

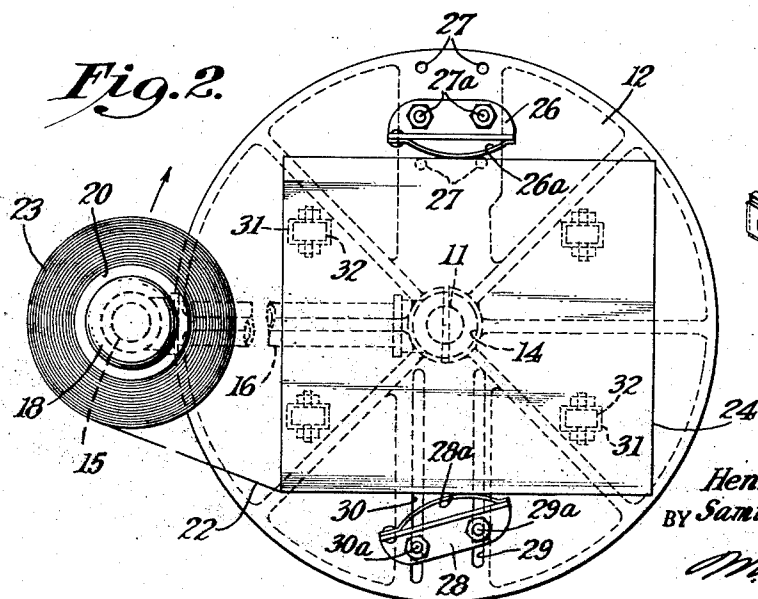
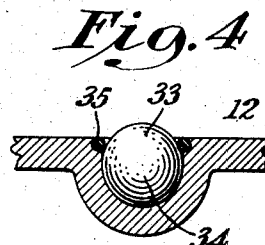
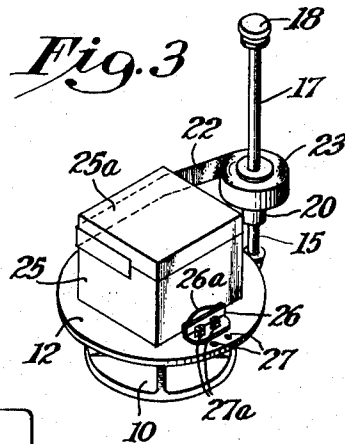
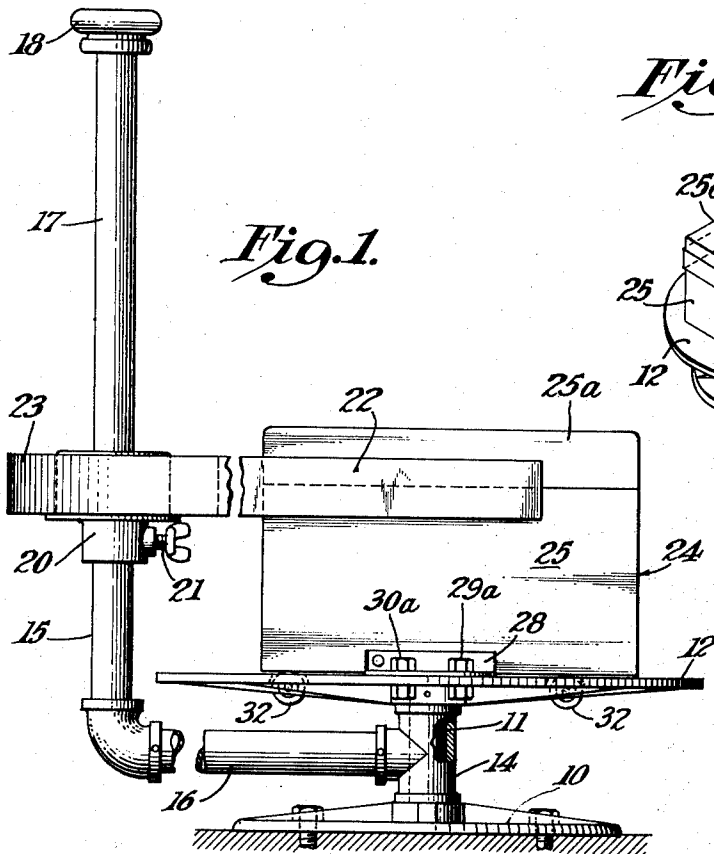
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DEVICE FOR SEALING PACKAGES WITH ADHESIVE TAPE

