(No Model.) 4 Sheets—Sheet 1.

T. D. EISNER.

FABRIC HOLDER FOR EMBROIDERING MACHINES.

No. 481,553. Patented Aug. 30, 1892.

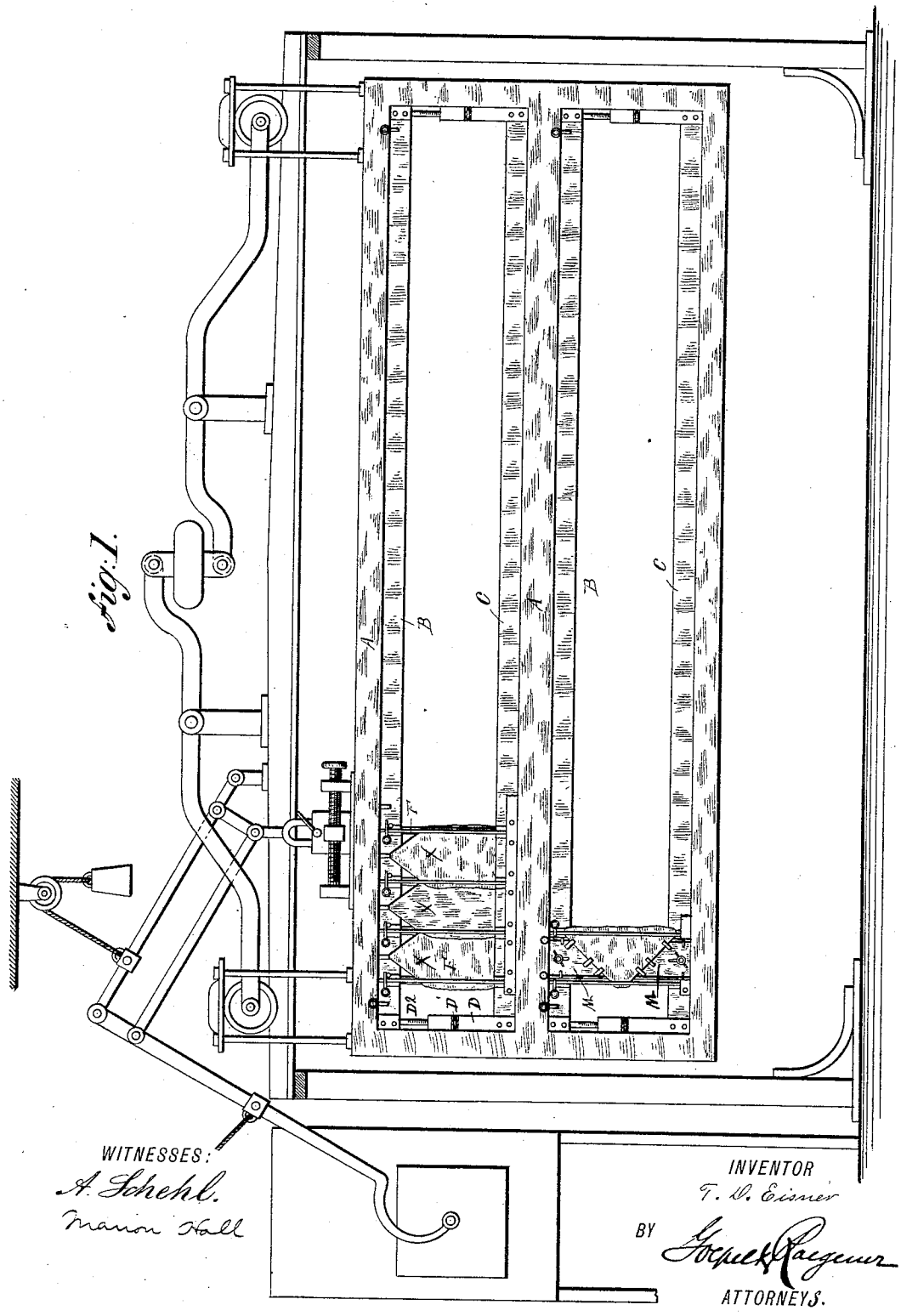


Fig. 1.

WITNESSES:
A. Schehl.
Marion Hall

INVENTOR
T. D. Eisner
BY Goepel & Paegener
ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 4 Sheets—Sheet 2.

T. D. EISNER.

FABRIC HOLDER FOR EMBROIDERING MACHINES.

No. 481,553. Patented Aug. 30, 1892.

Fig. 3.

