

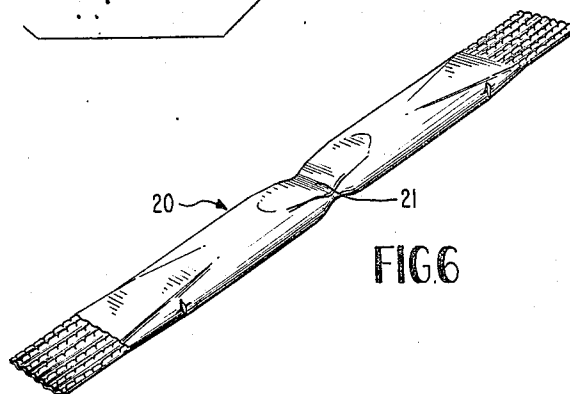
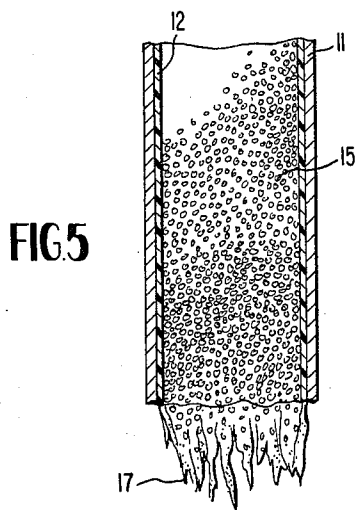
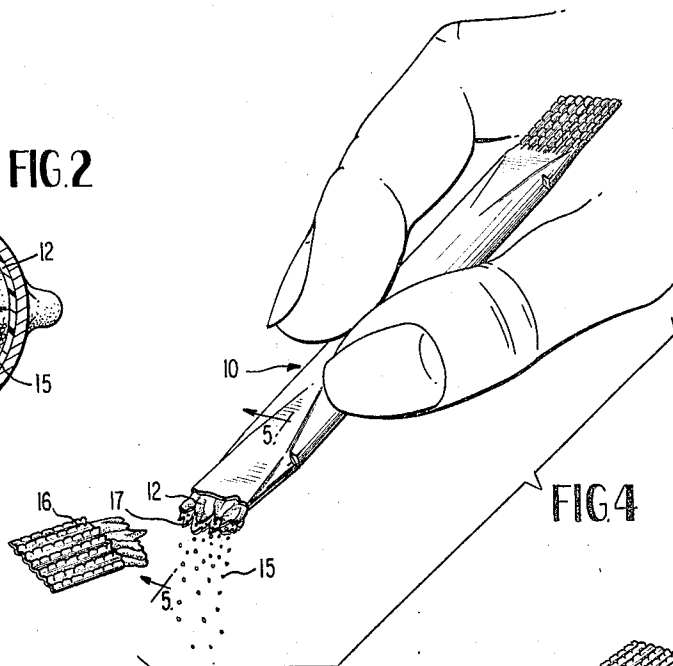
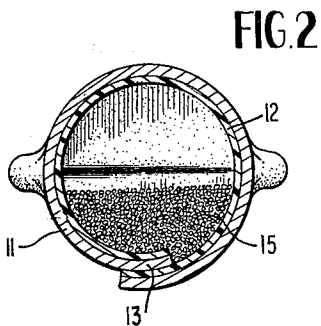
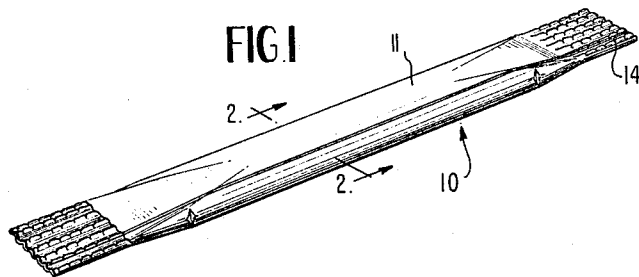
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3,263,863

CONTAINER FOR GRANULAR MATERIAL

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3,263,863

CONTAINER FOR GRANULAR MATERIAL

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This invention relates generally to a new container construction for granular and powdered materials.

The instant invention is more specifically concerned with a novel commodity packet for storage and dispensing of a quantity of salt, pepper, sugar, tea, coffee and other commodities wherein means are provided to restrict the flow of the material to prevent the dispensing of more of the material than is desired by the user.

Single use discardable packets for granular comestibles have long been known in the art. By way of example, attention is directed to my earlier patents: 2,499,313, of February 28, 1950; 2,784,896, of March 12, 1957, and 2,895,606, issued July 21, 1959. Such shaker packets as are now in use provide no means whereby the flow of granular material can be controlled to any degree and as a result it is difficult for the user to dispense only a desired amount of the contents.

It is accordingly a primary object of this invention to provide a container or packet for granular material which maintains control of the outflow of material and obviates the dumping out of excessive quantities of the material.

A further object of this invention is to provide a sealed tubular container for granular material that is highly impervious to moisture and maintains the contents in a dry state.

A still further object of the present invention is to provide a sealed tubular container which when torn open will release its contents when tapped or otherwise agitated.

