

July 29, 1941.

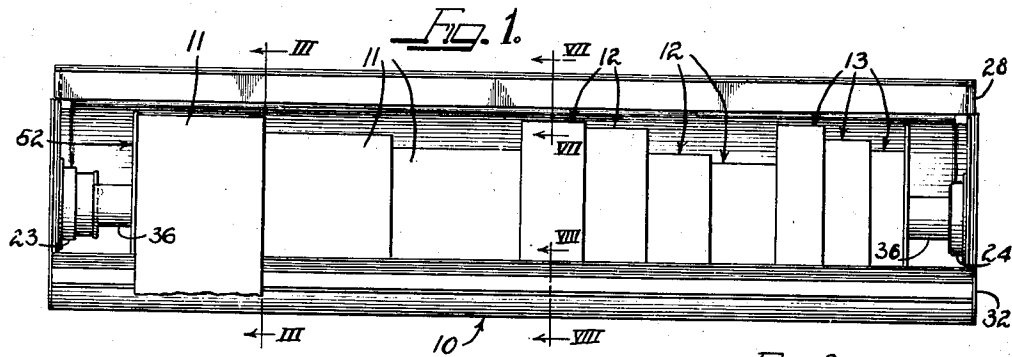
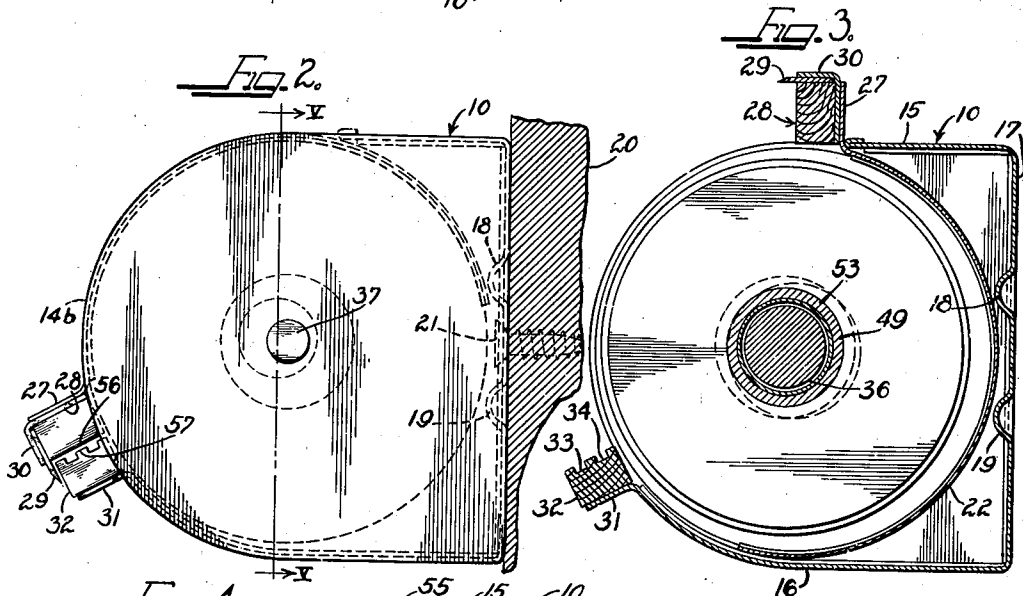
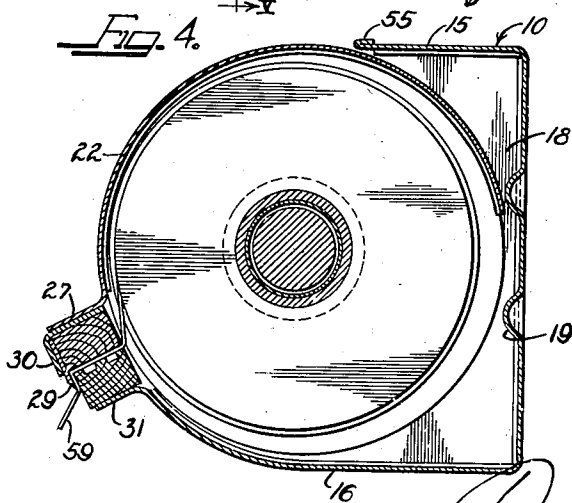
J. F. PILLER

2,250,774

ADHESIVE TAPE DISPENSER

Filed May 13, 1939

2 Sheets-Sheet 1



Inventor
JOHN F. PILLER

Charles M. Hill
ATTY.

