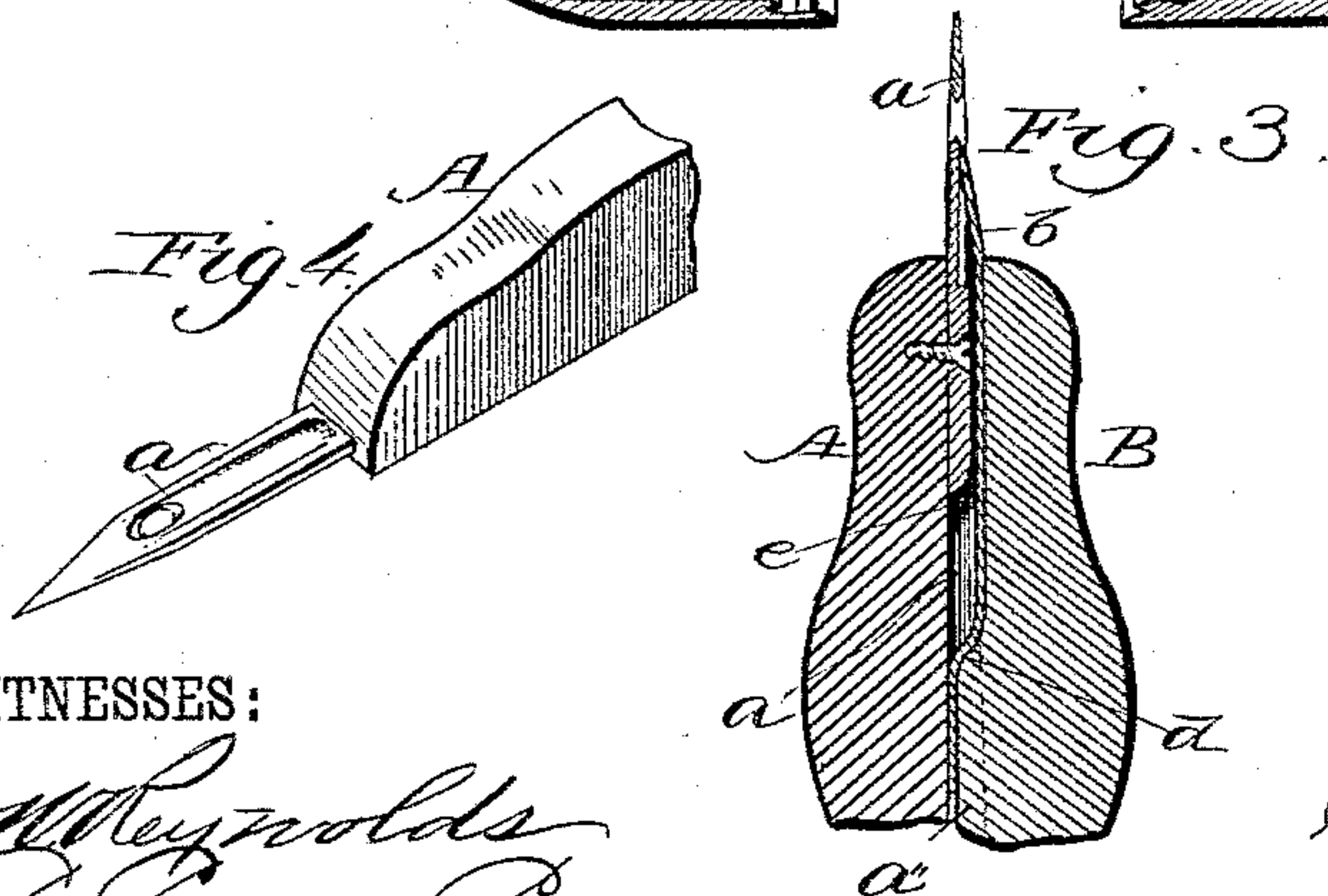
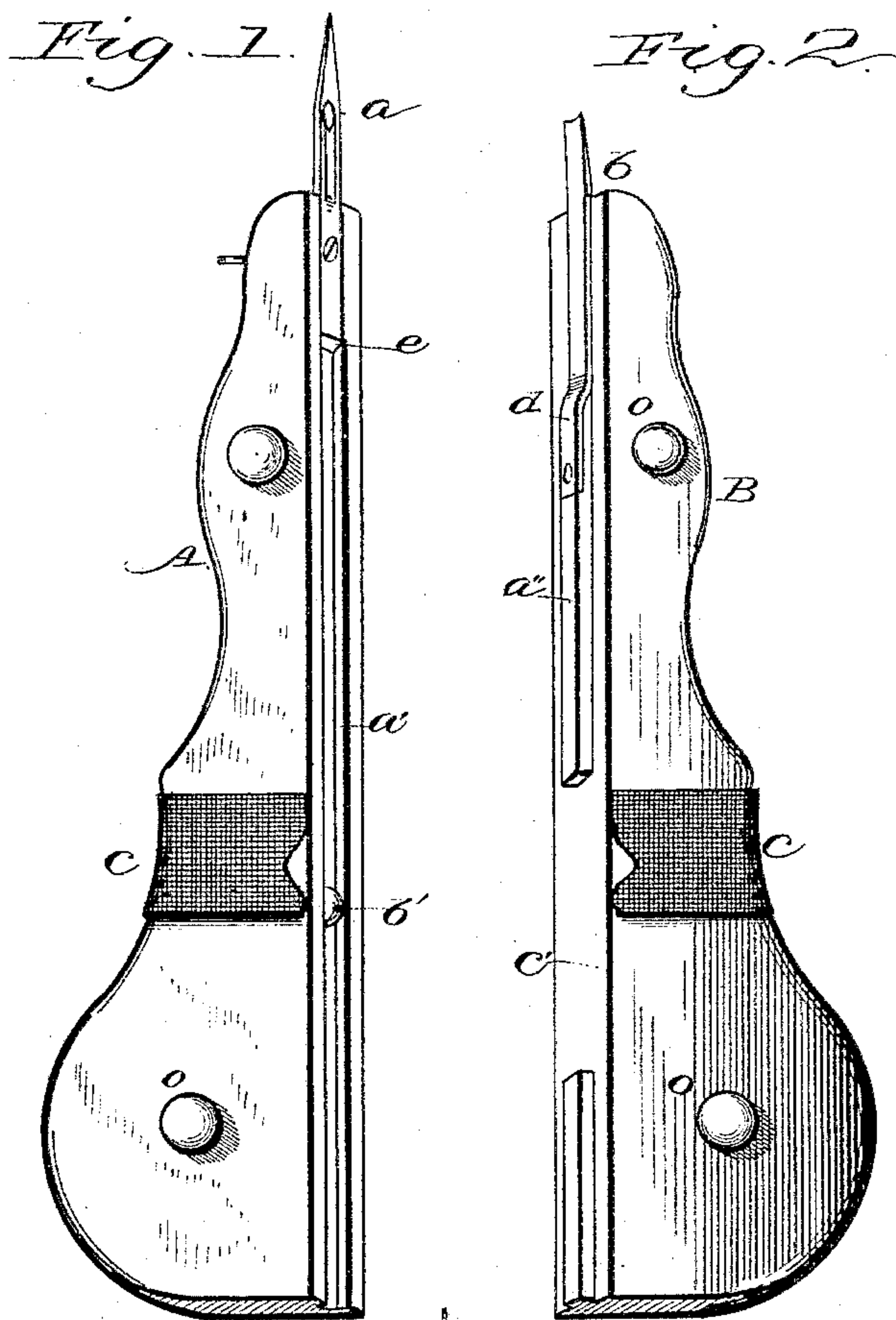


