Oct. 21, 1952 H. EPSTEIN 2,614,772

PACKAGE OF CORELESS TUBE WOUND BUNDLE OF TWINE

Filed Feb. 23, 1950

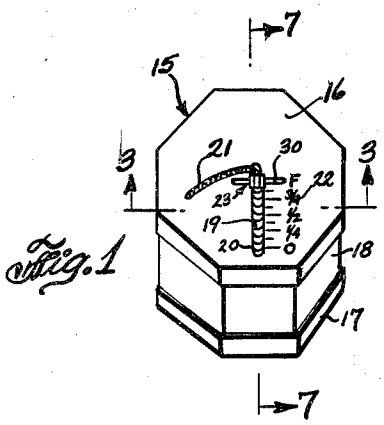


Fig. 1

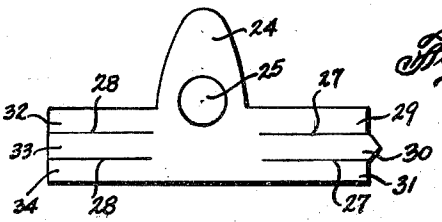


Fig. 2.

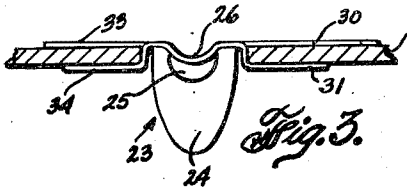


Fig. 3.

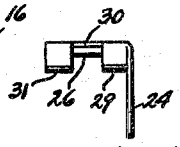


Fig. 4.

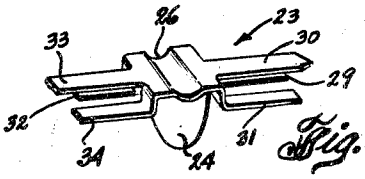


Fig. 5.

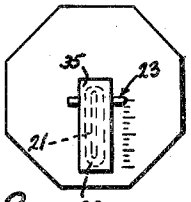


Fig. 8.

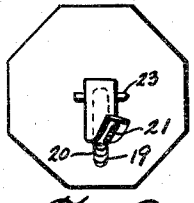


Fig. 9.

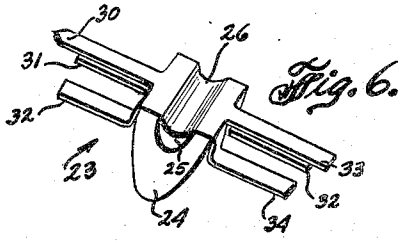


Fig. 6.

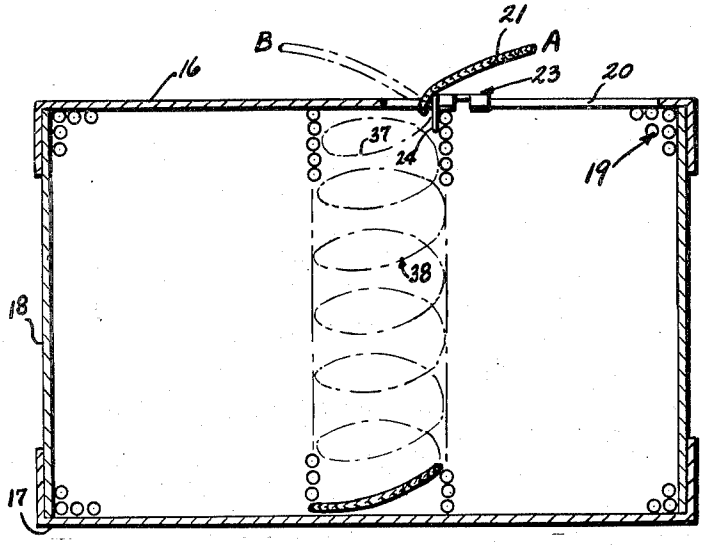


Fig. 7.

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PACKAGE OF CORELESS TUBE WOUND BUNDLE OF TWINE

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Application February 23, 1950, Serial No. 145,851

4 Claims. (Cl. 242—146)

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The present invention relates to package constructions which may take the form of wrappers, containers and holders for wound bundles of rope, twine, cord, thread or the like, and particularly to those fitted with means which indicate the inventory of the package from "full" to "empty," or otherwise.

An object of this invention is to provide a novel and improved package structure of the character mentioned, which serves as a housing from which its contents may be withdrawn as needed, and in particular has provision for indicating the approximate inventory of the rope, twine or the like, which was taken from, or which is still remaining in the package.

Another object is to provide a package of the nature set forth with novel and improved inventory indicating means including a movable pointer along a fixed scale or the like, which pointer is made to move along the scale as rope or twine is withdrawn from the package in any direction.

