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STOPPER FOR DISPENSING SPOUTS

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The present invention relates to an improvement in pouring container, or bottle seals, and has for its object, an improvement in the construction of the parts thereof to reduce the structure to two simple, coacting parts, thus permitting of a saving in the costs of manufacture and final assembly.

The present device is an improvement over that covered in my expired United States Patent No. 1,027,544, of May 28, 1912, in which there is shown a dripless dispenser for liquids.

The present improvement has an added function over the above noted patent disclosure, in that it has been found that the structure herein described is perfectly adapted to dispense dry pulverulent materials, as a substitute for a after top, while at the same time performing the function of a screw-on stopper, which is readily opened or tightly closed as desired.

The foregoing and other features of advantage, will appear as the herein construction is disclosed, and it is obvious that modifications may be made in the structure herein, without departing from the spirit hereof or the scope of the appended claims.

In the drawings:

Fig. 1 is a side elevation of a container having its neck portion broken away to better show the details of container and pouring stopper;

Fig. 2 is a sectional view of the container and stopper, taken on line 2—2 of Fig. 1, looking in the direction of the arrows;

Fig. 3 is a view in elevation of the stopper removed from the container;

Fig. 4 is a bottom view thereof;

Fig. 5 shows the container with stopper opened, and positioned for dispensing the contents thereof; and

Fig. 6 is a fragmentary section of the stopper.

As previously noted, it has been found that this structure dispenses dry pulverulent material from the container, and after bringing the container, generally denoted by 1, all figures, back to normal non-pouring position, the slope of the tapped flanged seat 4, of the bottle neck being greater than the angle of repose, returns back to the container interior, all undispensed material, after which the stopper generally denoted by 5, may be screwed to a closure.

As in Fig. 3, the stopper 5, made preferably of a moulded phenolic resin compound comprises a head having, as desired a knurled perimeter 11, a tapering, valve face 10, this structure being in turn, connected by the valve faced end 10 to a small diametrical neck 9', thus leaving a circular groove or guttering 9 between said head 5 and the threaded portion 6, Fig. 3, which threaded portion is of a single threaded, cylindrical extension, provided with four geometrically spaced, vertically disposed dispensing passages 8, 8, 8, 8, Fig. 4, which run from the lower end of the screw portion 6 and end by joining the guttering 9, and thus provide four legs or wings the outer faces of which are provided with thread portions 1, all four of said threaded faces forming an interrupted thread of continuous pitch.

The container as will be noted in Figs. 1 and 5, is preferably made of sheet tin as in the customary practice, with the exception that the neck portion, in addition to being provided with the rolled in threads 3, to match the threads on 6, has provided upon its outer end an extending, tapered flared seat 4, the angle of the taper seat and the dimension thereof being suited to receive the valve face 18 of the stopper 5, when closed tightly as in Fig. 1, but to form a wide pouring passage, out of which the liquid or dry material may be dispensed, as in Fig. 5.

Due to the dispersed positions of the four passages 8, 8, 8 and 8, of the stopper 5, when in pouring action, the guttering 9, into which the passages 8 lead, is utilized to unify the flowing stream of material, and thus the discharge from the interior of the container is continuous and smooth.

To prevent clogging and jamming of the material at the bottom of the stopper 6 as it starts to flow from the container, the said bottom, as at 12, Fig. 6, may be made with a tapering funnel like surface, the cross section of which, as at 13, 35 of each thread bearing member being also chamfered on opposite faces.

The mode of assembly is obvious, and easily accomplished, and the device, when assembled, operates in a highly efficient manner and provides for a long valve like seating and contact between the seat and face of the coating members, providing the stopper with an increased coefficient of friction against accidental opening.

What I claim is:

1. A pouring seal stopper comprising a head portion and an interrupted thread portion, both said portions being joined together by a neck portion of lesser dimension than either the head portion or said thread portion, said interrupted thread portion providing a plurality of pouring passages between the bottom of said thread portion and the valve seat portion, said neck portion providing a guttering groove into which said pouring passages empty, at their upper ends,
thereby to unify the stream of poured material, when pouring.

2. A stopper having a head, and an interrupted thread portion; said portion having substantially longitudinal passages spaced around said portion, the outer ends of said passages being formed to substantially communicate laterally, there being a circumferential groove thereat, and to combine material passing through adjacent passages to form a substantially unified stream.

3. A stopper having an inwardly tapered outer head, and an inner interrupted thread portion; said portion having four wide longitudinal passages spaced around said portion, and an annular groove around said portion between and adjacent to said head and portion and connecting the outer ends of said passages.

4. In combination, a container having an outlet opening having interior threads and surrounded by a tapered seat; and a stopper having a tapered head adapted to fit said seat, and an interrupted thread portion having threads engaging said interior threads; said portion having four wide longitudinal passages spaced around said portion and passing from end to end of the portion, and an annular groove adjacent to and between said head and portion and forming a passage connecting the outer ends of said longitudinal passages; whereby when said head is moved a short distance from the seat and lowered, material may pass through adjacent passages, combine in said groove and pass from the seat in a unified stream in any pouring position of the stopper.

5. A stopper and pouring guide for a container having an internally threaded neck, comprising a projecting substantially annular portion having externally threaded segments for engaging the threads of the neck, and a projecting head portion, there being a circumferential groove between said portions; said first portion having pouring passages between the segments, the outer ends of the passages being in communication with the groove, said segments having their inner ends edged or chamfered to facilitate the pouring, so that material poured through said passages may mingle in the groove whereby to provide a unified pouring stream.

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