

D. L. ANTHONY.
DARNING ATTACHMENT FOR SEWING MACHINES.
APPLICATION FILED AUG. 15, 1910.

1,004,132.

Patented Sept. 26, 1911.

Fig. 1.

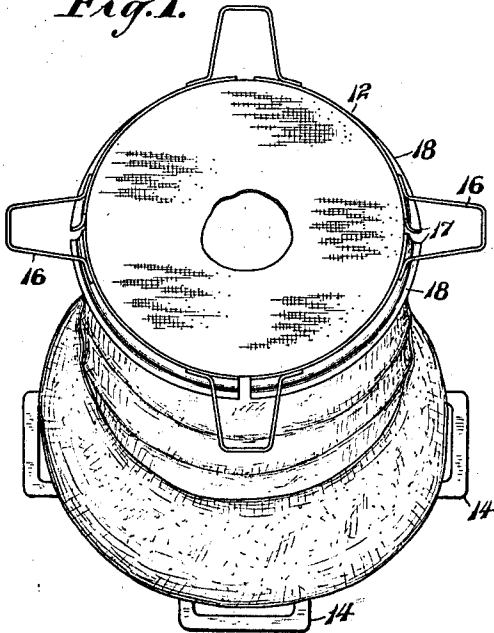


Fig. 2.

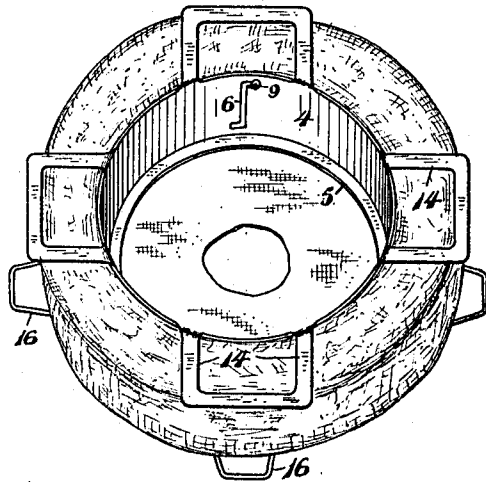


Fig. 3.

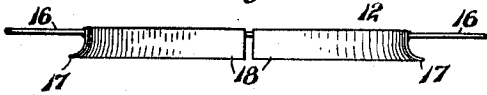


Fig. 4.

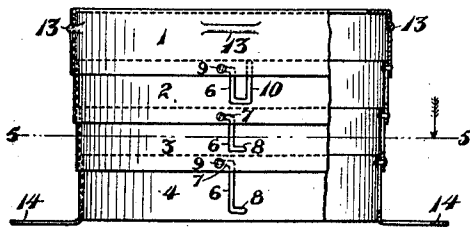


Fig. 5.

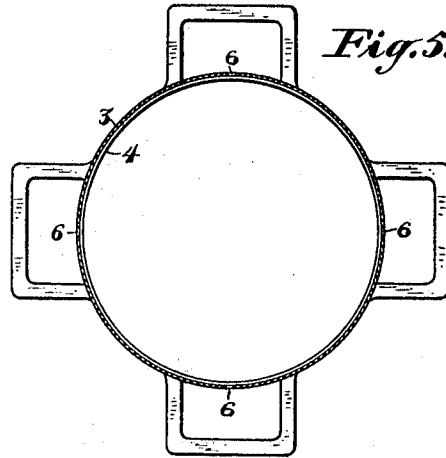
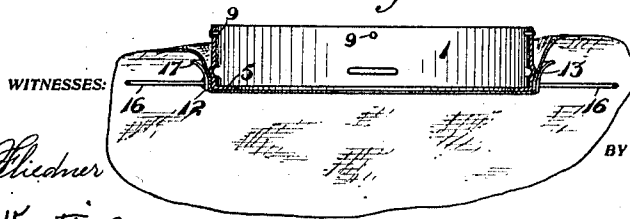


Fig. 6.



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DARNING ATTACHMENT FOR SEWING-MACHINES.

