

No. 887,403.

PATENTED MAY 12, 1908.

F. E. KOHLER.
EMBROIDERY HOOP.
APPLICATION FILED JAN. 27, 1908.

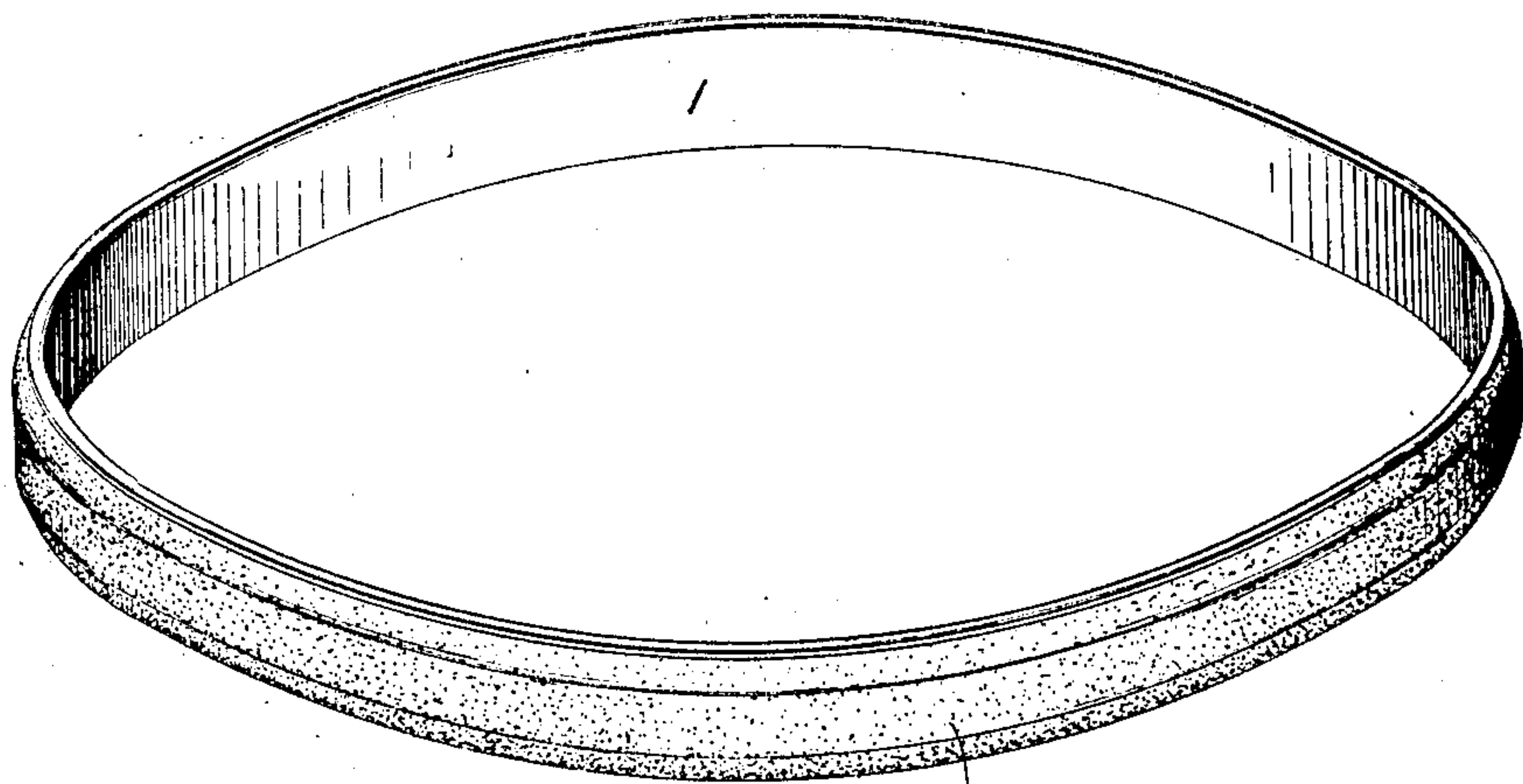


Fig. 1.

