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3,272,414

DISPENSER FOR STRIP MATERIAL

Filed Dec. 28, 1964

2 Sheets-Sheet 1

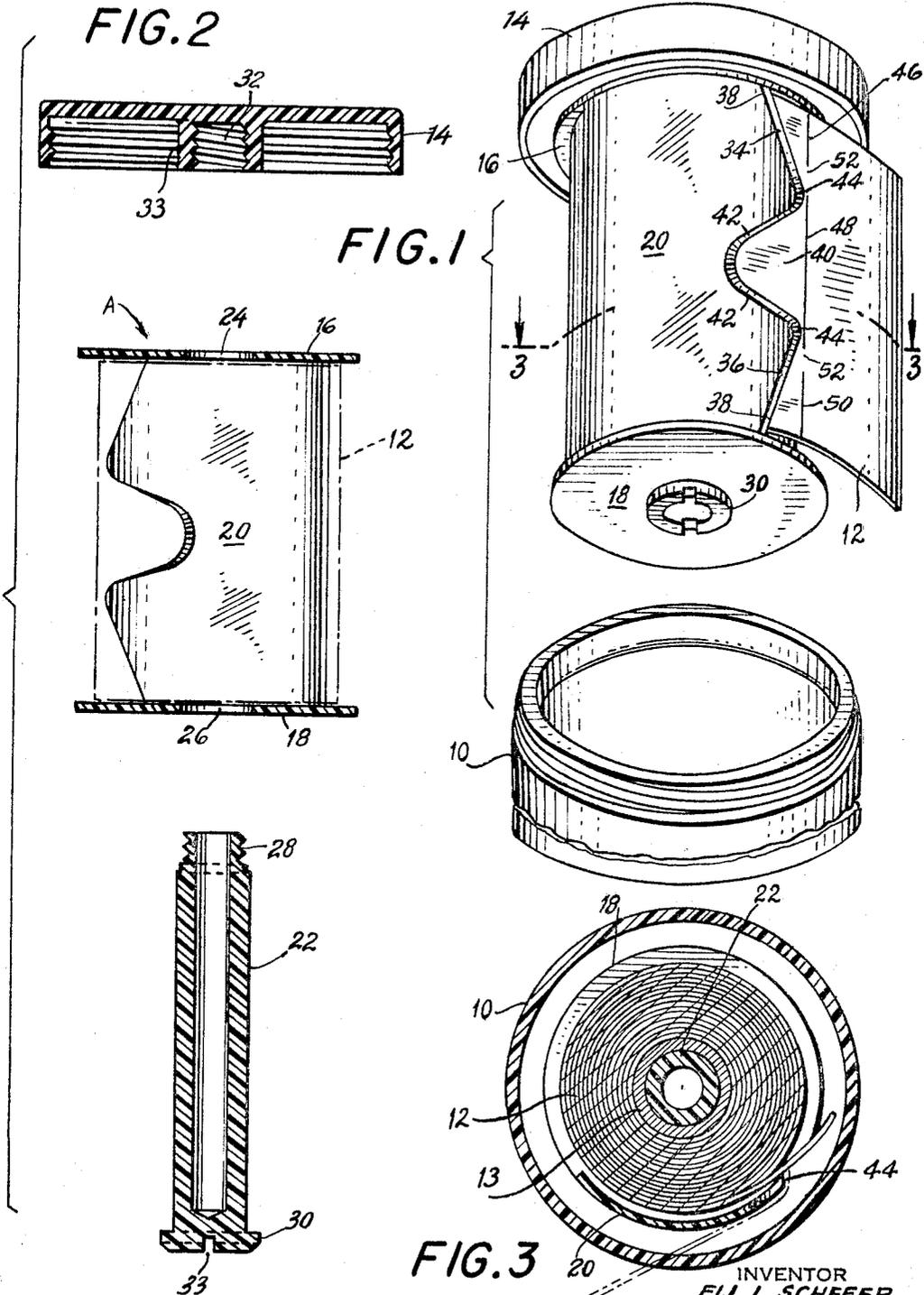


FIG. 3

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FIG. 4

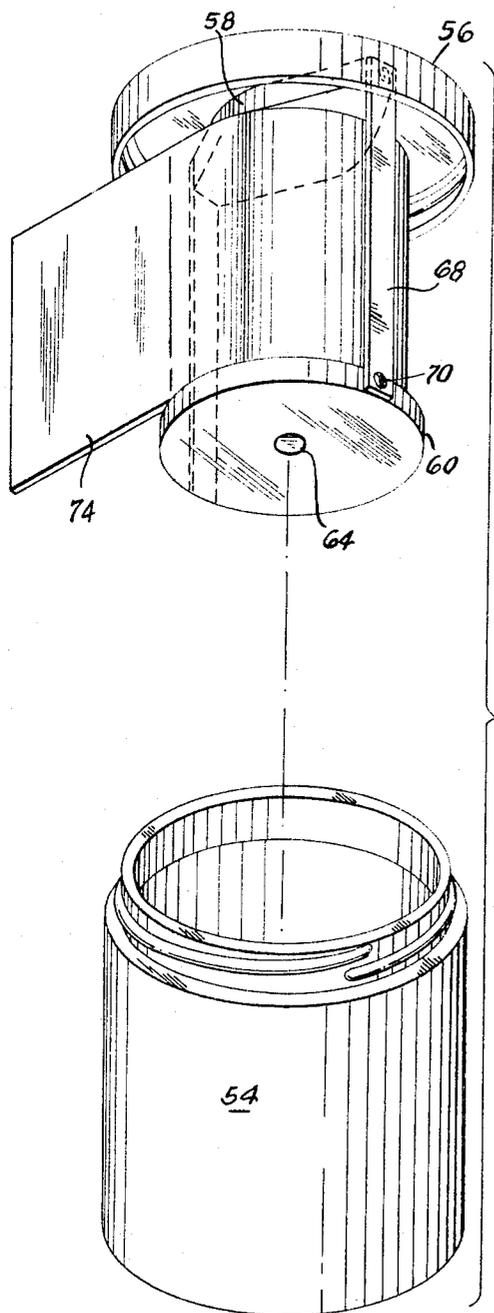


FIG. 5

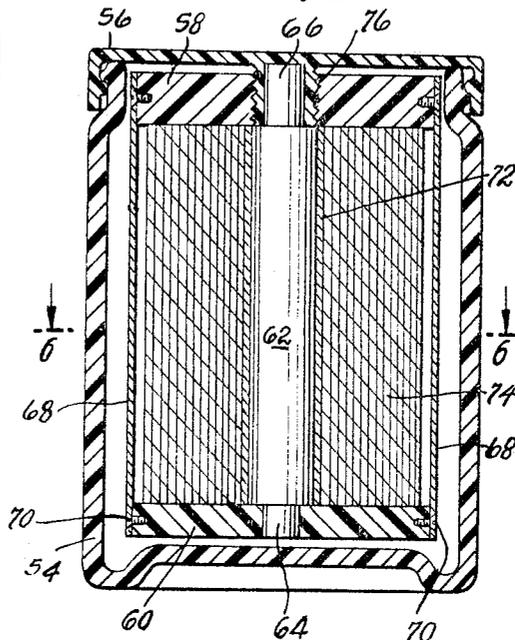
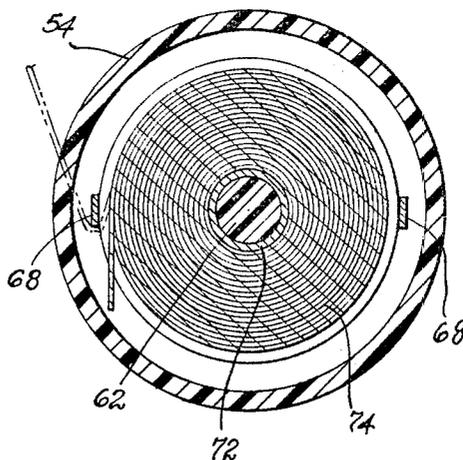


FIG. 6



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DISPENSER FOR STRIP MATERIAL

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7 Claims. (Cl. 225-45)

This invention relates to a storage and dispensing device for a roll of strip material such, for example, as is used for bandages or medicament pads.

