(No Model.) 2 Sheets—Sheet 1.

H. HIGGIN.

METHOD OF APPLYING FABRICS TO FRAMES.

No. 537,889. Patented Apr. 23, 1895.

Fig. 1.

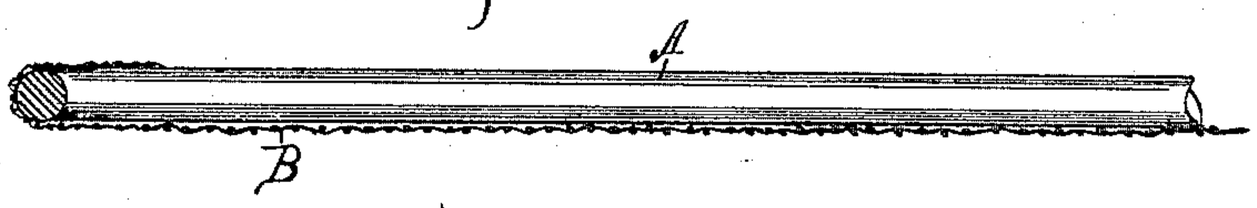


Fig. 2.

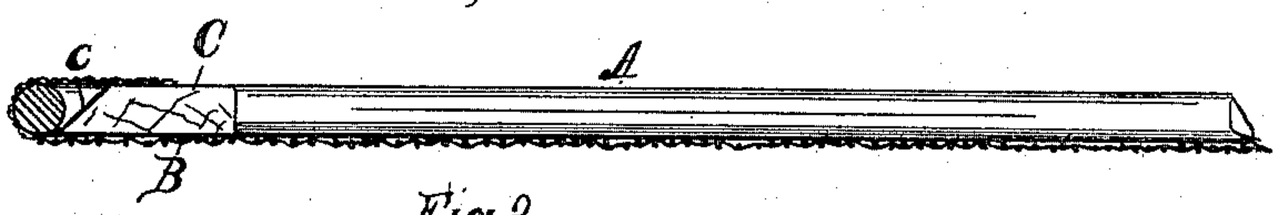


Fig 3

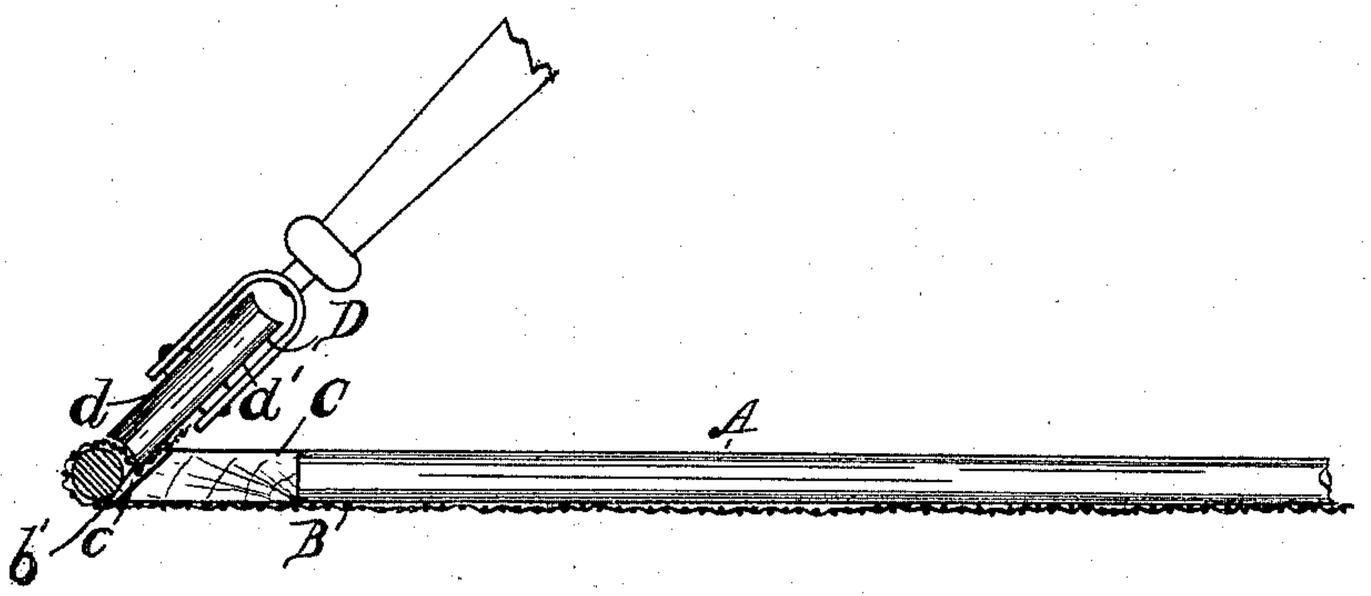


Fig. 4.

