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[33] **Japan**

[31] **No. 43-14500**

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[54] **METHOD AND APPARATUS FOR EMBROIDERY**  
 2 Claims, 6 Drawing Figs.

[52] U.S. Cl..... 223/104,  
 112/266

[51] Int. Cl..... A41h 31/00

[50] Field of Search..... 223/104;  
 112/169, 266

**ABSTRACT:** The present embroidery device contains a bobbin for an embroidery thread and a second bobbin for a thermofusibility thread and feeds said two threads from said bobbins through a handle and needle during the use of the device for embroidering the threads in a given pattern on a cloth surface where they are fixed by the application of heat to the opposite surface of the cloth.

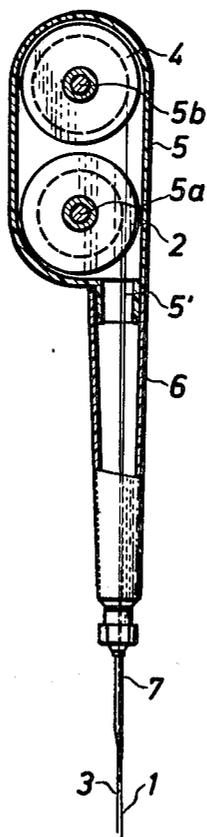


FIG. 1

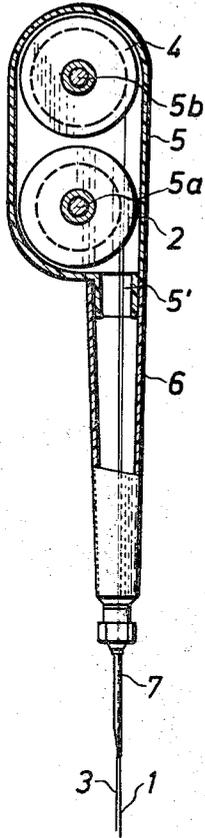


FIG. 1a

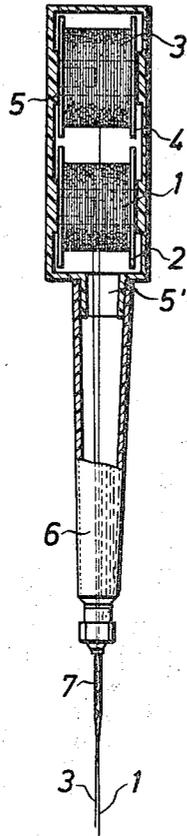


FIG. 2

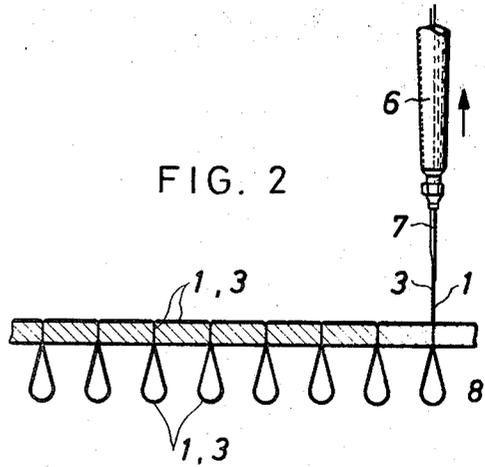


FIG. 2a

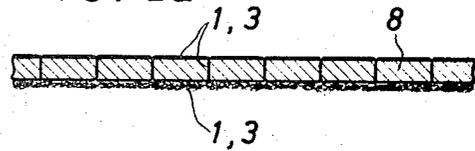


FIG. 3

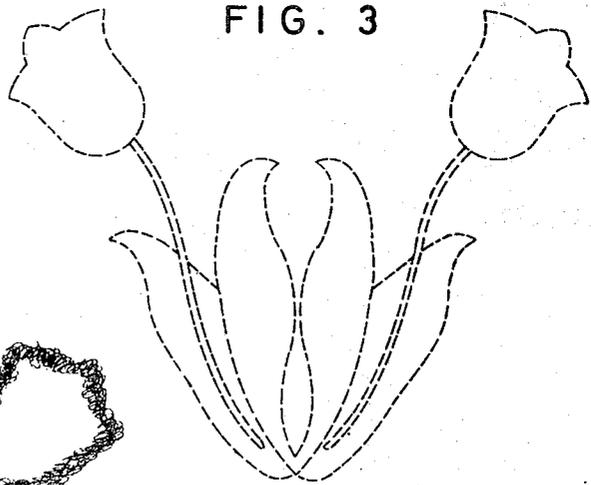
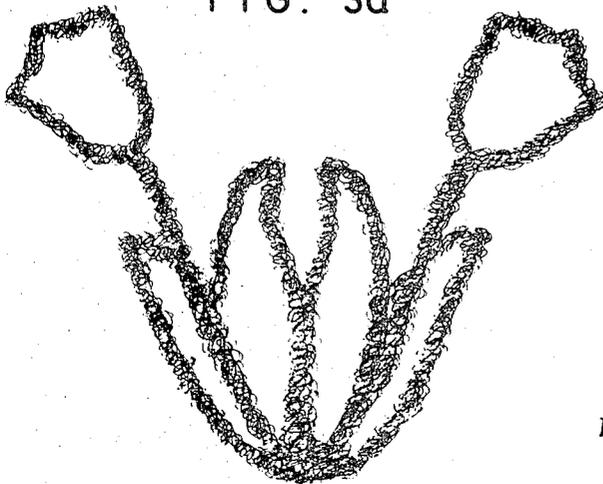


FIG. 3a



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## METHOD AND APPARATUS FOR EMBROIDERY

It has been heretofore known to provide a thread path marking device for basting which draws a thread wound on a bobbin out of a hollow needle and forms a seamlike string pattern by thrusting the needle on a cloth surface.

