June 19, 1962 T. P. KESSLER 3,039,602

SHIPPING PACKAGE FOR ROLL GOODS

Filed Feb. 25, 1960

FIG 1

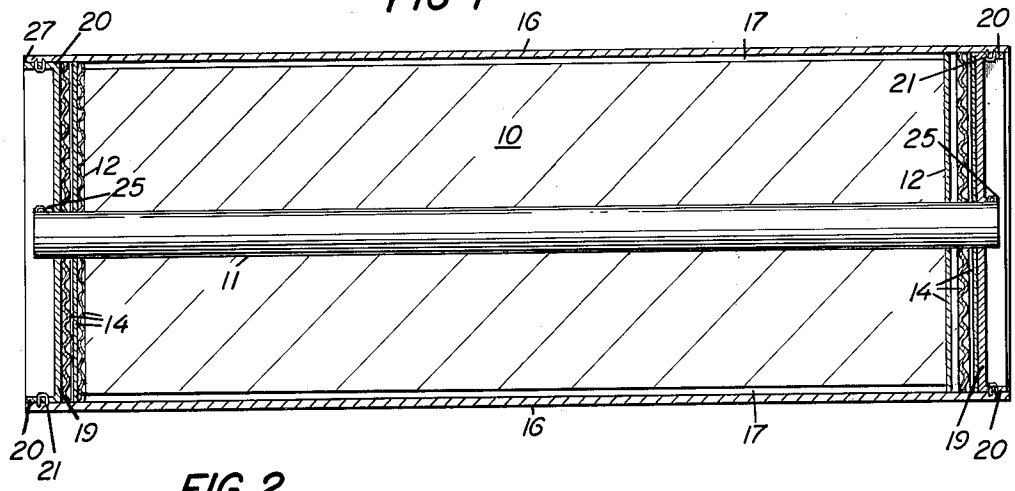


FIG 2

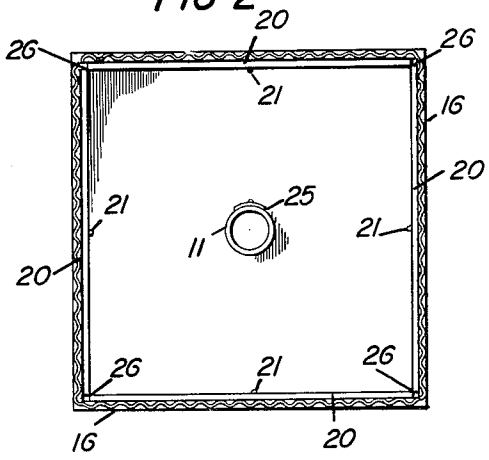


FIG 3

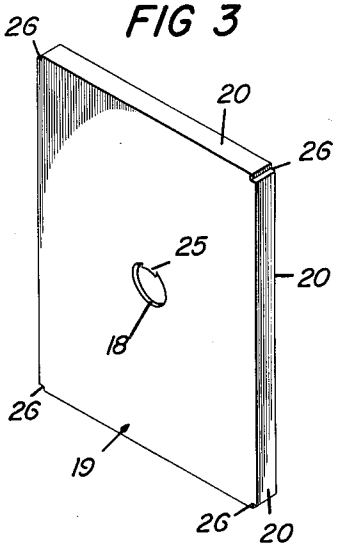
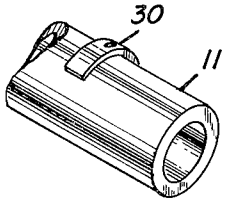


FIG 4



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SHIPPING PACKAGE FOR ROLL GOODS

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This invention relates to means for prevening injury to rolls of fabric while in transit and has for its principal object the provision of a shipping package of this kind which while of low cost yet insures against damage by displacement of the roll with respect to its central core and its encompassing carton.

A further object of the invention is to provide a shipping assembly package for rolled goods including fine fabrics as well as pile goods which will insure against damage to the ends of the roll by telescoping or mushrooming due to the tolerance common in the various parts of such a shipping assembly, primarily in the tube itself or in the length of the carton.

A further object of the invention is to provide a shipping assembly consisting of goods rolled upon a central support and having means to keep the goods from touching the sides of the shipping carton, the latter usually being of a readily obtainable standard size. This construction effectively prevents the fabric edges from being displaced as the end air spaces which exist in most previous packages are no longer present in this assembly.

A still further object of the invention is to provide a method of assembling a roll of fabric in an open-ended carton to prevent movement of the roll in its carton.

In the past considerable damage has been suffered by goods of these types because of the variances in size of the various separate items that go to the making of the package.

Assuming a roll of fabric 55 inches wide, the cardboard tube is ordered to be appreciably in excess of this dimension but may be delivered as much as a full inch from the size ordered. Even where the tubes as shipped are of the right size, allowance should be made for the shrinking of the tube as the cardboard dries out. The same observations apply equally well to the cartons whether they be of square open-end form or of other type, as these pieces of corrugated paper also shrink.

