

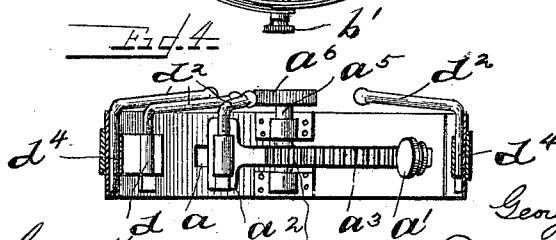
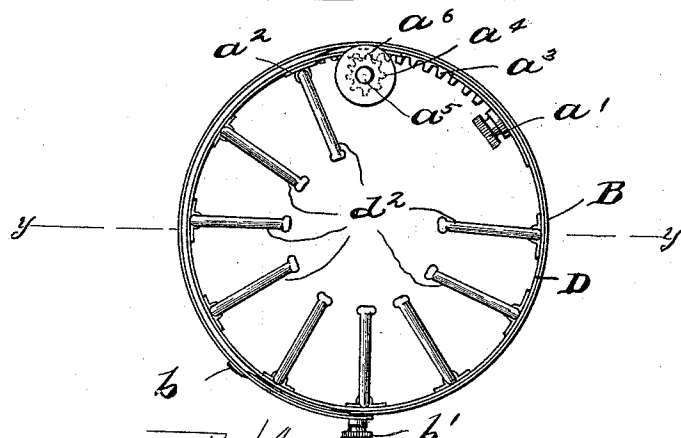
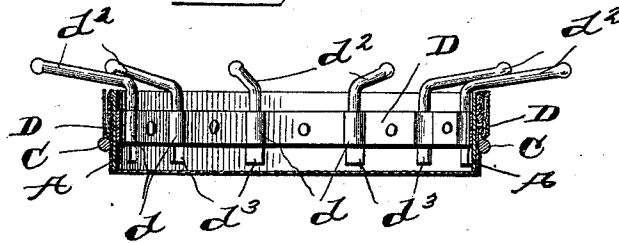
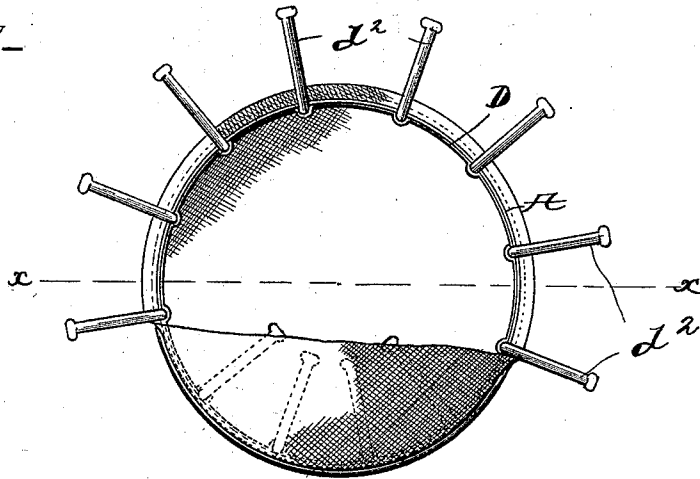
(No Model.)

2 Sheets—Sheet 1.

G. P. HILL.
DARNING OR EMBROIDERING FRAME.

No. 519,258.

Patented May 1, 1894.



