June 2, 1953 C. T. NICHOLS 2,640,638

APPARATUS FOR PACKAGING COMMODITIES WITH TROUGH MEMBER SUPPORTED BETWEEN PLATES

Filed May 17, 1949 2 Sheets-Sheet 1

Fig. 1.

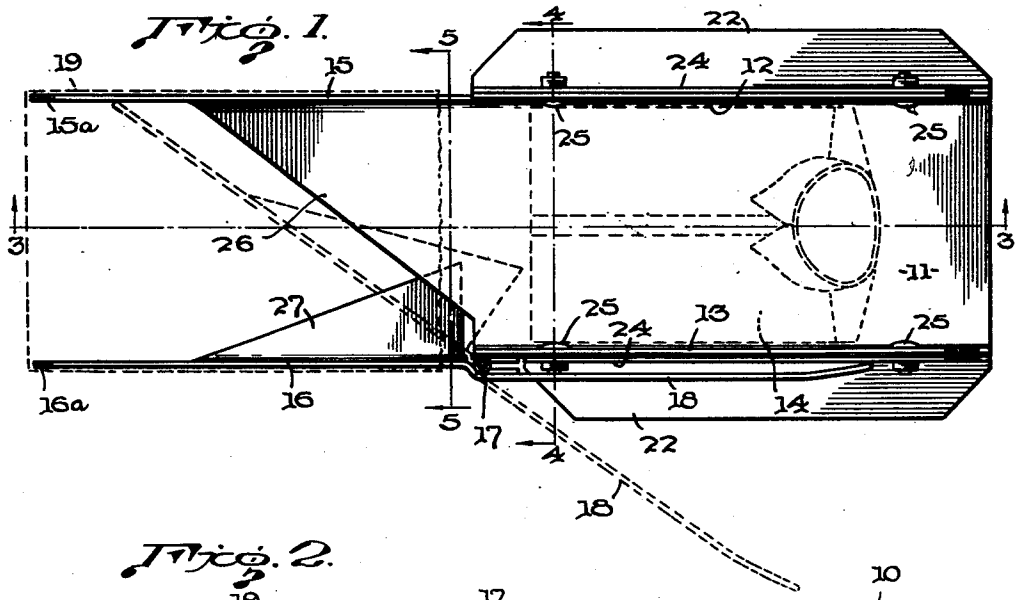
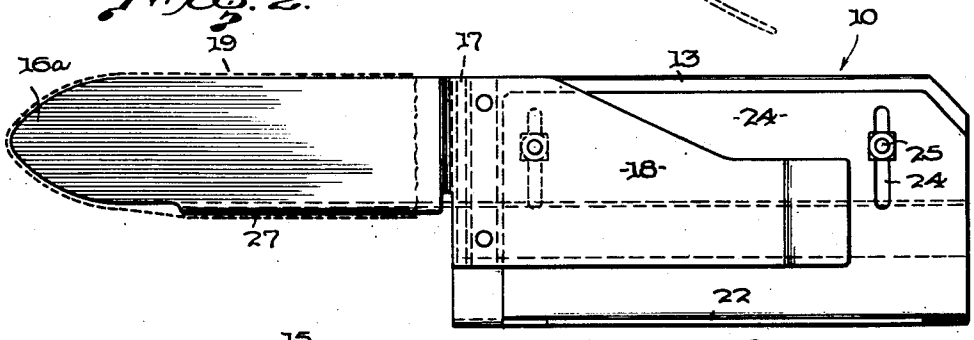


Fig. 2.



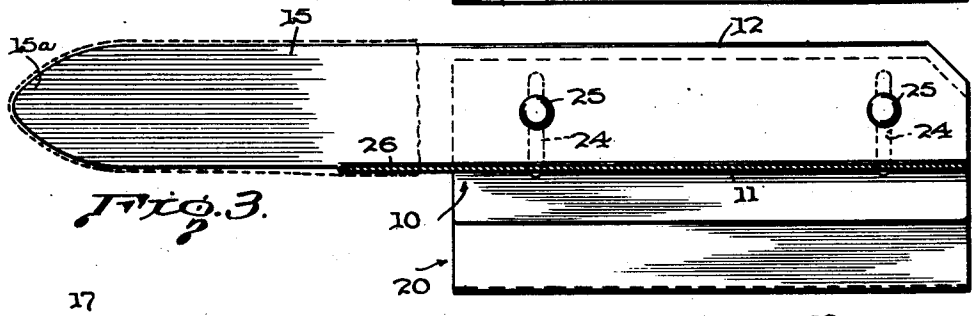


Fig. 3.

