Oct. 8, 1935. M. W. BECKER 2,016,311

SPOOL

Filed Feb. 21, 1934

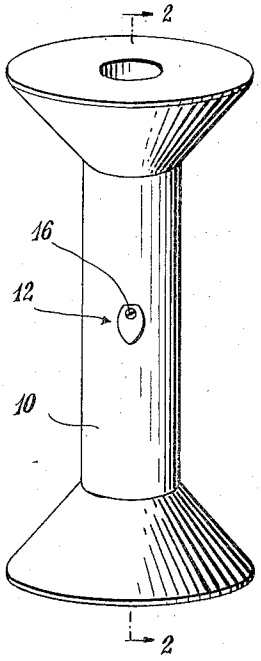
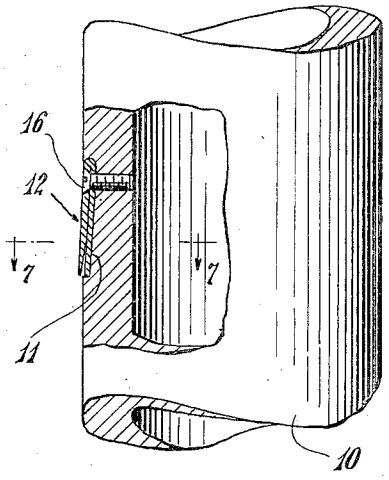


Fig. 1.

Fig. 2.



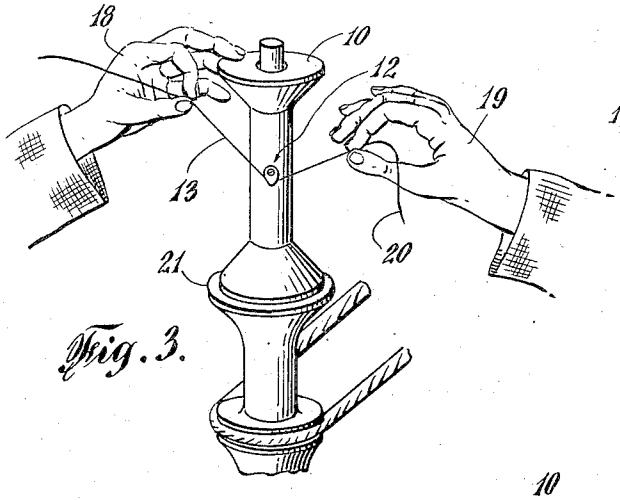


Fig. 3.

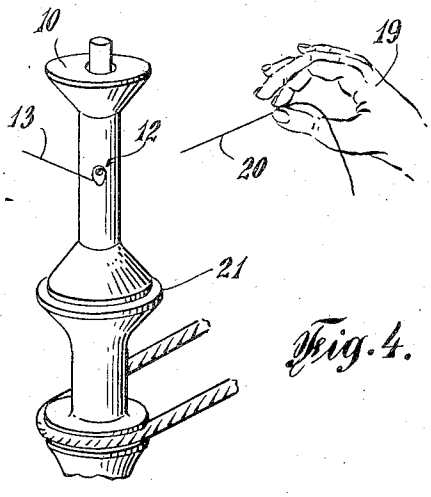


Fig. 4.

Fig. 5.

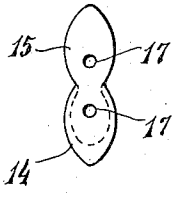
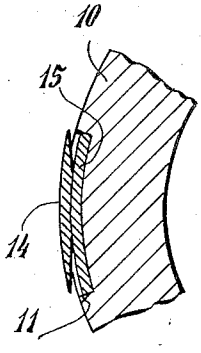


Fig. 6.



Fig. 7.



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SPOOL

Morris W. Becker, New York, N. Y.

Application February 21, 1934, Serial No. 712,284

2 Claims. (Cl. 242—125)

The present invention relates to spools and more particularly to the type adaptable in intermediate thread winding operations.

An object of this invention is to provide a spool of the type described of novel and improved construction, whereonto a thread is easily attached with no loose or dangling end.

Another object of this invention is to provide a novel spool upon which no waste threads occur which need to be stripped off.

A further object of the present invention is to provide a spool of the type mentioned, onto which a thread is attached and the free end cut off in but one stroke of the hand.

Another object is to provide a spool of the character described which eliminates the operation of making a few turns of the thread about its shank to secure the end of the thread to be wound thereon.

A further object of this invention is to provide an article of the class mentioned, which is simple in construction, cheap to manufacture, easy to work with, which effects a saving in time, and which is efficient and durable in use.