An object of the invention is to provide such a device in combination with such a roll of material as will facilitate removal of increments thereof from the roll in predetermined lengths or in lengths as desired by the user.

A further object is to provide a dispenser wherein the stored material is substantially isolated from the ambient atmosphere and to that extent protected from contamination.

Another object of the invention is to provide a device wherein the roll of material may be stored in dry condition or saturated, or immersed in a fluid, as desired.

A still further object of the invention has been to provide a dispenser and a roll of strip material carried thereby in such co-relation with a severing element that increments of the strip may be removed from the roll easily and without detrimentally affecting the remainder of the strip.

With the above and other objects in view which will appear from the following description, our invention resides in the combination and arrangement of elements recited in the appended claims.

And, although the drawings show two preferred embodiments of the invention, it is to be understood that other embodiments may be made which come within the scope and spirit of the claims.

In the drawings:

FIGURE 1 is an exploded fragmentary perspective view of one embodiment of the invention;

FIGURE 2, an exploded vertical sectional view of said embodiment with a roll of the strip material, indicated in dot and dash lines, mounted therein;

FIGURE 3, a horizontal sectional view on the plane of line 3-3 of FIGURE 1;

FIGURE 4, an exploded perspective view of another form of our invention;

FIGURE 5, a vertical sectional view of the embodiment shown in FIGURE 4; and

FIGURE 6 is a horizontal sectional view on the plane of line 6-6 of FIGURE 5.

The device of this invention comprises, in general, a substantially air, gas and fluid tight container that has a removable top closure or cap and a carrier for a roll of strip material normally attached to said cap and housed within said container, when the cap is in closing position, said carrier being provided with a strip cutter so constructed and arranged that a desired length of the strip may be severed from the supply roll without disarranging or disturbing the remainder of the strip in the roll. In one form of the invention the cutting edge of the cutter includes re-entrant portions which recede from advance portions providing points or tips for initially piercing the strip; and said advance portions are co-related in position with transverse slits in the strip to facilitate removal of

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successive portions of predetermined lengths of the strip along said slits.

Referring to FIGURES 1 through 3, the container 10, that may be of glass, plastic or other suitable material and conveniently of the form shown in FIGURE 1 includes a removable cover 14 attachable thereto by screw threads or other suitable means.

The carrier A, FIGURE 2, for the roll of strip material 12 which is wound on a cylindrical core 13, FIGURE 3, comprises an upper end plate 16, a lower end plate 18 and a spacer 20 which extends between these end plates with its ends rigidly attached thereto. In cross sectional contour, said spacer is in the form of an arc, FIGURE 3, and its curved ends follow generally, in contour, the curved peripheral edges of the end plates. Thus, when the plates are circular the ends of the spacer will, preferably, be arcuate in cross-section. These parts are, in general, so shaped and dimensioned that they will readily fit within the container 10 when cover 14 is in closing position thereon.

The assembly of the two plates and the spacer 20, comprising the carrier A, FIGURE 2, is attached to the cover 14 so that when the cover is removed the carrier will also be removed from container 10 along with the roll of strip material 12.

