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CLOSURE FOR FLEXIBLE TUBING

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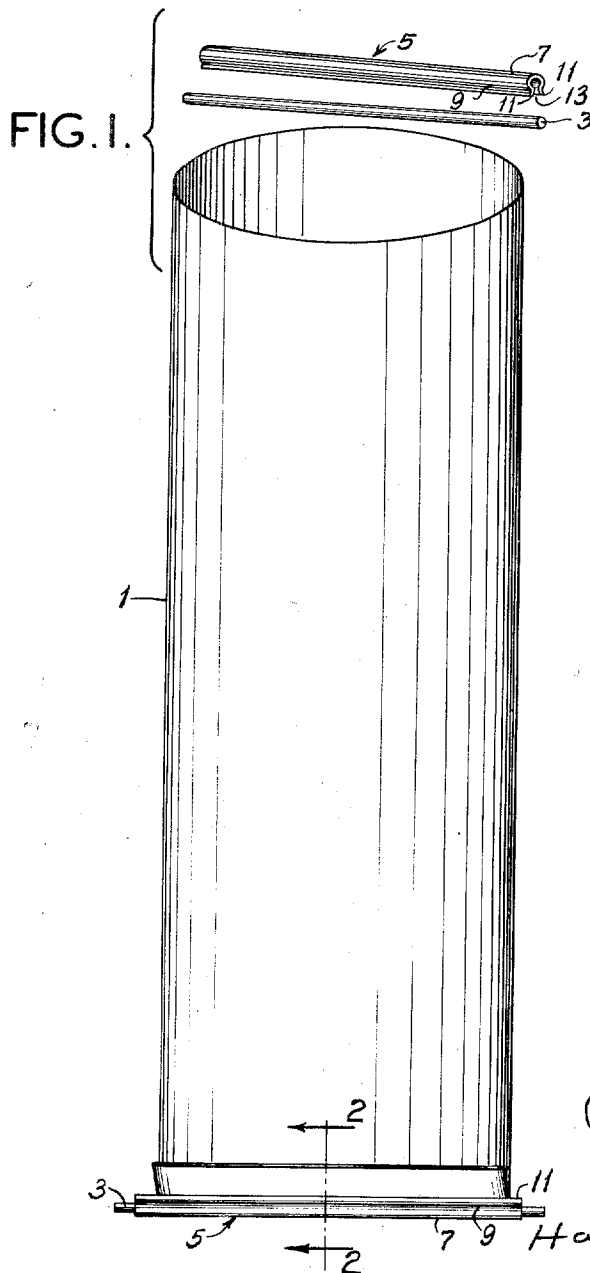
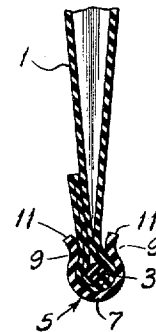


FIG. 2.



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CLOSURE FOR FLEXIBLE TUBING

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2 Claims. (Cl. 229-65)

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This invention relates to closures for flexible tubing or the like, more particularly to closures for flexible sheet plastic tubing used for packaging.

Among the several objects of the invention may be noted the provision of a closure for temporarily sealing the ends of a length of flexible tubing, particularly flexible sheet plastic tubing, to form a receptacle for packaging purposes; the provision of a closure of the class described employing closure elements which are easily applied and removed so as to be suitable for household use; the provision of a closure of this class employing closure elements which may be used over and over again; and the provision in a closure such as described of closure elements which are economical to manufacture and attractive in appearance. Other objects will be in part apparent and in part pointed out hereinafter.

The invention accordingly comprises the elements and combinations of elements, features of construction, and arrangements of parts which will be exemplified in the structures hereinafter described, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawing, in which one of various possible embodiments of the invention is illustrated,

Fig. 1 is a partially exploded perspective view illustrating the invention; and

Fig. 2 is a section taken on line 2-2 of Fig. 1.