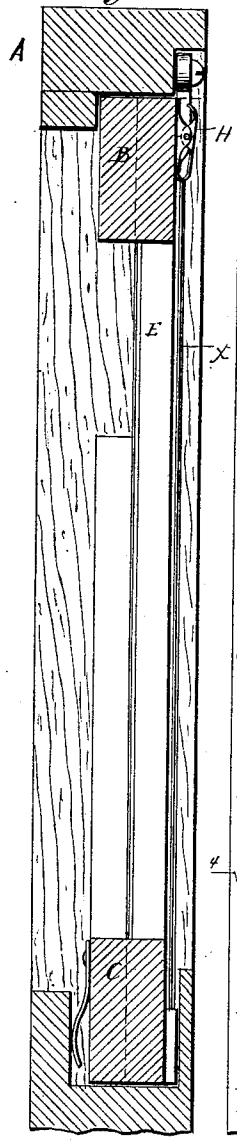


Fig. 2.

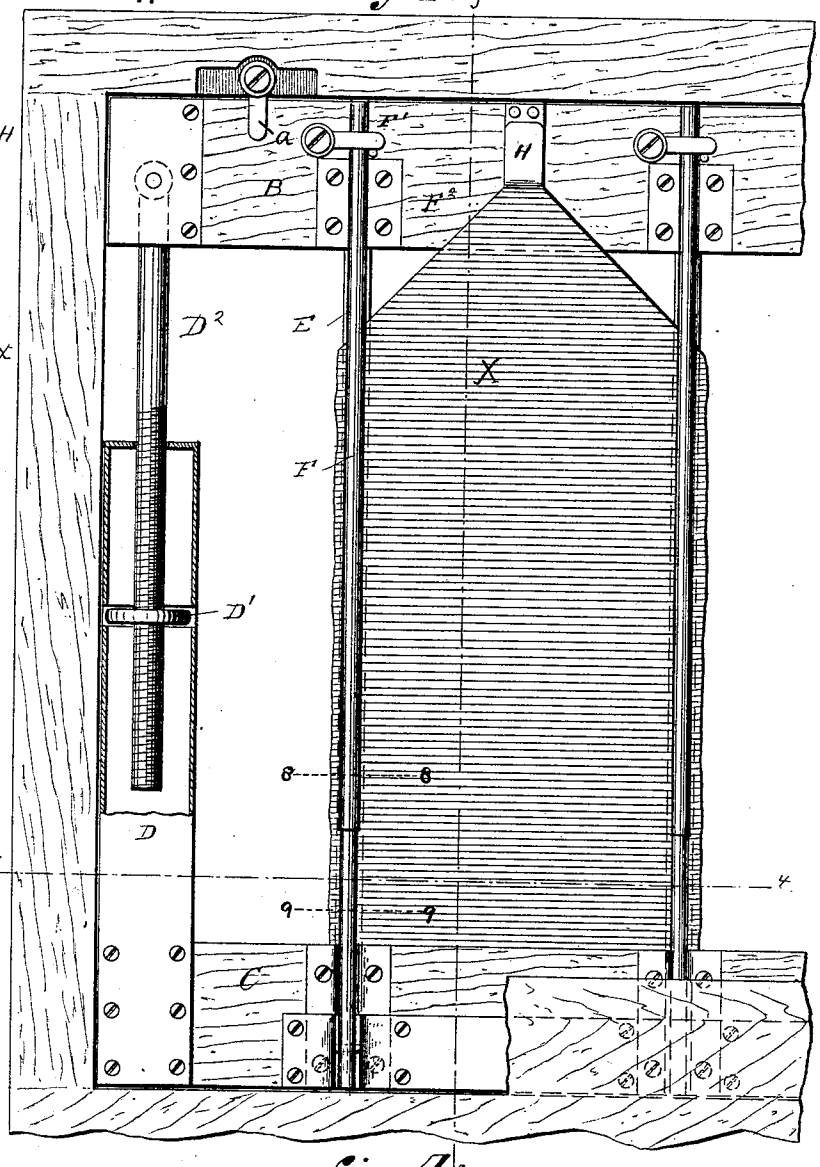
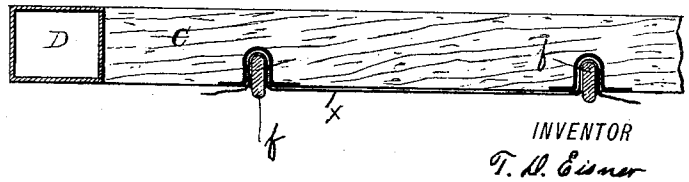


Fig. 4.



