H. S. JEWELL.

METHOD OF SEALING PACKAGES.

APPLICATION FILED NOV. 18, 1910.

1,129,199. Patented Feb. 23, 1915.

Fig. 1.

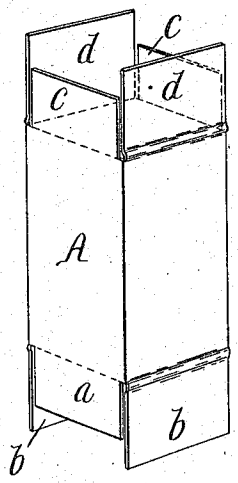


Fig. 2.

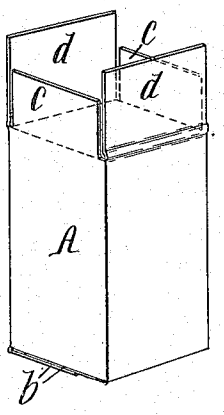


Fig. 3.

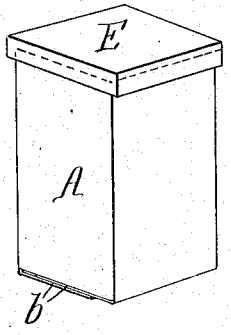


Fig. 4.

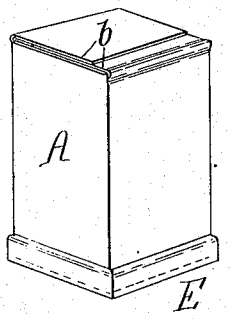


Fig. 5.

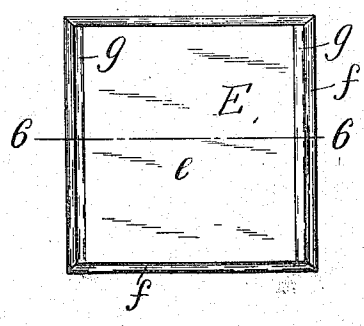
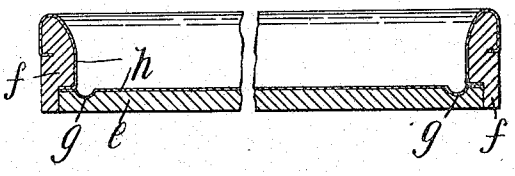


Fig. 6.



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UNITED STATES PATENT OFFICE.

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METHOD OF SEALING PACKAGES.

1,129,199. Specification of Letters Patent. Patented Feb. 23, 1915.

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To all whom it may concern:

Be it known that I, HERBERT S. JEWELL, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Methods of Sealing Packages, of which the following is a specification.

This invention relates to the sealing of containers, cases or packages having end flaps which are secured by an adhesive. Such containers are extensively used as a substitute for wooden boxes for inclosing each a number of articles of merchandise, for instance, packages of grain products, soap, &c., and since the weight of the contents is considerable and the containers are required to withstand the rough usage which they are liable to receive during transportation, the are made of heavy fiber board, straw board, corrugated board or similar material. The flaps of such containers are not easily folded down and kept in a closed position and considerable difficulty has been experienced in sealing the closing flaps by an adhesive applied thereto, which difficulty arises partly from the stiffness and springy character of the material of which the container is constructed and partly from the uneven character of the contents, which do not fill the container evenly and do not permit the application of external pressure in an efficient and satisfactory manner. Such containers are usually four-sided and have the edges of the four-sided tubular body secured by staples or similar means, forming a collapsible blank with four flaps at each end. The flaps at one end of the four-sided body are closed and secured before the contents are placed in the container and these four flaps can be secured without difficulty by applying an adhesive to the same, placing the container on a former which supports the flaps in the closed position, closing the flaps down and holding them closed by external pressure until the adhesive has set. The container now forms a four-sided box, closed at the bottom and open at the top, with the four top flaps projecting upwardly from the four sides of the body. The contents are placed in the container and the four top flaps are required to be closed down and secured.

