June 21, 1955 O. B. NYLUND ET AL 2,711,294

SPOOL HOLDER AND THREAD CUTTER

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Fig. 1

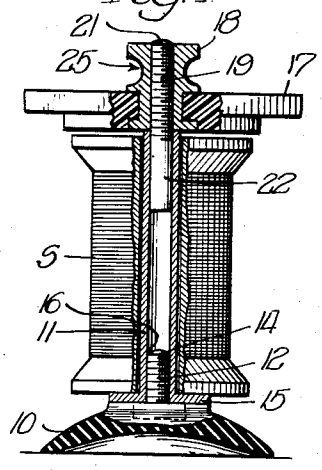



Fig. 2

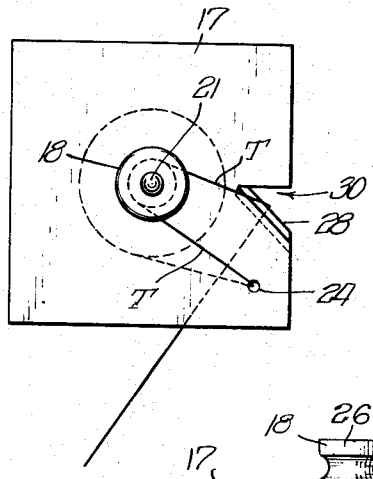



Fig. 3

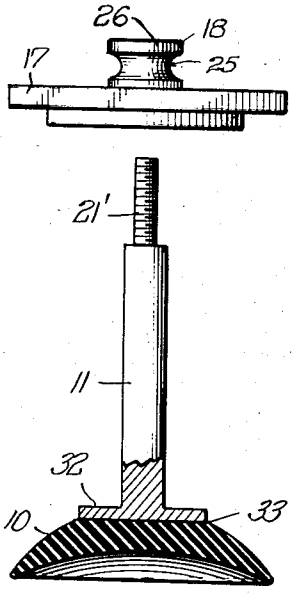



Fig. 4

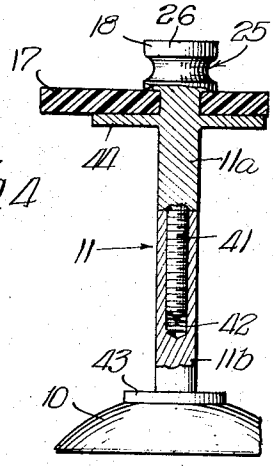
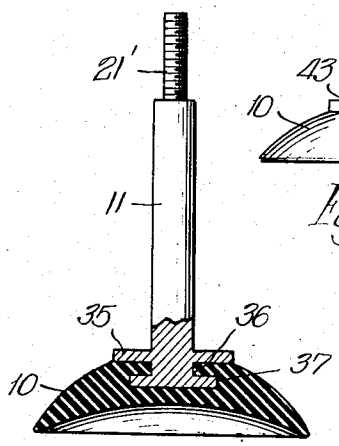



Fig. 5




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# SPOOL HOLDER AND THREAD CUTTER

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6 Claims. (Cl. 242—135)

Our invention relates to an improved spool holder and thread cutter for holding a sewing spool in fixed position, and for facilitating the cutting of the thread as it is drawn from the spool. Our improved device is intended for use by housewives, seamstresses, tailors or any one doing much hand sewing.

One of the features of the invention is the provision of an improved and simplified suction cup mounting for the spool holder. This suction cup mounting enables the spool holder to be fixedly attached to the surface of a table, desk, chair or other supporting surface at any point which will dispose the spool in the most convenient location for quick and easy use. Such fixed mounting is established by merely pressing the suction cup base of the spool holder with sufficient pressure against a sufficiently smooth surface to obtain the desired suction grip. This fixed mounting of the spool avoids the necessity of searching for the spool at each successive threading of the needle; it also avoids the possibility of the spool falling to the floor and rolling under furniture; and it holds the spool and the thread cutter with sufficient rigidity to enable the housewife or seamstress to perform a thread cutting operation with one hand. That is to say, if one hand is occupied, as for example in holding the fabric, the needle or the like, the thread can be cut with the other hand, after the operation of threading the needle, by drawing the thread against the fixedly held cutting edge with this other hand, so that there is no need of having two free hands, one to hold the spool or thread cutter and the other the thread.

