May 26, 1936. A. HIRSCH 2,042,311

SPOOL BOX

Filed Aug. 20, 1935

FIG. 1.

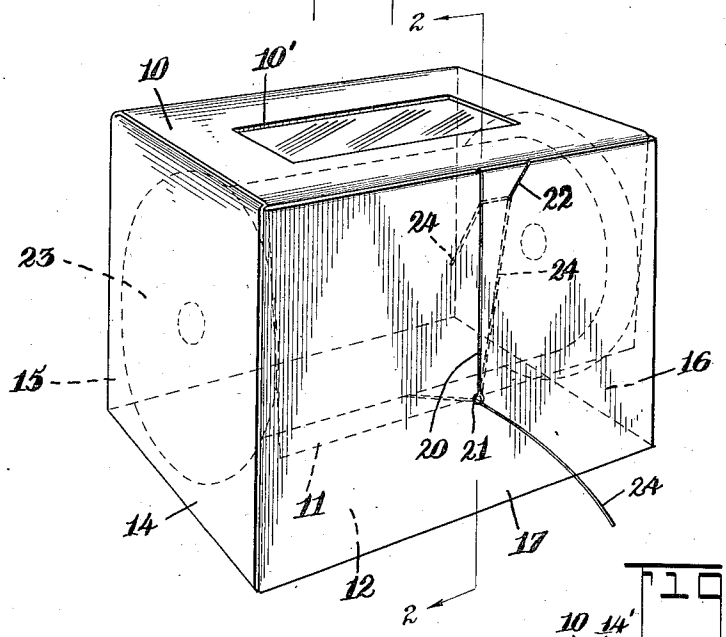


FIG. 2.

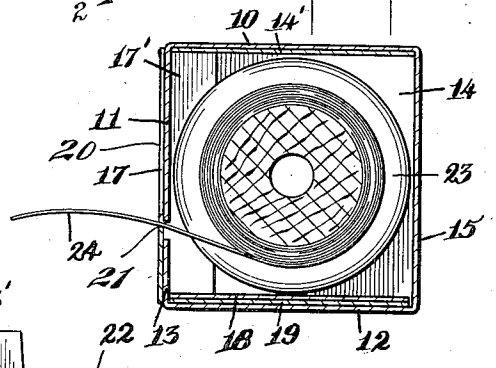
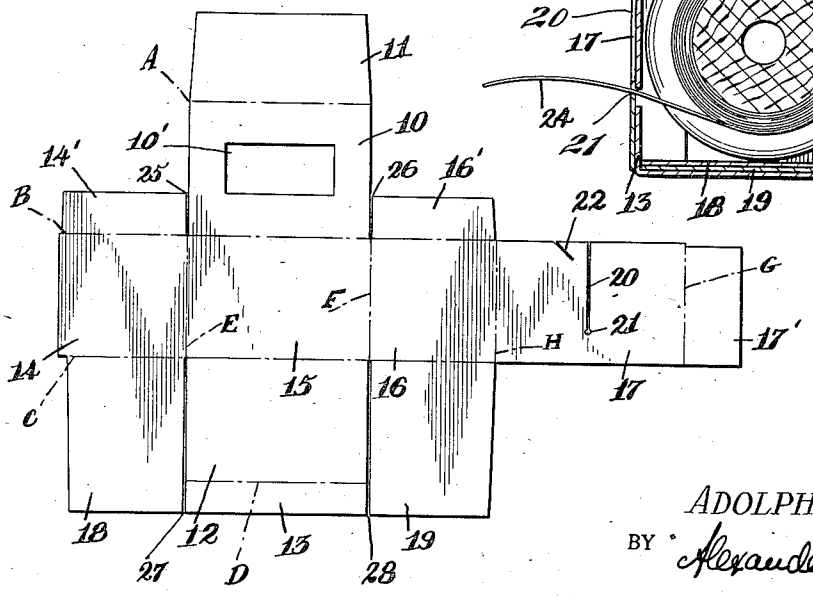


FIG. 3.