To attain these objects, in an embodiment of my present invention, I provide a spool with a strip metal thread grip, an edge of which serves as a cut-off to sever the loose end of the thread being attached to said spool.

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 be deemed illustrative and not restrictive, and that the patent shall cover whatever features of patentable novelty exist in the invention disclosed; reference being had to the appended claims rather than to the specific description herein to indicate the scope of the invention.

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

Fig. 1 shows in perspective, an embodiment of my present invention.

Fig. 2 is an enlarged fragmentary sectional view taken at lines 2—2 in Fig. 1, showing the construction of the thread grip and cut-off member mounted onto the shank of the spool.

Fig. 3 is a pictorial view showing a thread being slipped into the thread grip.

Fig. 4 is a similar view showing the loose end of the thread severed from the gripped thread.

Fig. 5 shows the metal strip used to form the thread grip and cut-off member.

Fig. 6 shows a side view thereof.

Fig. 7 is a section taken at line 7—7, in Fig. 2.

In the drawing, the numeral 10 designates a spool provided with a recess 11 in the shank thereof, of exact shape to receive a grip and cut-off member 12, which is of strip steel or like material, bent flat in half to pinch grip a thread 13, which may be inserted between the contacting halves 14 and 15, of said member 12. The lower free end of the outer or exposed half 14 of this member 12, has its inward edge beveled to facilitate entrance of the thread 13. This member 12, is also shaped to conform to the curvilinear contour of the shank of the spool 10, and is secured to same by a screw 16 passed through the registered holes 17 near the top end of each half of the member 12; the head of same being countersunk to present an even surface.

It is to be noted that the member 12 is tiltingly mounted with respect to the axis of the spool 10; the recess 11 being deeper at its upper than at its lower end to accomplish such construction. This is done so that the lower end of half 15 is flush with the shank of spool 10, to provide a smooth and unbroken path for the thread 13, when it is manually inserted between the halves of member 12. The side edges of the half 14 are slightly sharpened, to permit the thread to be cut thereon. The recess 11 should be so fashioned that member 12 when mounted therein, is flush with the shank of the spool 10 as best as can be attained.

In use, when thread is to be wound onto the spool 10, it is positioned so that a thread 13 held in hands 18 and 19 is slipped into the member 12 by an upward motion, and simultaneously, hand 19 which holds the end of the thread, is brought abruptly upward, whereby the loose end 20 is cut off on the edge of the half 14. Thus the thread 13 is secured to the spool 10, without a dangling end.

As heretofore practiced, the free end of the thread was manually wound a few turns about the shank of the spool, leaving a dangling end which caused interference by becoming entwined in subsequent layers wound on the spool. When the spool would be unwound in further winding operations, this entwined end would cause frequent breaking of the thread and thus cause much waste, especially in the last layers to be unwound, which would necessarily require that they be stripped off with a knife. With my present device, such objections are entirely obviated, since they do not occur.

In use, when the wound spool is to be unwound, it is positioned so that the thread's secured end will leave the member 12 by moving upward from

between its halves 14 and 15. Therefore, in an unwinding operation, the spool 10 is set upside down with respect to its position when it is being wound, so that the secured end of the thread 13 will have easy exit from within the member 12.

In the Figs. 3 and 4, the spool 10 is shown in position preparatory to be wound with thread from a skein; the spool receiving its motion from a slowly revolving table 21, upon which it rests.

Having disclosed my present invention, the construction of an embodiment thereof and the manner of its use, I claim:—

1. In a device of the character described, a spool provided with a sloping recess, and a member having contacting strip elements mounted in the recess and secured to the spool at the deeper end of the recess, adapted to receive and grip a thread between them; the surface of the inward strip element, at the shallow end of the recess being flush with the surface of the spool to provide a smooth path for the introduced thread, an edge of the outer strip element being adapted to cut the dangling end of the thread gripped between the elements, and said elements being formed to conform to the contour of the surface of the spool, also the free ends of said elements being slightly spaced to facilitate the insertion of the thread between them.

2. In a device of the character described, a spool provided with a sloping recess and a member comprised of strip metal, mounted in the recess and secured to the spool at the deeper end of the recess, adapted to grip a thread inserted beneath same; the free end of said strip member being formed to conform to the surface of the spool and slightly spaced from the shallow end of the recess to facilitate admission of the thread, and said member presenting an edge on which the loose end of the gripped thread may be manually severed to eliminate the dangling end of said thread.

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