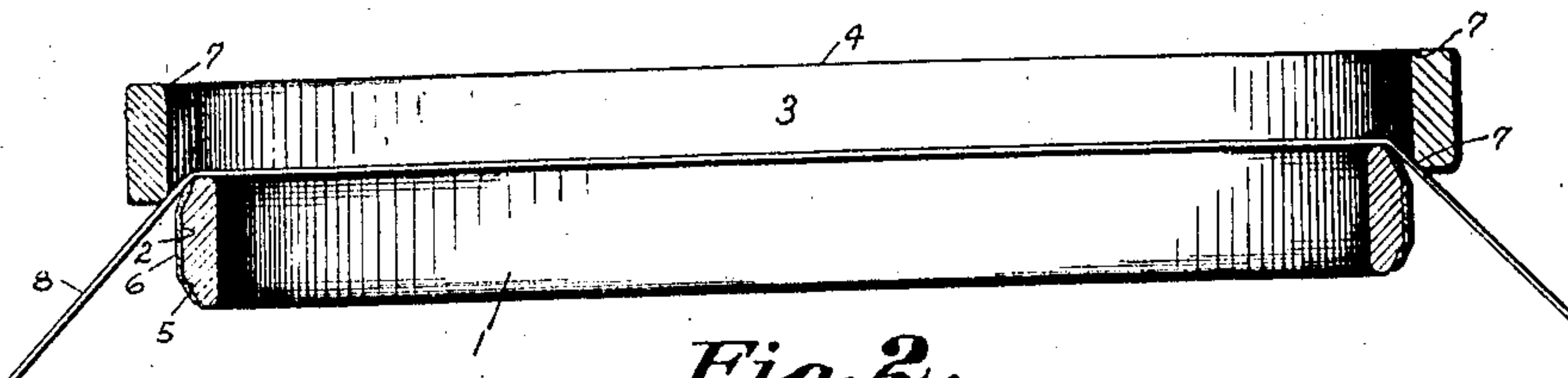


Fig. 2.

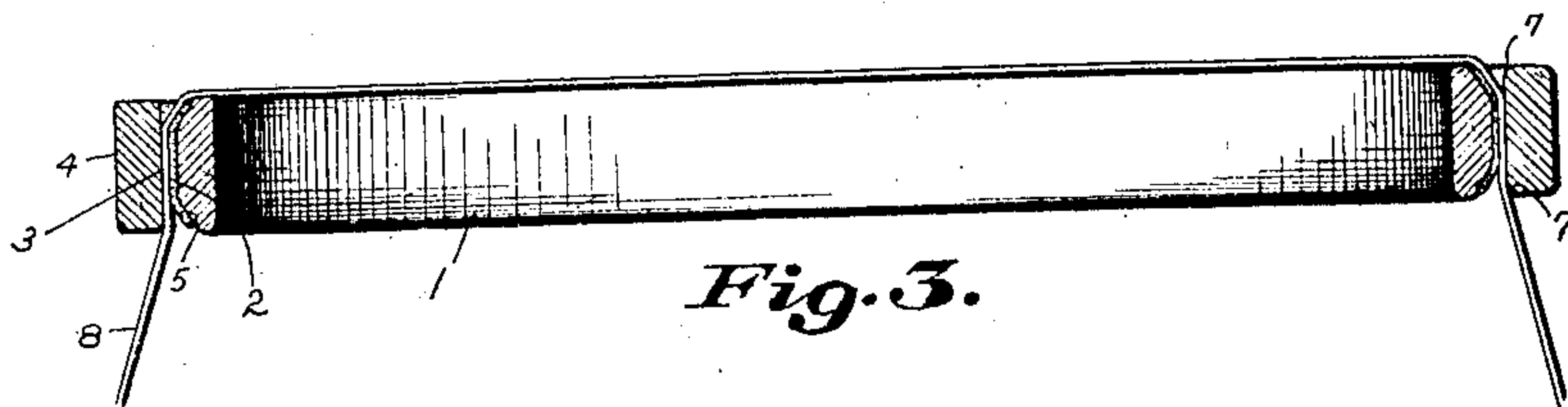


Fig. 3.

