Nov. 26, 1968 G. ROSENBERG 3,412,912

BASTING AND MARKING IMPLEMENT

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Fig. 1.

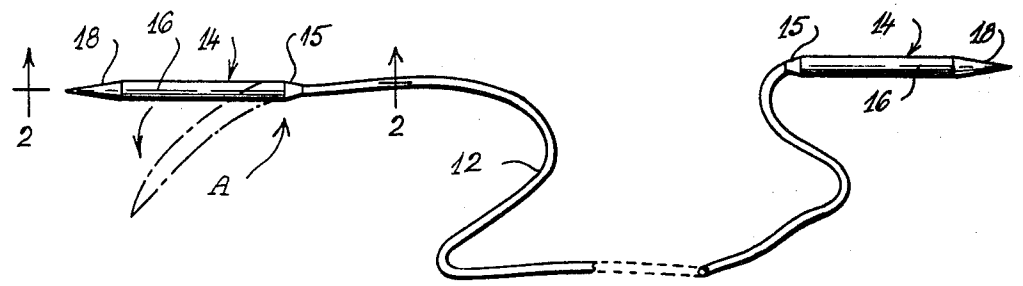

Fig. 2.

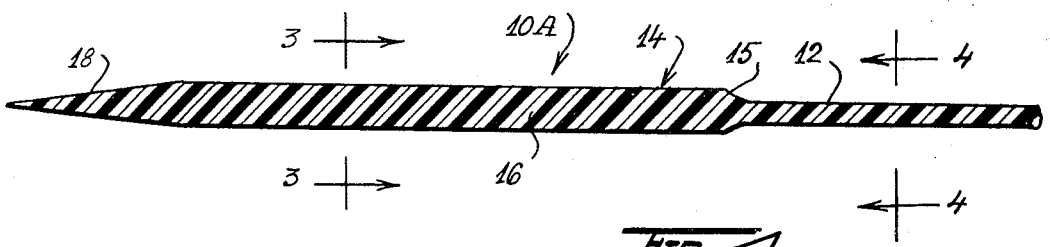

Fig. 3.

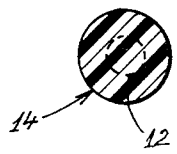

Fig. 4.

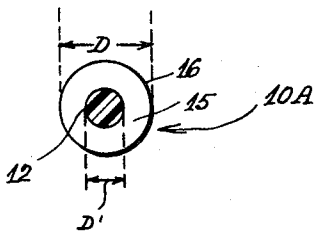

Fig. 5.

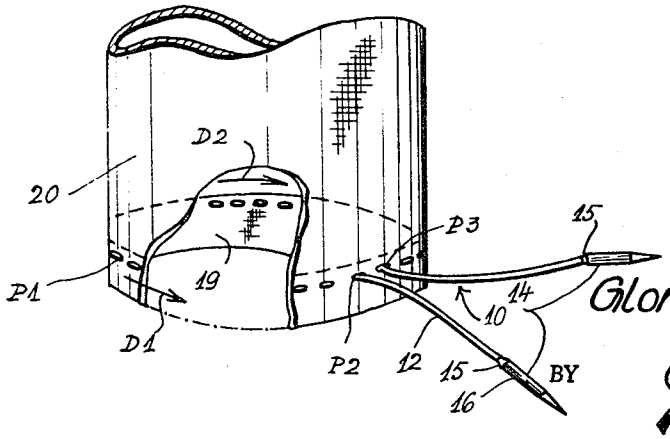

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Fig. 6.

