shaped, has its inner face of curved configuration as most clearly shown in Fig. 3.

When the top 11 of the box is in closed position with the flange 14 in contact with the front end of the box adjacent the lower block 15, any of the articles within the box may move forward, that is, towards the right in Figs. 2 or 3 of the drawing to lie in contacting engagement with the flange 14. At this time, however, the top block member has moved forwardly with the cover, thus leaving a corner space 17 between the underside of the block 16 and the bottom of the box of sufficient size to accommodate but a single article of the size and type for which the box is designed, the curved inner side wall of the block 15 permitting one of the articles, or tablets, to

pass into the corner space between the right hand edge of the block 15 and the right hand end of the box.

Due to the curved configuration of the side wall of the block 15 and also to the wedge shape of the block 16, all of the articles contained in the box are moved back freely without cutting, jamming or crushing them. In this respect the box of the present invention differs markedly from that shown in the aforesaid United States Patent No. 1,962,860, which disclosed in one modification a wedge shaped block, or projection, which terminated at its inner end towards the center of the box in a sharp knife-like edge while the top, or cover, of the box in the form shown in said patent, was a simple depending flange that extended longitudinally of the box. The result was that with a construction such as shown in the said patent, tablets, or other articles were caught between these sharp knife-like edges and completely destroyed.

Obviously the box may be designed to dispense any desired number of articles at one time by changing the size or position of the parts to allow more than one article to be retained in corner 17 on the movement of the cover.

The lower block 15, as heretofore pointed out, being positioned to extend down from the side and up from the bottom of the box to provide the corner 17 and the side wall of the block 15 being of curved configuration as shown in Fig. 3, any articles contained within the box have a more or less natural flow around the curved side of the block 15 into the corner 17; the upper wedge shaped block 16 being located immediately above the block 15 cooperates with the latter to define the corner 17 of precisely the shape desired. When, however, the cover is moved rearwardly to permit an article that has been located in the corner 17 to be dispensed from the box, the wedge shape of the upper block 16 and the fact that it extends rearwardly from the flange 14 somewhat beyond the rearward or left hand end of the block 15, insures that any articles which might otherwise tend to pile up behind the flange 14 are shoved around the curved side wall of the lower block 15 and crushing of the articles and likewise jamming of the cover is very effectually prevented. As will be seen by referring to Fig. 3, the upper block 16 is of such length that when the flange 14 is against the right hand end of the box, the rear end of the wedge 16 terminates short of the rear curved end of the lower block 15. Due to this fact, and also due to the inclined inner face of the upper wedge block 16, any articles that might otherwise have had a tendency to jam into the corner space 17 are pushed sideways and rearwardly without any crushing or jamming action taking place.

Although for purposes of illustration I have described my invention by reference to an actual embodiment, there are obvious modifications which can be made and still maintain the fundamental features which render the device operable in the substantial manner described. I therefore do not desire to limit myself by the specific structure disclosed but rather by the scope of the following claims.

I claim:

1. A dispensing container for small articles of the type employing a sliding cover with a projecting flange near one edge of said cover cooperating with a projection in the box spaced from one end to push all but a determined number of articles into a closed portion and leaving only

said determined number in the said space between said projection and the end of the container, characterized by a block member carried by said cover positioned above said projection of a size to cover the space between said projection and the end of the container when said cover is in closed position, thereby limiting the number of articles retained in the space between said projection and the end of the box.

2. In a container of the character described wherein articles to be dispensed are retained in a corner of said container between a fixed projection and the end of the box to be left in an open portion of the box when a barrier is used to move other articles into a covered portion of said container, characterized by a portion of said barrier carried by said cover having a cut out portion to clear said projection and having a block portion extending backwardly from said cut out portion a distance as great as the distance from said fixed projection to the end of said box and over said projection and cooperating with said projection when said cover is moved to open position to leave only such articles in the open portion of said container as were originally retained below said block and in front of said projection when said cover was in closed position.