1,004,132.

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To all whom it may concern:

Be it known that I, DANIEL L. ANTHONY, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Darning Attachments for Sewing-Machines, of which the following is a specification.

The present invention relates to a darning attachment for sewing machines, on which the stocking, or other material which is to be darned, can be secured and at the same time drawn taut, for the purpose of facilitating the darning operation.

In all prior devices of this character, so far as I am aware, this preliminary operation in darning has been slow and troublesome, since it has been necessary that the operator should pass at one time only a very small portion of the material on to the attachment.

One object, therefore, is to enable the stocking to be slipped on to the attachment much more quickly than heretofore.

A further object is to provide such an attachment which, while thus facilitating the application of the stocking or other garment thereto can be compressed or shifted to a very small height, when the stocking is in place thereon, so as to permit it to pass under the needle and the presser foot.

A further object of the invention is to provide a device of this character which, or part of which can be used for an ordinary embroidery support.

A further object is to provide such an attachment which will be self-adjusting for irregularities of thickness of the sheet material which is to be darned.

In the accompanying drawing, Figure 1 is a perspective view of the device, showing the stocking in position thereon, before it is collapsed and inverted; Fig. 2 is a similar view of the device collapsed, ready for insertion below the needle of the sewing machine; Fig. 3 is a sectional view of the hoop; Fig. 4 is a broken side view of the support extended; Fig. 5 is a section on the line 5-5 of Fig. 4; Fig. 6 is a sectional view showing the device used for an embroidery frame.

Referring to the drawing, 1 indicates a lower ring section, 2, 3 intermediate ring sections, and 4 an upper ring section of a support for material to be darned, said

sections telescoping in the lower. Said sections are each made out of a single piece of sheet material, and when extended form a support which is almost four times the height of the sections when collapsed. The lowermost section is made with an inwardly extending flange 5 which supports the upper sections when they are collapsed within the lowermost section, for the purpose of holding said sections in place, either when collapsed or extended, the upper three sections 2, 3 and 4 are each formed with a plurality of slots 6 therein, the main or central portion of each slot being vertical and the slot terminating in horizontal extensions 7 and 8. I have here shown four such slots in each section although the number may be varied at pleasure. Near the upper edge of each section each ring has pins 9 or inward projections formed by indenting the metal inwardly. Said pins or projections corresponding in number with slots. Each pin or projection extends into a slot of the section immediately above it, so that said pins sliding in said slots, retain said sections in register with each other. When the pins arrive at the upper end of the slots in collapsing the sections, a turn to one side locks said sections together, so that they cannot then be extended without turning the sections back. In like manner, when the pins arrive at the lower end of the slots, a turn of said sections to one side locks said sections in their extended position. The lowermost section is formed with pins 9 which extend into the slots 6 of the section above it, but has no slots these being unnecessary. The slots 6 of the next to the lowermost section are each formed with a vertical extension 10, the purpose of which will be hereinafter described.

The sections having been extended, and locked in their extended position, the cylindrical support thus formed is inverted, and the stocking or other sheet material to be darned is then slipped over said cylinder until the part to be darned is brought as nearly as possible to the center of the lowermost section 1 and is drawn taut thereon. There is now placed over the stocking thus drawn taut a hoop 12, which can surround the section 1 and clamp the stocking or other garment therebetween. To facilitate the passage of the hoop upon the cylindrical support, the lower portion of said hoop is

made to flare outward downwardly, as shown at 17. The hoop, when thus placed in position over the support, is supported in its place by ledges 13 stamped outward from the section 1. The cylindrical support is now collapsed, by first giving it the required slight turn to one side to unlock the sections so that they can slide one upon the other and applying pressure thereto to collapse the same, and is locked in its collapsed position by turning the sections through a small angle. The stocking or other garment is thus compressed upon extending ears 14, which are preferably formed by stamping them out from said section and are held down by wings 16, made of spring wire, bent approximately U-shaped, their ends being soldered or otherwise secured to the hoop 12.

