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(54) Title: STRUCTURE OF CAP HAVING STORING SPACE

(57) Abstract: A cap assembly with a storage chamber includes a stationary member coupled to a container and provided with a storage chamber defined therein and a movable member with an operation portion, the movable member being coupled to a spouting portion of the stationary member to release a secondary material into the container.

TITLE

STRUCTURE OF CAP HAVING STORING SPACE

TECHNICAL FIELD

5 The present invention relates to a cap assembly with
a storage chamber for a secondary material, and more
particularly, to a cap assembly with a storage chamber that
can store a secondary material that can be mixed with a primary
material contained in a container associated with the cap by
10 simple opening the cap.

BACKGROUND ART

In a variety of industrial field, it is sometimes
necessary to mix two or more different materials with each
15 other to prepare a mixture, prior to using the mixture.

For example, when it comes to beverage industrial filed,
users wishes to add a variety of flavors or vitamin to the
water. To this end, the user purchases the flavor or vitamin
and the separated bottle water and mixes the flavor or the
20 vitamin with the bottle water. However, it is very
troublesome for the user to do so.

SUMMARY OF THE INVENTION

Therefore, the present invention has been made in an effort to solve the above-described problems of the conventional art.

5 It is an object of the present invention to provide a cap with a storage chamber for a secondary material that will be mixed with a primary material contained in a container associated with the cap by simply opening the cap.

It is another object of the present invention to provide
10 a product employing such a cap with a storage chamber for a secondary material.

It is still another object of the present invention to provide a cap assembly that is simple in a structure, thereby saving the manufacturing costs.

15

TECHNICAL SOLUTION

To achieve the above objects, the present invention provides a cap assembly with a storage chamber including a stationary member coupled to a container and provided with
20 a storage chamber defined therein and a movable member with an operation portion, the movable member being coupled to a spouting portion of the stationary member to release a

secondary material into the container.

BRIEF DESCRIPTION OF THE DRAWINGS

5 FIGS. 1 and 2 are views of a cap assembly with a storage chamber according to a first embodiment of the present invention;

 FIG. 3 is a sectional view of a cap assembly with a storage chamber according to a second embodiment of the present
10 invention;

 FIG. 4 is a sectional view of a cap assembly with a storage chamber according to a third embodiment of the present invention;

 FIG. 5 is a sectional view of a cap assembly with a storage
15 chamber according to a fourth embodiment of the present invention;

 FIG. 6 is a sectional view of a cap assembly with a storage chamber according to a fifth embodiment of the present invention; and

20 FIG. 7 is a sectional view of a cap assembly with a storage chamber according to a sixth embodiment of the present invention.

BEST MODE FOR CARRYING OUT THE INVENTION

Preferred embodiments of the present invention will be described more in detail hereinafter in conjunction with the accompanying drawings. Wherever possible, the same reference numerals will be used throughout the drawings to refer to the same or like parts.

FIGS. 1 and 2 show a first embodiment of the present invention. A cap assembly 1 includes a stationary member 10 coupled to a neck portion 101 of a container 100 and a movable member 10 coupled to the stationary member 20.

The stationary member 10 includes a spouting portion 11 extending upward, a storage tube 12 formed extending downward to store a secondary material A, and a storage space 13 defined in the storage tube 12.

A seal film 14 is integrally formed on a lower portion of the storage tube 12, being provided with a cutting line 15.

A fixing portion 16 is formed on a center of the seal film 14.

The movable member 20 is screw-coupled to a spouting portion 11 of the stationary member 10. An operation portion

21 is formed extending from an inner center of the movable member 20.

The operation portion 21 is formed in a tube shape in which a fixing portion of the seal layer 14 is tightly
5 inserted.

Therefore, in a state where the secondary material is filled in the storage tube 12 formed on the stationary member 10, the movable member 20 is screw-coupled to the spouting portion 11 of the stationary member 10. Then, the
10 fixingportion 16 formed on the seal layer 14 is tightly inserted in the operation portion 21 and the stationary member 10 is screw-coupled to the neck portion of the container 100.

At this point, when the movable member 20 is unscrewed from the spouting portion 11 of the stationary member 10, the
15 operation portion 21 moves upward together therewith and the fixing portion coupled on the lower end of the operation portion 21 also moves upward, thereby moving the seal layer 14 upward.

When the seal layer 14 moves upward above a predetermined
20 level, the cutting line 15 is broken to separate the fixing portion 16 from the operation portion 21, thereby defining an opening. As a result, the secondary material filled in

the storage tube 13 is dropt into the container 100.