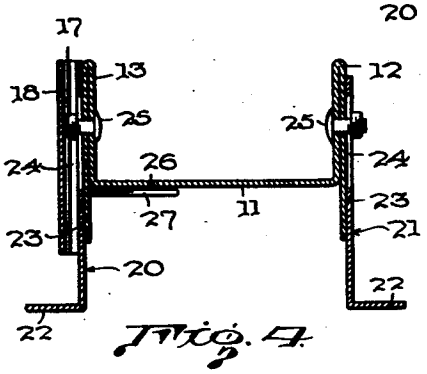


Fig. 4.

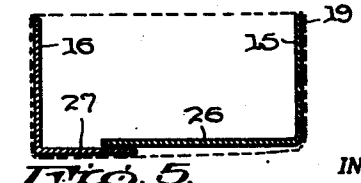


Fig. 5.

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Filed May 17, 1949 2 Sheets-Sheet 2

Fig. 6.

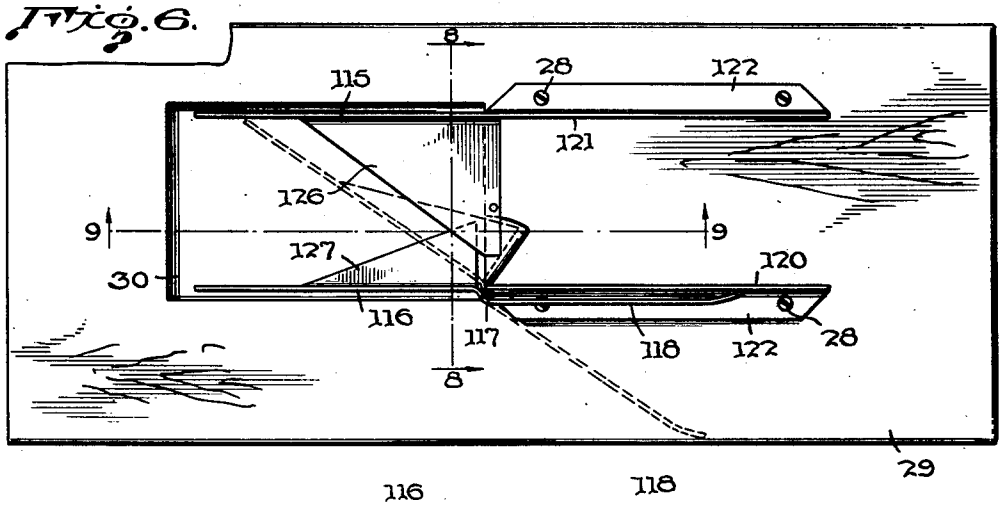
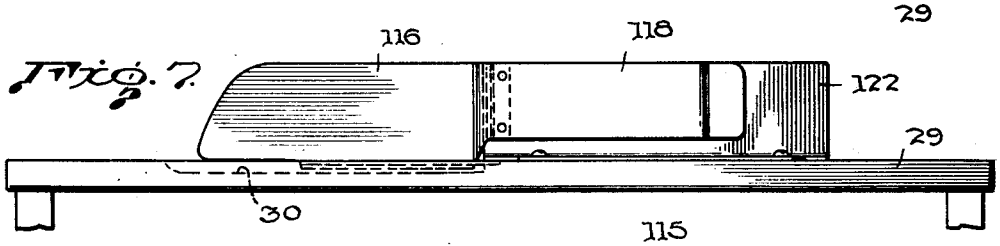


Fig. 7.



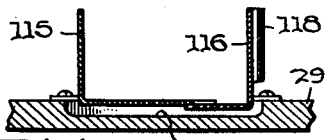


Fig. 8.

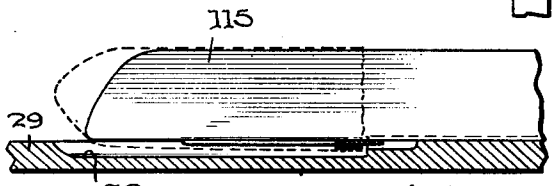


Fig. 9.

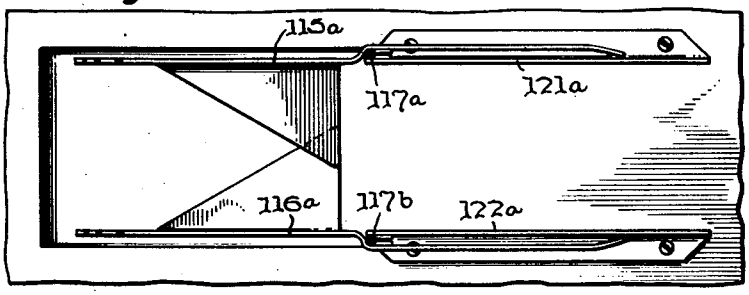


Fig. 10.