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DEVICE FOR SEALING PACKAGES WITH
ADHESIVE TAPE

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2 Claims. (Cl. 216—20)

1

This invention relates to sealing devices and, in particular, to devices adapted to accomplish the application of sealing tape to the seams formed by the abutment or telescopic engagement of the containers and their covers and tops.

It is an object of this invention to provide such a device which is of cheap, light and simple construction; which is conveniently manually operable; and which is adapted for ready attachment to floors, tables, etc. in semi-permanent manner by any conventional attaching means such as screws, bolts, clamps, and the like.

It is an object of this invention to provide such a device embodying a stationary table or platform provided with cooperating opposed jaws or stops which are yieldable within predetermined limits and which are adjustable toward and away from one another for the accommodation therebetween of boxes, canisters and other containers of widely varying shapes and dimensions, one of the aforesaid jaws or stops being completely adjustable within predetermined limits with respect to the other, and the other jaw or stop being semi-adjustable or adjustable only in steps of predetermined length.

It is a further object of this invention to provide such structure wherein one of the aforesaid jaws or stops is maintained always at a predetermined angle to the other jaw or stop member whereby the jaw formed is wider at one side than at the other side to facilitate introduction of containers therebetween from one direction, irrespective of the existing adjustment therebetween.

It is a further object of this invention to provide such a device wherein the stationary table or platform is provided with antifriction means facilitating movement of containers thereover, into and out of engagement with the jaw.

It is a further object of this invention to provide such a device which incorporates a substantially L-shaped arm or member having a horizontal portion pivotally connected with a member which supports the abovedescribed table or platform, and having a vertical portion adapted to swing about the table or platform, outside the confines thereof, while carrying a coil or roll of tape, of which a portion is to be attached in suitable manner to a container on the table or platform for sealing the container.

It is a further object of this invention to provide, in such a device, a tape holder detachably secured on the vertical portion of the aforesaid arm or member for adjustment vertically thereon.

These and other objects and advantages of the invention will clearly appear from the following

2

description, and the accompanying drawing forming a part thereof, and will be pointed out in the appended claims.

In the drawing:

5 Fig. 1 is a view, in side elevation, of a preferred form of our device, partly in section, showing the parts in operative position to seal the top or cover and the main portion of a container together;

10 Fig. 2 is a plan view of the structure shown in Fig. 1;

Fig. 3 is an isometric view of the structure shown in Figs. 1 and 2, but with the parts in a slightly different position.

15 Fig. 4 is a fragmentary view, partly in section, illustrating the application of a modified type of anti-friction means to the table of the device shown in Figs. 1, 2 and 3; and

20 Fig. 5 is an isometric view of one of the jaw or stop members of the device shown in Figs. 1, 2 and 3.

The illustrative device shown in Figs. 1-5 of the drawing comprises a base 10 fixed to the lower end of the spindle 11 which has the table or platform 12 pinned or otherwise non-rotatably secured to its other, or upper end.

The base 10 is adapted for permanent, or semi-permanent attachment, by screws, bolts, or other known means to floors, table tops, etc. to render the table or platform 12 stationary.

30 The spindle 11 supports the sleeve 14 for free rotation about its axis, between the base 10 and the table or platform 12. This sleeve 14 is fixed to the inner end of the horizontal portion 16 of the substantially L-shaped arm or member 15, the aforesaid horizontal portion being of such length that when the arm or member 15 swings about the axis of the spindle 11, the vertical portion 17 of the arm or member 15 will swing freely about the table or platform 12, outside the confines thereof. A suitable handle member 18 is frictionally, screw-threadedly or otherwise detachably secured at the upper end of the vertical portion 17 of the arm or member 15 for facilitating manipulation thereof; the ready removability of the handle 18 facilitating renewal of tape coils or rolls carried by the arm in a manner which will hereinafter appear.