Therefore, the secondary material A stored in the storage space 13 is perfectly protected from humidity by the seal layer 14. The seal layer 14 is broken when the movable
5 member 20 is separated to release the secondary material A.

FIG. 3 shows a second embodiment of the present invention.

A hook step 30 is formed on a lower end of the operation portion 21 formed on the movable member 20. A fixing portion
10 16 is formed on the seal layer 14. The fixing portion 16 has an opened top to which a lower end of the operation portion 21 is inserted. A hook groove 31 in which the hook step 30 is inserted is formed on an inner surface of the fixing portion
16.

15 A cutting line 15 is formed on the seal layer 14 in a spiral shape.

FIG. 4 shows a third embodiment of the present invention.

A lower end of the operation portion 21 is attached on the seal layer 14 with the cutting line 15. The cutting line
20 15 is broken when the movable member 20 moves upward.

FIG. 5 shows a fourth embodiment of the present invention.

A portion of the seal layer 14 is removably assembled on a lower end of the operation portion 21 formed on the movable member 20.

That is, an assembling portion 50 provided with a cutting line 15 is assembled on the seal layer 14,

The assembling portion may be adhered or fitted in the seal layer 14.

FIG. 6 shows a fifth embodiment of the present invention.

An opening 60 is formed on the seal layer 14 and an extreme end of the operation portion 21 is inserted. A seal seat 61 is attached on the extreme end of the operation portion.

FIG. 7 shows a sixth embodiment of the present invention.

A seal layer 14 is integrally formed on a lower portion of a spouting portion 11 of a stationary member 10. A fixing portion is formed on the seal layer 14 with a cutting line 15. The fixing portion 16 is inserted in the operation portion formed in the movable member 20.

INDUSTRIAL APPLICABILITY

As described above, the present invention can be associated with a variety of containers such as a PET bottle and a pouch container.

CLAIMS

1. A cap assembly with a storage chamber, comprising:
a stationary member coupled to a container and provided
5 with a storage chamber defined therein; and
a movable member with an operation portion, the movable
member being coupled to a spouting portion of the stationary
member to release a secondary material into the container.

10 2. The cap assembly of claim 1, wherein the storage
chamber is provided with a seal layer that can be broken by
the operation portion.

3. The cap assembly of claim 2, wherein the seal layer
15 includes a fixing portion coupled to the operation portion
and the fixing portion is provided with a cutting line.

4. The cap assembly of claim 3, wherein the cutting
line is formed in a spiral shape.

20

5. The cap assembly of claim 2, wherein the storage
chamber includes a storage tube extending downward from the

spouting portion of the stationary member.

6. The cap assembly of claim 2, wherein the seal layer is attached on an extreme end of the operation portion.

5

7. The cap assembly of claim 2, wherein the seal layer is provided with an opening communicating with a lower portion and an extreme end of the operation portion is inserted into the opening, the opening being provided with a seal seat.

10

8. A cap assembly with a storage chamber, comprising:
a stationary member fixed on a cup-shape container and having the storage chamber defined therein, the stationary member being provided with a seal layer; and