WITNESSES:
A. Schehl.
Marian Hall

INVENTOR
T. D. Eisner
BY Goepel & Raegener
ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 4 Sheets—Sheet 3.

T. D. EISNER.

FABRIC HOLDER FOR EMBROIDERING MACHINES.

No. 481,553. Patented Aug. 30, 1892.

Fig. 6.

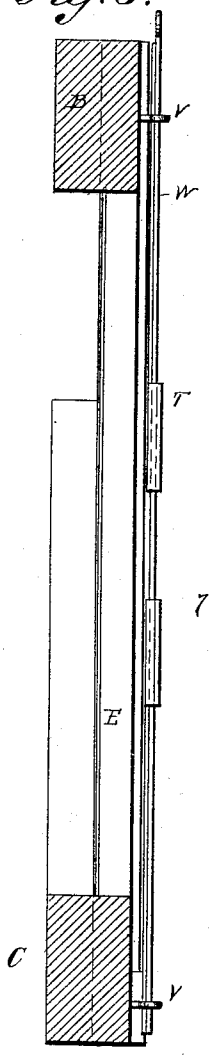


Fig. 5.

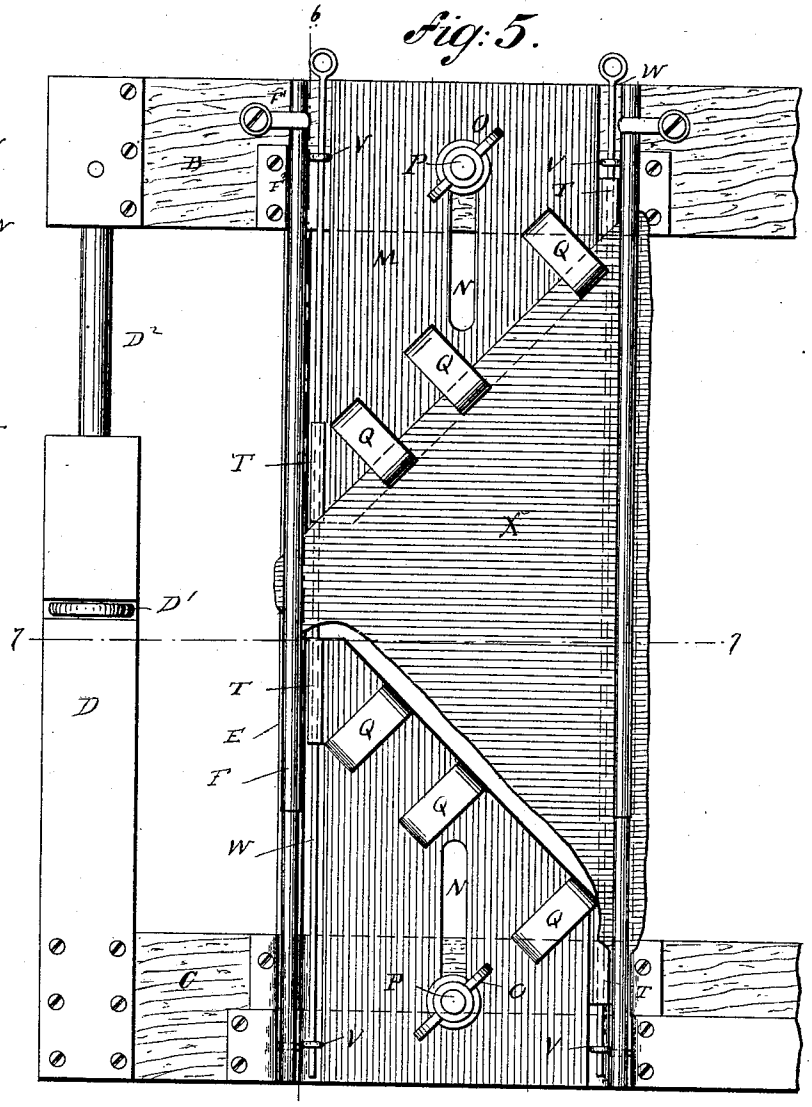
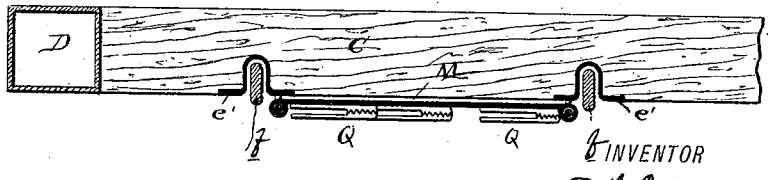


Fig. 7.