Another object of the invention is to provide a dispensing packet which can be produced at high speed using a minimum of packaging materials, which is relatively small in size and is easily fed from automatic vending machinery.

An additional object of this invention is to provide a dispensing packet in the form of a sealed convolute wound tube which is of simple construction, is inexpensive to produce, has a long shelf life, and is convenient and efficient in use.

For yet other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in conjunction with the accompanying drawings which illustrate the best mode now contemplated of carrying out the invention and in which:

FIGURE 1 is a perspective view of the container of the invention;

FIGURE 2 is an enlarged section taken along line 2—2 of FIGURE 1;

FIGURE 3 is an end elevation of the container of FIGURE 1 taken from either end;

FIGURE 4 is a perspective of the container in use after being torn open;

FIGURE 5 is an enlarged sectional view taken along line 5—5 of FIGURE 4; and

FIGURE 6 is a perspective of a modified form of the invention.

Reference is now made more specifically to the drawing, wherein like numerals designate similar parts throughout the several views and wherein the container constituting the subject matter of this invention is designated generally at 10.

The container may be formed from any desired material depending upon the comestible, drug or other product to be packaged, the amount of handling the container will be subjected to and other relevant factors. However, paper,

or other tearable, bendable plastic or other web material has been found suitable for this use. This web material forms the outer casing 11 of container 10.

An inner film liner 12 is superimposed on the web material 11 and may be laminated or otherwise secured thereto. For the purposes of this invention polyethylene has been found suitable. Examples of other films that may be used are "Saran" (polyvinylidene chloride), cellulose acetate, coated cellophane, and "Pliofilm" (rubber hydrochloride). The film chosen should be one that will stretch readily when placed in tension and will not fully recover when tension is released.

The superimposed web material 11 and film liner 12 are wound into a convolute tube as shown best in FIGURE 2 and heat sealed longitudinally in the area of overlap 13. One end of the tube is then heat sealed and preferably crimped as at 14 effectively closing the one end and the tube is then filled with granular contents 15. After filling, the other end of the tube is heat sealed and preferably crimped forming a closed container.

In use, the container is held in the hand and one end 16 is torn off, preferably adjacent the crimped end, but the container may actually be torn anywhere intermediate its sealed end portions. When so torn, the outer web material tears away cleanly, however, the inner film liner 12 strings out in tension until its limit is reached at which point it separates leaving a plurality of elongated tentacles or fingers 17. The film is such as to have a natural cohesive affinity for itself so that the tentacles naturally cling together. This self-cohesive character is apparently the result of some kind of surface attraction forces present in certain films. For a more complete discussion of this phenomena, attention is directed to U.S. Patent No. 2,679,969, issued June 1, 1954, to Richter.

The elongated tentacles 17 combined with the small size of the container or tube have a tendency to hold back the flow of the container contents from dumping quickly. Additionally, the small particles of salt, pepper, sugar, etc. have a tendency to cling to the tentacles, thus preventing flow until the tube is tapped or agitated in some positive manner by the user. It is believed that the molecular action of the powdered contents aided by the surface tension characteristics of the liner material cause this tendency for the particles to cling to the film tentacles.

In the modification shown in FIGURE 6, a container 20 is formed with an additional heat seal 21 transverse to the tube longitudinal axis providing two sealed container sections. Both salt and pepper could be conveniently packaged in this manner in but a single tubular container.

While I have shown and described a preferred embodiment of the invention and an additional modification, it is to be understood that the drawings and detailed disclosure are to be construed in an illustrative rather than a limiting sense since various modifications and substitutions of equivalents may be made by those skilled in the art within the spirit and scope of the invention as defined in the appended claims.

What I claim as my invention and desire to protect by Letters Patent of the United States is:

1. A container for granular material comprising, an outer tubular cover, an inner tubular liner of fluid impervious plastic film which will stretch when placed in tension, the ends of said cover being sealed, the inner liner when torn in two generally transverse to the longitudinal axis of the container stretching into material restraining tentacles.

2. A container for granular material comprising, an outer tubular cover, an inner tubular liner of plastic film substantially nonelastically stretchable when placed in tension, the ends of said container being heat sealed, the inner liner when stretched to failure forming material restraining tentacles at the area of failure.

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3. A container as set forth in claim 2 and further including a longitudinal heat seal from one end to the other.

4. A container as set forth in claim 3, including a sealed portion transverse to the longitudinal axis of the container and intermediate the ends thereof defining two material containing sections.

5. A container for granular material comprising a convolute wound tube, said tube including superimposed laminated webs of an outer paper material and an inner plastic film liner, said plastic film being substantially nonelastically stretchable when placed in tension, the ends of said tube being sealed, the inner liner when stretched to failure forming material restraining tentacles at the area of failure.

6. A container as set forth in claim 5, including a seal intermediate the ends of the container defining two material containers.

7. A dispensing container for granular material, said

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container being formed of a web of paper material and a web of plastic film, said webs being superimposed and laminated together and wound in a convolute tube with the paper material on the outside, said plastic film being substantially nonelastically stretchable when placed in tension, the ends of said tube being sealed, the inner liner when stretched to failure during transverse tearing of said tube forming material restraining tentacles at the area of failure.

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