July 20, 1937. E. L. CRAWFORD 2,087,372

NEEDLE ANCHOR

Filed July 8, 1935

Fig. 1

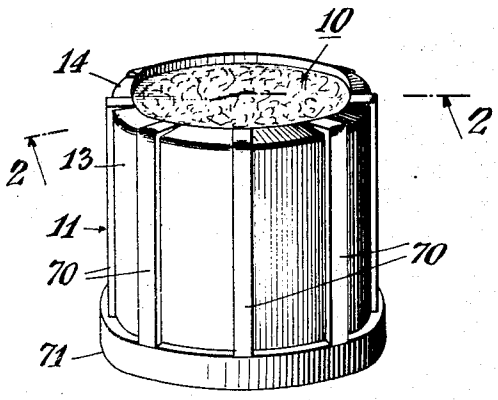


Fig. 2

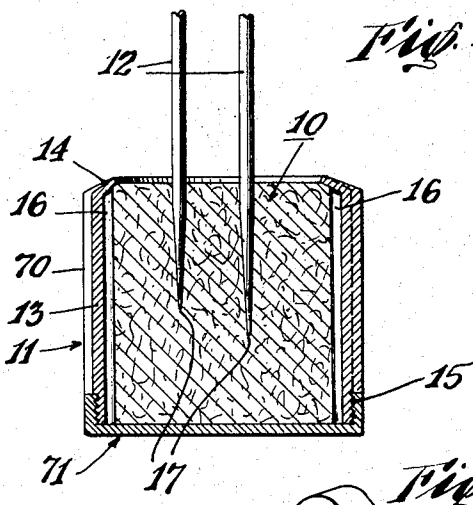


Fig. 3

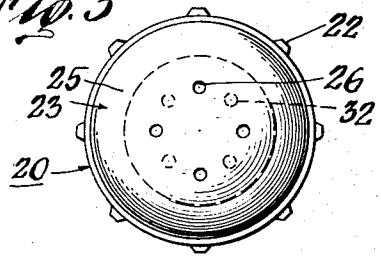


Fig. 6

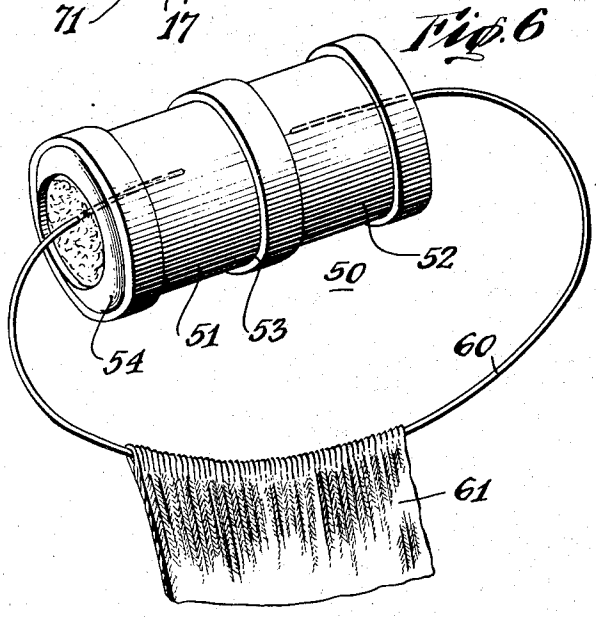


Fig. 4

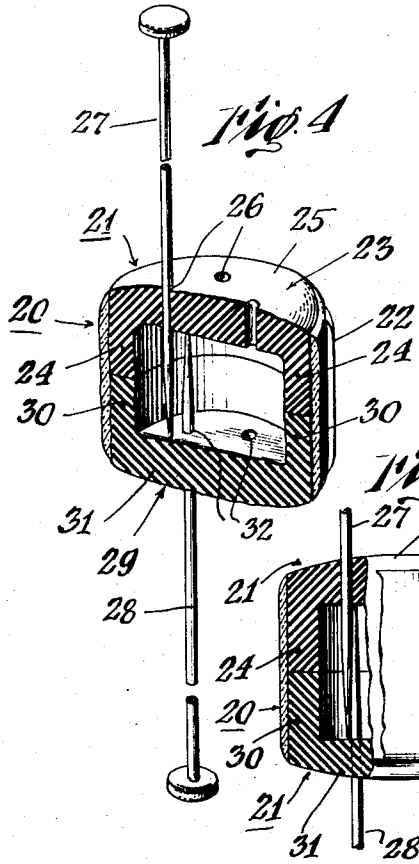
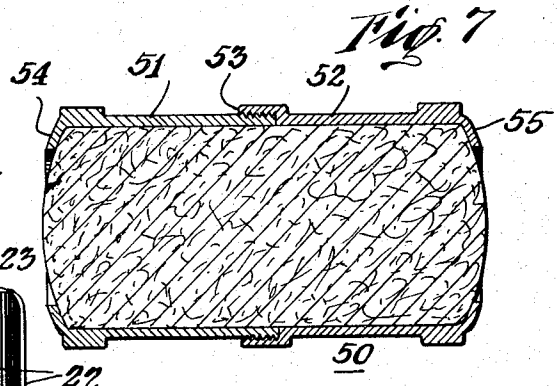


Fig. 5

Fig. 7



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2,087,372

NEEDLE ANCHOR

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Application July 8, 1935, Serial No. 30,318

3 Claims. (Cl. 66—117)

This invention relates generally to guards and more particularly to needle guards.