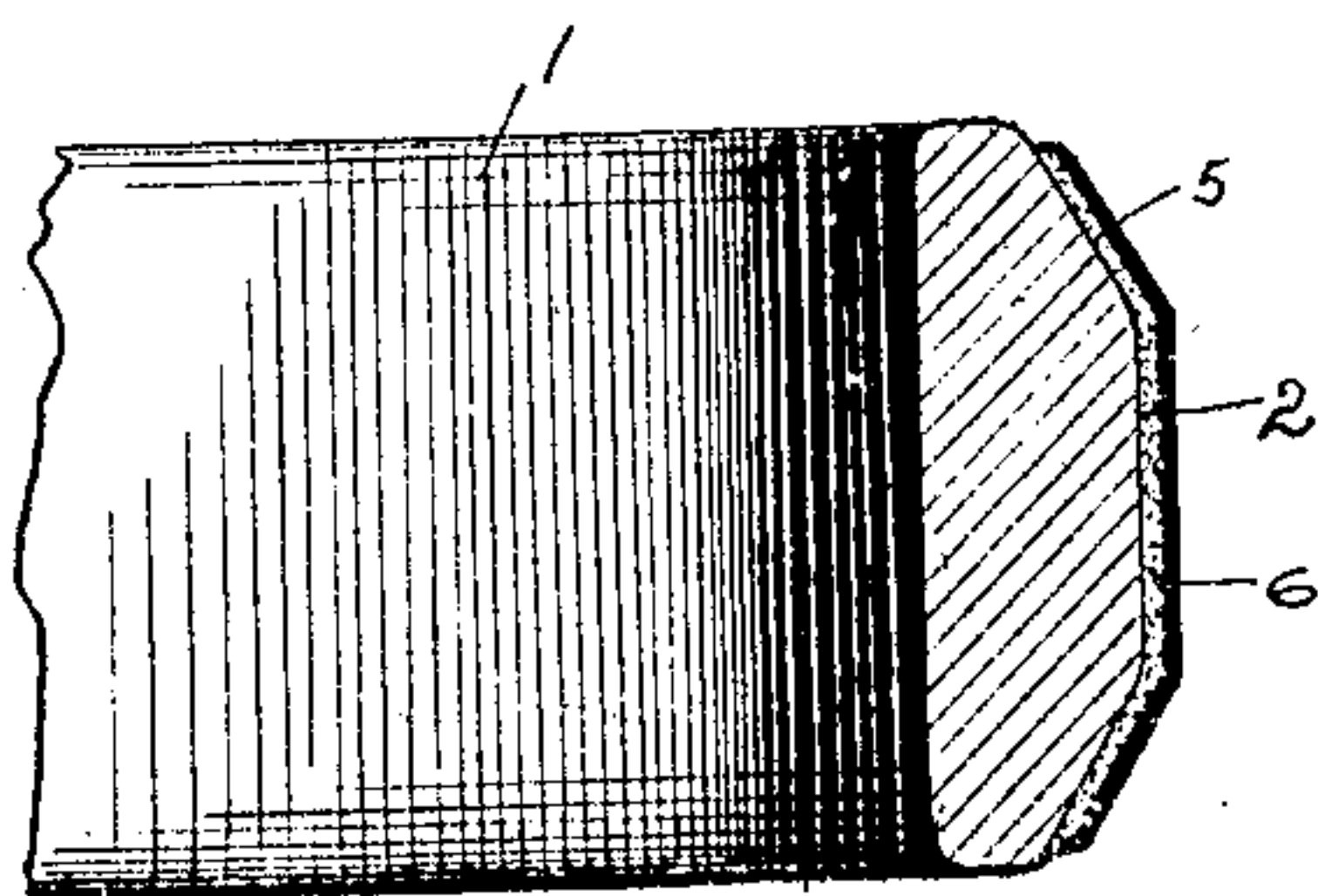


Fig. 4.