July 29, 1941.

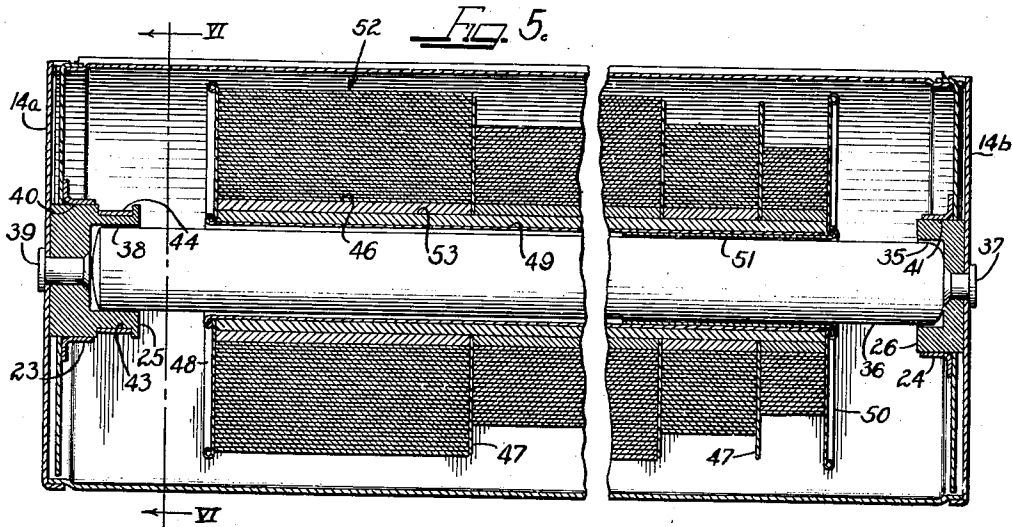
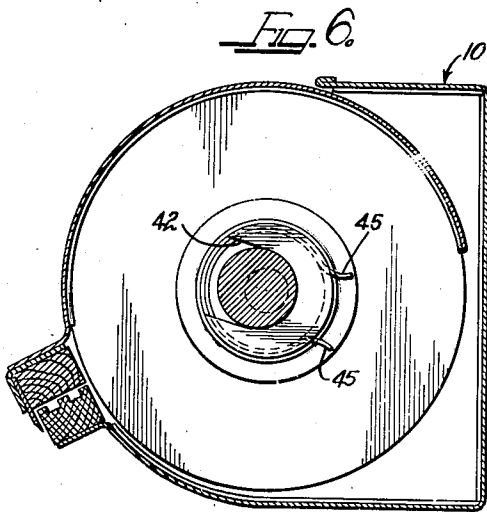
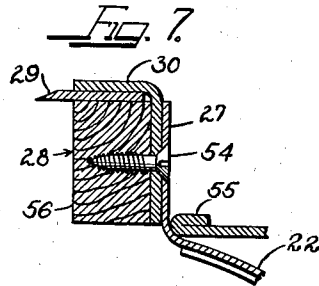
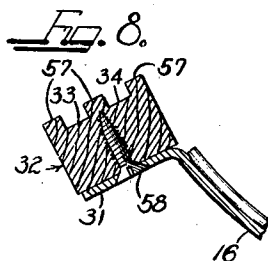
J. F. PILLER

2,250,774

ADHESIVE TAPE DISPENSER

Filed May 13, 1939

2 Sheets-Sheet 2



INVENTOR
JOHN F. PILLER

Charles W. Mills ATTY.