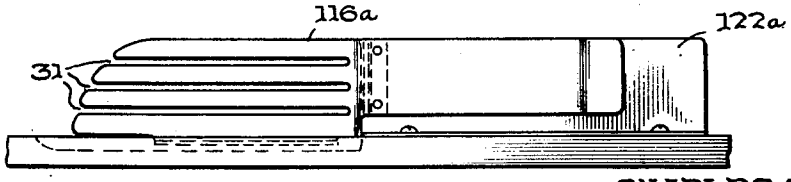


Fig. 11.

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APPARATUS FOR PACKAGING COMMODITIES WITH TROUGH MEMBER SUPPORTED BETWEEN PLATES

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Application May 17, 1949, Serial No. 93,777

2 Claims. (Cl. 226—18)

1

This invention relates to the packaging of various commodities and articles such as textiles, glass, food stuffs, garments and the like, in department stores, laundries, and similar establishments and places of business.

An object of the present invention is to provide for facilitating the placing in bags or various types of wrappers, articles of merchandise, and to that end the invention consists in the provision of a device which, while relatively simple in construction and operation, lends itself to the accommodation of bags of various sizes and to certain adjustments and variable positioning of the parts whereby the operation of packaging the commodity is accomplished with less difficulty and with better results than have heretofore been the case.

The bag filling or packaging devices of the present invention is equipped to receive the article or commodity to be packaged, and is also equipped to open and support in open position the bag into which the article is to be placed, the entire construction, combination and arrangement of elements serving to provide a simple and efficient device for accomplishing the packaging with minimum effort and without requiring a great deal of skill on the part of the operator.

The invention, together with its objects and advantages, will be best understood when the following detailed description is read with reference to the accompanying drawing in which is illustrated what is presently considered a preferred embodiment of the invention, and wherein:

Figure 1 is a top plan view of one form of bag filling or packaging device embodying the features of the present invention and illustrating the manner in which the wrapping or packaging may be accomplished by the use thereof;

Figure 2 is a side elevational view of the device;

Figure 3 is a vertical longitudinal sectional view through the device and taken substantially on line 3—3 of Figure 1;

Figures 4 and 5 are transverse sectional views taken substantially on the lines 4—4 and 5—5, respectively, of Figure 1;

Figure 6 is a top plan view of an alternate form of packaging device embodying the features of the present invention;

Figure 7 is a side elevational view of the assembly shown in Figure 6;

Figure 8 is a transverse sectional view taken substantially on the line 8—8 of Figure 6;

Figure 9 is a fragmentary longitudinal sectional view taken substantially on the line 9—9 of Figure 6;

Figure 10 is a top plan view of a third form of the invention, and

2

Figure 11 is a side elevational view of the assembly shown in Figure 10.

The bag filling or packaging device of this invention, as illustrated in Figures 1 to 5 inclusive of the drawings, and in the preferred embodiment thereof, comprises a substantially U-shaped through 10 having a bottom 11 and side walls 12 and 13. This trough 10 is adapted to have placed therein the commodity, such as the shirt shown in Figure 1 and there indicated by the reference numeral 14, that is to be packaged by the insertion thereof into a paper bag or tube, as the case may be. Extending from the walls 12 and 13, and forming substantially continuations thereof are blades 15, 16. Blade 15 is preferably formed integral with the trough wall 12 while blade 16 is secured to the trough wall 13 through the medium of a suitable hinge 17, one leaf of which is secured to the wall 13 and the other leaf of which is secured to the blade 16 at the junction of that blade and manipulating extension or handle 18 that is preferably formed integral with the blade 16.

The blades 15 and 16 form, as will be apparent from the drawing, the bag opening and holding portion of the device, a bag being shown supported on these blades in open position in Figures 1 to 3, inclusive, of the drawings, and therein indicated by the reference numeral 19.

The trough 10 is preferably supported between a pair of opposed standards 20, 21. Each of the standards 20, 21 consists of a broad flat blank of metal bent at right angles to form respectively, a base flange 22 and upright 23.

The uprights 23 of the two standards are provided with elongated vertical slots 24 which receive nut-equipped bolts 25 carried by the sides 12 and 13 of trough 10 and which serve to adjustably secure the trough 10 at the desired elevation between the standards 20, 21.

Trough 10, blades 15, 16 and standards 20, 21 may be of any suitable material, such as metal. Preferably the trough 10 and blade 15 are formed from a single blank of material, and the portions of the material forming the walls 12 and 13 are reversely bent as will be clear from a study of Figure 4 to provide in effect two-ply walls 12, 13 for the trough thereby adding materially to the desired strength of the trough and rigidity of the walls 12 and 13 without materially adding to the over-all weight of the device.

Also in accordance with the present invention, the bottom wall 11 of trough 10 at the blade-equipped end thereof is extended for a portion of the length of blade 15 and cut away obliquely, this extended portion of the bottom wall being indicated generally by the numeral 26. Also the blade 16 has projecting inwardly from its lower edge a bottom forming extension 27 cut away obliquely for its full length. These

bottom sections 26 and 27 being disposed beyond the side walls 12 and 13 and located between the blades 15 and 16 extend into the mouth of the bag as clearly shown in Figures 1 to 3, inclusive, and serve to support the commodity 14 as it passes from the trough into the bag 19.