WITNESSES:
A. Schehl.
Marion Hall

INVENTOR
T. D. Eisner
BY Goepel & Weisgerber
ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 4 Sheets—Sheet 4.

T. D. EISNER.

FABRIC HOLDER FOR EMBROIDERING MACHINES.

No. 481,553. Patented Aug. 30, 1892.

Fig. 8.

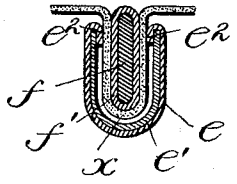


Fig. 9.

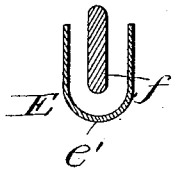
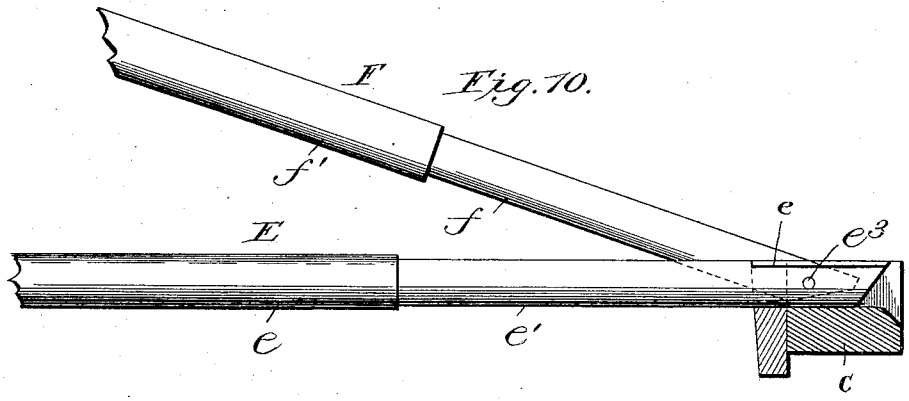


Fig. 10.



Witnesses
C. Allred
W. H. Nichols

Inventor
Theodor D. Eisner
By F. C. Somes
Associate Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THEODOR D. EISNER, OF BOSTON, MASSACHUSETTS.

FABRIC-HOLDER FOR EMBROIDERING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 481,553, dated August 30, 1892.

Application filed March 27, 1891. Serial No. 386,593. (No model.)

To all whom it may concern:

Be it known that I, THEODOR D. EISNER, a subject of the Emperor of Germany, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Holding-Frames for Embroidering-Machines, of which the following is a specification.

This invention relates to improvements in the well-known Swiss embroidery-machines; and the object of my invention is to provide new and improved frames for holding the corners of handkerchiefs, shawls, &c., in such a manner that the said corners can be embroidered.

The invention consists in the combination, with a tambour-frame, of rails fitting in the openings of the frame and adapted to be adjusted toward or from each other, sliding U-shaped bars secured to the rails, clamping-rods pivoted to one of the rails and adapted to be locked to the other, and spring-clamps for holding parts of the fabrics held between said clamping-bars.

The invention also consists in the construction and combination of parts and details, which will be fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of a Swiss embroidery-machine, in the tambour-frame of which a number of my improved folding-frames are arranged. Fig. 2 is an enlarged detail elevation of part of the tambour-frame and of one construction of my improved holders. Fig. 3 is a vertical transverse sectional view on the line 3 3 of Fig. 2. Fig. 4 is a horizontal sectional view on the line 4 4 of Fig. 2. Fig. 5 is an elevation of my improved fabric-holding device, showing the manner in which it is held in the frame. Fig. 6 is a vertical transverse sectional view on the line 6 6 of Fig. 5. Fig. 7 is a horizontal sectional view on the line 7 7 of Fig. 5, with fabric removed. Fig. 8 represents an enlarged transverse section of the cloth-clamping bars on line 8 8 of Fig. 2. Fig. 9 represents a transverse section of the clamping-bars on line 9 9 of Fig. 2, with the fabric removed. Fig. 10 represents a side elevation of a portion of said clamping-bars, the hinged bar being in raised position, the rail C being shown in cross-section.

Similar letters of reference indicate corresponding parts.

A represents a tambour-frame of a Swiss embroidery-machine, and the same is of the usual construction.