(No Model.)

S. A. SCOFIELD.  
HAND EMBROIDERING MACHINE.

No. 321,318.

Patented June 30, 1885.



WITNESSES:

*J. Reynolds*  
*C. Smith Ellis*

INVENTOR

*S. A. Scofield*  
BY  
*O. E. Duff*  
ATTORNEY



# UNITED STATES PATENT OFFICE.

SILAS ANDREW SCOFIELD, OF MORENCI, MICHIGAN.

## HAND EMBROIDERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 321,318, dated June 30, 1885.

Application filed December 1, 1884. (No mod. l.)

*To all whom it may concern:*

Be it known that I, SILAS A. SCOFIELD, of Morenci, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Hand Embroidering-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to that class of devices known as "hand embroidering-machines;" and it consists, substantially, in the parts as constructed, and in the particular combinations to be hereinafter distinctly described, and pointed out in the claims.

The class of machines to which my invention is most nearly allied consists of two blocks, which are alternately caused to slide past each other, one of which bears at its outer end the needle by which the thread is carried, and the other carrying at its corresponding end a rigid loop-holder, the needle being first caused to penetrate the fabric on which the embroidering is to be done, and the loop-holder immediately afterwards forced into the opening thus made, to hold the stitch and prevent its withdrawal until another or succeeding stitch is made, and so on.

In machines of the character described the blocks have heretofore been of certain constructions by which the necessary operation of moving them apart to the length of stitch to be made, and again bringing them together automatically, when permitted so to do by the operator, is attained, and some ingenuity has been exercised in the construction of both the needle and loop-holder, by which the best practical results could be accomplished; but thus far many difficulties have been encountered which this invention is designed to overcome, as will be seen from the following description.

Referring to the annexed drawings, Figure 1 represents a perspective view of the block, at the outer end of which the needle is carried; and Fig. 2 indicates a like view of the corresponding block, which carries the loop-holder. Fig. 3 indicates a view in section of

the outer ends of the blocks as when placed or held together for operation, and Fig. 4 represents a detail perspective to more clearly indicate the construction of certain parts.