A further object hereof is to provide such a movable pointer of novel and improved construction, which is given its motion by a novel mode of operation and does not require that the rope or twine be withdrawn from the package in any particular direction.

Another object hereof is to provide package constructions with inventory indicating means of novel and improved structure, which are cheap to manufacture, easy to use and efficient in carrying out the purposes for which they are designed.

Other objects and advantages will become apparent as this disclosure proceeds.

In the accompanying drawings forming part of this specification, similar characters of reference indicate corresponding parts in all the views.

Fig. 1 is a perspective view of a box housing a wound bundle of rope, twine or the like, and fitted with inventory indicating means in accordance with the teachings of this invention.

Fig. 2 shows a blank of sheet metal or the like, from which the slidable pointer of the indicating means used in the embodiment illustrated in Fig. 1, is formed.

Fig. 3 is a fragmentary section taken at lines 3—3 in Fig. 1, showing the manner in which the pointer is mounted on the box structure.

Fig. 4 is a side view of the pointer shown in Fig. 3.

Fig. 5 is a perspective view of the pointer in position as shown in Fig. 3.

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Fig. 6 is a perspective view of said pointer member as seen from the rear of Fig. 5.

Fig. 7 is an enlarged section taken at lines 7—7 in Fig. 1, showing what happens when rope or similar contents of the box, is being withdrawn.

Fig. 8 is a top plan view of Fig. 1 showing a sealing strip over the slot of the box top; said strip adhering to the free end of the packaged goods.

Fig. 9 is a similar view showing the said strip being stripped off; said free end of the rope or twine being made accessible, for it is carried along by said strip.

In the drawings, the numeral 15 designates a box having a flat top 16 and a flat bottom 17, which are preferably flanged and glued onto the body portion 18. The box may be of any other suitable construction and its shape may be other than octagonal as shown. This box, made of corrugated board having flat facings, or of heavy cardboard or else of other suitable stiff sheet material, houses a wound bundle of rope, twine or the like; the winding being what is known as the coreless tube type, made of a single length wound in concentric coils and adapted to be unwound preferably from center outwardly, first the most inner coil, then the next coil and so on until the entire bundle is unwound. The box top 16 is provided with a radial slot 20, preferably commencing at the center of the box top, through which slot the free inner end 21 of the rope or twine extends out of the box. The bundle 19 snugly fits the box body 18. Suitable indicia 22 are provided along the slot 20, which among other things are taught in my previous invention in this art identified in my application for patent now pending under Serial No. 119,189, filed October 1, 1949, and as an improvement thereon, I provide a specially constructed slide member denoted herein generally by the numeral 23, which includes a pointer to travel across said indicia for indicating the inventory of the package. I will now describe the construction of such slide member 23, as I prefer it to be made, and I will set forth the manner in which it is made to automatically slide along the slot as material is withdrawn from the bundle 19.

The slide member 23 is formed of a flat blank of stiff sheet metal or other suitable sheet material, which blank, shown in Fig. 2, consists of an elongated strip having an integral tab 24 extending outwardly centrally of a longitudinal edge of said strip. This blank is provided with

a hole 25, part in tab and part in said strip, to permit the forming of a channel 26 across the strip in line of the tab, which channel is unobstructed by any part of the tab when the latter is bent to stay at right angles to the strip on the line of said longitudinal edge and in the direction which is downwardly into said channel. The strip portion of said blank is provided with longitudinal slits commencing at each end of said strip and extending to tab region, whereby three adjacent tines are formed at each end of said strip. The slits mentioned, are denoted by the numerals 27 and 28. The tines formed at one end of said strip are designated by the numerals 29, 30 and 31 respectively, while those at the other end of the strip are denoted by the numerals 32, 33 and 34, respectively. The middle tines 30 and 33 are left alone, while all the other tines are bent so that for the major portions of their respective lengths, they lie in a plane spaced from and parallel to the plane of the middle tines, in the direction of the depth of the channel 26; the distance between such planes being the thickness of the material of the box top 16.

The width of the slot 20 is such as to accommodate placing the slide member 23 with its tines lengthwise along said slot between the longitudinal edges of the slot, whereby the slide member 23 can be mounted on the box top 16, by then turning said slide member a quarter turn so that the middle tines 30 and 33 are atop the upper surface of the box top and the other tines are against the underside thereof. The slide member 23 should be able to slide along the slot 20 with slight friction.

The slide member 23 is mounted as mentioned, and particularly, the tab 24 shall be nearest the box top center, because when the package is assembled, said tab sets into center of the bundle 19 to contact the innermost coil of the bundle. The remote free end of the tine 30 may be pointed, to show a reading on the graduated scale 22.

