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G. STROCCO ET AL

2,187,386

SPOOL BRACKET

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Fig. 1.

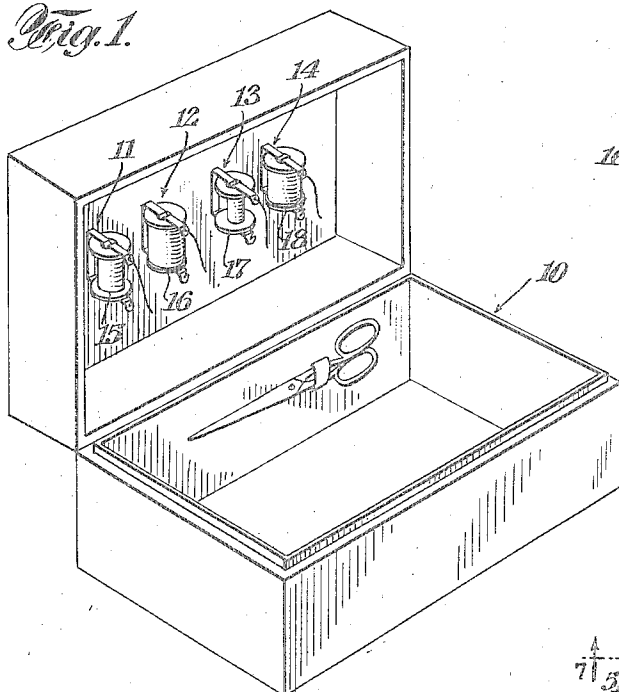


Fig. 2.

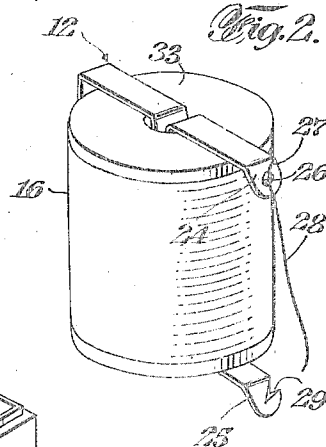


Fig. 6.

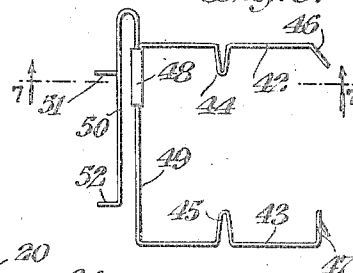


Fig. 3.

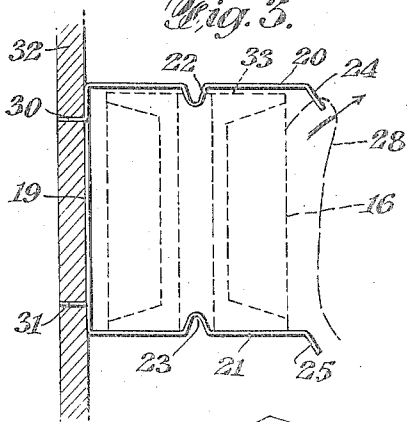


Fig. 4.

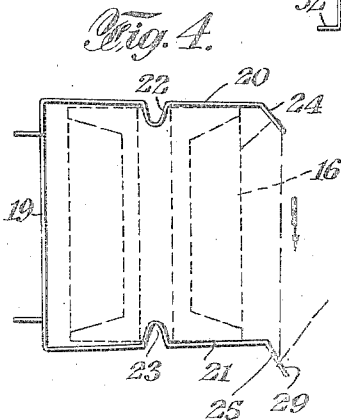


Fig. 7.

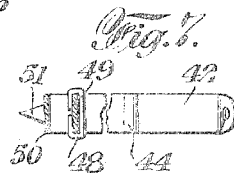


Fig. 5.

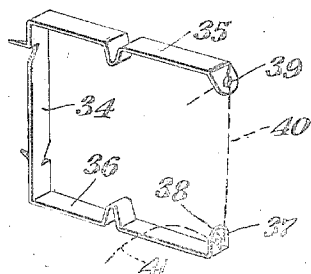
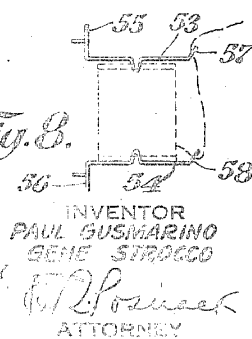


Fig. 8.



INVENTOR
PAUL GUSMARINO
GENE STROCCO
BY *W. J. Posner*
ATTORNEY

UNITED STATES PATENT OFFICE

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SPOOL BRACKET

Gene Strocce and Paul Gusmarino,
New York, N. Y.