Reference being had to the several parts by the letters marked thereon, A represents the block, which carries at its outer end the needle *a*, and B represents the block which carries at its corresponding end the rigid loop-holder *b*. The two blocks are held together by a rubber, spring, or other suitable elastic connection, *c*, (shown in each of the first two figures as broken away,) and on their corresponding or contiguous edges they are formed, the first with a longitudinal channel or groove, *a'*, and the second with a corresponding tongue, *a''*, the channel or groove in the one being provided with a pin or projection, *b'*, which plays in a space or division, *c'*, in the tongue *a''*, by which the movement of the blocks past each other is limited. The tongue *a''*, at near the outer end of the block on which it is formed, terminates by slanting off flush with the surface of the inner longitudinal edge of said block, as shown at *d*, Fig. 2, the purpose of which will be described hereinafter.

The needle is secured to the block A, near its outer end in the groove *a'*, in such manner as to be brought about even or flush with the surface of its inner edge.

Both of the blocks may, if desired, be provided with ornamentally-headed pins *o o*, by which the appearance of the blocks or complete machine will be rendered fancy and attractive.

Referring more particularly to the construction of the loop-holder, it consists of a flat and rigid strip of metal, which is bent to conform to the incline at the upper termination of the tongue *a''*, as shown at *d*, and is secured to said tongue by a screw, rivet, or in any suitable manner. The longer extremity of this loop-holder, a portion of which projects outwardly from the outer end of the block B, is preferably made flush with the surface of the inner side or edge of said block, as shown. The outer end or edge of this loop-holder is slightly concave, as shown, which the thread or strand will be more readily caught and retained in the opening made by the needle.

Directing attention to the needle, as con-



5 structured, it will be seen to consist of a metal  
 piece sharpened or pointed at its outer end,  
 and having at a suitable distance from the point  
 an "eye" or opening, in which the thread is in-  
 10 serted. The lower end of this needle is formed  
 beveled or inclined, as at *e*, and its inner side  
 is formed for a portion of its length with a  
 channel or groove for the reception of the  
 loop-holder, having to each edge an upward-  
 15 ly-projecting flange, while its outer side or  
 surface is similarly grooved or channeled, by  
 which, when the needle is forced through the  
 fabric the thread or strand will be made to  
 enter its side, and thus not increase the size  
 20 of the incision or opening made in the fabric  
 by the needle. This recess in the outer sur-  
 face of the needle likewise assists to guide the  
 thread or strand to the eye in the threading  
 operation. This needle-eye is beveled on its  
 surrounding edge from each side of the nee-  
 25 dle, which also facilitates in a great measure  
 the insertion of the edge of the thread.

The described construction of both the nee-  
 25 dle and loop-holder renders them of the great-  
 est degree of strength, and their joint opera-  
 tion most perfect.

The following is a description of the easiest  
 and best mode of operation of the several parts  
 constituting the machine: The needle is first  
 30 forced through the fabric, and the loop-holder  
 immediately inserted into the opening made  
 thereby. Simultaneously with the insertion  
 of the loop-holder the block which carries the  
 needle is drawn backward, to enable the spac-  
 35 ing and taking of the next succeeding stitch.  
 In the movement of the blocks back and forth  
 past each other the loop-holder is guided in  
 the side of the needle, and the inclined bottom  
 end, *e*, of the needle rides or slides upon the  
 40 corresponding incline, *d*, formed with the loop-  
 holder in its conformity to the end or extrem-  
 ity of the tongue *a''* of the block B, and thus  
 is the needle separated or forced apart from  
 the loop-holder to an extent of space equal to  
 45 the degree of the height or projection of the  
 tongue from the block on which it is formed.

The elastic connection between the two  
 blocks keeps them together, and it may be  
 added that when the machine is not in use it  
 has the appearance of two corresponding 50  
 blocks whose opposing edges are flat and  
 tightly fitting against each other, the needle  
 and loop-holder having also a somewhat like  
 resemblance to each other.

Having thus described my invention, what 55  
 I claim, and desire to secure by Letters Patent,  
 is—

1. In an embroidering-machine, the combi-  
 nation, with the sliding blocks A B, of a nee-  
 dle and loop-holder attached, respectively, 60  
 to the outer ends of said blocks, the needle  
 being formed on one side for the reception of  
 the loop-holder and on its opposite side with  
 a channel or groove, substantially as described.

2. The combination of the block A, pro- 65  
 vided with the groove *a'* and pin *b'*, and the  
 needle *a*, having bevel *e*, the block B, formed  
 with the tongue *a''*, inclined at its upper ex-  
 tremity, as at *d*, and separated or divided, as  
 at *c'*, and the loop-holder secured to the block 70  
 and bent to conform to said incline *d*, sub-  
 stantially as described.

3. The combination, with the blocks A and  
 B, formed with the corresponding tongue and  
 groove, of the needle *a*, formed in each of its 75  
 sides with a recess or channel, and provided  
 with the eye having beveled edge, and the  
 loop-holder *b*, adapted to work in the side of  
 the needle, substantially as described.

4. In an embroidering-machine, the combi- 80  
 nation, with the sliding blocks carrying at  
 their outer ends a needle and loop-holder, of  
 an elastic connection acting to draw said  
 blocks together, substantially as and in the  
 manner described. 85

In testimony that I claim the foregoing as  
 my own I affix my signature in presence of  
 two witnesses.

SILAS ANDREW SCOFIELD.

Witnesses:

JAMES INVERARITY,  
 FRED W. COOK.