Of course, before the top 16 is secured to the body member 18 of the box, the free end piece 21 of the bundle 19, is passed through the slot 20 to lie outwardly of the box structure and be positioned between the center of the box top and the slide member 23, as shown in Fig. 1. Now said free end piece 21 of the rope or twine, is laid over the slide member within the channel 26, and along and within the slot towards the side wall of the box 15, and dimensions of the bundle and box top thickness are such that the end-piece 21 so laid shall be flush with the top surface of the box. To prepare the package for shipment or storage, it is advisable to paste a strip 35 to seal the slot 20. This sealing strip when pried and ripped off as shown in Fig. 9, will carry the free end piece 21 along with it, making same accessible to the user, as is explained and made the subject of another application for patent bearing Serial No. 145,852, filed February 23, 1950, which has matured as Patent No. 2,580,900, dated January 1, 1952, and which includes such feature among other things. At this time it may be noted that even if no sealing strip is used, the slide member 23 with tab 24 within the bundle as stated, will prevent the free end piece of the rope or twine to become "lost" if the bundle 19 were to turn within the box 15 during handling in shipment or while in storage.

It is evident that as the bundle 19 is unwound, the tab 24 of the slide member 23, will always be within the innermost helical coil 36 of the part of the bundle then remaining. If the rope or twine while being withdrawn, is pulled on in such direction by the user, that it pushes against the slide member 23, it is evident that tab 24 will be in constant contact with such innermost coil and the pointer 30 will constantly indicate inventory of the package along the indicia 22. If however such direction of pull is perpendicular to the line of slot 20, or towards the rear half of the box 15, and even if directly in line and opposite to the necessary movement of the slide member 23 along the slot 20, the said slide member will also be shifted along said slots in the direction it need go, because the tab 24 is constantly being hit by the turns 37 of the expanding spiral 38 occurring within the box 15. So, regardless of the direction of pull, whether as shown at A or B, the slide member 23 will always be shifted along the slot 20, in the direction towards the end of said slot which is remote from center of the box 15.

This invention is capable of numerous forms and various applications without departing from the essential features herein disclosed. It is therefore intended and desired that the embodiment shown herein shall be deemed illustrative and not restrictive and that the patent shall cover all patentable novelty herein set forth; reference being had to the following claims rather than to the specific description herein to indicate the scope of this invention.

I claim:

1. In an article of the character described, the combination of a bundle formed of a continuous rope, twine or the like, wound about an axis in the form of concentric helical coils and having an exposed end piece extending from the innermost coil to be pulled to unwind the bundle, a member fixed adjacent the bundle whereby the axis of the bundle intersects said member; said member having an elongated slot therethrough, extending substantially radially with respect to said axis, at least substantially from the inner to the outer coils of said bundle; the said end piece of the rope, twine or the like, being positioned through said slot, and a slide member slidably mounted on said member for movement along the slot; said slide member having an element extending therefrom through the slot and into the bundle adjacent a side of the helical coil from which said end piece extends; said rope, twine or the like being drawn through said slot as the bundle is unwound, being adapted to contact said element regardless of the direction of pull on the rope, twine or the like or the position of the slide along the slot and thus shift the slide member, whereby the position of said slide member along the slot will be indicative of the inventory of the bundle; said slide being always free but limited for movement along the slot by the innermost coil existing at any time.

2. An article as defined in claim 1, wherein the mentioned element extends into the bundle from the extremity of the slide member which is nearest the coil from which the end portion of the rope, twine or the like, extends.

3. An article as defined in claim 2, wherein the slide member is mounted across the slot and is provided with a channel extending along the slot; the end piece of the rope, twine or the like, being positioned along and within the said channel and thence along and between the longitudinal edges of the slot and against the bundle, and including

a strip of sheet material secured across the slot and engaging the end piece of the rope, twine or the like lying between the edges of the slot against the bundle, whereby upon removal of said strip from across the slot, the end piece will be carried along therewith.

4. In an article of the character described, the combination of a panel-like member having an elongated slot therethrough and a slide member formed to include a central body portion having a plurality of extensions from one end thereof and a plurality of extensions from an opposite end thereof, at least one of said extensions at each end of the body member lying in one plane and the remaining extensions at each end lying in a second plane; both said planes being parallel and a tab extending from the body portion in a direction substantially normal to the planes mentioned; said slide member being slidably mounted along the slot whereby the said tab extends through and out of the slot and the extensions in

one plane contact one surface of the panel along one edge of the slot, and the remaining extensions are immediately adjacent the other surface of the panel member; the central body portion of the slide member being between the longitudinal edges of the slot, and a hole being provided part in said central portion of the slide member and part in the tab; said body portion being provided with a channel extending from the rim of said hole and lengthwise of the slot.

HENRY EPSTEIN.

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The following references are of record in the file of this patent:

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