In order to adapt the device for use with materials of various thicknesses, and also with irregularly thick surfaces in the material to be darned, the hoop is made of segments 18, here shown as four in number, which segments are united by means of the wings 16. The ends of said wire forming each wing being made of segments, it can be readily expanded for various thicknesses of material, and spring wings 16 normally compress the segments of the hoop together, so as to hold said material between said hoop and cylindrical support. The device is now inverted and is ready for insertion beneath the needle and presser foot. The bulk of the stocking is held or supported by the outwardly extending lips and is held down by the outwardly extending wings so that it is kept in compact form, out of the way of the operator.

An important feature of this invention is that the lowermost section of the device can be used for an embroidery attachment or frame, or for darning sheet material which can be spread out flat. In order to allow of the lowermost section being removable for this purpose the slot 6 of the second section 2 is extended, as shown at 10, from the upper lateral extensions thereof downward, and outward through the lower edge of the ring section 2, so that by collapsing said lowermost section upon the next section above it then turning it to one side and then drawing it downward or outward again the lowermost section can be detached from the remaining sections. It can then be used in conjunction with the hoop as an embroidering frame or darning attachment for such material as it is especially adapted to, as shown in Fig. 6.

My improved telescoping device is of great utility for the following reasons: In order to be passed under the needle of the sewing machine, the stocking holder must be comparatively low. The stocking is of great length compared with the height of

the holder. The part of the stocking to be darned is almost always in the foot. In such cases it is necessary to pass around the holder the whole of the leg of the stocking before the part to be darned can be stretched across the holder. If the stocking leg is passed over or around the holder in its collapsed position the folds of the stocking leg pile up on one another, to such an extent that, when it is necessary to place around the holder the part of the stocking adjacent to that which is to be darned (if in the foot portion) said folds render it difficult to push this part down around the top of the holder, so that the stocking can only be adjusted for darning by exercising great pressure and considerable care. Now by providing a holder which is three or four times as high when extended as when collapsed, the above difficulty is avoided. When the stocking leg has been passed over the holder and the folds thereon accumulate to a height equal to, or even greater than, the height of the holder when collapsed, the upper portion of the holder will still be free for a considerable distance below the top, and thus allow the remainder of the stocking to be placed thereover with great ease and the stocking to be nicely adjusted on the holder. The holder can then be quickly collapsed, and then the device is ready for insertion under the needle.

I claim:—

1. A cylindrical support for material to be darned or the like, comprising sections telescoping one over the other, in combination with a hoop arranged to surround the terminal section and to clamp the material between said hoop and terminal section, substantially as described.

2. A cylindrical support for material to be darned or the like, comprising sections telescoping one over the other, and means for locking said sections in their extended position, substantially as described.

3. A cylindrical support for material to be darned or the like, comprising sections telescoping one over the other, and means for locking said sections in their extended and collapsed positions, substantially as described.

4. A cylindrical support for material to be darned or the like, comprising sections telescoping one over the other, in combination with a hoop arranged to surround the terminal section and to clamp the material between said hoop and terminal section, said support and hoop having outward extensions to hold the material therebetween, substantially as described.

5. A cylindrical support for material to be darned or the like, comprising sections telescoping one over the other, in combination with a hoop arranged to surround the terminal section and to clamp the material

between said hoop and terminal section, said hoop having a flaring inner lower edge, substantially as described.

6. A cylindrical support for material to
5 be darned or the like, comprising sections telescoping one over the other, in combination with a hoop arranged to surround the terminal section and to clamp the material
10 between said hoop and terminal section, said hoop being composed of segments, and spring wires connecting said segments, substantially as described.

7. A cylindrical support for material to
15 be darned or the like, comprising sections telescoping one over the other, the lower-

most section being removable from the other sections and said other sections being permanently connected together, in combination with a hoop arranged to surround the terminal section and to clamp the material between said hoop and terminal section, substantially as described. 20

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

DANIEL L. ANTHONY.

Witnesses:

FRANCES N. WRIGHT,
D. B. RICHARDS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
