

May 18, 1937.

G. R. MAST

2,080,867

VALVED DISPENSING DEVICE

Filed May 29, 1936

2 Sheets-Sheet 1

Fig. 1.

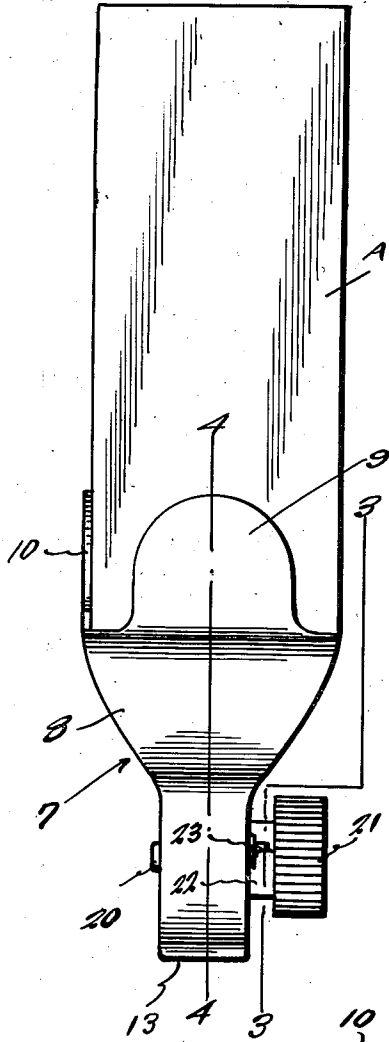


Fig. 2.

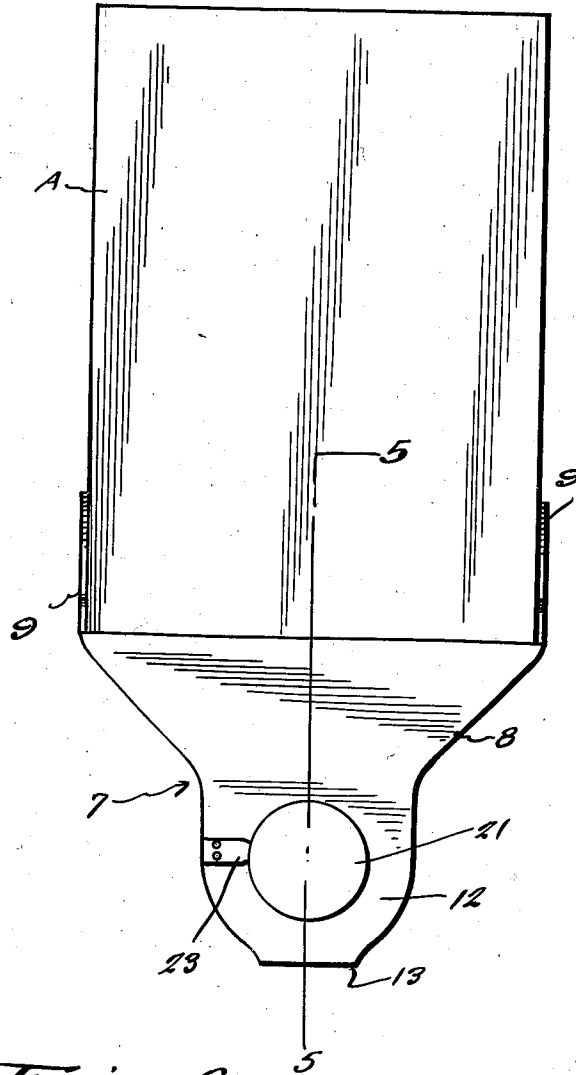
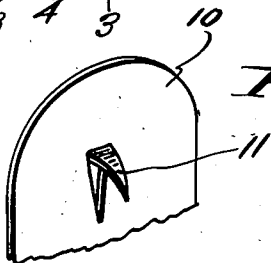


Fig. 6.



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2 Sheets-Sheet 2

Fig. 3.