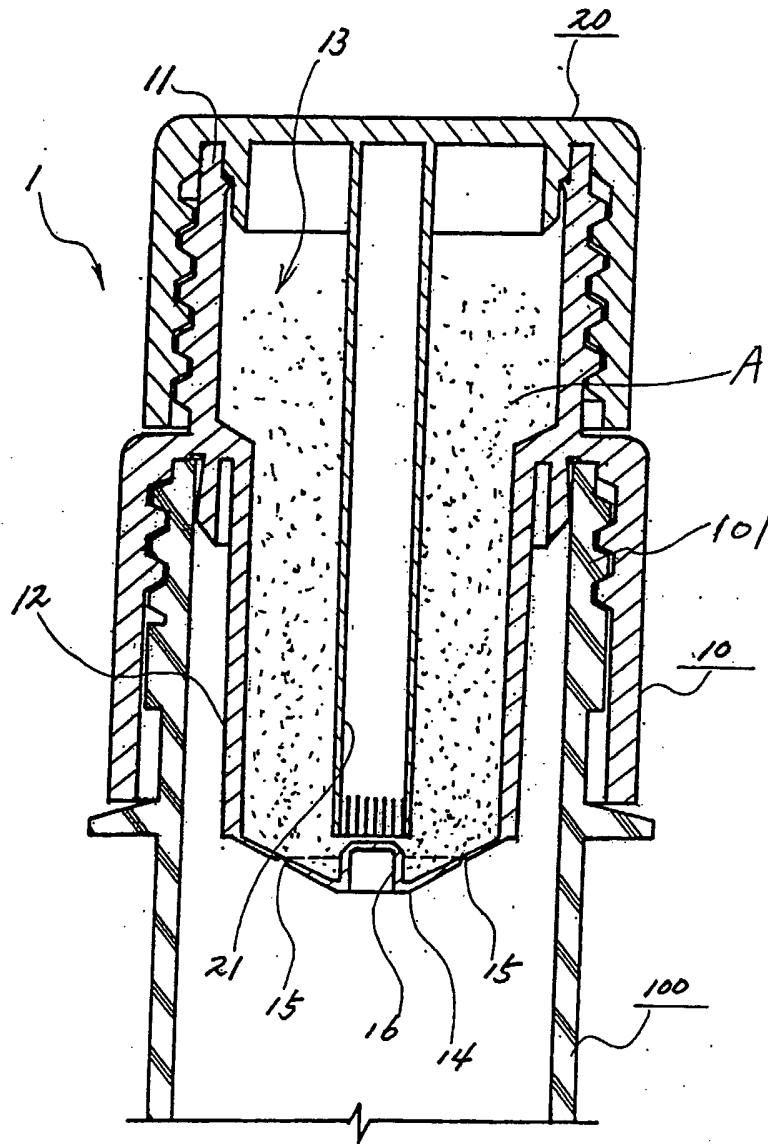
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a movable member coupled on the stationary member and having an operation portion for opening the seal layer.

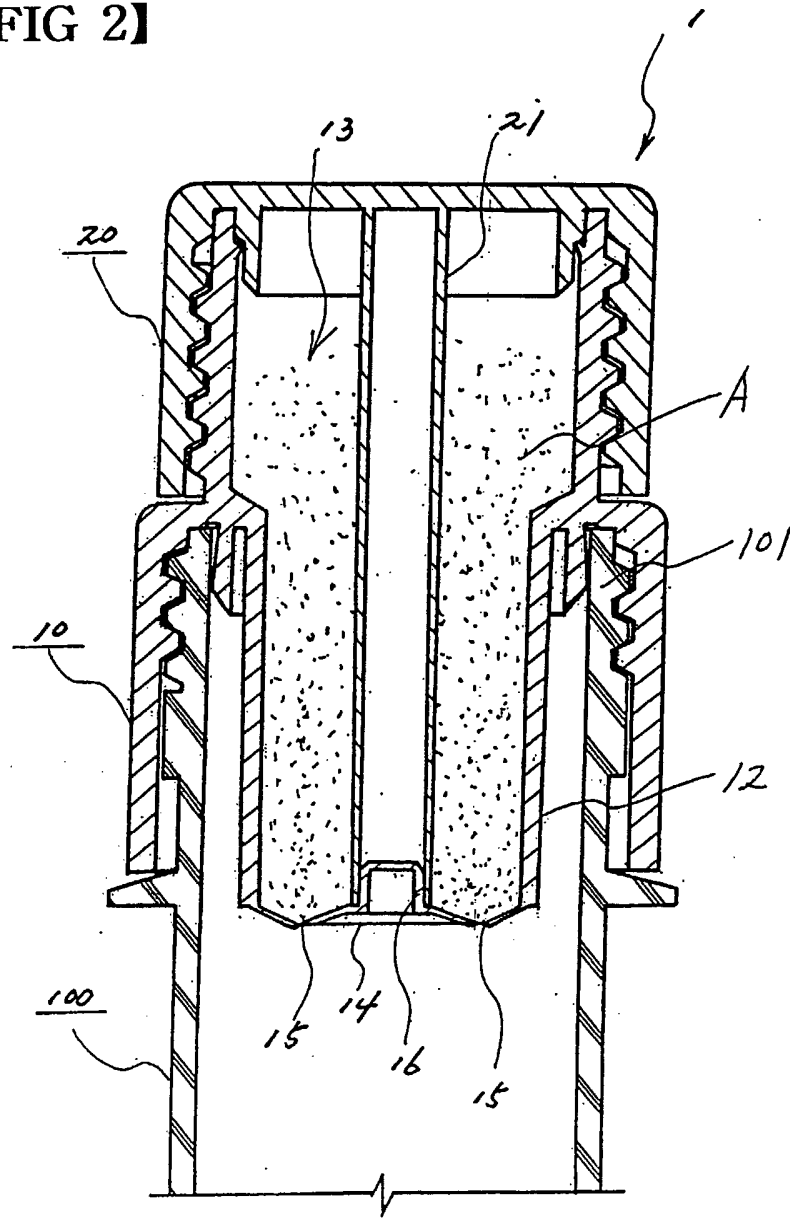
9. The cap assembly of claim 8, wherein a fixing portion with a seal layer is inserted in the operation portion and the fixing portion is designed to be removed by a cutting line.

