No. 682,271. Patented Sept. 10, 1901.

J. H. POST.

EMBROIDERY HOOP.

(Application filed Aug. 29, 1900.)

(No Model.)

Fig. 1.

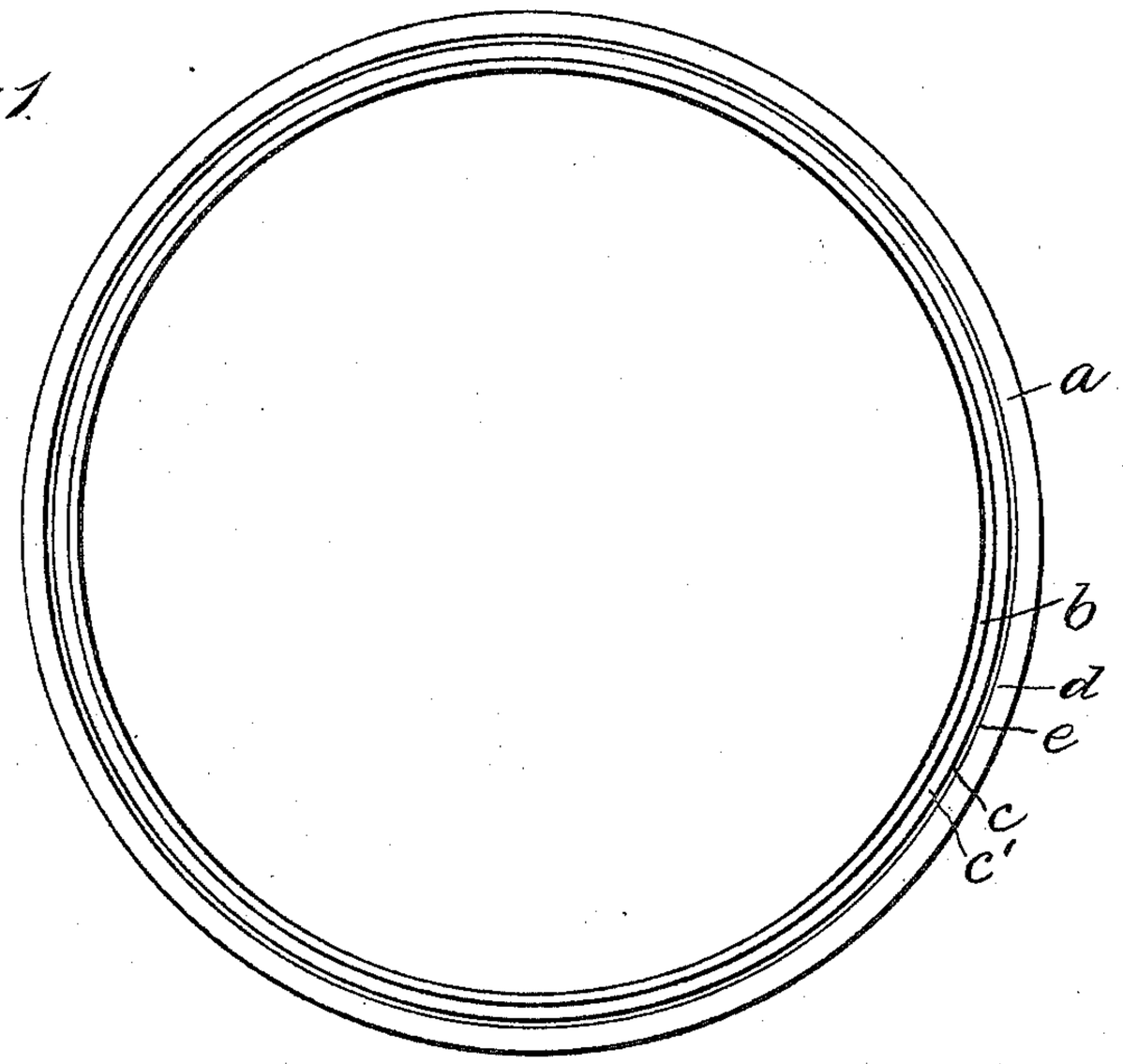


Fig. 2

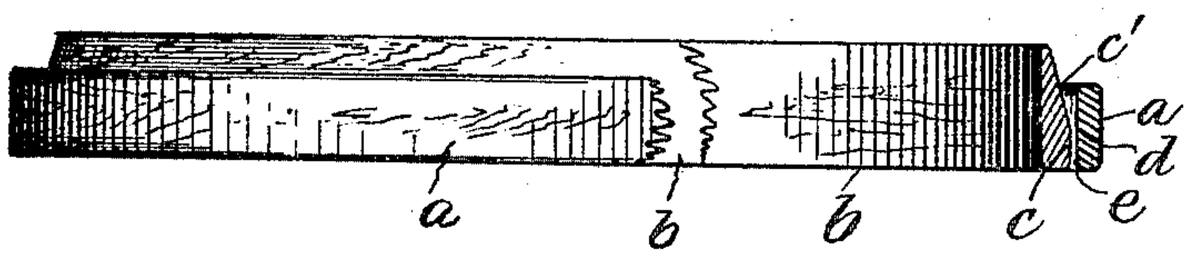


Fig. 3.