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SPOOL BOX

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4 Claims. (Cl. 242—138)

This invention relates generally to boxes for containing reels or balls of cotton, thread, silk, string or other materials, and more specifically to boxes of this type wherein the box members themselves provide a slit from which the yarn is unravelled and a catch for the said yarn when a sufficient length thereof has been withdrawn.

The main object of the invention resides in the provision of a box having its members slitted so that yarn may be unravelled from a reel or ball frictionally mounted within the said box, the said yarn being prevented from sliding upwardly along one of the slits of the front wall member by virtue of the clamping action of the closure flap of the box.

Another object of the invention resides in the provision of a box of the nature described wherein the closure member is provided with a perforation to render visible the contents of the said box and a flap portion of the said closure member which serves the double purpose of an abutment against the upward thrust of the yarn passing through the slit of the front wall and as a friction member against the ball, reel or spindle of yarn within the box.

A further object of the invention resides in the provision of a box which is capable of being fashioned from a single piece of material or blank, such as cardboard or other suitable substance capable of maintaining a fold.

Another object of the invention resides in the cheapness in manufacture of such boxes, in the simplicity of conjoint operation with a reel, spindle or ball of yarn and in the obvious manner of operation.

These objects and other incidental ends and advantages of the invention will hereinafter appear in the progress of the disclosure and as pointed out in the appended claims.

Accompanying the specification is a drawing showing a preferred form of the invention wherein corresponding reference characters on the said drawing designate corresponding parts throughout the several views.

In accordance with the drawing:

Fig. 1 is a view in perspective of the box showing the same in operative position and containing a spool of yarn.

Fig. 2 is a reduced sectional view of Fig. 1 along the plane 2—2 thereof.

Fig. 3 is a plan view of a blank from which the box is patterned by folding along the dot and dash lines shown thereon.

In accordance with the invention and in accordance with the preferred form thereof shown in the accompanying drawing, the box comprises front and rear walls 17 and 15 respectively, side walls 14 and 16 respectively, a bottom wall 12 and a top wall or closure member 10.

In accordance with the blank shown in Fig. 3 the front wall 17 is provided with a lateral flap 17', the end wall 14 is provided with an upper flap 14' and a lower and longer flap 18, the end wall 16 is similarly provided with an upper flap 16' and a longer and lower flap 19. The bottom wall 12 is provided with a lower flap 13 while the top wall or closure member 10 has a central perforation 10' and an upper flap 11. Numeral 25 designates a slit extending along the inner edge of upper flap 14' to the upper horizontal line of folding B, while numeral 26 designates a slit extending from the inner edge of flap 16' to the same line of folding. Numerals 27 and 28 designate slits along the inner edges of flaps 18 and 19 respectively, and extending to the lower horizontal line of folding C. Flap 11 of the top wall 10 folds along the horizontal line of folding A of the top wall 10, while lateral flap 17' folds along the vertical line of folding G of front wall 17.

E and F represent vertical lines of folding in line with slits 25, 27 and slits 26 and 28 respectively, while H is another vertical line of folding in alignment with the outer edges of flaps 16' and 19.

By folding the several members described inwardly and perpendicularly along the lines of folding A, B, C, D, E, F, G and H of the blank of the box, as shown in Fig. 3, and fitting the parts together, the box of Fig. 1 is effected. Flap 13 of the lower wall 12 folds over the outer longitudinal edges of flaps 18 and 19 and folds inside of the lower edge of front wall 17. Flaps 14' and 16' serve as the support for top wall 10 and flap 11 serves as the closure flap for the top wall 10, the said flap folding along the inner surface of front wall 17.

Lower wall 12 after the folding operation is superposed by the overlying flaps 18 and 19.

The front wall 17 intermediate the lateral limits and folds thereof, H and G, is provided with a vertical slit 20 extending from the top edge thereof to a point preferably below the middle and terminating in an eyelet or perforation 21. Adjacent the said slit 20 is an inclined slit 22 extending inwardly a short distance from the upper edge of front wall 17. The said slit 22 serves as a catch for the yarn hereinafter designated by numeral 24 when the latter has been withdrawn a desired length. It should be observed that closure flap 11 of top wall 10 extends

along the front wall 17 to a point slightly above perforation 21.

