

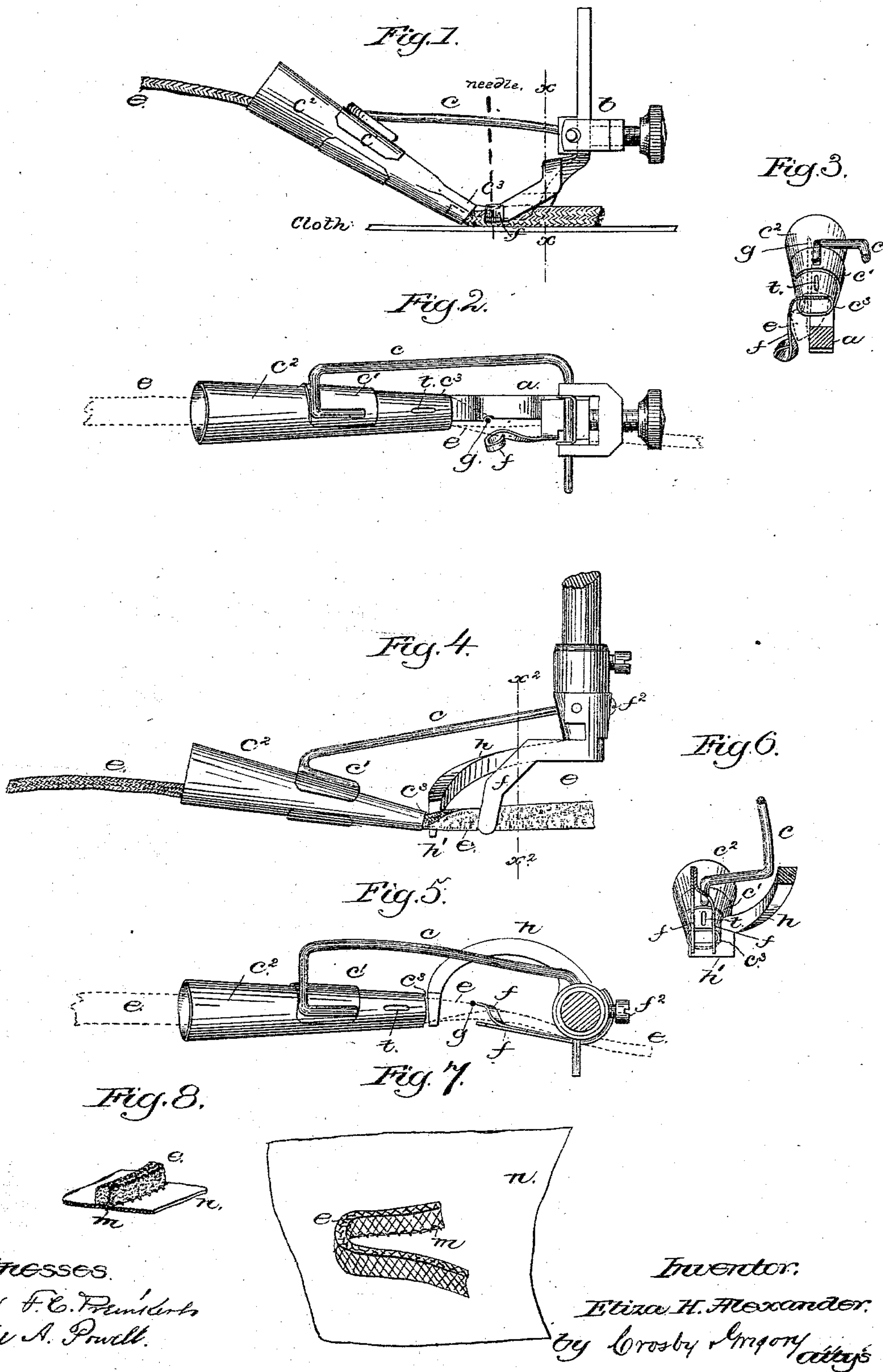
(No Model.)

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BRAIDING ATTACHMENT FOR SEWING MACHINES.

No. 281,225.

Patented July 17, 1883.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

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## BRAIDING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 281,225, dated July 17, 1883.

Application filed February 16, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ELIZA H. ALEXANDER, of New York, county of New York, State of New York, have invented an Improvement in Braiding Attachments for Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object the production of an attachment by which to present quadrilateral or flat braid to the needle of a sewing-machine in such position that the needle will penetrate one corner of the braid diagonally, and by its thread fasten the said  
15 corner to the fabric, so that the braid will stand upon its edge or upright. In this my invention I employ two guides having their guiding-surfaces placed angularly with relation to each other, one of the said surfaces being in advance and the other back of the needle, and acting to give to the braid a slight twist or spiral turn, in order that the needle may penetrate the same diagonally across one  
20 of the square corners of the braid, the stitch, when drawn taut, causing the braid to stand upright, although connected only at one of its four corners. This class of braid, now coming into fashion and being extensively  
25 used, is commonly attached by hand-stitching through two of its edges; but by my attachment this class of work may be well and rapidly done on a sewing-machine. The braid-presenting guide, into which the braid is first  
35 introduced, is made as a flat-mouthed tube adjustably held in a holder or socket-piece connected with the presser-foot shank, so that the said guide may be turned more or less in order to put more or less twist into the braid to be stitched and insure its correct angular penetration by the needle of the sewing-machine.