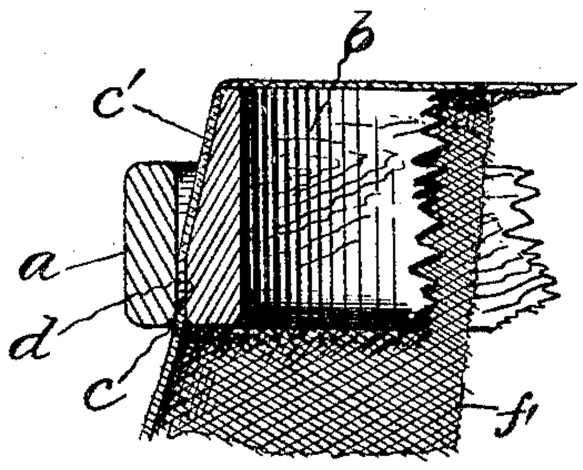
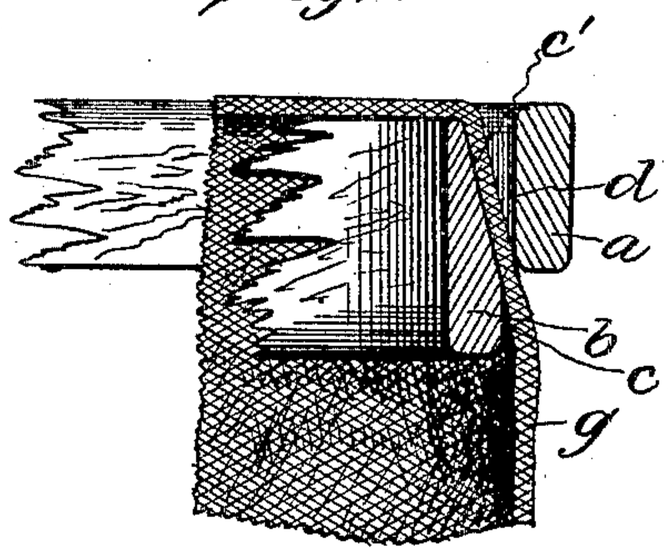


Fig. 4



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UNITED STATES PATENT OFFICE.

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EMBROIDERY-HOOP.

SPECIFICATION forming part of Letters Patent No. 682,271, dated September 10, 1901.

Application filed August 29, 1900. Serial No. 28,443. (No model)

To all whom it may concern:

Be it known that I, JOHN H. POST, a citizen of the United States, and a resident of Andover, in the county of Tolland and State of Connecticut, have invented certain new and useful Improvements in Embroidery-Hoops, of which the following is a specification.

My invention relates to improvements in the class of devices used to hold material, most commonly a textile fabric, while it is being embroidered; and the object of my invention is to provide an embroidery-hoop which is adapted to hold fabrics of different degrees of thickness with any desired degree of firmness between the two sections of a substantially rigid hoop; and a further object is to do away, in the preferred form of my improvement, with any clamping means additional to or extraneous from the hoop itself.

Referring to the drawings which form part hereof, Figure 1 is a top or plan view of the hoop. Fig. 2 is a side view with parts broken away to show the hoop in cross-section on one side. Fig. 3 is a detail view, on enlarged scale, in cross-section, of the hoop, on one side to illustrate the relative position of the two sections in holding a thin fabric. Fig. 4 is a detail view, on enlarged scale, in cross-section, of the hoop on one side to illustrate the relative positions of the sections in holding a thick fabric.

In the accompanying drawings the letter *a* denotes the outer section of a hoop made of any convenient material, preferably of wood, which is a cheap and durable material for the purpose, the hoop being usually of a width greater than its thickness, and by "width" is meant the dimension in a direction parallel with the axis of the hoop. An inner section *b* fits quite closely within the outer section of the hoop, the distance between the meeting surfaces of the two sections being about the same as or slightly less than the thickness of the thinnest fabric to be held by the hoop for embroidering.

