(No Model.)

J. GRAF.

FABRIC HOLDING FRAME FOR EMBROIDERING MACHINES.

No. 490,111. Patented Jan. 17, 1893.

Fig: 1.

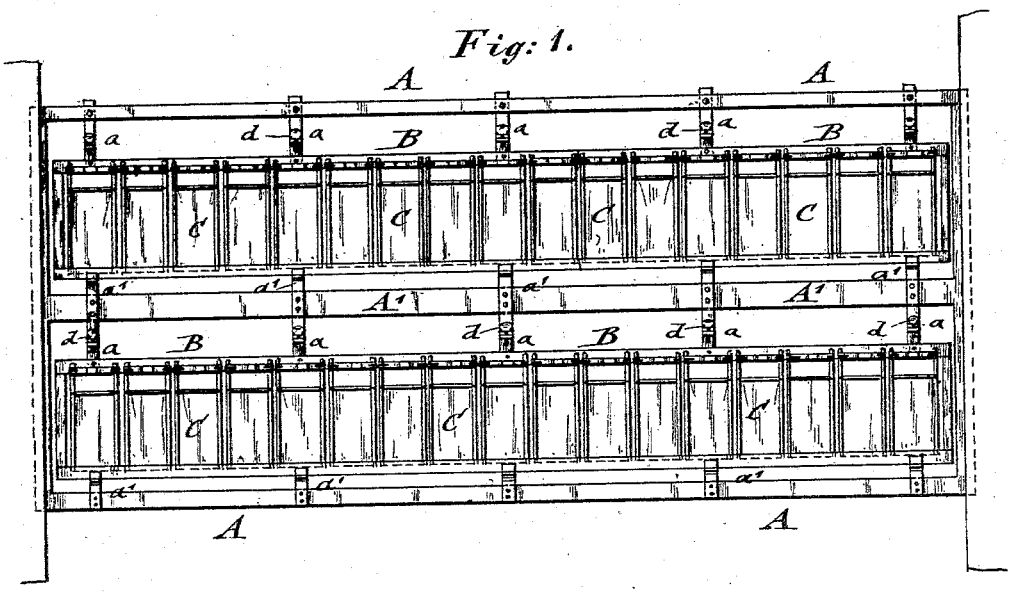

Fig: 2.

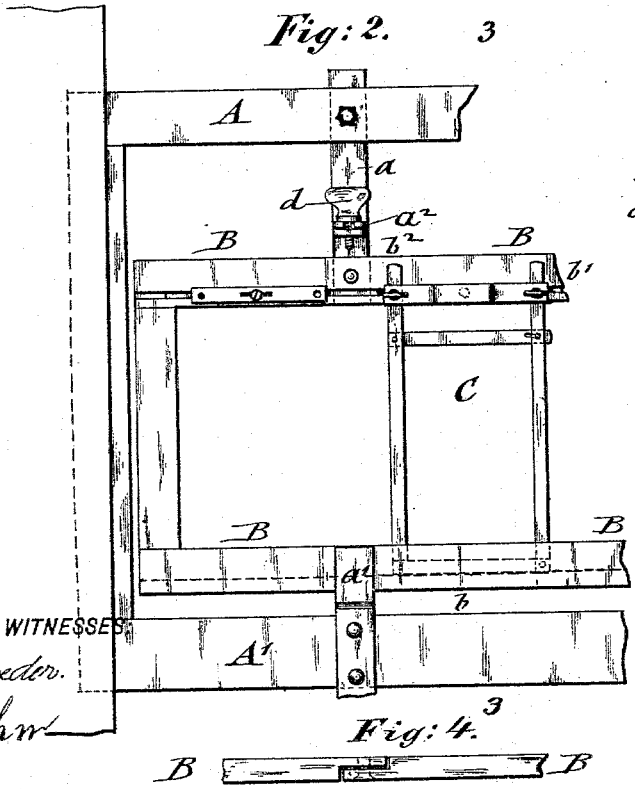

Fig: 3.

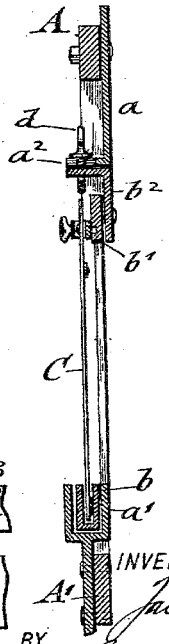

Fig: 4.

WITNESSES:
C. Schroeder.
W. Dühr

INVENTOR
Jacob Graf.
BY
Lagner & Raegener
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JACOB GRAF, OF NEW YORK, N. Y.