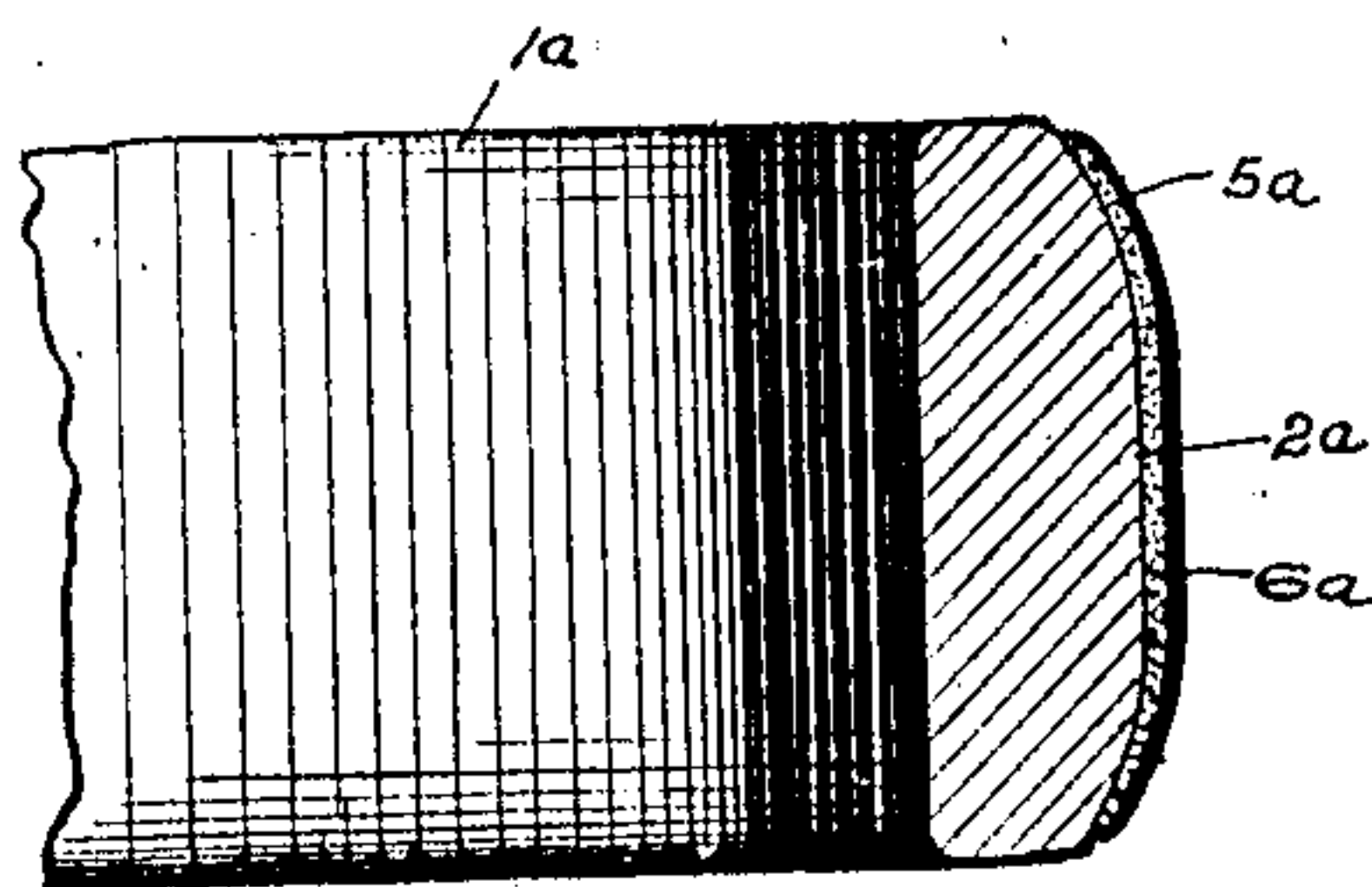


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

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EMBROIDERY-HOOP.

No. 887,403.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FREDERICK E. KOHLER, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented a new and useful Improvement in Embroidery-Hoops, of which the following is a specification.

The invention relates to a hoop composed of two rings, one adapted to telescope loosely outside the other for the purpose of holding a piece of fabric taut over the inner ring, for conveniently embroidering the same. When the rings are made entirely out of wood or other relatively hard and smooth material, and no means are provided for a change in the diameter of either ring, such hoop is not well adapted to hold fabrics of different thicknesses and consistencies; and for the purpose of increasing the resilience and friction of the holding surfaces, a rubber band has been wrapped around or applied longitudinally along a flat holding surface on one or both of the rings, and a flexible fibrous band or cord has also been partially countersunk in the same. Serious objections pertain to each of these appliances. When a rubber band is wrapped around a ring, it makes the hoop quite cumbersome and takes away the neat and light condition so desirable in a hoop of this character, and the band is apt to wear off at the edges of the ring and requires frequent renewal. When a band of soft rubber is applied longitudinally along the flat surface of the ring, the edges become loosened from the wood by use and stretch or fold out of place, and the hoop soon loses its efficiency. And finally, when a resilient frictional band or cord is partially countersunk in the face of the ring, the hoop soon becomes inefficient by reason of the ordinary wear and use which either abrades the protruding portion of the countersunk material down to the plane of the hard body of the ring, or overcomes the resilient qualities of the frictional material and compresses it entirely into the countersink in the ring; and furthermore, when a band is countersunk, unless and until the protruding edges of the same are worn off by the abrasion of use, they are apt to be loosened and either stretched or folded out of place like the edges of a band which is merely laid on a flat surface.