3. A container of the type having a sliding cover adapted when in open position to uncover a portion of said container and said cover having barrier means projecting within said container and extending transversely thereof to prevent material contained in said container when said cover is in said open position from moving from the covered to the uncovered portion of said container, characterized by said container being provided in addition to said barrier means with a projection extending upwardly from the bottom and inwardly from a side thereof and spaced from one end of said container, the top of said projection being spaced below said cover and said cover being provided with a cooperating projection located immediately above said first named projection but in closely spaced relationship therewith and cooperating with said first named projection and with the adjacent end and side walls of said container to define a corner space when said cover is in closed position in which corner space a predetermined measured quantity of said material is adapted to move for dispensing purposes, and both of said projections cooperating when said cover is moved to open position to move into the covered portion of the container all but such predetermined measured quantity of said material.

4. A container of the type having a sliding cover adapted when in open position to uncover a portion of said container and said cover having barrier means projecting within said container and extending transversely thereof to prevent material contained in said container when said cover is in said open position from moving from the covered to the uncovered portion of said container, characterized by said container being provided in addition to said barrier means with a projection extending upwardly from the bottom and inwardly from a side thereof and spaced from one end of said container, the top of said projection being spaced below said cover and said cover being provided with a cooperating projection located immediately above said first named projection but in closely spaced relationship therewith and co-

operating with said first named projection and with the adjacent end and side walls of said container to define a corner space when said cover is in closed position in which corner space a predetermined measured quantity of said material is adapted to move for dispensing purposes, and both of said projections cooperating when said cover is moved to open position to move into the covered portion of the container all but such predetermined measured quantity of said material, and the inner side wall of said first named projection being curved on its front and rear sides to assist free flow of said material about said projections.

5. A container of the type having a sliding cover adapted when in open position to uncover a portion of said container and said cover having a barrier means projecting within said container and extending transversely thereof to prevent material contained in said container when said cover is in said open position from moving from the covered to the uncovered portion of said container, characterized by said container being provided with a projection extending upwardly from the bottom and inwardly from a side thereof and spaced from one end of said container, the top of said projection being spaced below said cover and said cover being provided with a cooperating projection located immediately above said first named projection but in closely spaced relationship therewith and cooperating with said first named projection and with the adjacent end and side walls of said container to define a corner space when said cover is in closed position in which corner space a predetermined measured quantity of said material is adapted to move for dispensing purposes, and both of said projections cooperating when said cover is moved to open position to move into the covered portion of the container all but such predetermined measured quantity of said material and the inner side wall of said first named projection being curved on its front and rear sides to assist free flow of said material about said projections and said second projection merging with said barrier means and extending rearwardly thereof into said container and having its inner side face inclined to the side edges of the cover whereby said inclined face will engage material contained within the container and push it sidewardly and rearwardly when said cover is moved from closed to opened position.

6. In a container, a projection inside said container, extending upwardly from the bottom, inwardly from a side and spaced from one end of said container, a sliding cover adapted to open with an edge thereof movable to an open position in substantial alignment with said projection, a barrier member extending downwardly from said edge toward the bottom of said container and having a notched out portion to clear said projection, a block member secured to said cover extending back of said barrier member and above said notched out portion over said projection and cooperating with the latter to define a material retaining pocket when said cover is in closed position in which pocket material will remain as said cover is moved from closed to open position while other material is moved into and retained in the covered portion of said container by the divider formed by said barrier, said projection and said block.

7. A container such as set forth in claim 6 in which the block member is of substantially wedge

shape in plan view with the edge of the wedge extending back from the barrier member.

