Oct. 20, 1953 G. R. SMITH 2,656,093

MEANS FOR CLOSING BAGS

Filed July 28, 1949

Fig. 1.

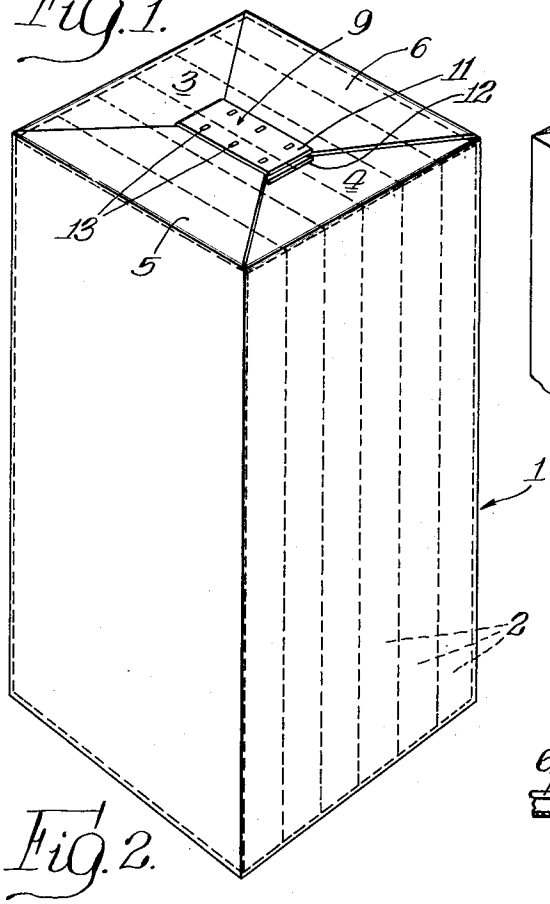


Fig. 2.

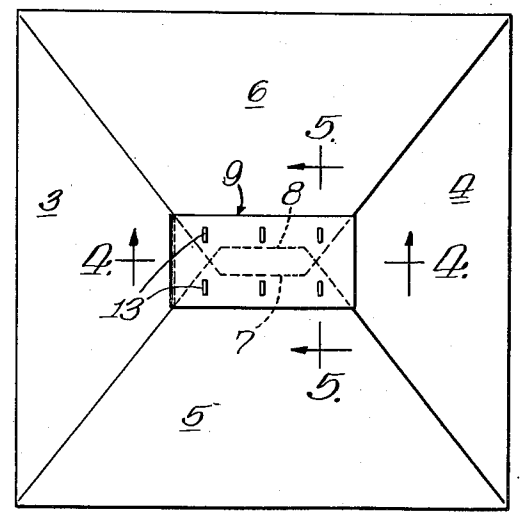


Fig. 3.

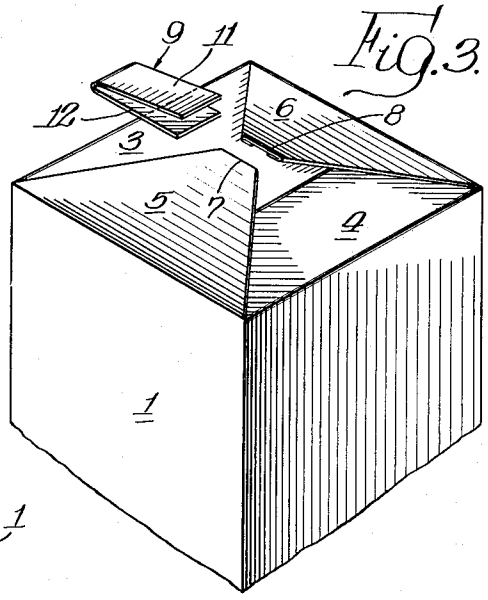


Fig. 4.

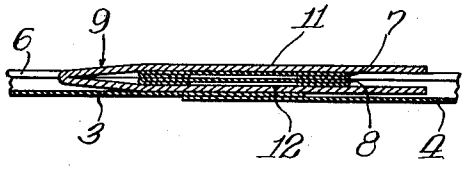
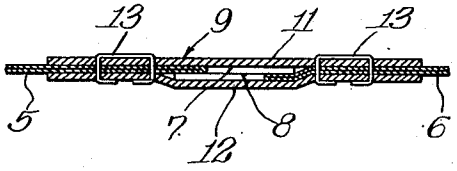


Fig. 5.



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MEANS FOR CLOSING BAGS

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1 Claim. (Cl. 229—54)

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The present invention relates to bags of the type employed in the packaging, shipping and storing of batts of thermal insulation and especially to a novel closure for such bags.

In the packaging and shipping of thermal insulating material of the type formed into batts, it is customary to employ a bag or container of paper or the like of a size adapted to conformably receive and package a plurality of such preformed batts of rock wool or other relatively light weight thermal insulation. The open end of the bag is then closed by various methods. One common method is to wire tie the open end of the bag. However, such wire tie leaves a projecting neck which consumes shipping and storage space when a plurality of such bags are stacked, either horizonally or vertically.