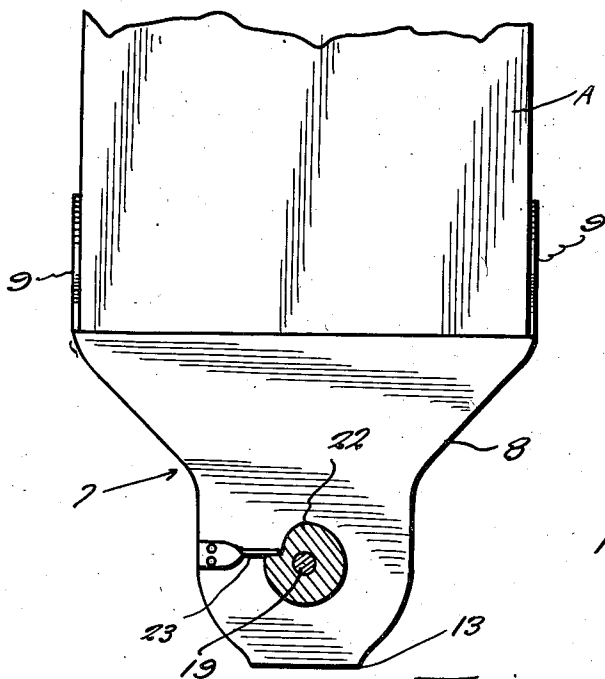


Fig. 5.

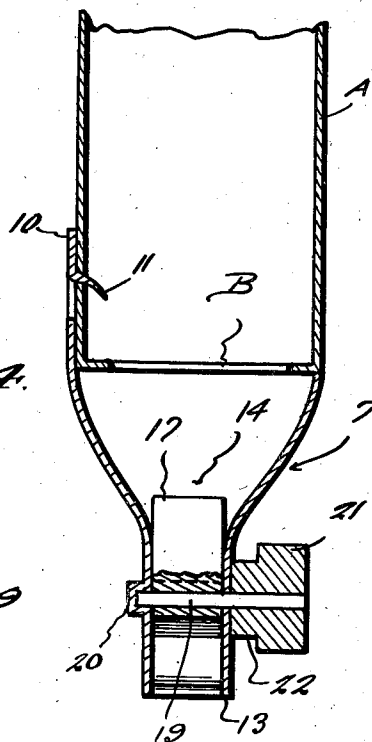
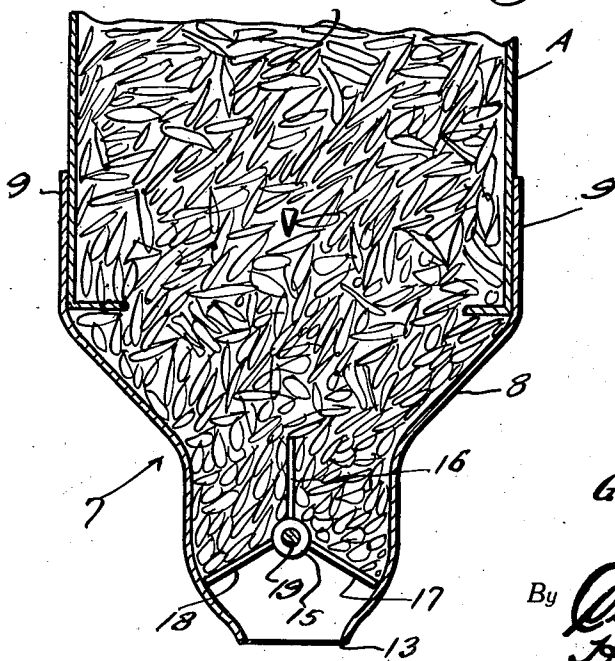


Fig. 4.



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UNITED STATES PATENT OFFICE

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VALVED DISPENSING DEVICE

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Application May 29, 1936, Serial No. 82,657

1 Claim. (Cl. 221—1)

This invention relates to a hand-controlled, valve-regulated dispensing nozzle for use as an attachment for cardboard boxes and cartons such as are employed commercially for packaging granular products such as washing powder, soap chips, and the like.

As implied by the preceding introductory statement, it is my primary object and aim to provide the trade with a simple, economical and efficient closure attachment for commodity-containing carton, wherein the same is constructed to fit in a hood-like manner over the hand-torn end of the box to expedite discharge of the contents of the box in measured charges.

To be a little more specific, the preferred embodiment of the invention is in the nature of a closing cap similar to a miniature hopper constructed with adapter means whereby it may fit over a conventional carton and including a hand valve-controlled nozzle to expedite delivery of the contents of the carton or box into a suitable collection receptacle or elsewhere.

Other features and advantages will become more readily apparent from the following description and drawings.