8. A dispenser, comprising a shallow box having a projection on the inside thereof extending upwardly partway of its height from the bottom and inwardly from a side and spaced from one end of said box, a sliding cover mounted upon said box adapted to be moved from a closed position to an open position with a transverse edge thereof in substantial alignment with said projection; a transverse flange carried by said cover extending across said box and downwardly from said edge toward the bottom of said box, said flange being notched at one lower corner thereof to clear said projection, a depending member on the inner side of said cover extending rearwardly from said flange having a lower surface in a plane above said notch and said projection, said member cooperating with said projection to define a material dispensing pocket between said one end of said box, said projection, the bottom of said box and said member when said cover is in closed position and in which material will remain as said cover is moved from closed to open position, and means for limiting the sliding movement of said cover to its open position to an extent just sufficient to uncover said dispensing pocket.

9. A dispenser comprising, a shallow box having a projection on the inside thereof extending upwardly partway of its height from the bottom and inwardly from a side and spaced from one end of said box, a sliding cover mounted upon said box adapted to be moved from a closed position to an open position with a transverse edge thereof in substantial alignment with said projection, a transverse flange carried by said cover extending downwardly from said edge toward the bottom of said container, said flange being arranged to clear said projection, a depending member on the inner side of said cover at one end of said flange having a lower surface lying in a plane above said projection and cooperating with said projection to define a material dispensing pocket between said one end of said box and said projection when said cover is in closed position and in which pocket material will remain as said cover is moved from closed to open position, and means for limiting the sliding movement of said cover to its open position to an extent just sufficient to uncover said dispensing pocket.

10. A dispenser as defined in claim 9, in which the means for limiting the sliding movement of the cover to open position comprises a lug on the wall of the box opposite the projection, adapted to be engaged by the flange on said cover member.

11. A dispenser such as set forth in claim 9, in which the depending member is at least of a length sufficient to bridge the material dispensing pocket when the cover is in closed position.

12. A dispensing container for small substantially uniform disc-like articles, comprising a shallow box adapted to receive said small disc-like articles therein in indiscriminate relation, said box having a projection extending from a side wall and spaced from an end wall of said box to provide a material dispensing pocket between said one end wall and said projection when said box is closed, said projection being of a height slightly greater than the thickness of one of said disc-like articles, a cover slidably mounted upon said box, and means carried by said cover including a depending flange and projecting

means both cooperating with said projection when said cover is closed to form a barrier which prevents said articles from entering said pocket except when flatwise and, when said cover is moved to its open position, retaining a predetermined number of articles in said dispensing pocket, depending upon the extent to which said projection extends inwardly from said side wall.

13. A dispensing container for small substantially uniform disc-like articles comprising, a shallow substantially rectangular box adapted to receive said small disc-like articles therein in indiscriminate relation, said box having a projection extending inwardly from a side wall and upwardly from the bottom wall and spaced from an end wall of said box to provide a material dispensing pocket between said one end wall and said projection adapted to receive at least one of said articles therein flatwise, a cover slidably mounted upon said box, said cover having at the edge thereof adjacent said one end wall of said box a transverse flange depending into said box and terminating close to the bottom thereof, and the end of said flange member adjacent said side wall terminating in spaced relation to said projection to clear said projection and being adapted to be moved into transverse alignment with said projection, when said cover is moved from closed to opened position said projection being of a height slightly greater than the thickness of one of said disc-like articles, and an elongated filler

block depending from said cover at one end of said flange and having a height sufficient to substantially fill the space between said cover and projection, whereby when said cover is moved to its open position, at least one of said articles will remain in said dispensing pocket and the articles behind said flange will be shifted out of alignment with said dispensing pocket upon movement of said cover to align said flange with said projection and expose said dispensing pocket.

14. A container for dispensing small, substantially uniform disc-like articles which have been deposited therein in bulk comprising, a shallow box member adapted to receive said small disc-like articles therein in indiscriminate relation, a cover member slidable upon said box member, pocket-forming means within said container providing a dispensing space large enough to receive only one of said articles therein flatwise, said pocket-forming means including a filler portion secured to said cover and substantially filling the space between the upper side of said pocket and said cover member, and a flange depending from said cover member extending across said box member arranged to allow one of said articles to remain in said dispensing space and to shift articles behind said flange out of alignment with said dispensing space when said cover member is moved to its open position.

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