This mounting and removability are facilitated by providing a roll receiving spindle 22 that is engaged in centrally arranged openings 24 and 26 in the upper and lower plates 16 and 18, respectively. In an acceptable form the spindle 22 is tubular and provided with external screw threads 28 at its inner end and a flange 30 on its outer end, the screw threads being adapted to engage in a threaded recess 32 in a boss 33 at the under side of the cover 14. When the carrier is assembled, the flange 30 is adapted to bear against outer face portions of the plate 18 at the peripheral edge of hole 26.

To facilitate tightening of spindle 22 in recess 32, flange 30 may be provided with wrench receiving slots 32.

When the spindle is inserted axially through the plates and through core 13 of roll 12, of strip material, and tightened in recess or socket 32 the elements shown in FIGURE 2 will constitute a unitary structure such as shown at the upper portion of FIGURE 1 and wherein the core 13 of strip roll 12 is free to rotate on spindle 22. As so assembled, the carrier may be inserted in the container 10 and there stored for subsequent removal and use with the strip material either in a dry or wet state.

The strip cutting edge of spacer 20 which is irregular in contour includes cutting portions 34 and 36 which recede divergently from the somewhat rounded spaced advance portions 44 toward the end portions 38. A thumb-receiving space 40 is left between these said spaced advance portions 44; and the slides of the re-entrant edge portions 42 and the cutting edges 34 and 36 meet to form said somewhat rounded advance strip-piercing and severing portions or rounded tips 44.

In this form of the invention, the strip of material is advantageously provided with groups of transversely aligned slits 46, 48 and 50 which are of such lengths and the adjacent ends of which are so spaced transversely in each group and so positioned that the severing tips 44 will engage initially in said slits; and the lands 52 between adjacent ends of the central and end slits will be severed by the edge portions 34, 36 and 42 when a section of

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the strip is being removed from the roll in a manner hereinafter described. The groups of slits 46, 48 and 50 occur at longitudinally spaced locations in the strip, the distance between groups depending ordinarily upon the purpose for which the severed portions are to be used.

When it is desired to sever a section of the strip from the supply, the cover 14, the roll carrier A and the roll 12 are removed from the container as a unit. While the user holds this unit conveniently with the thumb of one hand engaging the end at 30 and with another finger or other fingers pressed against the top surface of cover 14, he grips the free end of the strip at 40 between the thumb and forefinger of his other hand; and a section of the strip is withdrawn by pulling outwardly on its free end and thus causing the core 13 and roll 12 to rotate freely until the next slits or other desired group of slits is substantially aligned with the severing tips 44. The withdrawn portion is bent back on itself (as shown in dotted lines in FIGURE 3) over said tips 44 and then pulled in this reverse direction. The tips will initially engage and penetrate the slits and, as the pulling force in reverse direction is continued, the lands between the intermediate and end slits will engage and be severed by the cutting edges 34, 36, 42 and the section of strip to be removed will thus be cut from the roll without disturbing the remainder of the supply.

To replace a used-up roll of strip in the carrier A, spindle 22, is unscrewed from cap 14 and withdrawn from engagement with the carrier unit. A fresh roll of material is inserted between the end plates 16 and 18 in such position that the tubular core 13 of the roll is aligned with holes 24 and 26. Spindle 22, is now inserted through said holes and said core; and is again secured to cap 14.

The structure disclosed in FIGURES 4 through 6 is somewhat different from that disclosed in FIGURES 1 through 3 and advantageously employs a disposable carrier pre-assembled with a roll of strip material.

The embodiment disclosed in FIGURES 4 through 6 provides a container 54 having a removable cover 56 which is adapted to substantially seal the container against the entry of contaminating or detrimental elements. The strip carrier comprises an upper end plate 58 and a lower end plate 60. A spindle 62 extends between these two plates and is rotatably mounted with its lower end 64 journaled in plate 60 and its upper end 66 journaled in boss 76 of cover 56.