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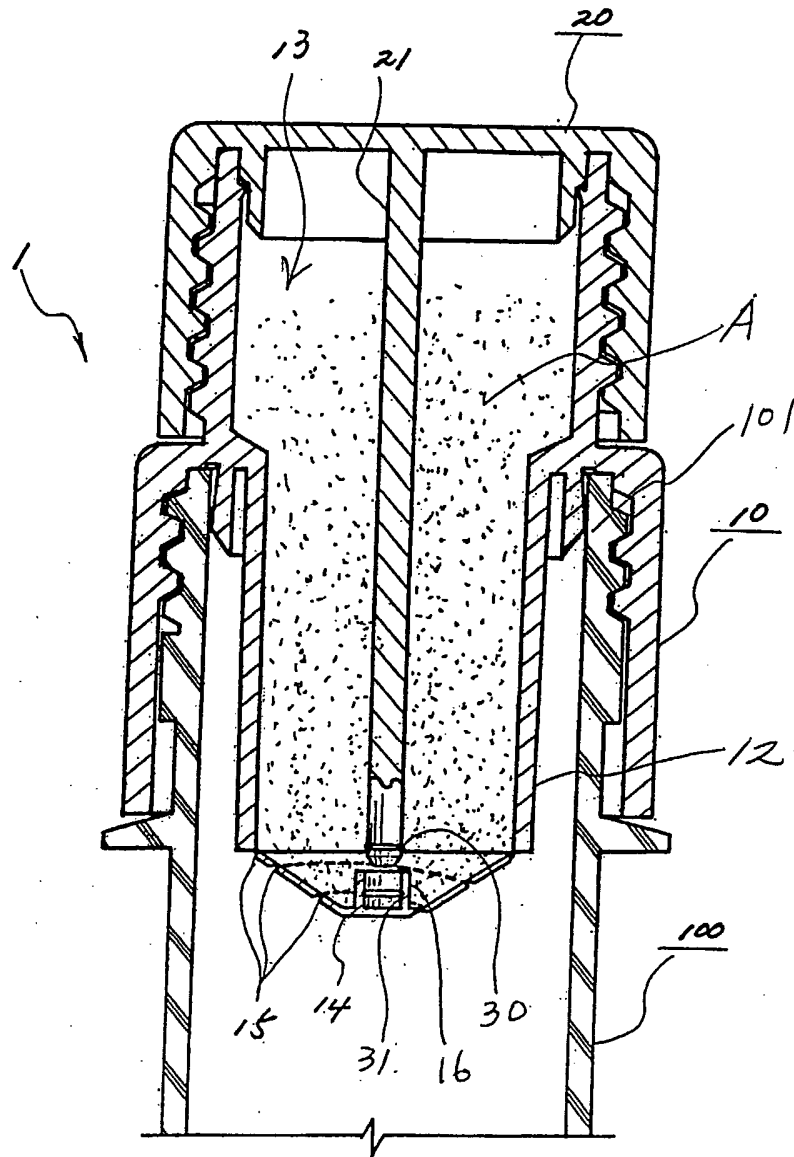
【FIG 1】