It is within the contemplation of this invention to provide an inexpensive, yet very attractive device which not only is useful to those who use needles for knitting, crocheting and the like but as well, is useful as a safety device for protection against injury to persons carrying needles when same are not in actual use.

In addition to attaining the foregoing desirable objects, the invention provides an effective and convenient means for the prevention of lost stitches on knitted work which is partially completed, particularly during the time that the work is carried on the needles when they are not in actual use.

The invention consists broadly in the provision of a suitable substance of pliable texture capable of being pierced by the points of knitting needles of metal or of such other materials as knitting needles are ordinarily made; for example, phenol and urea condensation products, or moulded plastics, and the like. The pliable substance is preformed into convenient desirable shape and is provided with a suitable shield or shell made of rigid material which may, if desired, be of the same material as the needles for which the needle guard is intended. The shell is preshaped to convenient and graceful form and may be of many varying and pleasing color effects. Not only does the shell appeal to the aesthetic but it is designed to cooperate with the pliable material to facilitate embedding of the needle points therein and further assists in maintaining sufficient pressure upon the pliable material so that when the needle points are inserted therein there is sufficient frictional resistance against them to prevent the needle points from being removed except by manual withdrawal; all of which is described more in detail hereinafter.

Although the novel features which are believed to be characteristic of this invention will be particularly pointed out in the claims appended hereto, the invention itself, as to its objects and advantages, and the manner in which it may be carried out, may be better understood by referring to the following description taken in connection with the accompanying drawing forming a part thereof, in which

Fig. 1 is a view in perspective of one form of the device;

Fig. 2 is a view on line 2—2 of Fig. 1 showing also the ends of knitting needles;

Fig. 3 is a top plan view of a modified form of the device;

Fig. 4 is a view in perspective of the form shown in Fig. 3 with a part partially cut away and showing knitting needles in anchored position;

Fig. 5 is a view in elevation and partly in cross-section of the form shown in Figs. 3 and 4;

Fig. 6 is a view in perspective of a further modified form showing also a two pointed knitting needle in anchored position; and

Fig. 7 is a view in cross-section of the form shown in Fig. 6.

Referring now to the drawing in which like reference characters denote like parts, 10 represents an insert of pliable spongy-like material preformed to fit very snugly into shell 11. The spongy-like material is preferably of an elastic substance consisting of innumerable void or air spaces confined by elastic walls forming non-uniform honeycomb partitions.

The shell 11 may be made of metal or, preferably, from a phenol condensation product, such as bakelite or the like, which may be of any of innumerable colors, solid or variegated, and, if desired, to match the color of the knitting needles 12. Plaskon, a urea condensation product has been found to be very satisfactory and is now available on the market. The shell 11 may be comprised of a cylindrical side wall portion 13 having an annular shoulder 14, extending inwardly at an angle from said side wall portion 13. The cylindrical portion may be threaded at the opposite end as at 15. This provides the male portion for the joint formed by the blind end portion or cap 71 which is also threaded to form the female portion of said joint. The cap may be fixed on to said cylindrical portion by any desirable method.

The cylindrical portion 13 may be provided with a plurality of ribs 70 disposed in parallel exteriorly and longitudinally of said cylindrical portion and likewise a plurality of ribs 16 disposed interiorly and longitudinally of said cylinder 13. The exterior ribs 70 provide means for gripping the device when inserting the needle points 17 into the pliable insert 10. The interior ribs provide antislip projections which tend to maintain the insert in proper position and prevent it from undesirable movement within the shell.

In assembling the device, the insert 10 of pliable elastic material is preformed and is of a shape to fit within the shell 11 but slightly larger than its inside dimensions. The insert is then pressed into position, as shown in Figs. 1 and 2. Inasmuch as the insert when not confined is slightly larger than the shell, it is maintained in stable position by reason of its elasticity and normal tendency to expand to its natural size. The ribs or projections 16 hold the insert from turning when pierced by the needles. After the insert is placed in position, the cap 71 is screwed into position or otherwise fixed to the shell and forces the insert toward the shoulder 14. If desired, the cap 71 may be cemented on to said cylinder or otherwise held by suitable adhesive. It will be apparent that the insert will tend to

expand to its normal size and by the pressure exerted outwardly against the rigid shell 11 is held firmly by reason of the resilience of the former.