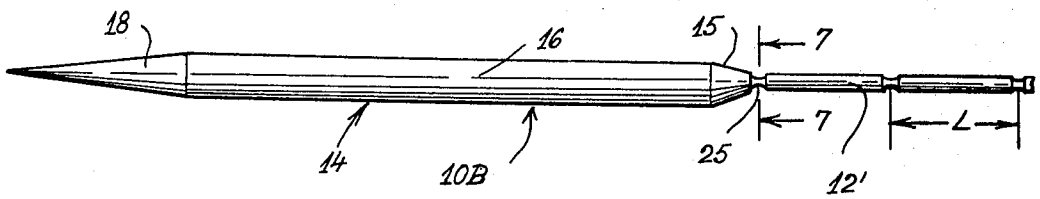


Fig. 7.

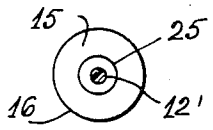


Fig. 9.

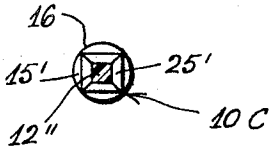


Fig. 8.

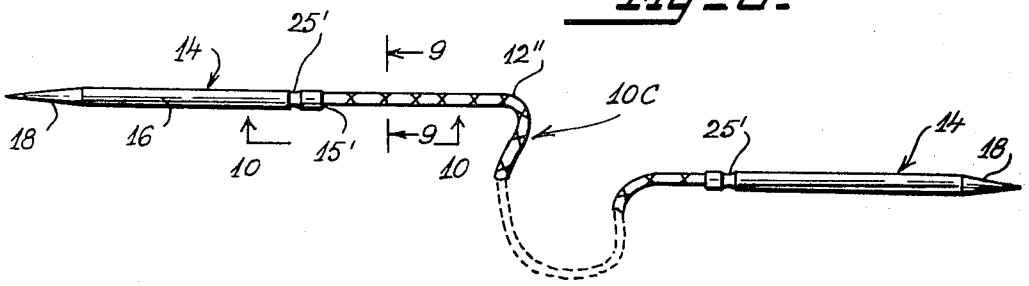


Fig. 10.

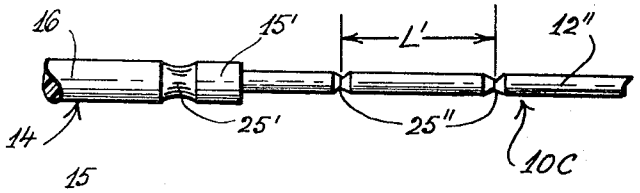
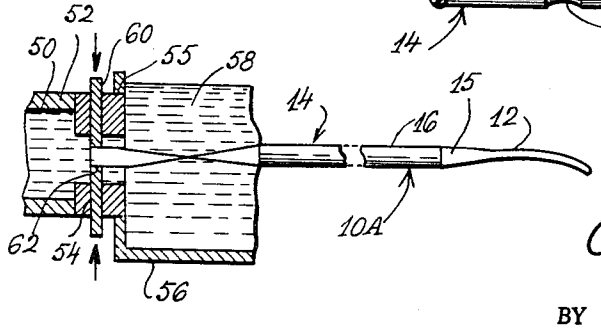


Fig. 11.



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BASTING AND MARKING IMPLEMENT

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1 Claim. (Cl. 223—102)

ABSTRACT OF THE DISCLOSURE

A sewing implement for basting operations which can be used over and over again, which can be easily broken at predetermined points and which can be used as a measuring device. The implement consists of an elongated thread with integral needles at the ends thereof, the thread and needles being formed of flexible plastic material, the thread having constrictions.

This invention relates to the art of sewing and stitching implements and more particularly concerns a device including a thread having integrally formed needle points at opposite ends.

Heretofore it has been necessary to thread a needle for sewing basting stitches. Often it is found necessary to sew additonal stitches at the loose end of the thread but this is not possible because the free end of the thread is too short to thread a needle thereon. In any case the thread must be engaged on either one or two needles which is a rather time consuming and tedious procedure. Also the handling of separate needles is objectionable. Also, conventional sewing thread is generally so fragile that it can only be used once for basting purposes and then must be discarded.