Another feature of the invention is the provision of an improved thread holding and thread cutting head on the upper end of the spool holding standard, this head having direct and unique cooperation with the suction cup mounting of the spool standard in the performance of the above described thread cutting operation. This head embodies a thread guiding aperture, a thread snubbing hub, and a thread cutting knife, all cooperatively arranged to facilitate the above described thread cutting operation, and also serving to effectively prevent the remaining end of the thread from falling back through the head or unwinding from the spool upon the completion of the thread cutting operation. The manner in which these parts coact will be hereinafter described in the later description of different embodiments of the invention.

Another feature or object of the invention is to provide a construction which will be so simple and inexpensive to make and assemble that the device can be sold through 5- and 10-cent stores and other like merchandising channels.

Other features, objects and advantages of the invention will be apparent from the following detail description of different embodiments of the invention. In the accompanying drawing illustrating such embodiments:

Figure 1 is a view partly in elevation and partly in section, showing an embodiment of our invention;

Figure 2 is a plan view of the head; and



Figures 3, 4 and 5 are fragmentary sectional views showing modified embodiments.

The suction cup mounting base is indicated at **10**, being composed of a pliable rubber and having an adequate area of suction surface grip to hold the device in place against the stresses of pulling the thread T from the spool S, possibly with a quick or jerky movement, and also of holding the device in place against the stresses of snubbing the thread around the snubbing post and pulling the thread against the cutting knife. Rising axially from the top of the suction cup **10** is a spool holding standard **11** for receiving the spool S. The attachment of the standard to the suction cup is preferably effected by providing the suction cup with a screw **12** having its head embedded in the rubber and its threaded shank **14** extending upwardly therefrom for screwing into the standard. The standard **11** is shown as being composed of a suitable plastic material, preferably provided with an integrally formed circular base flange **15** for abutting against the top of the suction cup **10**, although this base flange is not essential. An internally threaded socket **16** in the bottom end of the standard is adapted to be screwed down over the threaded shank **14**. Our invention contemplates other methods of attaching the spool holding standard to the rubber suction cup, as we shall later describe.

Referring now to the removable upper head **17** which performs the three-fold function of guiding, snubbing and cutting the thread T, this head is preferably composed of plastic and has a square or other non-circular form of periphery so that if the assembled unit should be accidentally dropped to the floor it cannot roll under nearby furniture etc. Molded centrally in the plastic head is a metallic hub **18** having a threaded socket **19** for threading down over a screw **21** which projects upwardly from the upper end of the plastic spool holding standard **11**. The screw **21** has a lower shank portion **22** which is molded or threaded directly in the standard. The length of this standard **11** is so proportioned to the length of the average spool S to be mounted thereon that when the head **17** is screwed down fast against the top end or shoulder **20** of the standard **11** the head is spaced from the top end of the spool so that the spool remains free to revolve.

Formed in the head **17**, preferably at a point spaced outwardly beyond the peripheral edge of the spool, is a thread guiding aperture **24** through which the thread is adapted to be passed in an upward direction. From this guiding aperture **24**, the thread is adapted to be wrapped once or twice around the metallic hub **18**. This hub is formed with a snubbing portion **25** of smaller diameter than the knurled head **26** so that the thread cannot slip off the top end of the hub **18** in the thread snubbing operation. This snubbed engagement of the thread around the hub **18** holds the thread against more length being pulled off the spool when the thread is pulled tight against the cutting blade **28** in the cutting operation. This cutting blade **28** is set back in one edge of a V-shaped notch **30** extending inwardly from the edge of the head **17**. In the preferred construction the cutting blade is embedded in the plastic head in the moulding thereof, but it might be secured in the notch **30** after the formation of the head, such as by pinning, staking, screwing or otherwise fastening the cutting blade in place along one edge of the V-shaped notch. After the thread has been snubbed or retained by taking one or more turns around the hub **18**, it can be easily cut by being pulled downwardly in the V-shaped notch **30** against the cutting blade **28**. It will be noted that the pull exerted on the thread in the cutting operation is a downward pull with respect to the head and spool holder, so that there is little tendency to pull the suction grip of the rubber cup **10** loose from the supporting surface. Any lateral component of

pull exerted on the thread in the cutting operation always acts in a direction tending to keep the head **17** screwed down over the screw **21** tight against the shoulder **20** of the standard **11**. It will also be seen that this thread cutting operation can be easily performed with one hand by merely pulling out the length of thread desired, then snubbing the thread at a point near the spool by making one or more turns around the snubbing hub **18**, and then cutting the thread by drawing it downwardly into the V-shaped notch **30** against the cutting blade **28** all in a one-hand operation. The snubbed end of the thread remaining after the cutting operation will frequently remain snubbed around the hub **18**, but if it becomes loosened therefrom it will not slip back through the guide aperture **24** and hence it will remain conveniently available for further needle threading operations.