Extending between these two end plates are spacing and cutting members 68 which are permanently secured at their ends to the upper and lower plates by suitable means, such as screws, at 70. The spindle 62 is engaged in a tubular core 72 on which the roll of strip material 74 is wound. Thus the plates 58 and 60 and the spacing and cutting members 68 form a unitary roll supporting structure; and when the roll 74 of strip material is in position on the spindle 62 this material becomes in effect part of the unitary structure.

So that in use this unitary structure may be removed from the container along with the cover 56, the latter is provided with the depending externally threaded boss 76 preferably integral therewith, whereby the cover 56 is attached to the upper plate 58 by suitable means, such as screw threads.

When it is desired to remove an end portion or section of strip material from the roll, the cover is unscrewed from the container 54 bringing with it the unitary strip supporting structure above described, thus exposing the strip in condition to permit withdrawal of one end portion from the roll.

Thus, while said unit is held by the user in one hand, the end of the strip is conveniently grasped between fingers of his other hand and pulled from the roll. This unrolled portion is folded back on itself and over one or the other of the spacing and cutting bars 68 by which, upon the application of adequate force, the increment will

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be severed from the roll without dislodging or disarranging the remainder of the material forming the roll.

In this form, as in the form shown in FIGURES 1 through 3, the container may be filled with fluid to saturate the material of the roll, or this material may be permitted to remain in a dry state, or in such a saturated or other state as is desired.

To replace a used-up roll of strip in the dispenser, cover 56 and the carrier are removed from container 54. The carrier is separated from cover 56 by unscrewing plate 58 from box 76 and may be replaced by a carrier pre-assembled with a roll of material. This arrangement substantially reduces the likelihood of contamination from excessive handling of the rolled material.

What we claim is:

1. A dispenser comprising in combination, a container which includes a detachable cover, a carrier for a roll of strip material, said carrier being normally attached to the underside of said cover and located within said container and removable therefrom with said cover, and a roll of strip material mounted on said carrier to rotate freely in relation thereto, said carrier comprising spaced end plates and means extending between said plates formed with a strip cutting edge of irregular contour having strip engaging and severing relatively advanced spaced tip portions and cutting portions receding from the same with a finger accommodating space provided between said spaced tips whereby the user may have access to outer end portions of the rolled strip to seize the same material manually for withdrawal of a portion thereof from the roll.

2. The dispenser recited in claim 1, further including a spindle adapted to pass through the center of said carrier and fix the carrier to the underside of said cover.

3. In combination, a container which includes a removable cover, a carrier for rolled strip material comprising spaced end plates and means for securing said plates together comprising a connecting member extending between said plates and having a strip severing means thereon, and means for removably positioning the carrier to the underside of said cover.

4. The combination recited in claim 3, wherein said strip severing means includes a strip cutting edge of irregular contour having strip engaging and severing relatively advanced spaced tip portions and cutting portions receding from the same.

5. The combination recited in claim 4 wherein finger accommodating space is provided between said spaced tips whereby the user may have access to outer end portions of the rolled strip to seize the same manually for withdrawal of a portion thereof from the roll.

6. The combination recited in claim 4, wherein said strip material is provided with longitudinally spaced groups of aligned transversely extending slits alternating with lands, the slits being positioned to come opposite said tips and the lands to come opposite said cutting portions when the strip is withdrawn a predetermined extent from its roll.

7. A dispenser comprising in combination a hollow cylindrical container open at one end, a cover therefor including an end wall and a peripheral threaded flange removably attachable to said container to securely close said open end thereof, said cover including a boss coaxial therewith and projecting from the inner face of said end wall and having a coaxial recess open at its inner end, a carrier arranged and adapted to support a roll of strip material coaxially therewith and in rotatable relation thereto and including spaced opposed end plates rigidly secured in spaced relation to receive said roll between them and strip severing means having severing edge portions arranged adjacent to the path of movement of portions of the strip when said portions are being withdrawn from the roll, said carrier being operatively connected to said boss and insertable in and removable from said con-

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tainer along with attaching and removal of said cover in relation to the container.

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