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8 Claims. (Cl. 242-135)

This invention relates to spool brackets, and more particularly to devices of this character adapted to releasably support spools in such manner as to permit predetermined lengths of thread to be readily severed therefrom.

Cognizance is taken of certain other devices containing mounting means provided with thread cutting implements; but most of these have not enjoyed wide commercial use because of certain inherent shortcomings, including among others the tendency of the spool to rotate during the act of severing the thread, thereby requiring a special effort or additional manual manipulation to hold the spool stationary during the thread severing operation. It is hence primarily within the contemplation of our invention to eliminate this shortcoming in a device of said class by providing a spool mounting of such construction as to enable the force applied to the thread during the cutting operation to be simultaneously effective in holding the spool against rotation.

It is also an object of this invention to enable a spool supported in a device of this category to be readily rotated whereby a thread of any predetermined length can be withdrawn for the severing operation.

It is further within the contemplation of this invention to provide, in one form thereof, a spool bracket with means for holding the thread against unravelling by frictionally gripping the loose end thereof.

Still a further object of our invention is the provision of a form of bracket adapted for quick and ready attachment to any suitable support, and whereby a number of such brackets may be operatively secured to a wall or within a kit or box in proximate spaced relation so that spools of different colored threads can be operatively mounted for ready and convenient selection.

It is also within the contemplation of one form of this invention to produce a bracket capable of performing the aforesaid functions and embodying a structure consisting of a single unitary and readily fabricated element.

And a further object of our invention, in a modified form thereof, is to provide a bracket of the above-referred-to type having adjustable means whereby it can operatively accommodate spools of various sizes, within predetermined limits.

Other objects, features and advantages will appear from the drawing and the description hereinafter given.

Referring to the drawing,

Figure 1 is a perspective view of a sewing kit

containing several brackets of our invention operatively supporting spools of thread.

Figure 2 is an enlarged perspective of a spool and supporting bracket of the type illustrated in Figure 1.

Figure 3 is a side view of a suitably supported bracket of the type illustrated in Figures 1 and 2, showing in dash lines a spool of thread operatively mounted thereon in its normal position.

Figure 4 is a view substantially similar to Figure 3 showing the end of the thread in engagement with the cutter and the spool operatively locked against rotation.

Figure 5 is a perspective view of a slightly modified form of bracket constituting our invention showing combination thread holding and cutting means.

Figure 6 is a side view of still another modified form of our invention adapted to adjustably support spools of different sizes.

Figure 7 is a transverse section of Figure 6 taken along line 7-7, and

Figure 8 is a side view of still another form of our invention substantially similar to the forms illustrated in Figures 1 to 4, except that the device consists of two separate supporting elements instead of a single continuous element.

In the drawing, the compact or kit 10, adapted to contain therein various sewing implements, has mounted on the inside of the cover thereof the four brackets 11, 12, 13 and 14, rotatively supporting therein the spools 15, 16, 17 and 18, respectively. In the preferred form of our invention, each one of the brackets is of substantially U-shaped configuration consisting of a connecting bar 19 yieldably supporting at opposite extremities thereof the arms 20 and 21. Substantially at the middle portions of said arms are the oppositely disposed preferably V-shaped indentures 22 and 23, respectively, these serving as axial rotatable supports for the spool 16 illustrated by dash lines. The free terminal edges of the preferably resilient arms 20 and 21 contain the bent portions 24 and 25, respectively, these being, in the preferred form illustrated, in substantial parallel relation. The upper portion 24, serving as a thread guiding element, contains therein the apertured portion 26 communicating with the lateral edge of the arm via the slit 27,—the aperture thereof being adapted to slidably receive therethrough the thread 28 of spool 16,—it being obvious that said thread is brought into the said aperture by slidably moving it through the slit 27. The lower bent portion 25 serves as

a cutting element and contains therein a cutting edge or blade 29.

In the arrangement illustrated, the connecting member 19 is vertically disposed, whereby the arm 20 carrying the guiding element 24 is disposed at the top of the device, and the arm 21 carrying the cutting element 25 at the bottom thereof. It is of course understood, however, that the device may be supported in any other position with equal effectiveness. The form illustrated also shows the connecting member 19 provided with two rearwardly disposed prong elements 30 and 31 having sharp edges whereby the device can be driven into and supported by any suitable wall 32. Our invention however is not limited to the specific securing means 30 and 31 described, as independent fasteners can be employed for effectively securing the bracket in place, all within the scope of the appended claims.

