May 2, 1933. H. G. STINE 1,906,495

SPOOL FOR THREAD

Filed Oct. 4, 1930

Fig. 1.

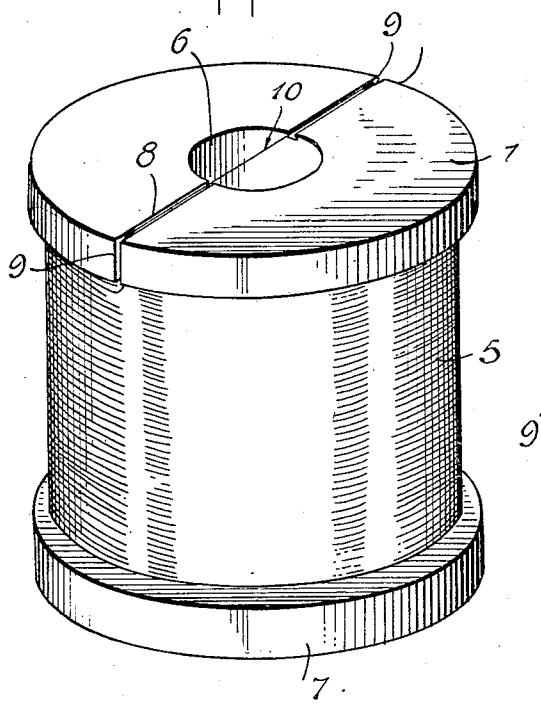


Fig. 2.

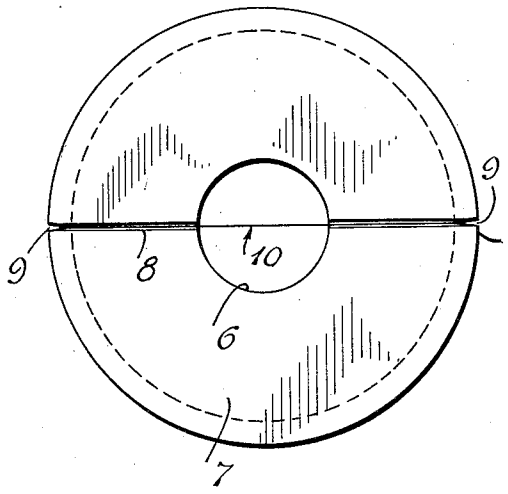
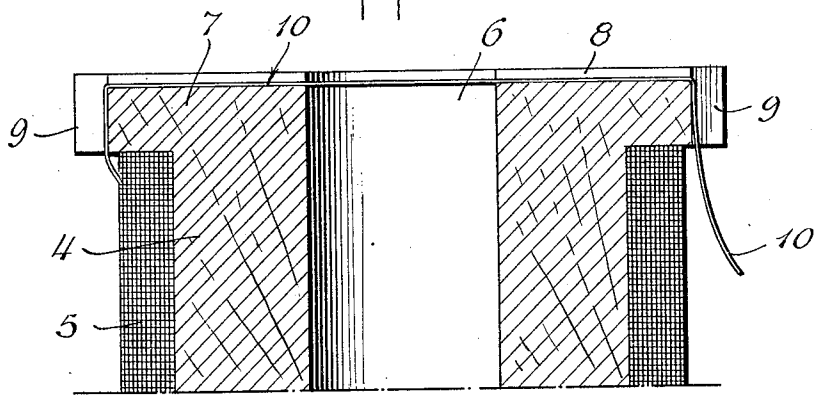


Fig. 3.



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SPOOL FOR THREAD

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This invention relates to improvements in spools of the type upon which silk and cotton threads or the like are wound, and has particular reference to a means for attaching the loose end of the thread to the spool.

In the production of spools of thread it is the customary practice for the operators in manufacturing establishments to manually cut a notch, by means of a knife or similar implement, in the periphery of one end of the spool after the thread has been wound thereon, and thereafter insert the loose end of the thread into said notch so as to prevent inadvertent unwinding of the thread. Unless the operator is careful in performing this operation, there is a likelihood that the notch, which is formed at an angle to a radial line extending to the center of the spool, will be cut too deep with the result that the thread may be severed or a piece of the edge of the spool split off. Furthermore, it is a well-known fact that considerable difficulty is ofttimes experienced by the user of a spool of thread in finding the end of the thread when it is engaged in the usual notch and disengaging it therefrom and also in replacing said end after using the thread.

The present invention is designed to overcome the above-mentioned difficulties and, to this end, it is proposed to provide the spool with a thread-receiving channel or groove extending across one end thereof in intersecting relation to the axial opening of the spool so that when the thread is engaged in said groove it will be countersunk beneath the surface of the end of the spool and a portion of said thread will extend across said opening where it can be easily grasped in order to withdraw the end for use.