The box after being folded and assembled from the blank shown in Fig. 3 into the form shown in Fig. 1, is ready for the insertion therein of a reel, spindle or ball of yarn. As shown in Figs. 1 and 2 the box contains a reel 23 with yarn 24 wound therearound. The reel of yarn fits into the box snugly so that the yarn 24 will not unravel with too much ease. In order to insert reel 23 in the box, the top wall or closure member 10 is open fully so that flap 11 is free of the interior of the box. Thereupon the free end of the yarn is inserted into slit 20 of front wall 17, and guided downwardly into the perforation 21, the latter serving as an eyelet and exit for the yarn from within the box. Closure member 10 together with flap 11 is forced into its closing position whereby the lower edge of flap 11 serves as a stop against any upward thrust of yarn 24 along slit 20. Furthermore, flap 11 serves as an added frictional element against the surface of the reel of yarn, as best shown in Fig. 2 of the accompanying drawing. Thus the difficulty and annoyance of having to thread the orifice 21 from the inside of the box are eliminated. When the consumer has withdrawn a desired length of yarn and desires to cut the same, the yarn is drawn up along the outer surface of front wall 17 obliquely of perforation 21 through slit 22 until it engages with the bottom of the inclined slit 22, and thereupon drawn outwardly through the upper portion of slit 20, as shown in dotted lines on Fig. 1. The portion of the yarn extending outwardly from the said upper portion of slit 20 is then cut. Thus the free end of the yarn if pulled, will not cause further unravelling. The fastened position of the thread 24 is shown in dotted lines in Figure 1.

The invention thus secures a number of advantageous purposes. An economical box is provided which serves as a holder for a reel, spool, spindle or ball of yarn with means provided for identifying the contents of the box and with means provided for threading the free yarn from without the box and securing the same against self-unravelling. No additional mechanisms affixed to the box are necessary to accomplish all these ends.

I wish it understood that minor changes and variations in the method of forming the box and in the location and integration of the several parts may all be resorted to without departing from the spirit of the invention and without departing from the scope of the appended claims.

I claim:

1. In a box to contain a reel or ball of yarn, the combination of front, rear, side and bottom walls, a closure member having a front flap, the front wall being provided with a guiding slit extending down from the upper edge thereof, the lower edge of the front flap extending to a point proximate to the end of the guiding slit to clamp upon the loose end of the yarn passing therethrough and hold the same in said slit.

2. In a box to contain a reel or ball of yarn, the combination of front, rear, side and bottom walls, a closure member having a front flap, the front wall being provided with a guiding slit extending down from the upper edge thereof, the lower edge of the front flap extending to a point proximate to the end of the guiding slit to clamp upon the loose end of the yarn passing therethrough and hold the same in said slit, the front wall being provided with a second slit extending from the upper edge thereof and proximate to the first mentioned slit serving as a locking means for the loose end of the yarn after being cut.

3. In a box to contain a reel or ball of yarn, the combination of front, rear, side and bottom walls, a closure member having a front flap, the front wall being provided with a guiding slit extending down from the upper edge thereof, the lower edge of the front flap extending to a point proximate to the end of the guiding slit to clamp upon the loose end of the yarn passing therethrough and hold the same in said slit, the closure member being provided with a perforation.

4. In a box to contain a reel or ball of yarn, the combination of front, rear, side and bottom walls, a closure member having a front flap, the front wall being provided with a guiding slit extending down from the upper edge thereof, the lower edge of the front flap extending to a point proximate to the end of the guiding slit to clamp upon the loose end of the yarn passing therethrough and hold the same in said slit, the front wall being provided with a second slit extending from the upper edge thereof and proximate to the first mentioned slit serving as a locking means for the loose end of the yarn after being cut, the closure member being provided with a perforation.

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