Witnesses

G. A. Tauberschmidt.
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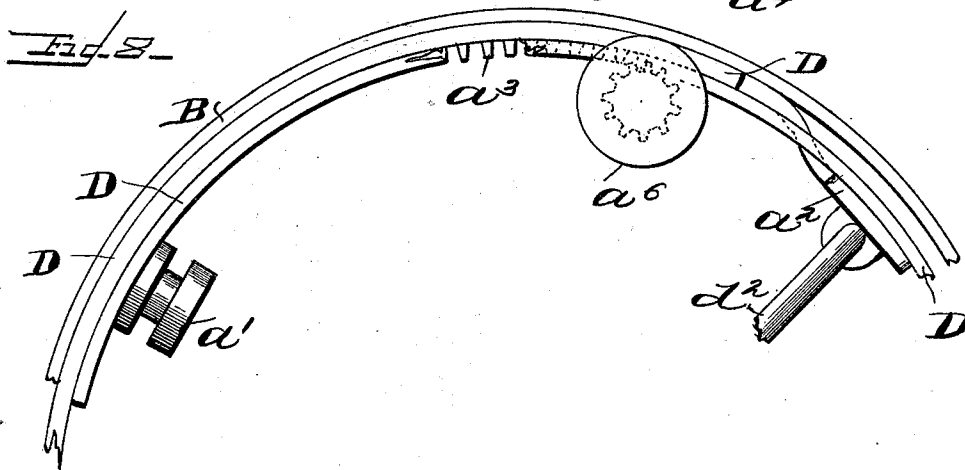
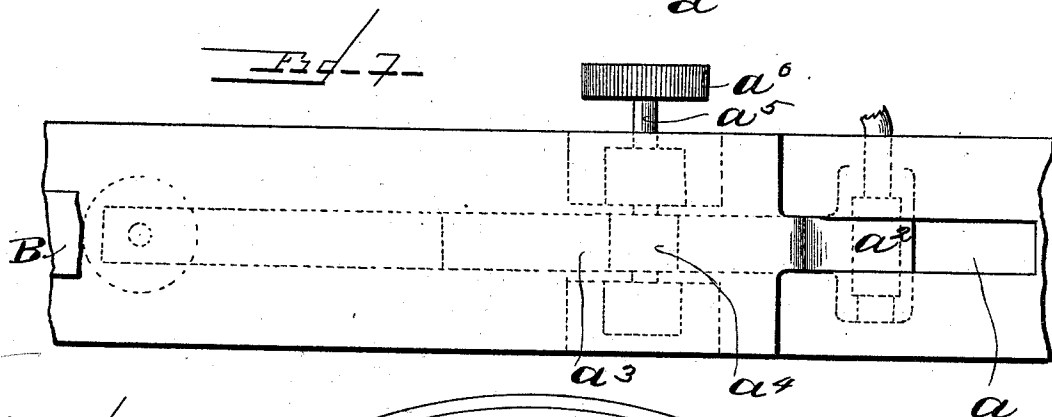
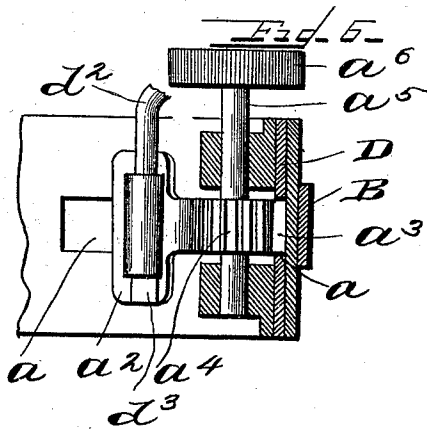
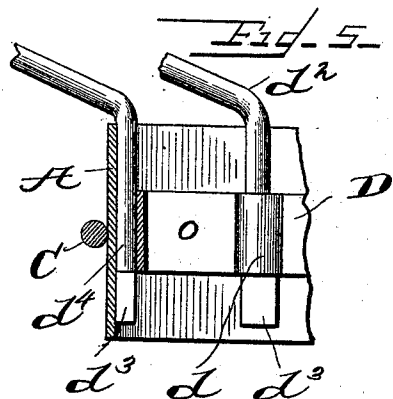
(No Model.)

2 Sheets—Sheet 2.

G. P. HILL.
DARNING OR EMBROIDERING FRAME.

No. 519,258.

Patented May 1, 1894.



Witnesses
J. A. Fauberschnitt,
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UNITED STATES PATENT OFFICE.

GEORGE POWELL HILL, OF RICHMOND, VIRGINIA.

DARNING OR EMBROIDERING FRAME.

SPECIFICATION forming part of Letters Patent No. 519,258, dated May 1, 1894.

Application filed May 1, 1893. Serial No. 472,554. (No model.)

To all whom it may concern:

Be it known that I, GEORGE POWELL HILL, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Darning and Embroidering Frames; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to darning and embroidering frames.

The object of my invention is to produce a frame that will hold a stocking or piece of fabric in such a manner that if desired the darning or embroidering may be done on an ordinary sewing machine, further to provide means whereby such frames may be adjusted to different diameters; and it consists of a darning and embroidering frame to which is secured a series of independently revoluble angular fingers and means of holding the same in predetermined positions, and a clamping ring, said clamping ring to hold a fabric stretched across the frame, while the fingers hold the unstretched portion against the side of the frame.