45 The tape holders 20 are provided, each, with a bore adapted for free sliding engagement with the portion 17 of the arm 17 and are provided with wing-screws 21 projectible into the aforesaid bores to secure the tape holders 20 in desired vertical position on the portion 17. The upper portion of each tape holder 20 friction-

ally engages the interior of tape rolls 23 which are disposed thereon and supported by the intermediate flanged portion of the holder 20 which supports the roll 23. While only one tape holder 20 (and roll 23) is shown on the portion 17 of the arm 15, it will be understood that a plurality of holders and rolls may be carried, at the same time, by the portion 17.

The arm or arm portion 15 is preferably made tubular for lightness of weight since it is adapted to be freely swung about the stationary platform or table 12. If the end of the tape 22 from the coil or roll 23 be manually stuck to the seam of a container on the table 12 a full revolution of the arm portion 17 about the container and the table 12 will cause the seam to be completely tape sealed. For instance, with the parts in the position of Figs. 1 and 2, by manually engaging the handle and swinging the arm 15 substantially one revolution, clockwise as seen in Fig. 2, the tape 22 is progressively engaged with the sides of the main portion 25 and top 25a of the container 24 to cover the seam as shown. If desired, simple moistening means (not shown) may be provided on the arm 15 for progressively moistening the tape where such is necessary.

The table or platform 12 is provided with a jaw which is yieldable to a predetermined extent for detachably receiving a container and temporarily holding it stationary during the above-described movement of the arm member 15. This jaw is formed by a pair of similar members 26 and 28. Each of these members comprises an angle member having a horizontal flange and a vertical flange, the horizontal flange of each being provided with a pair of bolt holes through which a pair of bolts extend.

To accommodate the bolts 27a extending through the bolt holes in the flange of the member 26, the table 12 is provided with a series of paired bolt holes 27, equidistant from a radial axis extending through the axis of the spindle 11, each pair being spaced from the other at equal distances along this axis as seen in Fig. 2. By means of this arrangement, the jaw member 26 may be adjusted in steps of predetermined distance with respect to the center of the table 12 which coincides with the axis of spindle 11.

To provide for adjustment of the other jaw member 28, the table 12 is provided with a pair of bolt accommodating slots 29 and 30 each equidistant from the extension of the aforesaid axis. While the distance between the bolt holes 27 of each pair, described above, is equal to the spacing of the bolt holes in the flange of the member 26, the spacing of the slots 29 and 30 is slightly less than the spacing of the cooperating bolt holes in the flange of the jaw member 28.

Because of the relationship of the spacing of the slots 29 and 30, described above, and the bolt holes in the flange of the member 28, the vertical flange of the member 28 is maintained always out of parallelism with the corresponding flange of the member 26. This insures that the members 26 and 28 form a jaw which is wider at one side (the left as seen in Figs. 1 and 2) than at the other. Thus the entry of containers into the jaw 26, 28 from the left (Figs. 1 and 2) is facilitated.

Because the slots 29 and 30 are more closely spaced than the bolt holes in the horizontal flange of member 28, the exertion of spreading force between the jaw members 26 and 28 will result in placing the bolts 29a and 30 in shear whereby the frictional engagement between these

bolts and the outer walls of the slots 29 and 30 resist sliding outward movement, or creep, of the jaw member 28 whether the bolts 29a and 30a be tight or not.

The units 26 and 28 are similar, each comprising an L-section angle member (26 or 28) with an offset spring member 26a or 28a secured to the upright portion or flange thereof in any suitable manner as by rivets, bolts, or welding (see Fig. 5). These spring members 26a and 28a render the jaw 26, 28 yieldable within a predetermined degree whereby containers within the jaw 26, 28 are held stationary with sufficient firmness to prevent disturbance during attachment of the tape 22 during the operative cycle of the arm member 15.