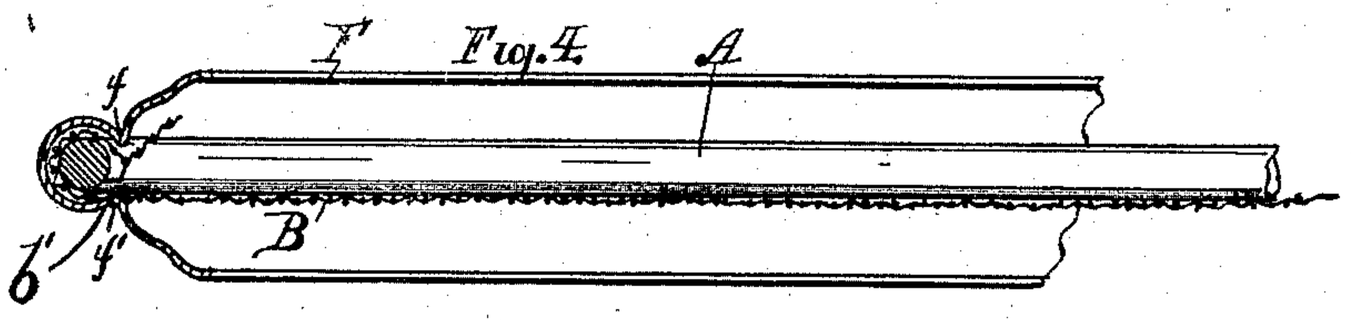
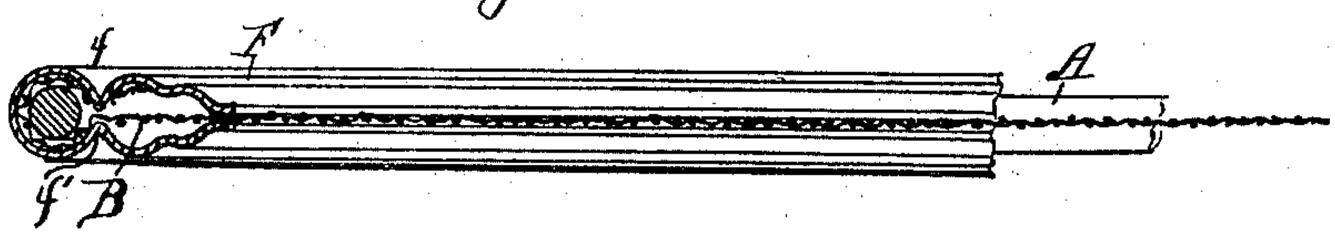


Fig. 5



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(No Model.) 2 Sheets—Sheet 2.

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METHOD OF APPLYING FABRICS TO FRAMES.

No. 537,889. Patented Apr. 23, 1895.

Fig. 6.

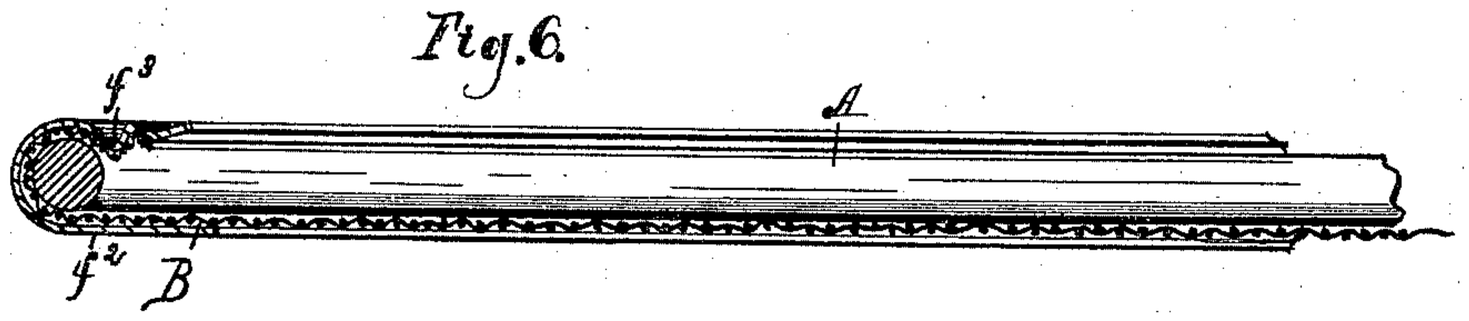
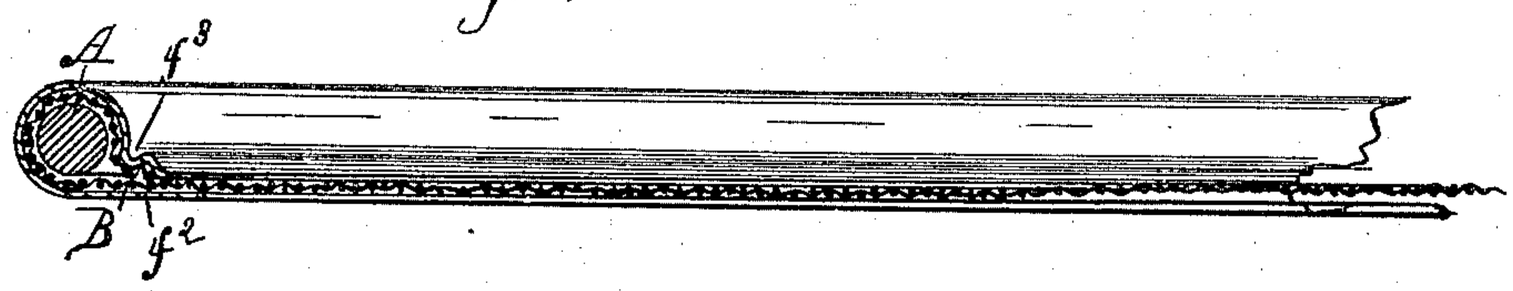