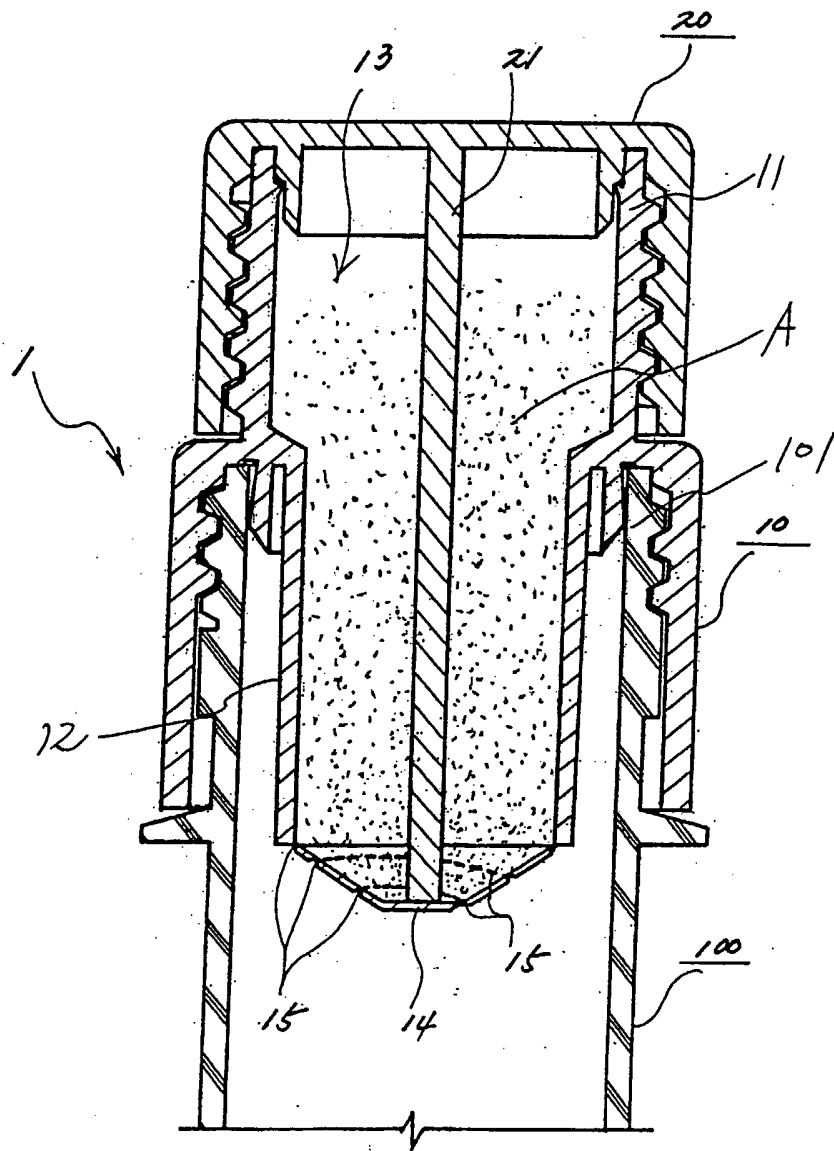
【FIG 2】



【FIG 3】

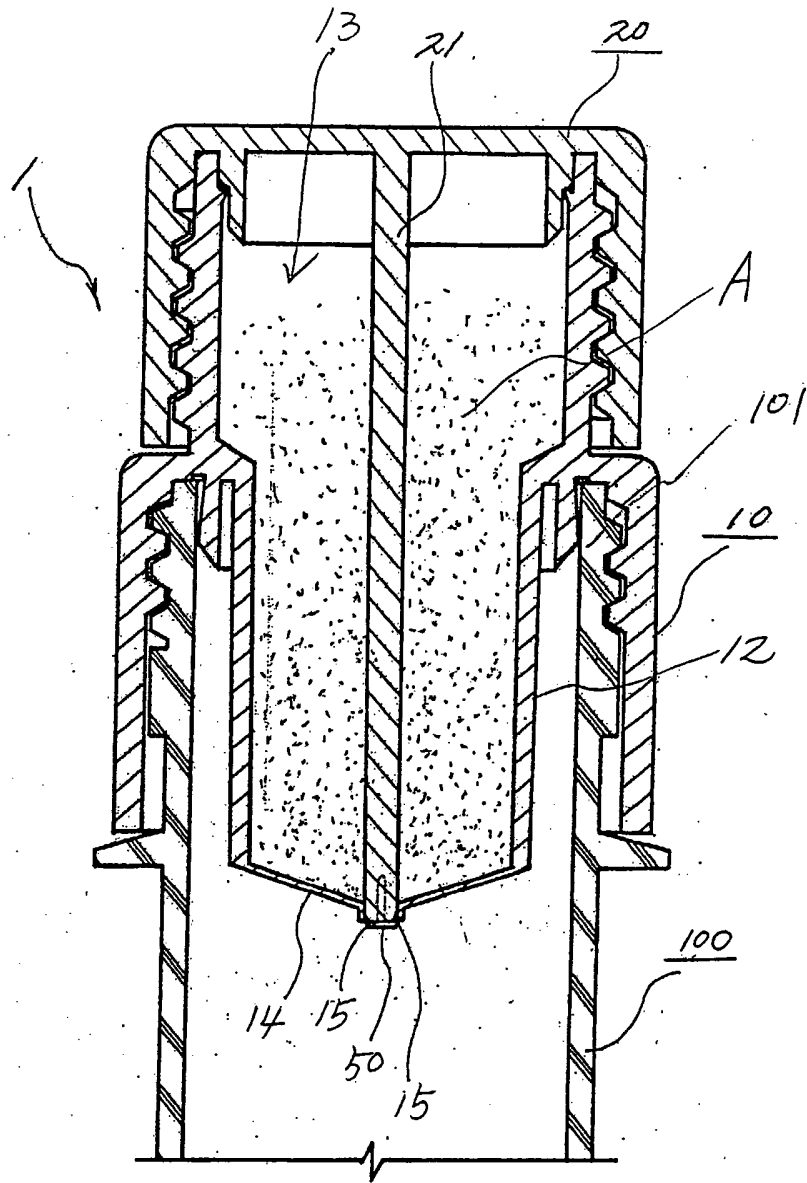


[FIG 4]