Optionally, the table or platform 12 is provided with antifriction means for facilitating entry of containers into the jaw 26, 28 irrespective of weight and bulk. This means may comprise rollers 32 (Figs. 1 and 2) arranged as shown, whereby they project upwardly of the surface of the table or platform 12. Alternatively, the antifriction means may comprise ball members 33 disposed in recesses 34 of such depth that the ball members project upwardly above the surface of the stationary table or platform 12.

It is to be noted that the jaw 26, 28 is possessed of resiliency within a predetermined degree, or within predetermined limits, and will accommodate cartons, boxes and containers of widely varying dimensions and shapes. While we have, for the purpose of illustration, shown a carton of rectangular section, containers of virtually any other section i. e. round, oval, etc. may be handled by the device with equal convenience and advantage.

The tape holder 20 may be adjusted at any height above the table 12 to accommodate varying container depth, readily and conveniently by releasing the wing nut 21, moving the holder and then re-tightening the nut 21.

Furthermore, the containers, etc. need not be centered on the table or platform 12. The free end of the tape 22 may be applied at a suitable location to the container when the arm 15 is adjacent the nearest jaw member, as 26 (Fig. 2). As the arm travels around platform 12, the free tape portion increases until the arm reaches the jaw member 28. Thereafter, the free tape portion decreases until the arm 17 completes the circuit.

From the above description it will clearly appear that we have provided a new and improved container sealing device of extreme simplicity, cheapness, efficiency, and possessed also of other advantages enumerated above which adapt it to use in situations, and under conditions which would not warrant the use of more complicated, expensive, and less flexible sealing devices.

It is, of course, to be understood that the above description is merely illustrative and in no wise limiting, and that we desire to comprehend within our invention such modifications as are included in the scope of the following claims.

Having thus fully described our invention, what we claim as new and desire to secure by patent is:

1. In a sealing device of the character described, a stationary base adapted for attachment to a permanent support, a relatively short spindle fixed to said base and extending upwardly therefrom, a substantially horizontal table fixed to said spindle and supported thereby in relatively closely spaced relation above said base,

5

a substantially L-shaped arm member longer than the radial distances between said spindle and all parts of said table in one horizontally disposed portion, with a substantially vertical upright portion extending upwardly from the outer end of said horizontally disposed portion, a bearing sleeve secured to the inner end of said horizontally disposed portion and supported for free rotation on said spindle for free swinging movement of said horizontally disposed portion between said base and said table and for free swinging movement of said upright portion about said table outside the confines thereof, means adjustable on said upright portion of said arm member for supporting a tape roll at desired distances above said table, and jaw means on said table yieldable within predetermined ranges for detachably holding stationary on said table containers to be sealed with tape from said tape roll.

2. In a sealing device of the character described, a stationary substantially horizontal table, an arm member having an upright portion freely swingable about said stationary table outside the confines thereof, means adjustable on said upright portion of said arm member for supporting a tape roll at desired distances above said table, and jaw means on said table yieldable within predetermined limits for detachably holding stationary on said table containers to be sealed with tape from said tape roll, said jaw means comprising a pair of similar oppositely directed L-section angle members, each of said angle members having a resilient facing on its upright portion forming a jaw surface yieldable to a predetermined extent and having a pair of

6

predeterminedly spaced bolt holes in the horizontal portion thereof, said table having at one side a plurality of pairs of bolt holes adapted to receive bolts extending through one of said angle members, said pairs of bolt holes being spaced radially of the approximate center of said table, and said table at the opposite side of its approximate center having a pair of slots receiving bolts extending through the bolt holes in the other angle member, said slots being spaced apart a lesser distance than the spacing of the bolt holes in said angle member whereby the upright portion of said last named angle member is angularly disposed with respect to the corresponding portion of the other angle member in all adjustments of said angle members, and whereby the bolts extending through the bolt holes in said last named angle member and said slots are placed in shear by spreading force exerted between said angle members to resist creeping of said last named angle member.

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