July 28, 1936. A. SOBOTA 2,049,334

SPOOL

Filed May 23, 1935

Fig. 1.

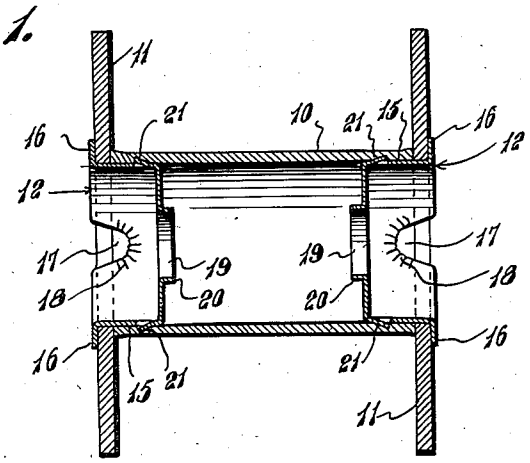


Fig. 2.

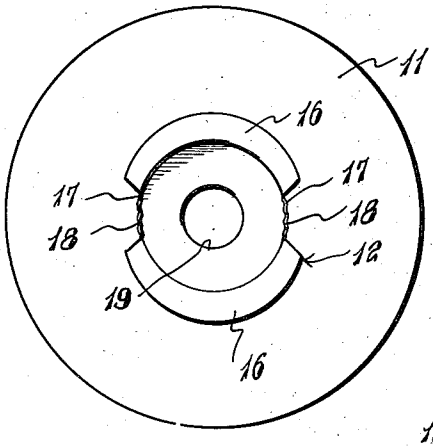


Fig. 3.

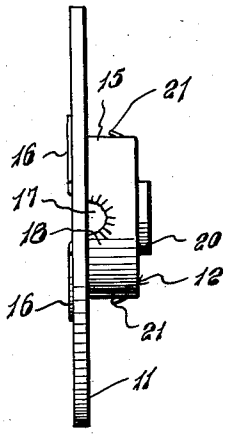
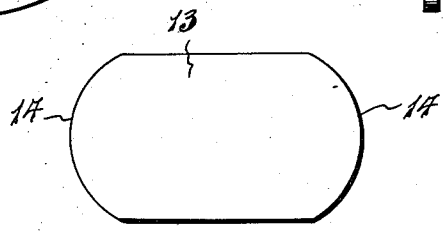


Fig. 4.



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SPOOL

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Application May 23, 1935, Serial No. 23,124

4 Claims. (Cl. 242—119)

This invention relates to a spool and it aims to provide a novel construction whereby spools upon which various materials are adapted to be wound into various arts, may be effectively constructed from pasteboard, fibre, or other disks and a tube, and secured together by novel metallic elements.

It is particularly aimed to provide a construction wherein the attaching element is pressed into shape from a single blank, in such a manner as to provide diametrically opposite corrugations or roughened portions which frictionally and to some extent actually penetrate the engaged tube, to more effectively connect and hold the parts together.

The more specific objects and advantages will become apparent from a consideration of the description following taken in connection with accompanying drawing illustrating an operative embodiment.

In said drawing:—

Figure 1 is a central longitudinal sectional view taken through a spool in accordance with the invention;

Figure 2 is an end elevation of the spool;

Figure 3 is a side elevation, showing one of the end disks and metallic elements alone, and

Figure 4 is a plan view of the blank from which the metallic elements are made.

Referring specifically to the drawing, wherein like reference characters designate like or similar parts, the spool comprises a tube 10 and end disks 11 initially separate from each other and made for example from pasteboard, indurated fibre, or the like. Said tube 10 and disks 11 are connected together by the devices generally designated 12.

Said connector devices 12 are preferably made from a single blank of metal as suggested at 13 in Figure 4. Such blank 13 is generally of oval shape, being somewhat elongated, with its ends arcuate as at 14. This blank is subjected to a stamping operation which causes the opposite end portions to move toward each other, providing a cylindrical cup as at 15, with flanges 16, the flanges 16 and wall of the cup 15 remaining open as at 17, and the metal about the cut away portions 17 assuming a roughened, corrugated, or like surface as at 18. The cup portion 15 is also centrally perforated to provide the axial openings 19 surrounded by annular flanges 20.

The connector members are telescoped within the openings of the disks 11 and the bore of the tube 10, forcibly, if necessary, until the flanges 16 overlap the disks 11, with the corrugated surface 18 effectively frictionally engaging and to some extent penetrating the bore wall of the tube 10, thus effectively securing the parts together and anchoring the connecting members against detachment.

If desired, fastening lugs 21 may be struck out from the connecting devices, after application thereof to the tube 10 and disks 11, for axially penetrating the bore wall of tube 10.

Various changes may be resorted to provided they fall within the spirit and scope of the invention.

What is claimed is:—

1. A spool comprising a tube, end disks, cup-like connecting members telescoped in said disks and tube and having axial openings therethrough, spaced apart zones of corrugations on the cup-like members engaging the bore wall of said tube, spaced apart flanges on each cup-like member between said zones and overlapping the exterior of said disks, and struck out spurs on said cup members penetrating the inner bore wall of said tube.

2. A spool comprising a tube, end disks, cup-like connecting members telescoped in said disks and tube and having axial openings therethrough, corrugations on the cup-like members engaging the bore wall of said tube, said cup-like members having diametric openings in the outer edges of their cylindrical walls, and said corrugations being provided about said diametric openings.

3. A spool comprising a tube, end disks, cup-like connecting members telescoped in said disks and tube and having axial openings therethrough, corrugations on the cup-like members engaging the bore wall of said tube, said cup-like members having diametric openings in the outer edges of their cylindrical walls, said corrugations being provided about said diametric openings, and spaced flanges extending laterally from said outer edges between said openings.

4. A spool comprising a tube, end disks, cup-like members telescoped in said disks and tube and having axial openings therethrough, said cup-like members having side walls provided with diametrically opposite open portions, spaced zones of corrugations on said side walls bordering said open portions, said corrugations engaging the bore wall of the tube, flanges on said cup-like members between the zones of corrugations and overlapping the exterior of said end disks, and spurs on said cup-like members penetrating the inner bore wall of said tube.

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