UNITED STATES PATENT OFFICE

2,250,774

ADHESIVE TAPE DISPENSER

John F. Piller, Chicago, Ill., assignor to The Scholl Mfg. Co., Inc., Chicago, Ill., a corporation of New York

Application May 13, 1939, Serial No. 273,527

7 Claims. (Cl. 242—55.5)

My invention relates to a dispensing container for strip material and more particularly to one for containing and dispensing rolls of adhesive tape whereby strips of any desired length may be pulled out and torn off.

An important object of the invention is to provide a box adapted to contain and dispense a plurality of the same or different width rolls of adhesive tape or other strip material, the box being provided with a serrated metal strip on its rotatable cover to enable the strips of adhesive to be torn from the individual rolls in any length desired.

Briefly described, my invention consists of a one-piece housing, oblong in shape and of metal or other suitable material, and having revolubly secured therein a removable shaft upon which a series of rolls of adhesive tape of the same or different widths may be mounted and the strips withdrawn and torn off as desired. The said housing is provided with a longitudinal opening through which the strips of adhesive tape can be withdrawn and is capable of being covered by a revoluble cover which is confined in its movement to the width of the opening and pivotally secured to the shaft mountings. When the cover is closed a clamp is provided between the cover and a housing wall for holding the withdrawn strips of adhesive while being torn across an extending serrated knife edge leaving the box sealed and the strips of adhesive adhering to the lower clamping surface to be thereafter pulled out and cut to any length desired.

One of the objects of my invention then, is to provide a dispensing box of the type described above having a clamp and an adjacent cutting edge formed outside the box with the ends of each roll of adhesive tape adhering to the lower clamping surface. Thereafter a strip of adhesive tape of the desired width and length may be pulled out, when the cover is in an opened position, and torn across the cutting edge, when the cover is closed, without the necessity of inserting the hand within the box, thereby eliminating any contact between the hand and the cutting edge.

Another object of my invention is the provision of a convenient and sanitary box whereby the adhesive rolls are mounted in such a manner that individual or a plurality of rolls may be readily substituted when necessary.

A still further object resides in the provision of a grooved bar, or one having an irregular surface, upon which rests a similar bar fastened to the cover when the latter is in a closed position, with the strips of adhesive held between the said bars while being torn across the serrated cutting edge.

Usually when a strip of material is clamped and then torn along a cutting edge it becomes

disengaged with the disengagement of the clamping surfaces, but where adhesive material is clamped such material adheres to the bottom clamping edge, and so the present invention provides as a further object a stationary bar of wood or other suitable material, grooved longitudinally or provided with an irregular surface along its upper side thereby providing a clamping surface of full width but providing less than a full surface for adhesion.

Still another object of my invention is to provide a box of suitable material so constructed as to be fastened to a wall and containing rolls of material whereby strips of such rolls of any desired length may be torn off without contaminating any other roll and after such strips are torn off the box is left in a closed position.

Another object of the present invention is to provide a container for adhesive rolls which may be used by the manufacturer as a shipping box or container and adapted for domestic or commercial use in dispensing the adhesive in strips of desired length.

While the disclosed embodiment of my invention shows separate elements to form the clamp and cutting edge, it is possible to so shape the cover and engaging wall of the box that the clamping surfaces are formed thereon with the closing edge of the cover sharpened to form the cutting edge.

Other and further objects the invention will more fully appear from the following detailed description taken in connection with the accompanying drawings, which illustrate the embodiments thereof, and in which:

Figure 1 is a front elevation of the dispensing box in an opened position illustrating the use of several rolls of adhesive tape of various widths and the manner of stripping one of them without having to insert the hand within the box after the tape is once pulled out and adhered to the lower clamping surface.

Figure 2 is an enlarged end view of Figure 1 illustrating the device attached to a wall.

Figure 3 is an enlarged cross-sectional view taken along line III—III of Figure 1 showing certain parts in elevation.