The present invention has as its object to provide to professional garment workers and dressmakers and to amateur home sewers, a basting and marking implement which has inegral needles, which can be used over and over, which can easily be broken at predetermined points, and which can be used as a measuring device.

For further comprehension of the invention and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

FIGURE 1 is a perspective view with part broken away of a device embodying the invention.

FIG. 2 is an enlarged fragmentary longitudinal sectional view taken on line 2—2 of FIG. 1.

FIG. 3 and FIG. 4 are further enlarged cross sectional views taken on lines 3—3 and 4—4 respectively of FIG. 2.

FIG. 5 is a fragmentary perspective view on a reduced scale and with parts broken away of a skirt having a hem baste stitched with the device.

FIG. 6 is an enlarged side view of part of another sewing implement embodying another form of the invention.

FIG. 7 is an enlarged cross sectional view taken on line 7—7 of FIG. 6.

FIG. 8 is a perspective view with part broken away of another sewing implement embodying a further form of the invention.

FIG. 9 is enlarged cross sectional view taken on line 9—9 of FIG. 8.

FIG. 10 is a further enlarged side view of part of the implement taken on line 10—10 of FIG. 8.

FIG. 11 is a side view partially in section of apparatus which may be used in manufacture of the implement.

Referring first to FIGS. 1–4, there is shown a sewing implement 10A which has a filamentary threadlike body

12 of any desired length. The body 12 is integral at opposite ends with needles 14 having the form of rather stiff cylindrical rods 16 terminating in sharp conical points 18. The thread body 12 and the needles 14 are all round in cross section with the diameters of the rods being greater than that of the body 12. Tapered transition sections 15 join ends of body 12 to the rods 16. The entire implement 10A is preferably made of a synthetic resin such as a polyamide (nylon), a polyester (Mylar), a polyfluorethylene (Teflon) or the like. Whatever resin is used, it must be tough, strong, smooth, abrasion resistant, a non-porous, moistureproof and dimensionally stable.

The body 12 is limp somewhat like sewing thread or even slightly stiffer such as horsehair. The needles 14 are stiffer and are springy and flexible laterally as indicated by dotted lines in FIG. 1. Both the needles and filamentary body are dimensionally stable longitudinally or axially and cannot be stretched under tension in normal use.

The implement can be made in any one of a number of ways. FIG. 11 illustrates one way in which the implement can be made. A mass of unplasticized resin 50 in liquid, semi-liquid or paste consistency is passed through a tube 52 under pressure. The tube has a ring 54 at its discharge end opening into a hole 55 in a tank 56 of a plasticizing fluid 58. Fluid 58 can be a liquid or gaseous chemical which may be maintained at different temperature from resin 50. Resin 50 plasticizes on contact with fluid 58. Fitted in ring 54 is an iris 60 having an adjustable opening 62. The iris is controlled automatically by means not shown to vary the size of opening 62 in a predetermined cycle depending on the rate of discharge of resin 50 into 58. The maximum diameter D of needle 14 formed when opening 62 is largest is at least twice diameter D' of filamentary body 12 formed when opening 62 is smaller; see FIG. 4. The cross sectional area of the rod 16 is thus at least four times that of the body 12. The resin 50 is selected from a number of known formulations such that the filamentary body 12 will have the desired limp characteristic when extruded in diameters up to approximately five mils (0.005") and the needle 14 while having the desired stiffness when extruded in diameters exceeding ten mils (0.01").

The implement can be made in other ways. It is possible for the needles 14 and filamentary body 12 to be separately extruded. Then the needles can be integrally joined by chemical or thermal fusion to opposite ends of the body 12. In another way, the entire implement 10A is formed by extrusion as a limp structure. Then the ends of the structure are hardened chemically to form needles 14 leaving body 12 limp. In a further way the entire implement is extruded as a stiff structure. The filamentary body portion 12 is then worked over mechanically and/or chemically to soften it and render it limp. Other suitable methods well known in the art of plastics manufacture and processing may be used. In any case the resulting structure of implement 10A is as shown in FIGS. 1–4 and described above. The entire exterior surface of the implement is smooth and highly polished. The surface is self-lubricating.

