

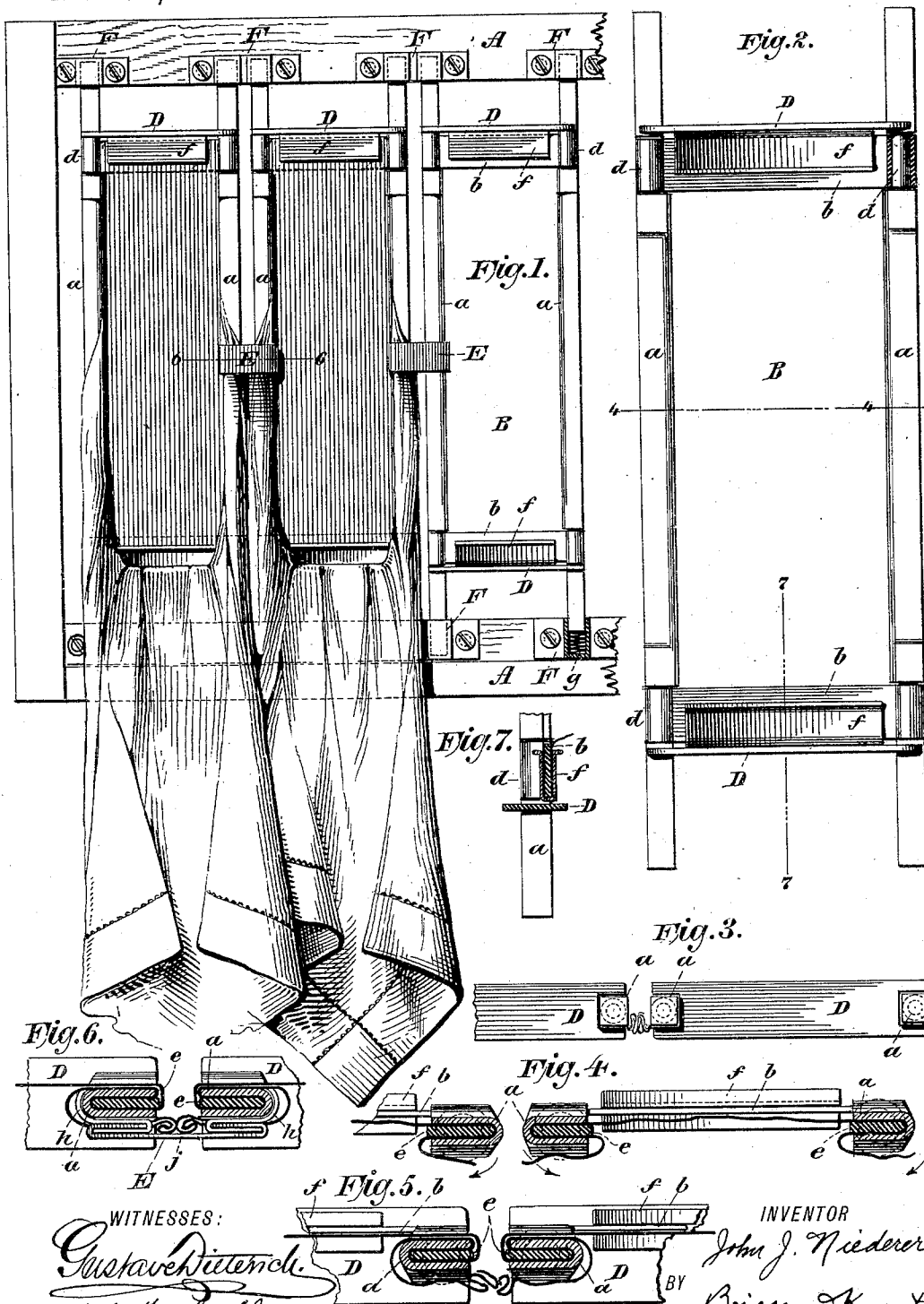
(No Model.)

J. J. NIEDERER.

FABRIC HOLDING FRAME FOR EMBROIDERING MACHINES.

No. 476,809.

Patented June 14, 1892.



WITNESSES:
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UNITED STATES PATENT OFFICE.

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FABRIC-HOLDING FRAME FOR EMBROIDERING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 476,809, dated June 14, 1892.

Application filed February 8, 1892. Serial No. 420,667. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. NIEDERER, a resident of the city, county, and State of New York, have invented a new and useful Improvement in Fabric-Holding Frames for Embroidering-Machines, of which the following is a full, clear, and exact description.

My invention relates to certain new and useful improvements in embroidering-machines; and it consists in a fabric-holding frame for such machines of improved construction, wherein the fabric to be embroidered at or near one corner or end may be properly held and distended.

