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 [21] Appl. No. **832,696**
 [22] Filed **June 12, 1969**
 [45] Patented **June 28, 1971**
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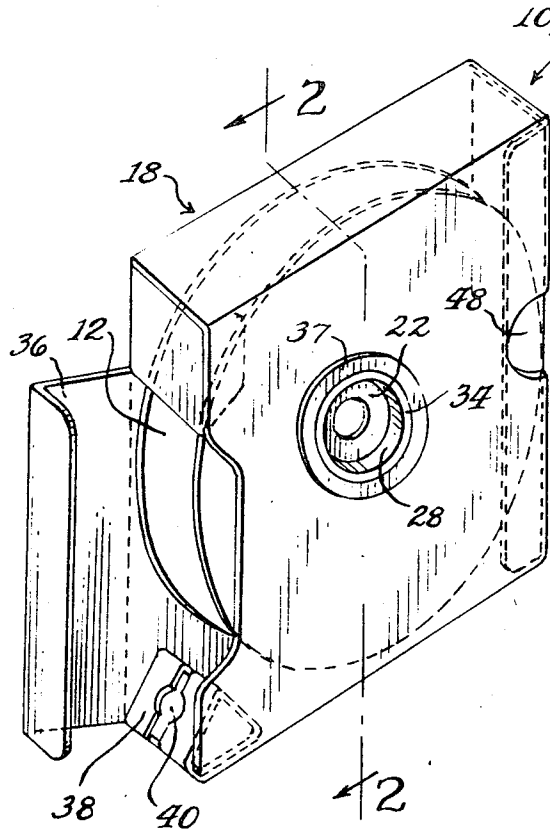
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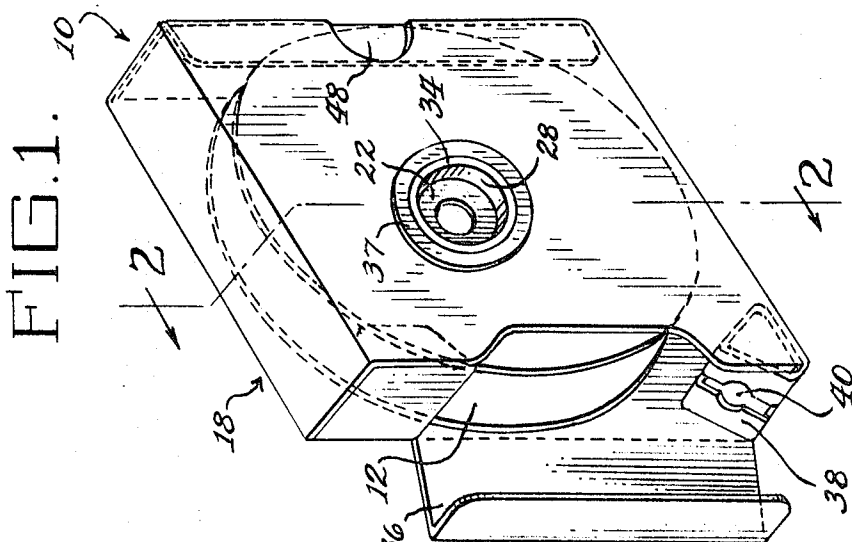
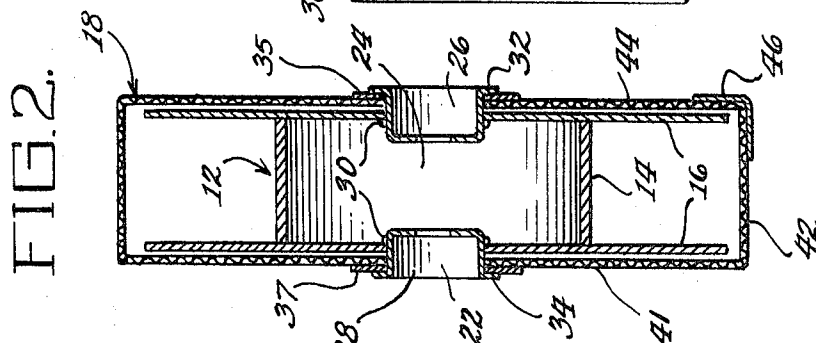
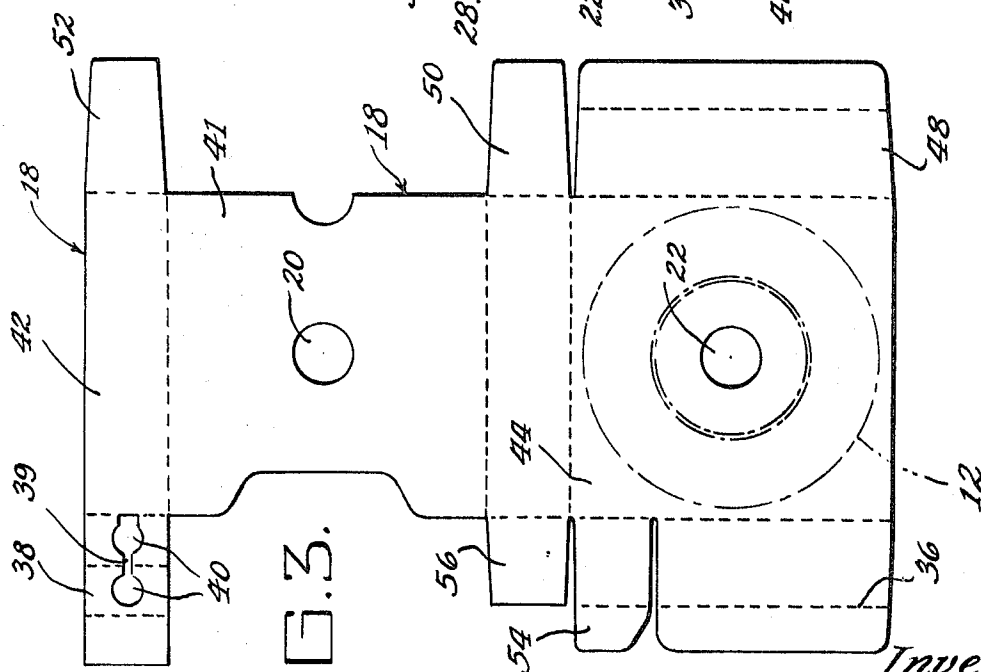
[54] **DISPENSER FOR TUBING AND THE LIKE**
2 Claims, 3 Drawing Figs.