FABRIC-HOLDING FRAME FOR EMBROIDERING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 490,111, dated January 17, 1893.

Application filed June 7, 1892. Serial No. 435,844. (No model.)

To all whom it may concern:

Be it known that I, JACOB GRAF, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Frames for Embroidering-Machines, of which the following is a specification.

In the well known Swiss embroidery machines, the fabrics to be embroidered are applied to small fabric-holding frames which are attached to longitudinal bars of the main-frame and removed when the design is completely embroidered on the same. During the removal of the small frames, the embroidering-machine cannot be operated and consequently the time of the attendant in charge of the same, is not fully taken up, which produces a considerable loss in time and labor.

The object of this invention is to improve the Swiss embroidering machines in such a manner that a number of smaller fabric-holding frames are attached to a larger frame, which is removable from the machine and which is interchanged with a corresponding frame in the machine when the embroidering of the fabrics supported by the smaller frames is completed, so that the work of the embroidering machine is not interrupted for any length of time: and the invention consists of a fabric-holding frame for Swiss embroidering machines, the upper and lower bars of which are provided respectively with recessed brackets and supports, supporting supplemental frames, having U-shaped lower rails and L-shaped lugs attached to the upper rails and means for attaching the upper L-shaped lugs to the recessed brackets of the upper rail.

In the accompanying drawings, Figure 1 is a front-elevation of a fabric holding main-frame of an embroidering-machine, showing the arrangement of the supplementary frames and of the smaller fabric-holding frames attached to the latter. Fig. 2 is a front-elevation of a portion of the fabric-holding main-frame, drawn on a larger scale. Fig. 3 is a vertical transverse section on line 3 3, Fig. 2, and Fig. 4 is a detail, showing the connection of two adjacent supplementary frames with each other.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A A′ are the longitudinal bars of the fabric-holding main-frame, which bars are provided with flanged brackets and supports *a a′*, the main-frame being divided longitudinally into two or more sections by means of the longitudinal bars A′, which are likewise provided with flanged brackets and supports *a a′*. The supports *a′* of the intermediate bar A′ and of the lower bar A are made U-shaped in cross-section, while the brackets *a* at the upper part of the intermediate bars A′ are provided with forwardly-extending and recessed flanges a^2, which serve in connection with the supports *a′* to support several supplementary frames B on the bars of the main-frame. The supplementary frames B are made also of oblong shape, the lower rail *b* of the same being of U-shaped cross-section, while the upper rail *b′* is provided with L-shaped lugs b^2 that register with the brackets *a* of of the main-bars A A′, so as to be attached thereto by clamping screws *d* that engage the forwardly-extending flanges of the lugs b^2 and the recessed flanges of the brackets *a*.

For placing the supplementary frames B in position in the main-frame A A′, the lower rail is inserted into the U-shaped supports *a′* of the intermediate and lower bars A′ A, while the upper rail is clamped to the brackets *a* as shown in Figs. 2 and 3. Before inserting each supplementary frame B into the main-frame, the same is filled up with a number of smaller individual fabric-holding frames C, which may be of any suitable construction, said smaller frames being inserted into the lower U-shaped rail of the supplementary frames B and attached by separate clamping screws to the upper rail of the supplementary frame, as shown in Figs. 2 and 3. In this manner the supplementary frames B can be filled up with a set of smaller fabric-holding frames, before the embroidery of the fabrics supported by the frames in the machine is completed, so that the supplementary frames are ready for being placed in position in the main-frames, when the embroidering of the fabrics is completed.

The removing of the frames with the embroidered fabrics and the replacing of the same by frames with unembroidered fabrics, and the fastening of the latter to the main-frame of the machine require but a short

time and interrupt the work of the machine but little. The supplementary frames overlap each other at their adjacent ends and may be fastened together by screws if desired, as shown in Fig. 4.

The employment of a number of supplementary frames B has the advantage that a greater number of fabrics can be embroidered within a given time and the embroidering machine utilized to a greater extent and in a more advantageous manner than heretofore.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

In an embroidery-machine of the Swiss type, the combination, with the upper and lower bars of the fabric supporting main-frame, said bars being provided respectively with recessed brackets and U-shaped supports, of supplemental frames having U-shaped lower rails and L-shaped lugs attached to its upper rails and means for attaching the upper L-shaped lugs to the recessed brackets of the main-frame, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JACOB GRAF.

Witnesses:
PAUL GOEPEL,
CHARLES SCHROEDER.