Sept. 30, 1952 L. P. BRUENING 2,611,953

PIVOTED BLADE MOUNTED ON A THIMBLE

Filed Aug. 26, 1949

Fig. 1.

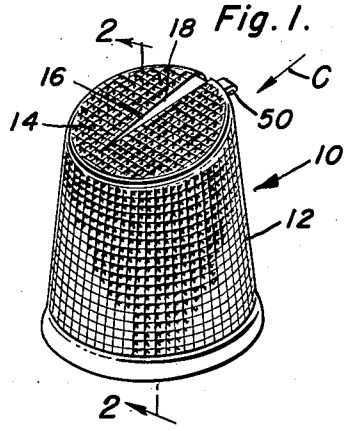


Fig. 2.

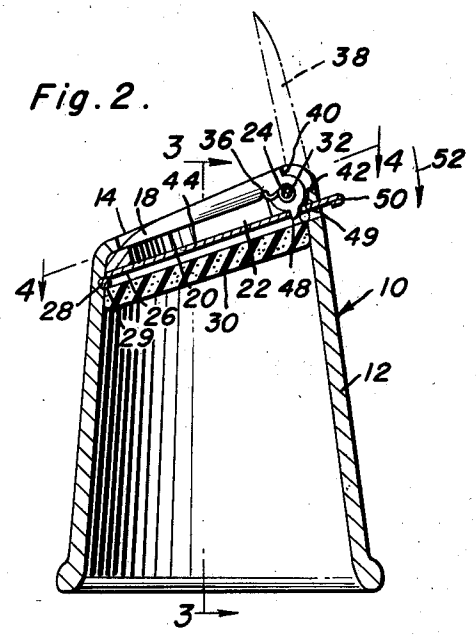


Fig. 3.

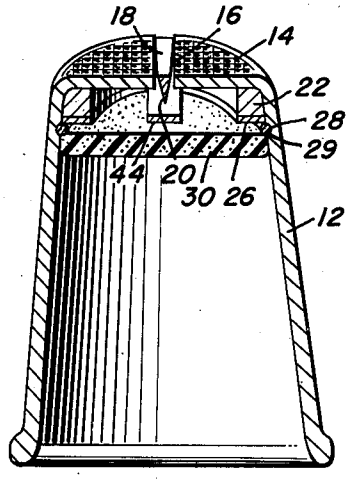


Fig. 4.

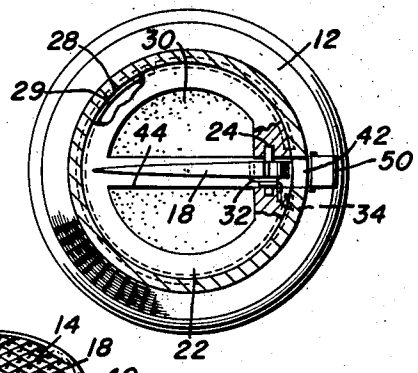
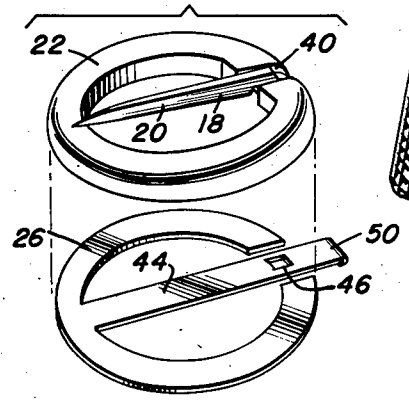


Fig. 5.



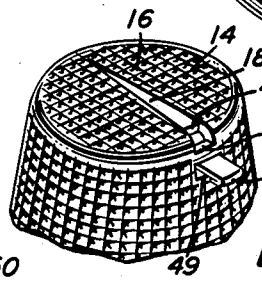


Fig. 6.

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PIVOTED BLADE MOUNTED ON A THIMBLE

Lee P. Bruening, Glendale, Calif.

Application August 26, 1949, Serial No. 112,487

1 Claim. (Cl. 30—159)

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This invention relates to new and useful improvements and structural refinements in thimbles, and in particular, this invention is an improvement on the thimble which constitutes the subject matter of United States Patent Number 1,822,953 which was granted to me on September 15, 1931.

While experimenting and using the invention constructed in accordance with the teachings of my prior patent, I found that the same lends itself to certain structural and functional improvements, and it is, therefore, the principal object of the instant invention to provide a thimble wherein such improvements are embodied.

This invention, as the one covered by my prior patent, concerns itself with a thimble combined with a ripping and thread cutting knife or blade, this blade normally being nested into the body or shell of the thimble so that it is unobtrusive, but means being provided for expeditiously projecting the blade so that it may be used for ripping and thread cutting operations.

The broad combination of such a blade with a thimble is, of course, covered by my prior patent, and therefore, the important feature of the instant invention resides in the specific structural arrangement of the thimble and cutting blade, as well as in the particular means which are employed for projecting and controlling the movement of the cutter.