The object of the present invention is to overcome the objections which have been noted as pertaining to the devices which have been employed to increase the resilience

and friction of the holding surfaces of the rings, and this object is attained by forming at least one ring, preferably the inner ring, with a flat middle portion located in a plane parallel with the holding face of the other ring, and by diverging as by beveling or curving the side portions of the holding face of the one ring away from the adjacent holding face of the other ring; and then by gluing or otherwise securely attaching a resilient frictional band, preferably of somewhat soft and pliable leather or felt, on the middle flat portion of the one ring, with the sides of the band extended over and across the diverging faces to or near the edges thereof; as illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of the improved inner ring, showing the resilient frictional band applied thereon; Fig. 2, an axial-sectional view, showing the fabric laid over the inner ring and the outer ring in position for telescoping over the same; Fig. 3, a similar view, showing the outer ring telescoped over the inner ring with the fabric stretched and held taut over the inner ring; Fig. 4, an enlarged sectional view, showing beveled diverging side portions on the holding face of the inner ring; and Fig. 5, an enlarged sectional view, showing curved diverging side portions on the holding face of the inner ring.

Similar numerals refer to similar parts throughout the drawing.

The inner ring 1 or 1^a is made of wood, hard rubber or other comparatively hard material, and is formed with the flat middle portion 2 or 2^a located in a plane parallel with the holding face 3 of the outer ring 4 when the same is telescoped around the inner ring. The side portions 5 or 5^a are either beveled or curved from the flat middle portion to the side edges of the ring, so as to diverge away from the adjacent holding face of the outer ring. The resilient frictional band 6 or 6^a is glued or otherwise attached on the holding face of the inner ring, and is of such width as to entirely cover the middle flat portion thereof and to have its side portions extended over and across the diverging portions of the holding face of the ring, preferably to or near the side edges thereof. The outer ring 4 is likewise made of wood or other suitable material, and as shown, is preferably formed with its inner face 3 smooth or flat, excepting only as the corners 7 may be slightly chamfered or rounded; and when

the fabric 8 is placed over the inner ring, as shown in Fig. 2, the outer ring is placed over and then forced downward around the inner ring, which stretches and holds the fabric taut over the inner ring. The resilience and friction of the band on the inner ring serves to give a resisting pressure against the outer ring, and to prevent a slipping of the fabric as against an ordinary strain, but nevertheless permits the fabric to be forcefully pulled and adjusted in any desired position.

It is evident that by reason of the side portions of the resilient frictional band being extended upon the diverging portions of the face of the inner ring, the diameter of the edges of the band is so much less than the diameter of the holding face of the outer ring, that the edges of the outer ring will strike the rounded or cone-shaped side of the face of the band which is presented to the outer ring, and will be guided thereby to the flat middle portion of the band, instead of striking the extreme edges of the band. It is also evident that the band will continue to be effective until it is worn entirely off the flat portion of the ring, between the diverging side portions thereof, for there is no countersink in the ring into which the leather can be compressed.

The edges of the resilient frictional band are preferably arranged to terminate a slight distance inside the edges of the inner ring, and these edges are thus protected by the edges of the ring from the wear and abrasion of use.

The advantages of the particular form of construction as described herein are best attained by using a comparatively thin resilient frictional band, or one having comparatively thin edge portions, so that the shoulder formed by the same on the face of the ring is not sufficient to invite serious abrasion or injurious contact. By using a band of this character no special provision need be made for protecting the edges of the band other than by diverging the side por-

tions of the holding face of the ring to which the side portions of the band are attached, from the adjacent holding face of the opposing ring.

It will be understood that the form and shape of the holding face of the inner ring can be somewhat varied without departing from the general idea of the invention, but it is preferable to make the flat middle portion of considerable width so as to present a broad holding face in a plane parallel with the holding face of the outer ring; and it is necessary to have the side portions of the resilient frictional band extended over and across the diverging portions of the holding face of the inner ring, far enough to form an appreciable rounded or cone-shaped face to receive and guide the contact of the edges of the outer ring when the same is being telescoped over the inner ring, and to reduce the diameter of the edges of the band so that the outer ring will not injuriously strike the same. And it will also be understood that the invention is not limited in scope to the use of leather or felt as the material for the resilient frictional band, nor to the application of the invention to hoops having rings of unvarying circumferences.

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

An embroidery hoop comprising two rings one adapted to telescope within the other, the holding face of one ring having a flat middle portion presented to the opposing face of the other ring and side portions diverging therefrom and extending from said flat middle portion to the side edges of the one ring, and a resilient frictional band attached on the holding face of the one ring and extending upon the diverging side portions thereof.

FREDERICK E. KOHLER.

Witnesses:

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