Fig. 7.



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METHOD OF APPLYING FABRICS TO FRAMES.

SPECIFICATION forming part of Letters Patent No. 537,889, dated April 23, 1895.

Application filed February 21, 1895. Serial No. 539,164. (No model.)

To all whom it may concern:

Be it known that I, HENRY HIGGIN, a citizen of the United States of America, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Methods of Stretching and Holding Semi-Flexible Materials or Fabrics on Frames, of which the following is a specification.

My invention relates to a method of stretching and securing semi-flexible material or fabrics, such as canvas, wire cloth, skins, &c., on frames. Heretofore great difficulty has been experienced in stretching such material on the frames upon which it is to be used, and holding it permanently taut.

The object of my invention is to provide an efficient method of stretching such material on frames and securing it when stretched and the invention consists in the method hereinafter described and claimed.

I have illustrated my method as applied to stretching and securing screen cloth on frames for the purpose of making window screens.

In the drawings, Figure 1 is a cross section of a screen and frame showing the screen cloth bent over the frame in position for being crimped. Fig. 2 is a sectional view of the same showing a former in position for operation. Fig. 3 is a view showing the frame, screen cloth and former in section and a roller for crimping the screen cloth. Fig. 4 is a cross section of the frame, screen cloth and molding adapted to take over the cloth and frame. Fig. 5 is a cross section showing the frame, screen cloth and molding as they appear in the completed screen. Fig. 6, is a view showing one form of the binding before clamping. Fig. 7, is a view showing the same after clamping.

In the manufacture of screens, a frame A, of the dimensions desired for the screen, is made, preferably of a single piece of wire. The frame is placed upon a sheet of screen cloth B, of a size to permit its edges being turned over the frame, as shown in Fig. 1. A guide or former, C, having a beveled edge *c*, is then placed on the screen cloth with its beveled edge adjacent to the frame, as shown in Fig. 2. The screen cloth is then pressed on the frame and crimped by means of a peripherally grooved roller, D, adapted to ride thereon and crimp the cloth by means of its projecting edges, *d*, *d'*. As the roller is passed over the frame the edge, *d'* bears on the lapping portion of the screen cloth and presses it against the beveled face of the former, crimping the cloth around the frame and forming a V-shaped bend, *b'*, therein. This operation partly binds the cloth and lays it evenly and smoothly on the frame. A molding or binding, F, preferably of sheet metal, having ribs or corrugations, *f*, *f'*, is then placed over the frame and pressed thereon by means of suitable pressure rolls which bring the ribs closely together, the rib, *f*, taking into the bend, *b'*, in the cloth and preventing it from slipping, while the rib, *f'*, bears against the face of the cloth and presses it into a central position, relatively to the frame, as shown in Fig. 5, thereby drawing the cloth taut and clamping it in position by the same operation.

The rib, *f'*, may be omitted and the fabric held and stretched by the agency of the other rib in the molding as shown in Figs. 6 and 7 in which, F, represents a molding having a flat leaf, f^2, and a rib, f^3, in the other leaf. The frame is placed on the cloth, the cloth lapped and bent, or crimped as before, and the molding placed about the frame with the rib f^3, taking into the bend in the cloth. The binding is then rolled or pressed, forcing the ribbed leaf of the binding inward and drawing the lapping edge of the cloth with it. This permits of stretching and holding the fabric flush with one face of the frame as shown in Fig. 7.

I claim—

The herein described method of stretching and securing semi-flexible material or fabrics to frames, consisting in lapping the edges of the material over the frame, making a bend in the lapping edge of the material, placing a ribbed molding or binding over the frame and edges of the material with a rib in engagement with the bend in the material, and clamping the leaves of the binding together, substantially as and for the purpose set forth.

HENRY HIGGIN.

Witnesses:
GEO. YOUTSEY,
GEO. WINTER.