[52] U.S. Cl..... 206/52
 [51] Int. Cl..... B65d
 [50] Field of Search..... 206/52

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ABSTRACT: A dispenser for tubing and the like having an inner cylindrical spool positioned inside of an outer rectangular hollow container made from a folded unitary sheet. A pair of hubs project through apertures in the sides of the container into an axial passage in the spool to hold the spool within the container in rotatable relationship thereto. This dispenser is made at very low cost, and serves as a combined dispenser and shipping container.





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DISPENSER FOR TUBING AND THE LIKE

BACKGROUND OF THE INVENTION

This application relates to a dispenser for tubing, tape, rope, or any other material which can be wound on a spool. The dispenser is particularly desirable for the shipment and dispensing of items such as vinyl tubing for medical use, in which it is necessary that the material dispensed be kept as clean as possible while still being conveniently shipped and dispensed. The dispenser can be shipped in sealed condition without the need for any additional container, if desired, yet it is easily opened and the contents quickly and conveniently drawn out as needed. Between uses, the dispenser can be closed up to prevent the remaining contents from being contaminated by airborne dust and the like until it is needed at a later time. Furthermore, the dispenser of this application is of highly inexpensive and simple construction, so that it is economically feasible to dispose of the container after use rather than to salvage it.

DESCRIPTION OF THE INVENTION

In accordance with this invention, a dispenser for tubing and the like has an inner cylindrical spool with a passage defined about the axis thereof. The spool is disposed within a six-sided hollow container made from a folded unitary sheet and having an aperture in each of two parallel sides, positioned for alignment with the axial passage of the spool. A pair of cylindrical hubs each project through an aperture in the container into the axial passage of the spool to hold the spool in place and to permit it to rotate with respect to the container. Each hub has detent means to hold it in position projecting into the axial passage, and each hub also has a flange of larger dimension than the aperture through which it projects, to prevent the hub from completely passing through the aperture.

The dispenser has integral openable and closable flap means for alternatively sealing and gaining access to the tubing or other items wound on the spool. Also, the container can have integral guide means through which, for convenience of handling, the contents wound on the spool are threaded while being removed from the spool.

In the drawing:

FIG. 1 is a perspective view of the dispenser of this invention, the spool being shown in phantom.