Another method of providing a closure for the bag or container is by sewing or stitching completely across its open end. This method is found to be relatively slow and expensive and with bags of the size generally employed requires considerable sewing or stitching to effectively close the open end. Furthermore, this sewing or stitching results in a projecting portion that consumes space in shipping and storage.

A still further method but one which has not been commercially successful is the folding of the open end of the bag and the gluing of the folded or overlapped portions. However, this method requires careful and tedious application of the glue and, in addition, requires the application of a covering strip of adhesive paper over the previously glued portions, and yet with all such precautions the glued end frequently bursts open in transit or storage and exposes the contents.

An important object of the present invention is to overcome the above noted objections by providing a novel closure which can be quickly and economically closed, and which will be durable under various conditions of use to which it may be subjected. In addition, this novel closure presents a flat bag end surface devoid of projections thereby economizing in valuable shipping and storage space.

The present invention further comprehends a novel bag closure which also serves as a convenient handle for permitting the bag or package to be carried on the forearm as one would carry a basket.

Further objects are to provide a construction of maximum simplicity, efficiency, economy and ease of assembly and operation, and such further objects, advantages and capabilities as will later more fully appear and are inherently possessed thereby.

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The invention further resides in the method and manner of construction, combination and arrangement of parts illustrated in the accompanying drawing, and while there is shown therein a preferred embodiment, it is to be understood that the same is susceptible of modification and change, and comprehends other details, arrangements of parts, features and constructions without departing from the spirit of the invention.

In the drawing:

Fig. 1 is a view in perspective of a bag having its open end folded and closed in accordance with my invention;

Fig. 2 is a top plan view of the upper closed end of the bag;

Fig. 3 is a fragmentary view in perspective showing the manner of folding the open end of the bag and of applying the closure member; and

Figs. 4 and 5 are enlarged fragmentary views in vertical cross section taken in planes represented by the lines 4—4 and 5—5 of Fig. 2.

Referring more in detail to the disclosure in the drawing which has been selected to illustrate the present invention, reference character 1 indicates a bag of the type employed for conformably receiving and enclosing a plurality of batts 2 of thermal insulation, such as rock wool or other relatively light weight material. Such a bag made of strong paper or other fibrous material has one end closed. When the bag is distended it is substantially square or rectangular in cross section to conformably house the batts for storage or shipment.

When filled with the requisite number of batts, the open, upper end of the bag is closed in accordance with my invention by first folding inwardly the upper portions of two opposite side walls to form overlapping folds 3 and 4 covering the upper ends of the batts, whereupon the upper portions of the other two side walls are folded to form the substantially triangular folds 5 and 6.

The overlapping ends 7 and 8 of the folds 5 and 6, are then fastened together by means including a strip 9 of strong fibre board or relatively heavy paper providing a pair of tabs 11 and 12. Such strip 9 has sufficient inherent strength so that when the tabs 11 and 12 are positioned respectively over and beneath the overlapped ends 7 and 8 of the folds 5 and 6, and are joined or secured thereto by a plurality of staples or other securing means 13 piercing these tabs and the intermediate overlapping ends 7 and 8 in the manner disclosed in Fig. 5, a strong and durable closure for the upper, open end of the bag is provided.

The stapling is quickly accomplished with the

use of a well known stapling mechanism which is adapted to receive between its jaws the flap or fold end portions 7 and 8 and also the tabs 11 and 12. These tabs may in some instances be structurally independent pieces instead of being of integral formation as shown.

When the flaps 5 and 6 are secured together by the stapled elements 11 and 12, the flaps and their connections provide a bail or bundle beneath which the forearm of a handler may be inserted thereby enabling the handler to carry one bag on each forearm.

From the above description and the disclosure in the drawing, it will be apparent that the present invention comprehends a novel means and manner of forming a closure for a bag and which closure affords a convenient means for carrying the closed bag.

Having thus disclosed the invention, I claim:

A bag formed of substantially flexible material adapted for packaging, shipping and storing batts of thermal insulation, said bag when distended being substantially rectangular in cross section, and consisting of four side walls folded at their lower ends to form a bottom closure, the upper ends of two oppositely disposed side walls being folded inwardly to cover the packaged batts, the upper ends of the other two oppositely disposed side walls forming approximately triangular flaps positioned with their reduced ends disposed in overlapping relation, a closure member of relatively heavy fibrous material comprising an elongated rectangular strip folded intermediate its ends to form a substantially U-shaped element having one leg thereof disposed beneath and the other leg disposed over the overlapping ends of the triangular flaps, with the ends of said closure member providing straight gripping edges extending from one side of one of said triangular flaps to the adjacent side of the other triangular flap and said edges located at points spaced outward from the overlapping ends of said triangular flaps, and attaching means extending through both legs of said closure member and through said triangular flaps for rigidly securing said member to said flaps to thereby close the bag and provide a carrying handle.

GERALD R. SMITH.

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