The present invention is directed to an improvement over such a well-known thread path marking device for basting to provide an apparatus and method for fixing a desired embroidery pattern wherein a bobbin case including two bobbins therein are fitted, one bobbin having an embroidery thread wound thereon and the other bobbin having thermofusible thread wound thereon, these threads of different fusibility are drawn out from the hollow of a needle and embroidered on a cloth surface in accordance with a desired embroidery pattern and then they are fixed by applying heat from the reverse side of the cloth.

In the present invention a particular embroidery device and a mixture of an embroidery thread and thermofusibility thread are used. Also an iron for heating the cloth is employed.

The accompanying drawings illustrate a preferred embodiment of the present invention in which:

FIG. 1 is a longitudinal sectional view of an embroidery device employed in the present invention.

FIG. 1a is a front view thereof in elevation.

FIG. 2 is a sectional view of the device showing the manner in which the embroidery device of FIG. 1 is used and the state of the thread left on the reverse side of the cloth.

FIG. 2a is a sectional view of the device showing that the thread left on the reverse side of the cloth which is thermally fused and fixed.

FIG. 3 is a top surface view of an embroidery pattern formed in accordance with the present invention.

FIG. 3a is a reverse side view thereof.

Referring now to FIGS. 1 and 2, an embroidery device is composed of a bobbin case 5 including therein two bobbins 2 and 4 rotatably mounted on shafts 5a and 5b which project therein, a cylindrical hollow handle 6 and a hollow needle 7. A port 5' of the bobbin case 5 is secured to an upper portion of the handle 6 and the needle 7 is secured to an extremity of the handle 6. Mounted on bobbins 2 and 4, respectively, are an embroidery thread 1 and a thermofusibility thread 3 (synthetic fiber thread such as nylon or Vinyon) having the same color as that of the embroidery thread 1 or being transparent, and preferably of small denier. Ends of the threads 1 and 3 are passed from the port 5' through the hollow handle 6 to the hollow needle 7, from an extremity of which they are drawn out.

Since the bobbins 2 and 4 are rotatably mounted on the shafts 5a and 5b, respectively, the threads can be smoothly drawn out when the ends thereof are pulled.

Thus, when the needle is thrust through cloth 8 upward and downward along a desired pattern previously defined by chalk or the like, the threads 1 and 3 introduced into the cloth 8 by the needle encounter frictional resistance in the fiber layer of the cloth, while the needle 7 encounters little frictional resistance, and hence threads 1 and 3 of the bobbins 2 and 4 are smoothly drawn out with the movement of the needle and they are left on the reverse side of the cloth (see FIG. 2). In this manner, by moving the needle in a seamlike pattern along a desired embroidery pattern, the desired embroidery pattern may be produced (see FIG. 3).

This embroidery pattern is formed by a mixture of two threads, embroidery thread 1 and thermofusibility thread 3, on both top surface and reverse sides. Thus, the thermofusibility thread 3 may be fused when the embroidery pattern is heated from the reverse side of the cloth by an iron through another cloth, and the fused thread 3 is twined around with the embroidery thread 1 and fixed thereto, which serves as a stop for the embroidery thread to prevent the latter being loosened. Thus, the embroidery pattern can be secured.

Since the thermofusibility thread 3 is of small denier and of the same color as that of the embroidery thread 1 or transparent, it does not adversely affect the color of the embroidery pattern on the surface.

As described above, the present invention utilizes an embroidery device having a bobbin case, in which two bobbins for embroidery thread and thermofusibility thread, respectively, are mounted, fitted to an upper portion of the handle thereof and a hollow needle mounted at the extreme end thereof. The needle is thrust through a cloth to make a seamlike pattern along a previously marked pattern on the cloth while the threads are drawn out of the bobbins, and hence the device may be easily and simply used. By applying heat to the cloth on which the embroidery pattern has been formed, from the reverse side thereof, the thermofusibility thread is fused and fixed to prevent the embroidery thread being loosened. Thus, the work of the embroidery can be easily done without requiring any skill.

I claim:

1. In an embroidery device, a bobbin case, two shafts mounted within said case, two bobbins rotatably mounted respectively on said shafts, a hollow handle attached to said case, a hollow needle terminally attached to said handle, one of said bobbins having embroidery thread wound thereon, the other of said bobbins having thermofusibility thread wound thereon, said two threads being fed from said bobbins through said handle and said needle.

2. An embroidery device according to claim 1, said thermofusibility thread being of small denier, said bobbin case being attached to one end of said handle.

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