The implement 10A can be used, for example, as shown in FIG. 5 for basting the hem 19 of a skirt 20. The dressmaker can if desired start at one point such as point P1 to sew long basting stitches 22 by working one pointed needle 14 in and out of the garment in direction D1 to point P2. Then the dressmaker can work the other needle from point P1 in and out of the garment in the opposite direction D2 to point P3. Later the dressmaker can pull either needle 14 axially and the entire filamentary body 12 and other needle will be easily drawn out of the garment. This mode of operation is made possible by the self-lubricating

nature of the external surface of the implement as mentioned above. Such an operation cannot, by contrast, be done with a conventional thread and needle because the thread will break or the apertured end of the needle will catch in the garment or because holes will be torn in the garment as the thread is forcefully pulled through. In the present invention, after removal, the implement **10A** can be used over and over again in the same manner as described.

The implement **10B** shown in FIGS. 6 and 7 is similar to implement **10A** and corresponding parts are identically numbered. This implement also has two cylindrical pointed needles **14** at opposite ends, only one being shown in the drawing. The flaccid filamentary body **12'** is formed with circumferentially extending grooves defining constrictions **25** which are smaller in diameter than that of the body **12'**. These constrictions are spaced apart equal distances L such as one-half inch or one inch. The constrictions serve as measuring or marking points so that the dressmaker or garment worker can be guided by them in sewing basting stitches of desired lengths. The constrictions also serve the useful function of facilitating the breaking off of the needles **14** or of the body **12'** at any point desired if sufficient tension is exerted, so that scissors are not necessary.

FIGS. 8–10 show another implement **10C** which is generally similar to implements **10A** and **10B** with corresponding parts identically numbered. In implement **10C** the limp filamentary body **12''** is rectangular in cross section, while the needles **14** are cylindrical as in the other implements. One larger circumferential constriction **25'** at the rear or inner end of each rod **16** marks the end of the rod. This constriction serves as a flexible joint to which a tapered flexible transition section **15'** is integrally joined. At the inner end of each section **15'** is a shorter constriction **25''** with similar further constrictions spaced equal distrances L' apart in filamentary body **12''**. The constrictions serve as measuring or marking points and in addition serve as weakened points where the implement can be broken if necessary without requiring use of a cutting tool.

All the implements described are made of solid resin and can be made by any of the methods mentioned. The implements described will fulfill long felt needs in the garment working field. They will effect important savings in time, labor and material, particularly in large scale garment manufacture. Even home sewers will find the implements very advantageous since they need no longer

manipulate separate needles, nor spend time and effort threading needles, nor inadvertently leave needles behind in garments when removing basting threads, nor search for dropped or lost needles, nor risk breaking brittle metal needles.

While I have illustrated and described the preferred embodiments of my invention it is to be understood that I do not limit myself to the precise construction herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claim.

What is claimed is:

1. A sewing implement useful in basting comprising a plastic limp filament body for sewing basting stitches in a garment, a first needle integral at one end thereof with one end of said filament body, another needle integral at one end with the other end of said body, each needle having a pointed free end for penetrating a fabric to be sewn with basting stitches, each needle being flexible laterally, the needles and filament body being dimensionally stable, said filament body and said needles being generally cylindrical, with the maximum diameter of each needle being at least twice the diameter of said filament body so that the needles are stiffer than the filament body, and tapered transition sections joining the needles with the filament body, said filament body having a multiplicity of constrictions therearound equally spaced along the length of the filament body to serve as measuring points for said stitches and to facilitate severing the filament body at any selected one of said constrictions, one of said constrictions being positioned at the inner end of each needle and being larger than the others, said larger constrictions serving as flexible joints, said tapered transition sections being integrally joined to said flexible joints.

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