It will be observed that the structure above described is composed of a single narrow strip of metal, preferably of some resiliency, and can be readily stamped and fabricated into the desired form by conventional manufacturing processes. Hence in this form of our invention no assembling operations are required other than the mere attachment of the formed strip upon the supporting wall.

In the operation of this device, a spool such as 16 is slipped into place with the indented portions 22 and 23 of the arms 23 and 21 inserted within the central opening of the spool—this operation being effectuated due to the resiliency of said arms. The relative dimensional proportions of the said indentures and the central hole of the spool are such as to permit the spool to be rotatably actuated upon the withdrawal of the thread 28, and at the same time prevent the spool from being displaced from its rotatable mounting. It is also preferred that the upper arm 20 be slightly spaced from the top flange 33 of the spool, so as not to resist any rotational effort applied thereto.

Should it now be desired to sever a predetermined length of the thread, so much of it is withdrawn as desired, this being accomplished by a pull in the general direction of the arrow (Figure 3). The thread is then pulled downwardly in the direction of the arrow (Figure 4) for engagement with the cutting edge 29. When applying this force, the upper resilient arm 20 is pulled downwardly until it is brought into contact with the top surface of flange 33, in this manner providing sufficient frictional resistance to prevent the spool 16 from rotating. And when the actual cutting takes place, the portion of the thread between the guiding and cutting elements at 24 and 25 is in a state of tension, urging both arms 20 and 21 towards each other to effect a more secure stopping action against the spool. It is thus apparent that simultaneously with the operation of severing the thread, the spool is held locked against further rotation.

It should be noted that the guiding aperture 26 and cutter 29 are in substantial vertical alignment, whereby thread 28 will be vertically disposed and the desired control of the cutting operation quite readily effected. It is also preferred that the guiding element 24 be bent towards arm 21 as illustrated, so as to bring it as close as possible to the spool for operatively receiving the thread therefrom; and it is likewise preferred that the cutting portion 25, in the form illustrated, be bent away from arm 20, so that it

will be completely out of the path of any of the thread being unravelled.

In the form of our invention illustrated in Figure 5, the bracket contains a connecting member 34 and arms 35 and 36, respectively, similar in general construction to the corresponding parts above described. However, instead of the downwardly extending cutting element 25, there is a short upwardly extending portion 37 containing a pressed out tongue 33 provided with a suitable cutting edge. With this construction, the thread 40 from aperture 39 can be brought down to the tongue 38 and slipped thereunder between the inner wall of the tongue and the adjacent wall of the upstanding portion 37 to frictionally hold the thread in place. Should it be desired to sever the thread, all that need be done is to apply sufficient pull upon the end portion 41 extending therefrom, whereby the thread will be severed at the knife edge of the tongue 28 and frictionally retained in place. In this manner not only does this simple unitary bracket permit the functions of the first described form of our invention to be effectuated, but in addition thereto serves to hold the terminal portion of the thread in place and prevent a loose dangling thereof.

In the modification illustrated in Figures 6 and 7, the resilient arms 42 and 43 and the respective indentures 44 and 45 thereon are similar to the corresponding parts hereinabove described. Also, the portion 46 is similar to the guiding member 24 above described, and the upstanding member 47 is similar to the corresponding member 37 illustrated in Figure 5. But instead of forming the bracket out of a single piece, two members are employed, the upper arm 42 containing a looped slide member 48, and the lower arm 43 containing a bar 49 which is embraced by the member 48 and in slidable engagement therewith. The said bar 49 is preferably provided with an extending portion containing a return bend therein and disposed in spaced parallel relation to the bar 49 thereby providing a supporting portion 50 containing the prongs 51 and 52 adapted for attachment to any suitable supporting wall in the manner aforesaid.

With the construction of this modified form of our invention, it is obvious that the arm 42 can be slidably moved along bar 49, so as to enable spools of different lengths to be operatively accommodated between said arms, within the dimensional limitations of bar 49. In other respects, the operation of this form of our invention is similar to that of the forms hereinabove described.

The form of our invention illustrated in Figure 8 is substantially similar to that shown in Figures 1 to 4, as aforesaid. Instead, however, of forming the device of a single strip of resilient material as hereinabove shown, the arms 53 and 54 are separately mounted by means of the brackets 55 and 56, respectively, to any suitable wall. In this manner it is obvious that said arms can be mounted in proper relative positions and so spaced as to accommodate any desired size of spool. It will also be observed that the free terminal portions 57 and 58, respectively, are inclined upwardly, so that the cutting means at 57 is at the top and the guiding means at 58 at the bottom—an arrangement which may also be employed in any of the forms hereinabove described if so desired. In all other respects this form of our invention is similar to those hereinabove referred to.