Figure 4 is a cross-sectional view substantially the same as Figure 2 but illustrating the cover in a closed position with a strip of tape clamped in position to be torn across the knife edge.

Figure 5 is a front cross-sectional view, as taken along line V—V of Figure 2, with certain parts shown in elevation.

Figure 6 is a cross-sectional view as taken substantially along line VI—VI of Figure 5 with the cover in a closed position.

Figure 7 is a fragmentary cross-sectional view as taken substantially along line VII—VII of Fig-

ure 1 illustrating the clamping bar and knife edge secured to the cover.

Figure 8 is a fragmentary cross-sectional view as taken substantially along line VIII—VIII of Figure 1 illustrating the grooved clamping bar secured to a wall of the container box.

As shown on the drawings:

As shown in Figure 1, a box or container 10 is made of a single folded piece of any desired material, preferably metal, of slightly larger size than the rolls of adhesive tape 11, 12 and 13 to be carried therein. This box 10 is provided with rounded end portions 14a and 14b, a top 15 that extends to the rounded portions, a bottom 16 that extends partially around the rounded end portions 14a and 14b and a back 17 having indented portions 18 and 19 for stiffness and provided with openings through which the box may be secured to a wall 20 or the like by screws 21 or other suitable fastening means, as shown in Figures 2 and 3.

Within this box 10, a revoluble cover 22 is supported by suitable angular bearing flanges 23 and 24 capable of rotating about stationary support bearings 25 and 26 and substantially centered relative to the rounded box ends 14a and 14b, with the cover being confined in rotary movement to the width of the box opening defined by the top 15 and bottom 16, as clearly shown in Figure 5. The closing edge 27 of cover 22 is bent outwardly, as illustrated in Figure 3, to limit the cover movement in an opening position and to form a surface to which a clamping bar 28 of wood or other suitable material, and an extended serrated knife edge 29 are secured within an angle 30. As shown on the drawings, the knife edge 29 extends slightly beyond the clamping bar 28. The opening defining edge of the box wall 16 is also bent outwardly to form a surface 31 for securing a clamping bar 32, also of wood or of such other material as used in the opposite clamping bar 28. This clamping bar 32 as shown, is provided with longitudinal grooves 33 and 34 whereby less surface is provided for adhesion than the clamping bar 28 provides for clamping, but the same function may be performed by the use of any irregular surface.

When the cover 22 is revolved to a closed position, as shown in Figure 2, the oppositely disposed surfaces 56 and 57 of the bars 28 and 32 form a clamp with the knife edge 29 adjacent thereto.

Referring to Figure 5, the stationary bearing 26, preferably of metal, has a recess 35 to support an end of a revoluble shaft 36, and is secured to the end wall 14b of the box 10 at the center of its rounded portion by a rivet 37, or by any other suitable fastening means. The opposite end of the shaft 36 is supported within a stationary bearing 25 also provided with a recess 38 and secured to the opposite box end wall 14a at the center of its rounded portion by a rivet 39, or by other suitable fastening means. The support bearings 25 and 26 are alike only with respect to the finished outer bearing surfaces 40 and 41 to support the revoluble cover 22 and the recesses 38 and 35 for the retention of shaft 36. The support bearing 25 performs a further function of providing a means for lateral insertion of the shaft 36 within the recess 38, when the opposite end of the shaft is inserted in the recess 35 of bearing 26, and for locking said shaft when inserted within such recess 38. This is provided for by cutting an axial wall slot 42, as shown in Figure 6, to the length of the recess 38 and of

sufficient width for inserting the shaft transversely into the said recess. Referring again to Figure 5, the bearing 25 is provided with an encircling slot or recess 43 on its outer surface and centered relative to the shaft recess 38 for retaining a slidable spring clip 44 which partially encircles the recess and is shaped with outwardly extending lips 45 oppositely spaced to nearly the diameter of the shaft 36. By turning this clip 44 to an open position, relative to the slot 42, the shaft can be inserted through the slot into the recess 38 and then by turning the clip one-half turn the slot is closed and the shaft is locked in position against accidental removal, as shown in Figure 6. It is necessary that the recesses 35 and 38 be slightly offset, having centers adjacent the centers of rivets 37 and 39 and in line with the transverse axis of the slot 42, so that the circumference of the shaft 36 is in close proximity to that part of the lock clip 44 which closes the slot 42, thereby reducing the side play of the shaft while being revolved.