The inventive idea involved is capable of receiving a variety of mechanical expressions, one of which, for purposes of illustration, is shown in the accompanying drawing, wherein:

Figure 1 is a perspective view of a spool of thread constructed in accordance with the invention;

Figure 2 is an end elevation; and

Figure 3 is an enlarged fragmentary vertical longitudinal section through the spool.

The spool body 4 may be of usual construction for spools commonly employed to carry silk and cotton threads 5, or the like, and has the customary axial opening 6 for mounting the spool upon the spindle of a sewing machine. The spool is also provided with the enlarged end members 7 between which the thread is wound upon the body of said spool.

In carrying out the present invention, the face of one end 7 of the spool has formed therein a groove or channel 8, which preferably extends diametrically across said face in intersecting relation to the axial opening 6 and to the periphery of said end at oppositely disposed points, so that the portions of the groove will extend radially relative to said opening. At the points where the outer ends of the groove intersect the periphery of the end 7 the latter is provided with notches 9 which are in communication with said groove. These notches are merely cuts in the spool of sufficient width to receive the free end portion 10 of the thread 5 and frictionally retain the same in position.

The notches 9 are preferably of greater depth than the groove 8 which need only be made of sufficient size to receive the portion 10 of the thread and recess or countersink the same below the face of the end 7.

The groove 8 and notches 9 may be formed in the end of the spool in any suitable manner and can be accomplished in a single operation when the spool is being made and prior to winding the thread thereon. In so doing, the usual practice now employed, wherein operators are required to manually cut notches in the ends of spools after the thread has been wound thereon, is avoided. With the present invention it is only necessary for the operator to receive a spool from the winding machine, engage the free end portion of the thread on the spool in one of the notches 9, then lay the same in the groove 8, and finally insert the thread

into the other notch 9, after which any excess of thread extending beyond the latter notch may be cut off. With the end of the thread thus engaged and retained in the end of the spool the latter is ready for packing and shipment and, by having the thread recessed within the groove 8, it will be apparent that accidental detachment of the thread from the notches 9 which might occur when the end of the spool is rubbed against any surface, such as the wall of a packing box, or the end of another spool in said box, will be avoided. When the spool is sold to the ultimate consumer the detachment of the free end of the thread from the notches is facilitated by reason of having a part of the end of said thread extending across the opening 6, whereby said part may be easily grasped and the thread withdrawn for use. Further, the free end portion of the thread, after use, may be easily engaged with the notches and groove, the latter, in this instance, forming a clear indicating mark which will enable the person handling the spool to readily find either of the notches 9 which, as is well known, is sometimes quite difficult with the ordinary spool.

What is claimed is:

1. A spool for thread having the face of one end thereof provided with a groove, portions of which extend radially from opposite points of the axial opening in said spool to the periphery of said end, and said periphery being formed with notches in communication with the outer ends of the portions of said groove, said notches and groove receiving the free end portion of the thread on said spool.

2. A spool for thread, comprising end members, one of which has a flat surface provided with a groove extending completely across the same for receiving the free end portion of the thread on said spool, said end member also having means to retain said portion in said groove.

3. A spool for thread having the face of one end thereof provided with a groove intersecting the axial opening of the spool, with the portions of said groove, on opposite sides of said opening aligned relative to each other and capable of receiving the free end portion of the thread on said spool with a part of said thread extending across said opening, said end of the spool further having means to retain said portion in said groove.

4. A spool for thread having one end thereof provided with a groove for receiving the free end portion of the thread on said spool, and also having notches in its periphery communicating with and forming continuations of the outer ends of said groove, said thread being insertable into said notches to retain it in said groove.

5. A spool for thread having the face of one end thereof provided with a groove extending entirely across said face and intersecting the axial opening of the spool and capable of receiving the free end portion of the thread on said spool with a part of said thread extending across said opening, said end of the spool also having notches in its periphery communicating with said groove and into which said thread is insertable to retain the same in said groove.

6. A spool for thread, comprising end members having flat surfaces one of which is provided with a groove extending completely across said surface and intersecting the axial opening of the spool with the portions of said groove on opposite sides of said opening aligned relative to each other, and the outer ends of said groove portions terminating in notches formed by radially extending cuts made in the periphery of the end member in direct alignment with said groove so that the free end portion of a thread may be recessed in said notches and groove by a single movement of the thread in one direction across the face of said end member.

In testimony whereof I have affixed my signature.

HERBERT G. STINE.