The natural result of these commercial tolerances is that when a roll of goods is assembled in its shipping container there is an air space at each side between the goods and the carton end which may range from as little as a quarter of an inch up to many times that amount. With excellent handling the air space might not be too objectionable but there are workmen who at times are pretty rough in their handling of shipped goods even though the cartons may be marked "Fragile."

Even with the best of care an accident may occur that will jar the shipment so as to cause the plane of the edges of the goods to vary considerably from when initially wound. Where the ends of the roll become conical this is called "telescoping" and where the cylindrical surface of the roll is undulated this is called "mushrooming." Pile goods would naturally be seriously damaged by pressure of the edge of the goods against the end of the carton with an appreciable air gap and even rather thin textiles are damaged by this unfortunate occurrence.

It is an important feature of the invention that the roll of goods be held firmly in the supporting covering in such a manner as to eliminate entirely any air spaces between the carton ends and the roll of goods, thus making it of no moment that either the tube or the carton or both are of a length departing considerably from the appropriate size.

The invention contemplates firmly securing the carton ends pressed tightly against the goods and this relationship is secured by locking the carton ends to the central tube usually of carboard or plastic. It is preferred that the securing means include a tab struck out from the material of the end board which tab is automatically positioned as the carton end boards are moved in position to engage the ends of the fabric roll thus making an appreciable reduction in labor cost.

In the drawings:

FIG. 1 is a central section through a shipping package.

FIG. 2 is an end view.

FIG. 3 is a perspective view of an end board.

FIG. 4 shows a modified form of securing clip for locking the central tube in place.

The goods **10** which may be of any material that can be shipped in rolled condition are wound upon a central core **11**, usually a cardboard tube, in such manner that the spiral edges **12** lie in planes perpendicular to the axis of the core. At each end of the roll there is one or more supports **14**, usually square of a size greater than the outside diameter of the roll, the purpose being to keep the goods from contact with the carton **16** by leaving a space **17** all around the periphery of the goods. The supporting sheets **14**, shown as two in number, are preferably of corrugated paper alternately running at right angles with five sheets usually being the maximum number. The sheets have a central perforation **18** to fit the central tube **11** with a reasonable degree of snugness.

The end boards **19** are preferably provided with outwardly extending peripheral flanges **20** which are stapled as at **21** to the projecting edges **22** of the open-ended carton **16**. In stamping out the central hole **18** to receive the tube **11** it is advantageous to leave a tab **25** altho the hole may be a full circle when the modified form of securing means is used as shown in FIG. 4.

The stiff end boards **19** while preferably of cardboard creased as at **26** to form the flanges, may be of Masonite, sheet fiber, or similar material. As the assemblies are generally placed in the railway car or highway truck in a vertical position to save room and reduce the shipping cost it is preferable that the flange and carton edges be alined as at **27** at the end which is to rest on the floor and all tolerances be left at the opposite end, altho the difference in length between the carton **16** and the total overall length of the parts within the carton may be divided between the two ends of the shipping package.

In the modified form of FIG. 4 a fiber clip **30** is stapled to the tube **11** at each end and holds the end boards **19** and the supporting sheets **14** in snug engagement with the ends of the velour or other goods formed by the alined selvages **12**. The initially described form of fastening is preferred, however, as the tab is positioned automatically and the labor cost is minimized.

The method of assembling the shipping unit is as follows: The goods **10** are wound on the central tube **11** so that the two opposite edges **12** of the goods which are equally spaced from the respective ends of the tube are in planes exactly perpendicular to the axis of the tube which is of a length appreciably greater than the width of the goods. The two or more supporting sheets **14** at each end are now slipped on the tube loosely against the goods.

The two end boards **19** are next placed on the tube and since the small tabs **25** are engaged by the tube they automatically bend outward at each end of the tube. The assembled unit is then slid to one end of the carton and the near board **19** fastened. The opposite end board is next pushed firmly against the near selvage ends of the goods and while in such position the tab is stapled

or otherwise secured to the tube, thus locking the two end boards in place with the goods snugly between them. The end board flanges 20 may then be stapled or otherwise scured as at 21 to the projecting ends 22 of the open-ended carton. A different type of carton may be used but this adds appreciably to the expense.

What I claim is:

A shipping assembly comprising a central hollow tube having a smooth outer surface, a single roll of fabric of a width approximating the length of the tube and wound directly on said tube with its two selvages in planes perpendicular to the axis of the tube, a carton of four equal rectangular sides and having two open ends, said carton having a length greater than the width of the fabric roll, a plurality of cushioning sheets of corrugated paper mounted near each end of the central tube and slidable thereon, a square, stiff, outwardly flanged end board at each end of the assembly, each end board snugly fitting within the carton and having a central opening to receive the tube, said end boards having their parallel sides spaced apart a distance greater than the diameter of the fabric roll to hold the roll out of contact with the side walls of the carton, and to enable the roll of fabric, the cushioning sheets, the end boards and the central hollow tube to be slid into the carton as a unit, and means locking the end boards in place with respect to the tube and to the carton so as to compress the corrugated paper sheets between the fabric roll and the two end boards, whereby to avoid the usual air space at each end of the fabric roll.

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