In Figure 3 we have illustrated a modified construction in which the base end of the spool supporting standard **11** is secured to the rubber suction cup **10** by molecular fusion or adhesion. For example, the standard may be formed of metal with a disk-like base portion **32** which is joined to the top of the rubber suction cup **10** by a vulcanized bond indicated at **33**. This joint or bond **33** might also be a cementitious bond, which would then enable the standard **11** to be made of a plastic material. The ability to make both the standard **11** and the head **17** of an attractive plastic material, either transparent, translucent, tinted or of multi-color design, adds greatly to the sales appeal of the device. In addition, the construction of these parts of molded plastic reduces the manufacturing cost to a minimum. The suction cup **10** must of course be composed of rubber or a like material having sufficient resiliency to perform the suction gripping action.

In Figure 4 we have illustrated another modified embodiment in which the base end of the standard **11** is formed with a base flange **35** from which extends a reduced neck **26** followed by an anchoring flange **37**. The body of the rubber suction cup **10** is molded over the anchoring flange **37** and reduced neck **36** and against the under side of the base flange **35**. This gives a very secure attachment between the suction cup **10** and standard **11**. In such embodiment, the standard **11** can be composed of an appropriate plastic or of metal. The base flange **32** of Figure 3 and the base flange **35** of Figure 4 function as the supporting surface for the lower end of the spool in the same manner as the base flange **15** of Figure 1.

In Figure 5 we have illustrated another modified embodiment in which the threaded joint for separating the head **17** from the base **10** is arranged in the spool supporting standard **11**. In this embodiment, the standard **11** is made in two parts **11***a* and **11***b*, preferably of metal, although they might be composed of plastic, and one of these parts is provided with a threaded shank **41** which screws into a threaded socket **42** in the other part. The lower part **11***b* of the standard has a base flange **43**, similar to the base flanges **32** and **35**, and the anchored attachment of this lower part **11***b* to the rubber suction cup **10** may be in accordance with any of the previously illustrated embodiments or previously described techniques. The upper part **11***a* carries the head **17**, preferably composed of plastic, although it might be made of metal. When the part **11***a* and head **17** are both of the same material they may be made integral, including the snubbing hub **18**. When the part **11***a* is composed of metal and the head **17** is composed of plastic, we preferably form the snubbing hub **18** integrally with the part **11***a*, and also form an integral flange **44** spaced downwardly from the snubbing hub **18**, so that the plastic head **17** can be molded between the hub **18** and the flange **44** for rigid attachment to the spool supporting standard.

While we have illustrated and described what we regard to be the preferred embodiments of our invention,



nevertheless it will be understood that such are merely exemplary and that numerous modifications and rearrangements may be made therein without departing from the essence of the invention.

We claim:

1. In a combined spool holding and thread cutting device, the combination of a suction cup base for suction attachment to any convenient supporting surface, a supporting standard projecting upwardly from said suction cup base for supporting a thread spool, a stationary head plate on the upper end of said supporting standard, a guide aperture in said stationary head plate through which the thread is adapted to pass in an upward direction from the spool on said standard, a snubbing hub projecting upwardly from the upper side of said stationary head plate and around which one or more turns of the thread leaving said guide aperture are adapted to be snubbed, a notch formed in one edge of said head plate, a cutting blade set in said notch against which that portion of thread extending beyond the snubbing hub is adapted to be drawn in a cutting operation, means defining a separating joint in the device between said suction cup and said stationary head plate comprising a threaded shank and a threaded socket screwing over said shank and adapted upon separation of the joint to permit the thread spool to be slipped over said supporting standard, and a stop shoulder coacting with said separation joint for predetermining a fixed length of standard on which said thread spool is always capable of revolving freely and for stationarily locking said head plate against rotary movement relatively to said suction cup base which might otherwise arise as a result of the pull of the thread against said cutting blade.