In the drawings: Figure 1 is a top plan view of one form of my invention showing a stocking applied. Fig. 2 is a central section of same on the line X—X. Fig. 3 is a top plan view of an adjustable frame which is the preferred construction, and Fig. 4 is a section of the same on the line X—X. Fig. 5 is an enlarged detail sectional view of Fig. 1. Fig. 6 is an enlarged detail sectional view of Fig. 3 showing rack and pinion. Fig. 7 is a side elevation of the same and Fig. 8 is a top plan view of the same.

A represents the darning ring which may be made in several sizes or it may be made adjustable as found most desirable. When made adjustable one end of the strip of metal that forms the ring or frame is slotted as at *a* while on the other end is secured a set screw *a'* which is adapted to slide in the slot. In Fig. 3 I show an adjustable frame in the preferred construction of which one end of the strip of metal, forming the frame, is formed with a T head *a*², and near this head is secured a rack *a*³ and just beyond the rack

I secure the set screw *a'*. The other end of the frame in Fig. 3 is slotted as at *a* and near the inner end of such slot I secure by means of rivets or otherwise, a pinion *a*⁴ from which extends an operating stem *a*⁵ having a head *a*⁶. The said pinion when in position meshes with the rack *a*³ and is adapted to operate the same. B is a clamping ring which is adapted to clamp the material over the frame A and when used with the adjustable frames one end of such ring is provided with a T head *b* and set screw *b'* while the other end is slotted as at *b*².

When desirable a split ring C of flexible material may be used in place of the adjustable ring, and when the rigid frame is used it is sometimes more convenient to use this split flexible ring.

On the inside of the frames A I secure a strip of spring metal D which is bent outward at *d* to form spaces at intervals between the frame A and such strip D. In the space thus formed I loosely secure fingers *d*², bent substantially in the form of an L. On the extreme end of these fingers I form a head *d*³ while the portion *d*⁴ has a cam like shape, in cross section, such portion *d*⁴ working between the strip D and the frame A as shown.

The operation is as follows: It will be presumed that the frame is to be used as a darning frame, for purposes of illustration. The frame is inserted in the stocking and placed in the desired position, the stocking is then stretched over the frame and the ring C pressed over the frame and thus clamping the stocking tightly to the frame. The fingers *d*² are all pressed toward the center of the frame before it is inserted in the stocking. That portion of the stocking above the frame is pulled to the one side and one of the fingers turned outward and over such portion thus holding the stocking at that place outside of the frame A and under such fingers the next finger is likewise turned and so on until all of the fingers have been turned outward, after which all of the stocking, above the clamped portion, will have been secured under the fingers *d*² and outside of the frame A. The frame may now be placed under the needle of a sewing machine and worked back and forth until the hole in the stocking is darned. If it is found that the stocking is not drawn

tight enough, after it has been clamped, the operator loosens the set screw a' and turns the pinion a^4 by means of the stem and head a^5 and a^6 thus operating the rack a^3 thereby
 5 expanding or enlarging the frame and drawing the stocking tighter, thus obviating the necessity of removing the stocking for such further stretching.

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

1. The combination with a darning and embroidering frame continuous in outline, of a series of independently revoluble angular fingers secured to said frame and means of holding the same in predetermined positions, and
 15 a clamping ring, said clamping ring to hold a fabric stretched across the frame while the fingers hold the unstretched portion against the side of the frame.

2. The combination with a darning and embroidering frame of spring loops secured to such frame, and angular fingers secured in the loops and each provided with a cam-like portion such portion seated in said loop.

3. The combination with a darning and embroidering circular frame of a yielding strip

secured to the inside of such frame loops formed in said strip, and fingers of substantially L shape secured and working in such loops, substantially as described. 30

4. A darning and embroidering frame consisting of a strip of suitable material one end of which is provided with a slot, and the other end with a T head adapted to work in such slot, a pinion secured to the slotted end and
 35 a rack and set screw secured to the T headed end, substantially as described.

5. A darning and embroidering frame consisting of a strip of suitable material one end of which is slotted, and the other end provided with a T head adapted to work in the
 40 slotted end, a pinion secured to the slotted end and a rack and set screw secured to the T headed end; spring loops secured to said frame, and fingers secured and working in
 45 said loops, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE POWELL HILL.

Witnesses:

EDWIN S. CLARKSON,

THOMAS A. BURNS.