It is of course understood that the structures above described and shown in the drawing are illustrative of our invention and not employed by way of limitation inasmuch as numerous changes and modifications may be made therein within the scope of the appended claims without departing from the spirit of this invention.

What we claim is:

1. In a spool bracket, two yieldably mounted spaced arms containing oppositely disposed indentures adapted to extend into the central aperture of a spool of thread operatively positioned between said arms whereby the spool will be rotatably supported thereby, the free terminal of one of said arms containing an apertured portion for receiving therethrough the thread extending from the spool while being withdrawn therefrom, the corresponding terminal of the other arm containing a cutting edge for severing the thread extending from said apertured portion, said arms being movable towards each other by the pull of the thread when in operative engagement with said apertured portion and said cutting edge.

2. In a spool bracket, the combination according to claim 1, the free terminal portions of said arms being bent out of the plane of the arms.

3. A spool bracket comprising a continuous strip of resilient material bent into substantial U-shaped formation with two forwardly extending parallel arms and a connecting portion, the arms containing oppositely disposed indentures adapted to extend into the central aperture of a spool of thread operatively positioned between said arms whereby the spool will be rotatably supported thereby, the free terminals of both of said arms being bent out of the plane thereof, one of said free terminals containing guiding means for slidably engaging the thread extending from the spool while being withdrawn therefrom, the other of said free terminals containing cutting means for severing the thread extending from the guiding means, and securing means extending rearwardly from the said connecting portion for attachment to a suitable support, said arms being yieldably engageable with the said spool to frictionally hold it against rotation by the pull of the thread when in operative engagement with said guiding and said cutting means.

4. A spool bracket according to claim 3, the bent terminal portions of the said arms being in substantially parallel relation, the terminal containing the guiding means being bent in the general direction of the opposite arm, and the terminal containing the cutting means being bent away from the oppositely disposed arm, whereby the guiding means will be in a position to conveniently receive the thread from the spool, and the cutting means will at all times be out of the path of the thread being unravelled from the spool.

5. A spool bracket according to claim 3, the terminal containing the guiding means being bent in the general direction of the opposite arm, and the terminal containing the cutting means being bent towards the oppositely disposed arm.

6. In a spool bracket, means for rotatably supporting a spool, movable stop means for fric-

tionally holding an operatively supported spool against rotation, guiding means connected with said stop means for slidably engaging the thread extending from the spool while being withdrawn therefrom, and cutting means remote from said guiding means for severing the thread extending therefrom, said stop means being movable into engagement with the adjacent flange of the spool to frictionally hold the spool against rotation by the pull of the thread operatively exerted upon the guiding means, the said supporting means for rotatably supporting the spool comprising two spaced arms, one containing the said stop and guiding means, and the other the said cutting means, further provided with adjustable mounting means for said arms whereby the distance therebetween may be varied to enable the bracket to operatively accommodate spools of different sizes.

7. In a spool bracket, means for rotatably supporting a spool, movable stop means for frictionally holding an operatively supported spool against rotation, guiding means connected with said stop means for slidably engaging the thread extending from the spool while being withdrawn therefrom, and cutting means remote from said guiding means for severing the thread extending therefrom, said stop means being movable into engagement with the adjacent flange of the spool to frictionally hold the spool against rotation by the pull of the thread operatively exerted upon the guiding means, the said supporting means for rotatably supporting the spool comprising two spaced arms, one containing the said stop and guiding means, and the other the said cutting means, further provided with adjustable mounting means for said arms whereby the distance therebetween may be varied to enable the bracket to operatively accommodate spools of different sizes, the said adjustable mounting means comprising a supporting bar connected to one of said arms and adapted for attachment to a suitable wall, and a slide element connected to the other of said arms and in slidable engagement with said bar.

8. In a spool bracket, means for rotatably supporting a spool, movable stop means for frictionally holding an operatively supported spool against rotation, guiding means connected with said stop means for slidably engaging the thread extending from the spool while being withdrawn therefrom, and cutting means remote from said guiding means for severing the thread extending therefrom, said stop means being movable into engagement with the adjacent flange of the spool to frictionally hold the spool against rotation by the pull of the thread operatively exerted upon the guiding means, said supporting means for rotatably supporting the spool comprising two spaced arms, one containing the said stop and guiding means, and the other the said cutting means, and separate mounting means for said arms whereby they may be independently secured to a suitable supporting wall in proper cooperative positions and in any selected spaced relation for accommodating a spool of any desired height.

GENE STROCCO.
PAUL GUSMARINO.