As shown in Figure 5, the shaft 36 is solid but a hollow shaft of any material of sufficient stiffness and strength may also be used. The assembly of adhesive tape rolls 11, 12 and 13 consists of as many different width rolls as the length of the box will contain. Each roll has an individual cardboard spacing spool 46 of the same width as the roll, and wax paper separators 47 on both sides thereof to prevent lateral adhesion with adjacent rolls. A spool is formed consisting of an end flange 48 with an extending tube 49 of the same length as the total width of the rolls of tape to be used, and a companion flange 50 also having an extending tube 51 to slidably engage the inside of tube 49. The spool assembly 52 is formed by sliding a sleeve 53, of cardboard or other suitable material, and as many rolls of adhesive tape with their spacers on the tube 49 as can be contained within the box, completing said assembly by inserting tube 51 within the companion tube 49 until the flange 50 abuts the end roll of tape forming a compact assembly adapted for mounting on the shaft 36. This combination of the shaft 36 and spool assembly 52 is then inserted and locked within the box 10 in the same manner as the shaft alone is inserted and locked as described previously.

Figure 7 illustrates a more detailed construction of the cross section taken through the clamping bar 28 as described in Figure 3, showing a countersunk screw securing means 54 to fasten the clamping bar 28, the knife edge 29, and the angle container 30 to the outwardly bent surface 27 of the revoluble cover 22. Also illustrated is a crimped edge 55 of the box top 15 for rounding the edges and providing additional strength, this feature being used on the box wherever required. As shown, the clamping face 56 of the clamping bar 28 is flat but it, too, like the oppositely disposed clamping surface 57 on the clamping bar 32, as illustrated in Figure 8, can be of a grooved or irregular construction. Clamping bar 32 is also secured by a countersunk screw 58 to the outwardly bent edge 31 of the box bottom 16 and is provided with a grooved or striated clamping surface 57 by longitudinal grooves 33 and 34. While this is the preferred embodiment as illustrated, surface 57 can be decreased to offer less surface adhesion by any irregular surface construction.

The method of dispensing strips of adhesive tape is shown in Figures 1 and 4. Figure 1 illustrates a strip of adhesive tape 59 pulled out and

adhering to the lower clamping bar 32. Figure 4 illustrates the same strip of adhesive clamped by closing the cover 22 and showing the relative adjacent position of the knife edge 29 across which the adhesive strip is torn. As a preferred embodiment, knife edge 29 is serrated to facilitate the tearing of adhesive strips but it can also be a straight sharpened edge. After the rolls of adhesive tape are inserted within the box, the end of each rolled strip is pulled out and the cover is closed, leaving the strip in a position as shown in Figure 4. This places my invention in an operative position, for if any strip of tape is needed thereafter the cover is opened and a strip of desired width and length is pulled out, the cover is closed and the strip is then torn across the cutting edge. As the strips of tape are withdrawn, clamped and torn off to desired lengths, the ends adhere to the lower clamping surface 57 and so less surface is provided for adhesion thereon than for clamping by the top surface 56. These strips remain adhered to the surface 57 until such time as the cover is opened and the ends released, pulled out and torn off to further desired lengths. By such an arrangement only strips of desired width are handled without contaminating adjacent strips and the box is left in a closed position after each stripping operation.

Whenever necessary, all or any one of the rolls of adhesive tape may be replaced by removing the assembly 52 and the shaft 36, making the desired replacements and inserting the combination in the box as previously described.