In the drawings:

Figure 1 is an elevational view showing the valved discharge cap or attachment and illustrating how the conventional carton is associated therewith for cooperative purposes;

Figure 2 is a front elevation of the arrangement depicted in Figure 1 observing the same in a direction from right to left;

Figure 3 is a section on the line 3—3 of Figure 1;

Figure 4 is a vertical central sectional view taken approximately on the plane of the line 4—4 of Figure 1;

Figure 5 is a view at right angles to Figure 4, the sections being approximately on the plane of the line 5—5 of Figure 2;

Figure 6 is a fragmentary perspective view of the retention spur for removably holding the carton in place for dispensing purposes.

Referring now to the drawings by distinguishing reference numerals, attention comes first to the part indicated by the letter A, this being what may be satisfactorily referred to as a soap chip containing box or carton. This is the regular carton sold on the market and in order to adapt it for cooperation with the dispensing device, it is simply necessary to tear or form a discharge opening as at B in the head thereof as denoted in Figure 5. Ordinarily, the carton is righted, that is, placed on a shelf on its bottom, and

therefore the attachment is in effect a hood-like cap which is attachable to the apertured end so that by inverting the carton, as indicated in the drawings, the soap chips or other contents C (see Figure 4) will discharge therefrom by gravity into the dispensing cap.

The cap is denoted by the numeral 7 and is here shown as constructed of light weight sheet metal or equivalent material. Obviously, however, it need not necessarily be in one piece. Fundamentally however, the cap, as before stated, is somewhat like a hood and designed to fit over the discharge end of the carton. It embodies a substantially rectangular, properly proportioned, tapered hopper 8. Rising from the end walls and one side wall of the hopper are upstanding stabilizing and retention lugs 9 and 10. There is no such lug on the front of the hopper, and this allows the box to be slipped in between the other three lugs 9 and 10. The back lug 10 is provided with an out-struck tongue or spur 11 which is forced through the back wall of the carton to hold the attachment in place on said carton, as illustrated in the drawings. The hopper at its bottom merges into a suitably proportioned shaped and tapered member which may be conveniently denoted as the dispensing or discharge nozzle 12. The numeral 13 designates the discharge opening which is restricted as illustrated in Figure 4 to conveniently shunt the delivered material into a collection receptacle (not shown), such as a wash tub or the like.

Substantially confined for operation within the nozzle is a measuring and cut-off valve 14 which is here shown as comprising a concentric hub 15 having a series of equi-distant, circumferentially spaced, radial blades 16, 17, and 18. The blades sweep around in an orbital path within the confines of the so-called nozzle and in a sense function as pockets for delivering a predetermined charge or amount of the material C through the discharge opening 13. The hub is mounted on a hand-controlled rotary shaft 19, one end of which is journaled for rotation in a bearing, as indicated at 20. The opposite end projects and is equipped with a knurled knob 21 whose integral hub portion 22 is fashioned to operate as a ratchet member, as denoted in Figure 3. Incidentally, this part 22 may be provided with a single cam-tooth or a series of three teeth corresponding to the spacing of the blades 16, 17, and 18. This would be for the purpose of better determining the successive discharges of material through the discharge opening 13. In the arrangement shown there is a single tube

and this illustrates the basic idea. Obviously, there is a spring pawl or retainer 23, and this has releasable snap engagement with the ratchet to control the rotation of the bladed valve or feeder unit 14.

The gist of the invention is found in the provision of a hood-like cap for dispensing unit to fit telescopically over the apertured end of a conventional carton. Specifically, the novelty resides in the adoption and use of a unit embodying a hopper having retention lugs or members 9 and 10 and an anchoring spur 11. Additional novelty has to do with the reduced valved nozzle, the pawl and ratchet means, and hand-controlled knob arrangement whereby the discharge of material through the nozzle may be regulated. This makes it possible to use the invention in an efficient, economical manner as is obvious.

It is thought that the description taken in connection with the drawings will enable a clear understanding of the invention to be had. Therefore, a more lengthy description is thought unnecessary.

While the preferred embodiment of the invention has been shown and described, it is to be understood that minor changes coming within the field of invention claimed may be resorted to if desired.

I claim:

A hood-like dispensing cap for a conventional carton of a type containing granular material comprising a substantially rectangular hopper proportioned for attachment to a correspondingly proportioned and shaped box, said hopper being formed with a reduced integral discharge nozzle at one end, being formed at the opposite end with wall extensions at its opposite side and rear walls adapted to embrace three sides of said box, the remaining wall of the hopper being unobstructed for slidably inserting the carton transversely, and a retention spur struck from the rear wall extension designed to pierce the wall of the box to maintain the box against removal from the open side of the hopper.

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