Referring to the drawing, there is shown at 1 a length of seamless tubing of a flexible and preferably transparent sheet plastic material, such as polyethylene, ethyl cellulose, or cellulose acetate. These materials are exemplary of plastics which may be readily extruded to form such seamless tubing. Tubing of this class is particularly useful in the household for packaging such items as meats, vegetables, fruit, etc. for storage in a refrigerator or elsewhere. For such purposes, it is desirable that the ends of the tubing be temporarily closed off to seal the contents within the tubing for better preservation. This invention provides a simplified closure for the ends of the tubing comprising two closure elements which may be easily applied and removed so as to be suitable for such household or similar use.

One of these closure elements is an elongate rod 3, preferably of circular cross section and made of a synthetic plastic material. The other closure element is an elongate, thin-walled clamping member 5 made of a stiff but somewhat resilient material, such as a synthetic plastic.

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Both the rod 3 and the clamp 5 are longer than the width of the flattened tubing, and the rod is longer than the clamp so that its ends project from the ends of the clamp.

The clamp 5 has a portion 7 of arcuate cross section adapted resiliently to embrace and clamp a portion of tubing 1 doubled around rod 3 against the rod. Opposite side walls of this arcuate portion of the clamp curve toward one another at 9 to form a narrow slot and diverge outward from the slot, as indicated at 11, to form a throat 13 which decreases in width toward the slot.

To close an end of the length of tubing 1, the end of the tubing is flattened out and folded around the rod 3 with the ends of the rod extending beyond the ends of the fold. The clamp 5 is then applied by entering the rod 3 with the tubing folded thereover into the throat 13 and forcing the rod through the slot into the arcuate portion 7 of the clamp. This operation is facilitated by the divergent walls 11 of the throat, the rod wedging its way between these walls to spread open the side walls of the clamp and permit entry of the rod with tubing 1 folded therearound through the slot into the arcuate portion 7. The throat, slot and resilience of the clamp guide and admit the rod and doubled tubing laterally into the tubular clamp throughout its length. The side walls of the latter portion thereupon clamp the tubing against the rod on opposite sides thereof to form a tight closure. The clamp is applied in position to extend beyond both ends of the fold so that it clamps and closes the tubing 1 throughout the width of the tubing. The tubing extends from within the arcuate portion 7 through the slot and the throat 13.

In packaging items such as vegetables, for example, the user may cut off a length of tubing 1 as long as needed from a supply roll of tubing material, apply a set of closure elements 3 and 5 as above described to one end of the length of tubing, insert the vegetables, then apply another set of closure elements to the other end. Or both ends may be closed after the vegetables have been inserted in the tubing. To open the ends of the tubing, it is merely necessary to snap off the clamp 5 or more conveniently, to withdraw the rod 3.

It will be understood that the end of the length of tubing may be folded over two or more times before being folded around the rod 3, rather than once as illustrated in the drawing.

The closure of this invention as applied to a

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length of flexible sheet plastic tubing is sufficiently tight to hold a liquid within the tubing. It will be understood that it is not limited in application for household use, but is capable of many other uses. It is contemplated, for example, that it may be used in conjunction with sheet plastic tubing as an ice bag, the seal being sufficiently tight to prevent leakage.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As many changes could be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

We claim:

1. A closure for the end of a length of thin flexible sheet tubing or the like, comprising an elongate rod of substantially circular cross section around which the end of the tubing is flattened and doubled, and an elongate thin-walled resilient clamp having an arcuate clamping portion removably and resiliently embracing the entire doubled portion of the tubing around the rod, said clamp being of such cross section as to press the doubled portion of the tubing on

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opposite sides of the rod against the rod to form a tight closure, opposite side walls of the arcuate portion curving toward one another to form a narrow slot and diverging outward from the slot to form a throat decreasing in width toward the slot, said throat, slot and resilience of the clamp guiding and admitting the rod and doubled tubing laterally into the tubular clamp throughout its length, the tubing extending from within the arcuate portion through the slot and throat.

2. The closure of claim 1 wherein the rod and clamp are longer than the width of the tubing to extend throughout the length of the doubled part of the tube, and are formed of synthetic plastic material, the rod being longer than the clamp.

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