2. In a combined spool holding and thread cutting device, the combination of a suction cup base for suction attachment to any convenient supporting surface, a supporting standard projecting upwardly from said suction cup base for supporting a thread spool, a stationary head on the upper end of said supporting standard, a guide aperture in said stationary head through which the thread is adapted to pass in an upward direction from the spool on said standard, a snubbing hub on said stationary head around which one or more turns of the thread leaving from said guide aperture are adapted to be snubbed, a cutting blade carried by said stationary head against which that portion of the thread extending beyond the snubbing hub is adapted to be drawn in a cutting operation, and a separating joint in said device to permit separation between said stationary head and said suction cup base for permitting the substitution of thread spools on said supporting standard, said separating joint comprising coacting parts which maintain a fixed length of supporting standard on which the thread spool is always capable of free rotation and which also stationarily locks said head against any rotary movement relatively to said suction base which might otherwise arise as a result of the pull of the thread against said cutting blade.

3. In a combined spool holding and thread cutting device, the combination of a suction cup base for suction attachment to any convenient supporting surface, a supporting standard projecting upwardly from said suction cup base for rotatably supporting a thread spool, a stationary head on the upper end of said supporting standard, a guide aperture in said stationary head through which the thread is adapted to pass from the thread spool on said standard, a cutting device carried by said stationary head against which that portion of the thread extending beyond said guide aperture is adapted to be drawn in a cutting operation, and a separating joint in said device to permit separation between said suction cup base and said stationary head for permitting the substitution of thread spools on said supporting standard, said separating joint comprising coacting parts which maintain a predetermined fixed length of supporting

standard longer than the length of the thread spool thereon so that said spool is always capable of free rotation on the standard, and which also stationarily lock said head against any rotary movement relatively to said suction base which might otherwise arise as a result of the pull of the thread against said cutting device.

4. In a combined spool holding and thread cutting device, the combination of a suction cup base for suction attachment to any convenient supporting surface, a supporting standard projecting upwardly from said suction cup base for rotatably supporting a thread spool, a stationary head on the upper end of said supporting standard, a snubbing device on said stationary head on which the thread drawn from said spool is adapted to be snubbed, a cutting device carried by said stationary head against which that portion of the thread extending beyond said snubbing device is adapted to be drawn in a cutting operation, and a separating joint in said device to permit separation between said suction cup base and said stationary head for permitting the substitution of thread spools on said supporting standard, said separating joint comprising coacting parts which maintain a predetermined fixed length of supporting standard longer than the length of the thread spool thereon so that said spool is always capable of free rotation on the standard, and which also stationarily lock said head against any rotary movement relatively to said suction base which might otherwise arise as a result of the pull of the thread against said cutting device.

5. In a combined spool holding and thread cutting device, the combination of a suction cup base for suction attachment to any convenient supporting surface, a supporting standard projecting upwardly from said suction cup base for rotatably supporting a thread spool, a stationary head on the upper end of said supporting standard, a cutting device carried by said stationary head against which the thread drawn from the spool is adapted to be pulled in a cutting operation, and a separating joint in said device to permit separation between said suction cup base and said stationary head for permitting the substitution of thread spools on said supporting standard, said separating joint comprising coacting parts which maintain a predetermined fixed length of supporting standard longer than the length of the thread spool thereon



so that said spool is always capable of free rotation on the standard, and which also stationarily locks said head against any rotary movement relatively to said suction base which might otherwise arise as a result of the pull of the thread against said cutting device.

6. In a combined spool holding and thread cutting device, the combination of a suction cup base for suction attachment to any convenient supporting surface, a supporting standard projecting upwardly from said suction cup base for supporting a thread spool, a stationary head plate removably mounted on said supporting standard, said standard having a threaded bore in its upper end, a threaded shank projecting downwardly from said stationary head plate adapted to be screwed down into the threaded bore in said standard, a stop shoulder associated with said threaded shank adapted to have abutment against the upper end of said supporting standard after the thread spool has been mounted on said standard, and a cutting device carried by said stationary head plate against which the thread drawn from the spool is adapted to be pulled in a cutting operation, the threaded engagement of said threaded bore up over said threaded shank and against said stop shoulder determining a fixed length of said supporting standard on which the thread spool is always capable of revolving freely, and also stationarily locking said head plate against any rotary movement on said standard which might otherwise arise as a result of the pull of the thread against the cutting blade.

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