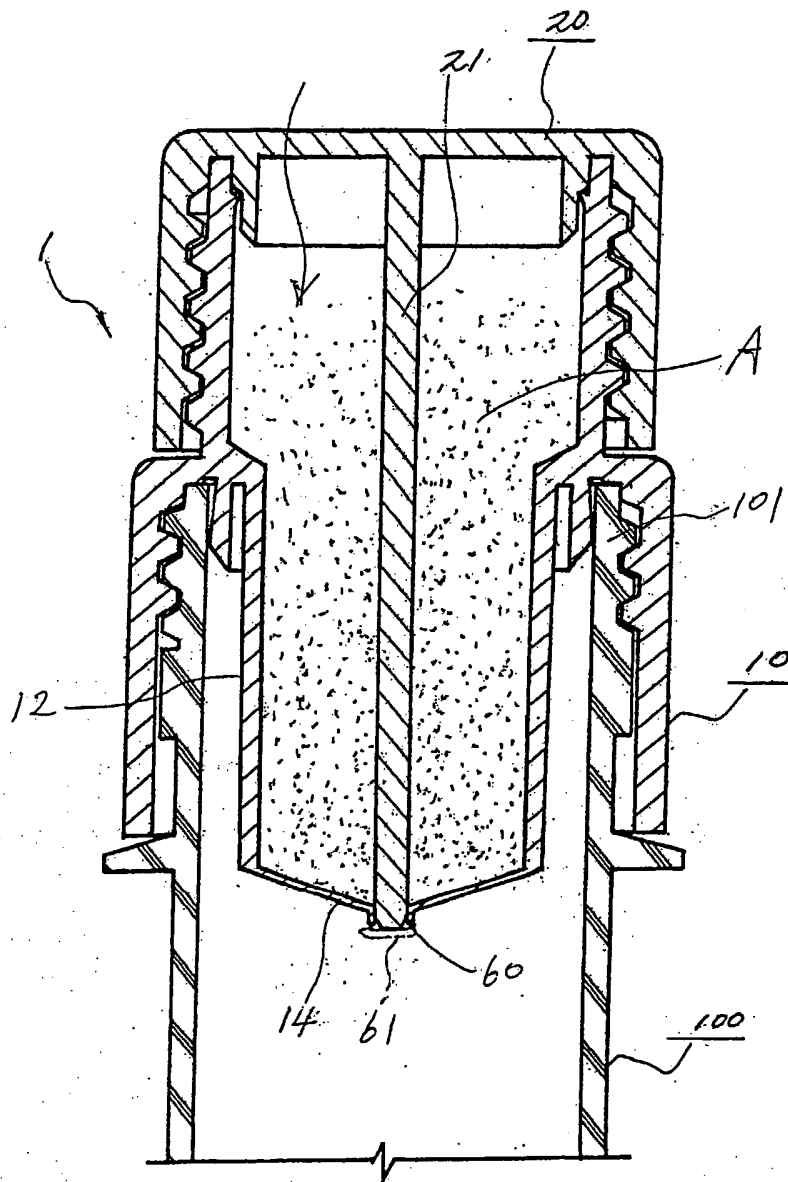


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【FIG 5】



[FIG 6]



[FIG 7]