For the purpose of adapting an embroidery-hoop of the prior art to hold fabrics of different thickness either the outer section or the inner has been cut through, so as to permit the diameter of one section of the hoop to be changed, and a clamp device is attached to the hoop near the line of division. The tension or holding grasp of the hoop upon the fabric has been regulated by means of this clamp device. In the preferred form of my improved hoop both sections are preferably continuous, and the adjustment requisite to the holding of fabrics of different relative thickness is obtained by locating the holding-surface of one of the sections which is adjacent to the other section at an angle to the plane of the holding-surface of the other section. For instance, if the holding-surface *c* of the section *b* is so formed as to lie substantially parallel to the holding-surface *d* of the section *a* the remainder *c'* of the holding-surface of section *b* is beveled or sloped inward toward the center of the section *b*. It follows from this construction of the parts that as the two sections are fixed as to diameter and are of comparatively inelastic material, so far as any ability to scratch is concerned, the width of the space *e* between the two sections *a* and *b* of the hoop will depend on the distance the inner is inserted into the outer section or the extent of interengagement of the two sections. This space *e* is of the greatest possible width when the beveled edge of the inner section is located in the same plane as the lower edge of the other section in that embodiment of my invention herein illustrated, and the space will be of the least width when the two sections are fully nested, as shown in Fig. 2 of the drawings. As a result of the above-described construction of the sections of the hoop as to adjacent holding-surfaces a thin fabric *f* can be firmly held, as shown in Fig. 3 of the drawings, and a thicker fabric *g* can as readily be held by the same hoop, as shown in Fig. 4 of the drawings, without requiring any change to be made in the relative diameters of the two sections of the hoop.

In the hoop herein illustrated and described there is provided a device which maintains a uniform width whether clamping a thick or thin fabric. In devices of the prior art, where narrow hoop-sections are employed, when a fabric of a maximum or minimum thickness is clamped between the hoop-sections the edges of the sections project beyond each other, so that in holding the hoop in the hand in the process of embroidering a force is applied, tending to close the sections together

on one side, which results in the separation of the sections on the opposite side, this loosening the grip of the sections on the fabric. Another objection results from the fact that when the fabric is thus clamped between the sections the surface of the fabric being worked upon is located below the edge of the outer hoop-section, and this makes it inconvenient to embroider the fabric at points near the periphery of the hoop-sections, for the reason that the hand holding the needle must project over the edge of the outer section of the hoop in order to get access to the surface of the fabric. This is unhandy and prevents fine work. By providing a wide inner section of a width equal to the proper width for an embroidery-hoop and a narrow outer section of a width which shall not cause it to project beyond the edges of the inner section, whether clamping fabrics of the thinnest or thickest dimensions, the disadvantages above referred to are avoided. By this construction of the two sections of the hoop I am able to produce an embroidery-hoop of a comparatively cheap and durable material, as wood, and a hoop that is free from all projections, which in the old form are often in the way either of the hands in holding the hoop or of the thread, which is apt to catch upon the clamp devices in such older forms.

It is obvious that part of the advantages and one feature of my invention may be present in a hoop in which one of the sections is changeable in diameter, and it is not limited to a hoop in which each section is continuous and without interruption or break in its hoop form; but the preferred construction provides each section as a continuous hoop.

The degree of slope or bevel on the holding-face of the hoop-section is not material, and such bevel may be formed on either of the two sections, as desired, and it may also vary in hoops of various sizes or diameter without departing from my invention; nor is there any limitation as to the material or size of the hoop-sections.

The parts *a* and *b* taken alone may each be considered as a hoop; but they are sufficiently described as sections of the one structure making up an embroidery-hoop as the article is known in the art.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an embroidery-hoop, an inner wide section and an outer narrow section arranged to clamp fabrics of different thicknesses and locate the narrow section within the limits between the surface of the fabric on one edge of the wide section and the opposite edge of said section.

2. In an embroidery-hoop, an outer narrow section and an inner wider section, one of said sections having a portion of its holding-face formed at an angle with the holding-face of the opposite section and the remainder of its holding-face formed in the same plane as that of the holding-face of the opposite section.

3. An embroidery-hoop composed of an outer narrow and an inner wide section one fitting closely within the other, the holding-face of one section having for a part of its width a surface beveled with reference to the holding-face of the opposing section and the rest of its holding-face formed in the same plane as the holding-face of the opposite section, whereby a space of varying width between the sections is formed.

4. In an embroidery-hoop, an inner wide section and a narrow outer section, one of said sections having its holding-face beveled with reference to the plane of the holding-face of the opposite section, said sections being arranged to clamp fabrics of different thicknesses and maintain the outer section within the limits between the surface of the fabric on one edge of the wide section and the opposite edge of said section.

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