It consists, also, in the novel arrangement and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a front view of several of my improved fabric-holding frames as arranged in the main frame of the embroidering-machine. Fig. 2 is an enlarged front view of one of said frames. Fig. 3 is an enlarged end view of two adjoining frames. Fig. 4 is a cross-section on the line 4 4, Fig. 2, showing the fabric loosely held in the frame. Fig. 5 is a similar cross-section showing the fabric distended in the frame. Fig. 6 is a cross-section on the line 6 6, Fig. 1; and Fig. 7 is a vertical section on the line 7 7, Fig. 2.

A is the main frame of the embroidering-machine, to which motion in the plane of its surface is imparted by Jacquard or analogous mechanism. This main frame A carries series of fabric-holding frames B, in each of which one corner or end of the handkerchief or fabric to be embroidered is secured for the purpose of properly distending said fabric therein.

The main objects to be secured in the construction and operation of these fabric-holding frames B are economy of space and proper distention of the fabric. The closer these frames B can be placed together in the main frame A the more frames B may be used in the main frame A and more fabrics can be embroidered simultaneously. The proper distention of the fabric assists in the successful and regular stitching of the design to be embroidered.

My present invention assists in accomplishing these results in the following manner: Each frame B has its sides *a a* grooved, and these grooved sides are angular at or near the

ends and swiveled to the end or cross-bars *b b* in suitable sockets *d d*, that are formed at the ends of said bars *b b*. Into the grooves of the sides *a a* are placed flat rods *e e* to fasten or clamp the fabric within said grooves. Over the end bars *b b* of the frame B are placed U shaped or grooved clamps *f f*, between the grooves of which and the end bar *b* the fabric is clamped or held.

D D are keys notched at the ends and adapted to be placed over the angular ends or portions of the side bars *a a* to lock them in position and prevent said side bars *a a* from turning once they have been properly set.

In operation the sides *a a* are turned in the socket *d* approximately to the position shown in Fig. 4, with the grooves of said sides *a a* turned inward or forward. The fabric is then inserted in and clamped to the said side bars *a a* and also clamped to the end bars *b b*, being stretched slightly over the frame. The sides *a a* are then turned outward to a position approximate to that shown in Fig. 5, in which the grooves of said sides *a a* are turned outward. The turning of the sides *a a* distends the fabric held in the grooves of said sides to the necessary extent, so that a flat and suitable surface of the fabric is presented to the action of the needles of the embroidering-machines. After the sides *a a* have been turned to the required extent the keys D D are placed over the angular ends or parts of said sides *a a* to lock said sides *a a* and prevent them from turning and loosening the fabric.

To secure the fabric-frame B to the main frame A, I place at the upper and lower ends of said frame A socket-pieces F F, arranged to receive the ends of the side bars *a a*. In the upper or lower sockets are placed springs *g*. To secure the frame B within these sockets F, one end of the frame B is inserted in the sockets that contain the springs *g*. The ends are pressed down against the force of the springs until the opposite ends of the frame B can be inserted into the other sockets, when the spring *g* will assist in pushing and holding the frame in place. When all the frames B are placed in position on the main frame, it will be apparent from the method of securing and stretching the fabric upon the frames B,

above described, that these frames can be placed side by side and very close together, leaving little space between them. The portion of the fabric which puckers or folds up at the sides of the frame is much less than in the frames of ordinary construction.

To assist in preventing the puckered-up portion of the fabric from interfering with the embroidering, I prefer to place at about the middle of the frame an elastic fastener or clamp E, arranged substantially as shown in Fig. 6. This fastener E consists of two metallic hooks *h h*, adapted to fit over the sides *a* of the frames, and an elastic band *j*, connecting the same. To attach this fastener E in position, one hook *h* is placed over the side *a* of one frame, the elastic band *j* is stretched toward the side *a* of the adjacent frame B, and the second hook placed over the said adjacent side *a* of the other frame. The elastic band *j* serves to compress or confine the folds of the fabrics between two frames B, so that they will clear the space to be embroidered.

Having fully described my invention, what I claim is—

1. In a frame B, the combination of the swiveled side bars *a a*, having angular end portions, with the end bars *b b*, socketed to

permit of the rotation of said side bars *a a*, and with keys D for locking said swiveled sides *a a* in position, substantially as described.

2. The frame B, having end bars *b b* and side bars *a a* swiveled to said end bars, combined with the keys D D for locking said side bars *a a* to prevent their turning and with the rods *e e* and clamps *f f*, substantially as described.

3. The combination, in an embroidering-frame, of the ends *b b* and sides *a a*, swiveled thereto, with means, substantially as described, for securing fabrics to said ends and sides and for stretching the fabrics while secured to said frame, substantially as described.

4. The combination of the frame B, having rotating sides with projections or ends, with the main frame A, having sockets F and springs *g*, said ends of frame B being adapted to be sprung into and held in the sockets F of said main frame, substantially as described.

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Witnesses:

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