Some of the advantages of the invention lie in its simplicity of construction, in its convenient operation, and in its adaptability to economical manufacture.

With the above more important objects and features in view, and such other objects and features as may become apparent as this specification proceeds, the invention consists essentially of the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view of the invention;

Figure 2 is a cross-sectional view thereof, taken substantially on the plane of the line 2—2 in Figure 1;

Figure 3 is a cross-sectional view, taken substantially on the plane of the line 3—3 in Figure 2;

Figure 4 is a cross-sectional detail, taken substantially in the plane of the line 4—4 in Figure 2;

Figure 5 is a group perspective view of the cutting blade support and blade actuating member; and,

Figure 6 is a fragmentary perspective view,

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taken in the direction of the arrow C in Figure 1.

Like characters of reference are employed to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, the invention consists of a thimble designated generally by the reference character 10, the same embodying in its construction a finger-receiving shell 12 having an outer end wall 14 provided with a transverse, tapered slot 16 to accommodate a tapered ripping and thread cutting blade or knife 18.

This blade, the cutting edge of which is best shown at 20 in Figure 3, is preferably triangular in cross-section, and is pivotally mounted between spaced opposing ends of an arcuate, substantially annular support 22, this being effected by providing a pivot pin 24 which extends between the spaced opposing ends of the support 22 and has one end portion of the blade 18 mounted thereon, as will be clearly apparent.

The support 22 is positioned within the shell 12 immediately adjacent the inner surface of the end wall 14, and an arcuate, substantially annular member 26 is positioned under the support 22, as is best shown in Figure 3.

The shell 12 is provided adjacent the end wall 14 with an annular depression 28 to accommodate a snap ring 29 for retaining the support 22 as well as the member 26 in position, and also, a disk-shaped cushioning pad 30 of resilient material is provided immediately adjacent the underside of the member 26, so as to protect the finger tip in the shell 12 from coming in contact with the mechanism in the outer end of the shell.

In any event, it is to be noted that a coil spring 32 is positioned on the pivot pin 24 and has one end thereof anchored in the support 22 as at 34, while the remaining end portion of this spring bears against the underside of the blade 18 as shown at 36, and thus urges the blade to its projected position, as indicated by the dotted line 38 in Figure 2. However, the pivoted end portion of the blade is recessed to provide a stop 40 which is engageable with a portion 42 of the shell 12 at one end of the slot 16, the elements 40, 42 being in engagement when the blade 18 is fully projected, so that further outward movement of the blade under the resiliency of the spring 32 is impossible and the blade is supported in a rigid position in readiness for ripping or cutting.

Moreover, means are provided for retaining the blade 18 in its retracted position in the shell 12, these means involving the provision of a resilient limb 44 which is formed integrally with the mem-

ber **26** and extends diametrically of the latter, longitudinally under the blade **18**, and is provided with an opening **46** to receive a detent **48** provided on the pivoted end portion of the blade. The limb **44** projects outwardly in a lateral direction through an opening **49** in the shell **12** and constitutes what may be referred to as a depressible finger piece **50**, so that as long as the detent **48** is in the opening **46**, the blade **18** is prevented from swinging outwardly under the resiliency of the spring **32**. However, when the finger piece **50** is depressed as shown by the arrow **52** in Figure 2, the detent **48** is released from the opening **46** and the blade is free to swing outwardly by the action of the spring **32**.

It is to be noted that the end wall **14** of the shell **12**, as well as the mechanism therein, are disposed in an oblique plane relative to the longitudinal axis of the shell **12**, so that the finger receiving portion of the shell is well adapted to accommodate fingers with exceptionally long fingernails.

It is believed that the advantages and use of the invention will be clearly apparent from the foregoing disclosure and accordingly, further description thereof at this point is deemed unnecessary.

While in the foregoing there has been shown and described the preferred embodiment of the invention it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

What is claimed as new is:

A cutting tool comprising a finger receiving shell having an upper end wall provided with a transverse slot, a split annular ring positioned in said shell, the lower surface of said end wall and having spaced opposing ends disposed at opposite sides of one end portion of said slot, a cutter blade pivotally mounted between the ends of said ring and projectable and retractible in the slot, resilient means for projecting said blade, a split annulus positioned in said shell in abutment with the lower surface of said ring and having spaced opposing ends in register with the ends of the ring, a resilient limb connected at one end thereof to said annulus at a point diametrically opposite the space between the ends thereof, said limb extending diametrically of said annulus, coacting means provided on said blade and in said limb for locking the blade in its retracted position, said limb having an outer portion projecting outwardly from the shell to provide a depressible finger piece for disengaging said coacting means, said shell having an inner wall provided with an annular groove, and a split locking ring positioned in said groove in abutment with the lower surface of said annulus for retaining the latter and said annular ring in said shell.

LEE P. BRUENING.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,547,863	Dulin	July 28, 1925
1,561,993	Nielsen	Nov. 17, 1925
1,822,953	Bruening	Sept. 15, 1931