To use the device, the same is positioned at rest on any suitable support and the desired vertical adjustment of the trough 10 is made. After the trough 10 has been adjusted to the desired elevation, the article or articles, such as the shirt 14, is placed therein.

As suggested in Figure 1, the blade 16 is rocked about the pivot of hinge 17 in the direction of the blade 15, this operation placing the bag opening and holding portion of the device as formed by these blades in a contracted condition and an empty bag is then slipped upon the tapered ends 15*a*, 16*a* of the blades. By applying pressure to the handle 18 of blade 16, in an obvious manner, the blade is then swung from the dotted position shown in Figure 1 to the full line position shown in said figure. This operation serves to completely open or expand the bag as it is gradually drawn over the blades to the position shown in the drawings. With the bag in the fully opened position just mentioned, the article or commodity 14 is pushed along the trough 10 and into the bag, after which the bag with the contents thereof is removed from the device. The open end or ends of the bag is then closed and sealed in the usual manner.

In the form of the invention shown in Figures 6 to 9, inclusive, the aforementioned trough 10 is dispensed with, and the opposed standards therein designated by the reference numerals 120 and 121 have the flanges 122 thereof secured by screws or the like 28 directly to the top of a work bench 29, being secured thereto in spaced parallelism and at the desired distance apart. Further in this form of the invention one of the supporting standards, in the present instance standard 121, has formed integral therewith and as a continuation thereof a bag opening and holding blade 115, while the other of the standards, in this instance standard 120, is equipped with a bag opening and holding blade 116 that is hinged to the standard 120 through the medium of a hinge 117 similar to the aforementioned hinge 17, one leaf of hinge 117 being secured to the standard 120 and the other leaf of said hinge being secured to the blade 116 at the junction of that blade and manipulating extension or handle 118 that is preferably formed integral with the blade 116.

Likened to the blades 15 and 16 of the form of the invention shown in Figure 1 and previously described, blades 115 and 116 have projecting inwardly from their lower edges extensions 126 and 127 to extend into the mouth of the bag and serve to support the commodity or article to be packaged as it passes from between the supports 120, 121 into the bag or wrapper. In this connection it will be noted that in alignment with the space between the standards 120, 121 and in the region of the blades 115, 116 the top of the work bench 29 is recessed as at 30 to permit easy placement of the bag or wrapper upon the blades 115, 116.

From the foregoing it should be apparent that the packaging assembly or device of Figures 6 to 9, inclusive, just described in detail, is used in substantially the same manner and functions in substantially the same way as the packaging device of Figures 1 to 5, inclusive, and hereinabove described in detail.

The form of the invention shown in Figures 10 and 11 differs from the form shown in Figures 6 to 9, inclusive, and just described in detail in the two following respects. As clearly shown in these Figures 10 and 11, both of the bag opening and holding blades therein designated by the reference numerals 115*a* and 116*a* are hingedly secured to the supports or standards 121*a* and 122*a* as at 117*a* and 117*b*, respectively. Thus in this form of the invention both of the blades 115*a*, 116*a* may be swung inwardly towards one another to initially receive the bag or wrapper and then swung away from one another to effect a complete opening of the bag or wrapper.

Also in this third form of the invention (shown in Figures 10 and 11) each of the blades 115*a* and 116*a* is provided with a plurality of vertically spaced longitudinal slots 31 whereby various sized bags may be used to advantage, all in a manner believed to be apparent.

From the above description it will be apparent that the device of this invention facilitates the packaging of commodities in paper bags, and particularly facilitates the opening and supporting of the bag in position to receive the article or commodity to be inserted therein.

While the invention has been described in detail in its presently preferred embodiments, it will, of course, be understood that such has been done for purposes of illustration only and not by way of limitation, and therefore only such limitations are to be imposed thereon as may reasonably come within the scope of the appended claims.

What I claim is:

1. A bag filling and holding device including a pair of spaced parallely arranged plates each of which has a flange, substantially coextensive with its length, for engagement with a support, a trough mounted between and supported by said plates, a terminal of one side of the trough being extended to provide a bag engaging blade, and a bag engaging blade hinged to the other side of the trough and cooperable with the first blade for opening and holding a bag in substantial alignment with the trough.

2. A unit for use in filling and holding bags including supporting plates with a trough mounted between and secured to the plates, a terminal of one side of the trough being extended to provide a bag engaging blade, the unit also including a second blade hinged to the other side of the trough for coaction with the first blade, the unit being bodily movable for selective positioning, on a substantially horizontal support, during the bag holding and filling operation.

CHARLES T. NICHOLS.

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