Figure 1 represents in side elevation one of my attachments applied to a Wheeler & Wilson form of presser-foot; Fig. 2, a top or plan  
45 view thereof; Fig. 3, a section of Fig. 1 in the dotted line  $x$ . Fig. 4 shows my invention as applied to another form of presser-foot; Fig. 5, a top or plan view thereof; Fig. 6, a section of Fig. 4 in the dotted line  $x'$ , and Figs. 7 and  
50 8 show pieces of braid stitched upon a fabric in accordance with my invention.

Referring to Figs. 1 to 3, the presser-foot  $a$

is supposed to be that common to the Wheeler & Wilson sewing-machine, and will be attached to the presser-bar in the usual manner. The clamping-block  $b$ , usually employed to hold the quilting-guide, receives and holds an arm,  $c$ , provided, as shown, at its front end, with a socket,  $c'$ , the arm and socket constituting a support for the movable or adjustable braid-presenting guide  $c^2$ , shown as made tapering and fitted loosely into the socket part of the said support, and as having its delivery end,  $c^3$ , flattened to bear upon the sides of the braid  $e$ , which is a broad thick braid having square corners, as shown.

The guide  $c^2$  is substantially such as described in former patents granted to me for braiding attachments, wherein the braid is adapted to be turned over when a square corner is to be turned.

The presser-foot has attached to it a finger,  $f$ , which, co-operating with an opposed surface, (herein shown as a part of the presser-foot,) constitutes the upright guiding-surfaces for the braid at the rear side of the needle. The flattened mouth of the guide  $c^2$ , or its contracted delivery end, constitutes the angular guide-surface in front of the needle.

One essential feature of my invention is the two guide-surfaces referred to—one in front and the other at the rear of the needle, or the path in which it reciprocates.

It will be noticed that the braid-presenting guide  $c^2$  is so held and located with relation to the path of movement of the needle and the presser-foot as to be partially rotated or turned over, to thereby twist or partially turn over the braid directly under the path of the needle, so that one of the lower corners of the braid may be entered by the usual eye-pointed thread-carrying needle. In this my invention the presser-foot does not bear with its full weight upon the top of the braid, either before or after it is stitched to the fabric. Twisting or partially turning over the thick braid under or in the path of movement of the needle, and in front of that guiding-surface which acts against the opposite side of the braid after it is stitched to the fabric, enables one corner thereof to be penetrated by the needle, leaving the stitch diagonally in the braid.

In Fig. 3 the needle  $g$  is shown in dotted lines as just penetrating the braid. The needle



$g$  is shown by a black dot in Figs. 2 and 5. This diagonal presentation to the needle of one corner of the braid is also a feature of my invention.

5 In Figs. 4, 5, and 6 I have shown the guide  $c^2 c^3$  applied to a presser-foot,  $h$ , adapted to be used in what is known as the "Davis vertical-feed machine," the part  $h'$  of the said foot resting upon the fabric to which the braid is being  
10 stitched, and between it and the braid, and moving laterally with the needle, which, with the foot, effects the feeding of the fabric. With the foot  $h$  arched or bowed, as in Figs. 4 and 5, it is necessary to somewhat change the shape  
15 of the upright guide at the rear of the path of reciprocation of the needle, and I have therefore shown two fingers  $f$ , attached to the foot by a screw,  $f^2$ .

In Figs. 7 and 8 the stitches are shown at  $m$   
20 and the fabric at  $n$ , and it will be noticed that the stitches pass diagonally through one corner of the braid. The braid as stitched to the fabric is in upright position, or has its edge uppermost. Viewing Fig. 8, it will be seen that  
25 but one corner of the braid is stitched to the fabric  $n$ , the other edge of the braid lying loosely upon the fabric.

The presser-foot in Figs. 1 to 3 will preferably be as narrow as possible, and yet permit  
30 the usual under four-motioned feed (not shown) to engage the under side of the material below the presser-foot and feed the material with certainty.

The upright guiding-surface for the braid  
35 back of the needle will in practice be made adjustable to adapt it to the thickness of the braid. The tube-like guide  $c^2$  will be provided with a slot,  $t$ , to permit a pin or other pointed instrument to be inserted therein to facilitate the initial passage of the braid through  
40 the said guide.

I claim—

1. In a braiding attachment, a presser-foot, a guide,  $c^2$ , having a flattened end,  $c^3$ , for the braid, arranged in front of the path of reciprocation of the needle, and adapted to be partially rotated to turn over the braid edgewise, and a guide-finger,  $f$ , located at the rear of the said path to receive between itself and the presser-foot the braid as it comes from guide  $c^2$ , and retain it with its edge twisted or turned up into a substantially vertical position, whereby one corner of its edge is presented to the needle, and by the needle stitched edgewise to the fabric, as and for the purpose specified. 55

2. The presser-foot, the support or holder thereon, and guide-finger  $f$ , applied to the presser-foot, combined with the guide  $c^2$ , the said guides being arranged, respectively, in the rear and front of the needle, substantially as shown and described, whereby the braid is presented edgewise at one side of the foot in a plane at an angle to the horizontal, to permit the needle to penetrate the corner of the braid diagonally just in front of the point where the braid is already stitched to the fabric, to secure the braid by one corner edgewise to the fabric. 65

3. That improvement in the art or method of securing square-edged braid upon fabric to remain in upright position, which consists in presenting the braid in spiral form to the needle and above the fabric, and stitching diagonally through but one corner of the said braid, as shown and described, leaving loose the opposite corner of the braid in contact with the fabric, as shown and described. 75

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ELIZA H. ALEXANDER.

Witnesses:

G. W. GREGORY,  
W. H. SIGSTON.