It will, of course, be understood that various details of construction may be varied through a wide range without departing from the principles of this invention and it is, therefore, not the purpose to limit the patent granted hereon otherwise than necessitated by the scope of the appended claims.

I claim as my invention:

1. A box comprising a single folded piece of metal having an elongated withdrawal opening defined by the walls thereof, a revoluble shaft mounted within said box, said shaft being adapted to support rolls of adhesive tape which are unrolled through said opening, a revoluble cover mounted coaxially with said shaft and movable to close said opening, a clamping bar secured adjacent an edge of said cover, an extended serrated knife edge secured between said bar and said cover, a grooved clamping bar secured adjacent an edge of one of the said opening defining walls, said clamping bars adapted to be brought into lateral engagement when said cover is moved to a closed position to clamp unrolled strips of adhesive tape while being torn across said knife edge.

2. A box comprising a single folded piece of metal provided with an elongated withdrawal opening, a cover movable to close said opening, said movable cover having an outturned flange at its closing edge, a clamping bar secured to said flanged closing edge, a knife edge secured to said clamping bar and extending therefrom in the direction of closing movement of said cover, a grooved clamping bar secured to a wall of said box, said clamping bars adapted to be brought into engagement when said cover is moved to a closed position thereby forming a clamp having an adjacent knife edge for cutting material withdrawn through said withdrawal opening.

3. A box comprising a single folded piece of metal provided with an elongated withdrawal opening, a wall edge of said box defining a side of said opening, said wall edge being turned outwardly to form a flange, a first clamping bar having an irregular engaging surface for less surface adhesion secured to said wall flange, a cover movable to close said opening, an outturned flange on the closing edge of said cover, a second clamping bar secured to said cover flange, a serrated knife edge secured to said second clamping bar and extending therefrom in the direction of closing movement of said cover, said clamping bars adapted to be brought into lateral engagement when said cover is moved to a closed position thereby forming a clamp having an outside adjacent cutting edge for cutting material withdrawn from the box.

4. In a dispensing device, a shaft end bearing comprising a longitudinally bored member, said bore being disposed in eccentric relation to the axis of said member, an elongated opening in the wall of said member through which the end of a shaft may be laterally inserted into said bore, an annular recess on the outer side of said member adjacent the mouth end thereof, and a spring member seated within said recess and shiftable to lock an inserted shaft against removal, said spring member when shifted into locking position bearing against a portion of an inserted shaft to hold it for rotation and against lateral displacement.

5. In a dispensing device, a releasable shaft end and cover support comprising a cylindrical bearing, a finished outer surface on said bearing for supporting a revoluble cover, a recess within said bearing for revolubly supporting an end of a shaft, a slot in the wall of said bearing extending the length of said recess and through which the end of a shaft may be inserted into said recess, an annular groove on the outside of said bearing adjacent the mouth end thereof, and a partially encircling slidable spring clip retained within said annular groove for closing said slot to retain the shaft within said bearing.

6. A dispensing container for continuous strip material having a withdrawal opening, a revoluble cover for closing said opening, a shaft mounted within said container, a tubular bearing for coaxially supporting one end of said shaft and said cover, a tubular bearing for coaxially supporting the other end of said shaft and said cover, a supporting recess in said last bearing, a slot in the wall of said tubular bearing extending the length of said recess through which said shaft end may be inserted into said recess, an annular groove on the outer side of said last bearing adjacent the mouth end thereof, and a slidable spring clip retained within and partially encircling said annular groove for closing said slot and thereby operatively retaining the inserted shaft within said bearing.

7. In a dispensing device, a shaft end support comprising a tubular bearing, said bearing having a longitudinal shaft receiving opening, an annular recess adjacent an end of said bearing, and a turnable spring clip having a resiliently expansible shaft receiving mouth smaller than the diameter of the shaft confined within said recess whereby the shaft can be snapped through said mouth into said bearing when said mouth registers with said opening.

JOHN F. FILLER.