The object of this invention is to provide means for securing these closing flaps successfully and in a simple and inexpensive manner. This object is attained by applying to the upper end of the closed container, to the flaps of which an adhesive has been applied, a sealing cap or former which confines or holds the closed flaps, and then reversing the container so that this cap forms a bottom on which the container and the weight of the contents rest, whereby the weight of the contents is caused to press the closing flaps against the cap, thus applying internal pressure to the closing flaps which presses the latter evenly against the flat and even supporting surface of the sealing cap and holds the flaps in close contact with each other until the adhesive has set.

In the accompanying drawings: Figure 1 is a perspective view of the blank of the container. Fig. 2 is a perspective view of the container ready to be closed. Fig. 3 is a perspective view of the closed container with the sealing cap applied to the upper end thereof. Fig. 4 is a similar view showing the container and cap reversed. Fig. 5 is a top plan view of the cap or former, on an enlarged scale. Fig. 6 is a vertical section in line 6—6, Fig. 5, on an enlarged scale.

Like reference characters refer to like parts in the several figures.

A represents the four-sided body of the container having flaps *a b* and *c d* at opposite ends. Assuming that the flaps *a b* are used for forming the bottom, the flaps *a* are turned down upon a suitable former, adhesive is applied to the outer sides of these flaps, the flaps *b* are then closed down upon the flaps *a*, and the closed flaps held under pressure until the adhesive has set. The container upon being removed from the former has the form of a box which is open at the top, as represented in Fig. 2. The container is now filled with the packages or other contents and the top flaps *c d* are closed down, an adhesive being applied to the upper sides of the flaps *c*. E represents the sealing cap or former which is applied to the end or top portion of the container and which confines this portion together with the closed top flaps *c d*, as represented in Fig. 3. This cap or former is recessed or chambered, resembles a shallow four-sided tray, and comprises a flat bottom *e* and side walls *f* corresponding in number, shape and

arrangement with the form of the container. The inner faces of the side walls flare toward the edge to facilitate the application of the cap to the top of the closed container. When the cap has been applied to the container the latter is reversed, as represented in Fig. 4. The weight of the contents now presses the flaps against the flat bottom of the cap and holds the flaps in close contact with each other. The container is allowed to remain in this position until the adhesive has set, when the cap is removed. The cap or former assists in bringing the ends of the containers to a uniform shape.

In some containers the bent portion of the material at the junction of the final closing flap *d* with the body A forms a weld or ridge. Caps which are used with containers of this kind are provided at the base of their walls with depressions or grooves *g* which accommodate these welds and permit the closed flaps to lie flat against the bottom of the cap. The cap may be made of any suitable material but is preferably made of wood and provided with a lining *h* of sheet metal.

A convenient and economical way of applying the sealing caps to containers consists in employing a suitable number of such caps and placing one container after another, with the cap applied to the same, in an inverted position upon a traveling surface or conveyer, for instance, a rotary table, which occupies in its travel or revolution a sufficient period of time to allow the adhesive to set, removing one container after another from the table or conveyer at the end of such period, and removing the caps from the sealed containers.

I claim as my invention:

1. The herein described method of securing the closing flaps of filled containers consisting in applying an adhesive to the container flaps, closing the flaps one upon another, placing over the flaps and the upper end part of the filled container a rigid retainer for confining the end part of the container rigidly against spreading and said flaps against movement out of their closed position, inverting the filled container with the retainer thereon before the adhesive has set, and retaining the same in an inverted position in said retainer until the adhesive has set.

2. The method of securing the closing flaps of a filled container having flexible walls which consists in applying an adhesive to said flaps, closing the flaps one upon another, confining the end portion of the container rigidly against spreading and said flaps against movement out of their closed position, inverting the container with its end portion and flaps so confined and before the adhesive has set, and causing the contents of the inverted container to rest on said flaps and hold the same stationary relative to the supporting surface while so confined until the adhesive has set.

Witness my hand in the presence of two subscribing witnesses.

HERBERT S. JEWELL.

Witnesses:

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