In the construction shown in Figs. 2, 3, and 4 two rails B and C are placed into each field or opening of the tambour-frame, the bottom rail C being provided at the ends with upwardly-projecting hollow standards D, containing a nut D′, through which a screw-rod D^2 is screwed, that is pivoted to the end of the upper rail B. By turning the said nuts D′ the bars or rails B and C can be moved toward or from each other, as may be necessary. Said rails fit in the spaces or openings in the tambour-frame and are held in place by the hinged buttons *a* on the upper rail B. The rails B and C are connected by a number of extensible clamping-bars E, each of said extensible bars being composed of a U-shaped rod *e*, attached at one end to the rail B, and a U-shaped bar *e′*, attached at one end to the rail C. One of these bars is slightly smaller than the other and slides freely in the latter, the larger bar being provided with a hooked flange e^2, which engages the upper edge of the smaller bar and holds it within the larger one.

Companion extensible clamping-bars adapted to co-operate with the extensible clamping-bars E, above referred to, are hinged to the rail C on the pivots e^3. Each of these hinged extensible bars F is composed of a bar *f* and a larger tubular bar *f′*, which slides over the bar *f*. The upper ends of the hinged extensible bars are held in recesses F^2 in the face of the upper rail B by the pivoted buttons F′. A clamp H is attached to the face of the upper rail between each two sets of clamping-bars. The edges of the handkerchiefs *x* or other like articles to be embroidered are placed upon the extensible U-shaped clamping-bars E in such positions that the corner to be embroidered is at the top rail B, said extreme corner being held by the spring-clamp H. The fabric is then stretched and the hinged extensible clamping-bars F are

swung down and pressed into the U-shaped extensible bars E and locked therein, whereby each handkerchief is securely clamped between the bars E and F and by the spring-clamp H. The rails B and C are then moved apart more or less by turning the nut D′ until said rails fit snugly in the corresponding opening in the tambour-frame. When the bars are so moved apart, the parts *e* and *e′* slide upon each other and permit the extension of the clamping-bar E, and the parts *f* and *f′* also slide upon each other and cause the extension of the hinged clamping-bar F. By this movement of the rails B and C the fabrics are further stretched.

In the construction shown in Figs. 5, 6, and 7 a sliding plate M, having a slot N and a diagonal inner edge, is arranged between each two sets of clamping-bars on the top and bottom rails, which sliding plates M can be adjusted a greater or less distance from each other by means of winged nuts O, mounted on screws P, projecting from the rails through the slots N of said plates M. A series of spring-clamps Q are fastened on the plates M to project over the diagonal edges of the same and serve to clamp and hold the edges of the fabric, as shown in Fig. 5. One corner of each piece of fabric is held by one of the clamping-bars F, as shown. The said plates M are provided with eyes T, through which wires W are passed, said wires being held in eyes V of the rails B C. With both constructions the handkerchiefs, shawls, &c., can readily be applied on the tambour-frame in such a manner as to conveniently present the corners that are to be embroidered, and a great quantity of such hankerchiefs or shawls can be applied on one tambour-frame.

The construction shown in Fig. 2 is adapted where the corner-ornament is small or of less width than length, whereas the construction shown in Figs. 5, 6, and 7 is more adapted for corner-ornaments that are circular or triangular in shape and in which the difference between the width and length is not so great.

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

1. In an embroidery-machine, the combination, with a tambour-frame, of rails fitting in the openings of the frame and means for moving them toward or from each other, U-shaped bars connecting the rails, clamping-bars fitting in said U-shaped bars, means for locking the free ends of the clamping-bars to one of the rails, and spring-clamps for holding part of the fabrics held between the clamping-bars, substantially as set forth.

2. In an embroidery-machine, the combination, with a tambour-frame having openings, of two rails fitting in said openings, hollow arms projecting from the ends of one of the rails, a nut in each hollow arm, screw-rods projecting from the other rail into the said hollow arms and passing through the nuts, U-shaped bars connecting the rails, hinged clamping-bars adapted to be pressed into said bars, means for locking the free ends of the clamping-bars to one of the rails, and spring-clamps for holding part of the fabric held between the clamping-bars, substantially as set forth.

3. In an embroidery-machine, the combination, with a tambour-frame having openings, of rails fitting in said openings, means for adjusting the rails toward or from each other, U-shaped bars secured to the rails, hinged clamping-bars adapted to be pressed into the U-shaped bars, adjustable plates held on the rails between the clamping-bars, which plates have their inner ends cut off diagonally, and spring-clamps on said plates at the diagonal edges thereof, 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.

THEODOR D. EISNER.

Witnesses:
PAUL GOEPEL,
CHARLES SCHROEDER.