FIG. 2 is a sectional view of the same spool taken along line 2-2 of FIG. 1.

FIG. 3 is a plan view of the unitary sheet in unfolded condition from which the rectangular container for the spool is made, showing the spool in phantom in its normal position against one portion of the sheet which will become a side of the container.

Referring to the drawings, dispenser 10 is shown (in FIG. 2) having an inner cylindrical spool 12 comprising a central cylindrical section 14 and two flanges 16 each on an end of section 14.

Spool 12 is positioned within rectangular, six-sided container 18 which is made from a folded unitary sheet, shown in unfolded position in FIG. 3. Container 18 has a pair of apertures 20 and 22 in each of two parallel sides of the container which are positioned for alignment with an axial passage 24 passing through spool 12. A pair of cylindrical hubs 26 and 28 each project through an aperture 20 and 22 into axial passage 24. The hubs 26 and 28 are each typically made of a single piece of stamped metal, and have detent means such as burrs or prongs 30, which hold each hub in position projecting into axial passage 24. Flanges 32 and 34 are defined about the outer end of each hub, and are of larger dimension than apertures 20 and 22 to prevent each hub from completely passing through the aperture. Thus the spool 12 is mounted within

container 18 and is rotatable about its axis relative to the container to permit contents of the container which are wound about the spool to be unwound and dispensed as needed.

Flanges 32 and 34 are separated from container 18 by washers 35 and 37 to protect the container from abrasion as spool 12 is rotated.

The dispenser has a closable flap 36 which can be opened to gain access to the contents and then closed to seal the contents from dust and other contamination. Also, the dispenser has a guide member 38 which is integral with container 18 and comprise a a triangularly folded flap having a pair of apertures 40 positioned for alignment in folded position. The tubing or other material can be threaded through apertures 40 for added convenience in dispensing. The two apertures 40 are shown to be connected by a small channel-shaped cut 39. This is done for convenience of manufacture.

Typically, both container 18 and spool 12 are made of cardboard for maximum economy.

The container of this invention can be assembled in a very simple and economical manner. As shown in FIG. 3, spool 12, having the contents to be dispensed wound thereon, can be emplaced on container 18 in unfolded form. Washer 37 is installed in position and hub 28 is inserted through aperture 22 and set into position by a sharp blow to drive prongs 30 of hub 28 into the interior of spool 12. The hub is then securely set in position and not easily removed, due to the retaining action of prongs 30. The container 18 can then be folded about spool 12 by bringing side 41 (as shown in FIG. 3) over on top of spool 12, and folding side 42 into abutting relation with side 44. The latter sides can be sealed together by a strip of adhesive tape 46 (FIG. 2). End flaps 48, 50 and 52 are tucked in to seal one end of the container. At the other end, guide member 38 is folded in position, and flaps 36, 54 and 56 are tucked in.

Either before or after the tucking in of the above members, washer 35 is emplaced, and the other hub 26 can be inserted into aperture 20 and seated with a sharp blow. Flaps can be sealed in position with glue or tape if desired.

The resulting container can be used to ship its contents without the use of an extra outer container or wrapping if desired, and the contents are protected from dirt and dust. To dispense the contents, flap 36 is opened, and the dispensing contents threaded through guide member 38 and pulled outwardly. Spool 12 rotates easily to dispense the contents. When it is desired to store a portion of the contents of the container, flap 36 can be reclosed to protect the contents from contamination.

The above disclosure is for illustrative purposes only, and not for purposes of limitation of the scope of the invention.

I claim:

1. A dispenser for tubing and the like having an inner cylindrical spool with an axial passage defined therein, and an outer, rectangular, six-sided, hollow container for said spool made from a folded unitary sheet, having an aperture in each of two parallel sides of said container positioned for alignment with the axial passage of the spool positioned within said container, a pair of cylindrical hubs, each projecting through an aperture in said sides into said axial passage, each hub having detent means to hold said hub in position projecting into said axial passage, and a flange, defined about each hub, of larger dimension than said aperture to prevent said hub from completely passing through said aperture, whereby said spool is rotatable about its axis relative to the container, said container having integral guide means through which tubing and the like wound on said spool is threaded as it is removed from the spool, said guide means comprising a triangularly folded flap, integral with said container, having a pair of apertures positioned for alignment in folded position.

2. The dispenser of claim 1 in which said container has integral openable and closable flap means for gaining access to items wound on said spool.