The device is now ready for use as a needle anchor or guard. Ordinarily, two or more straight needles are used in manual knitting and during the course of knitting a particular piece the knitted material is retained on the needles. In the normal course of events, the piece is only partially completed when work is stopped for various reasons. At such times, it is desirable to make some provision for the prevention of lost stitches or, in other words, for preventing that work which has been done from becoming undone. The device of the present invention is admirably suited for attaining this desirable result. For this purpose, the ends of the needles are embedded into the pliable insert, as shown in Fig. 2. By reason of the pliability and resiliency of the insert 10 made of elastic material containing innumerable air voids, the points readily penetrate the insert and are held in place by the frictional resistance set up against the needles. In addition to the elasticity and natural friction of the elastic material itself, the void spaces tend to form vacuum cups. The needles are maintained in position and will not, without manual removal, come out. Hence, when not in use, the needles are fixed in such position as to prevent dropping of stitches on work then carried on the needles. At the same time, the device provides a safety guard which prevents the sharp ends of the knitting needles from accidental pricking and possible hazardous injury to the person.

The modified form of the invention shown in Figs. 3, 4 and 5 comprises a shell 20 and an insert 21. The shell may be made of similar rigid material, as previously described. It may have ribs 22 positioned exteriorly and longitudinally of said shell. If desired, internal ribs may be provided for purposes, as set forth hereinbefore.

The insert of comparatively soft, elastic and resilient material such as rubber or the like but more dense than that previously described may be comprised of a cup shaped member 23 having a generally cylindrically shaped side wall portion 24 closed at one end by a head 25. A plurality of holes 26 are provided in said head slightly smaller in diameter than the diameter of the knitting needles 27 and 28, for which the device is intended; a second cup shaped member 29 which may be similar in all respects to cup shaped member 23 has its open end butted against the open end of the cup shaped member 23. This member comprises a generally cylindrically shaped side wall portion 30 and a head 31 having a plurality of openings 32 therein. The cylindrical portions 24 and 30 are in registered relation, but the openings 26 and 32 are staggered for purposes hereinafter described. If desired, one of the cups may be a disc without openings serving as a buffer for needle points inserted through the openings in the perforated head.

The perforations 26 and 32 in the heads when two similar cups are employed are staggered so that when needles are inserted through a head the inside surface of the opposite head may also serve as buffer for the point of a needle. By reason of the openings being smaller than the cross-sectional area of a needle, the needle when inserted therethrough will be gripped because of the resilient and elastic nature of the material of the insert and remains in fixed position and removable only by manipulation. It will be apparent that this modified form accomplishes the desirable results hereinbefore mentioned.

A still further modification particularly adapted for a flexible two pointed needle 60 designed for knitting tubular work (shown in part at 61), such as skirts and the like, may comprise a shell 50 open at both ends and provided with an insert such as shown in Figs. 1 and 2, or Figs. 3, 4 and 5. The shell may be made in two telescoping parts 51 and 52 fixed together as shown at 53 by threading or by some other method such as cementing or the like. Shoulders 54 and 55 at opposite ends maintain the insert in place, although the insert may be cemented or otherwise fixed to the shell.

It is seen from the foregoing description that the invention provides a needle guard or anchor which not only appeals to the aesthetic but which is also most useful as a safety device for the prevention of possible personal injury which may be caused by exposed sharp needle points when they are being carried and not in use in actual knitting. Furthermore, although of no less importance, the innumerable and ambitious yet unceasingly patient workers who have the relentless courage to produce, by their handicraft, that knitted work of inestimable sentimental value—if not intrinsically priceless—will, through the utilization of the invention, save many a lost stitch.

While certain novel features of the invention have been disclosed and are pointed out in the annexed claims, it will be understood that various omissions, substitutions and changes may be made by those skilled in the art without departing from the spirit of the invention.

What is claimed is:

1. A needle anchor comprising a pair of cup shaped members of pliable material each having a substantially cylindrical side wall portion, heads closing one end of each of said cylindrical portions and each having an open end, the open ends of said members being fixed together in registered relationship, at least one of said heads having a hole therein for the insertion of a knitting needle, and the opposite head providing a buffer for the point of a needle inserted through said hole.

2. In a needle guard, a preformed shell of rigid material and a preformed insert therefor snugly fitting therein, said insert comprising a cup shaped member of pliable resilient material having a substantially cylindrical side wall portion and a perforated head in an end of said cylindrical side wall portion, and a buffer for the point of a needle opposite said perforated head.

3. A knitting needle guard comprising a preformed and preshaped insert of pliable material having a cylindrical hollow portion closed at one end by a head having a restricted opening therein for the insertion of a knitting needle therethrough, the material defining said opening being sufficiently resilient to grasp the knitting needle inserted through said opening and hold it in position; a buffer for the point of needle inserted through said opening; and a cylindrical shell of rigid material snugly fitting the peripheral outside surface of said cylindrical hollow portion.

EDITH L. CRAWFORD.