

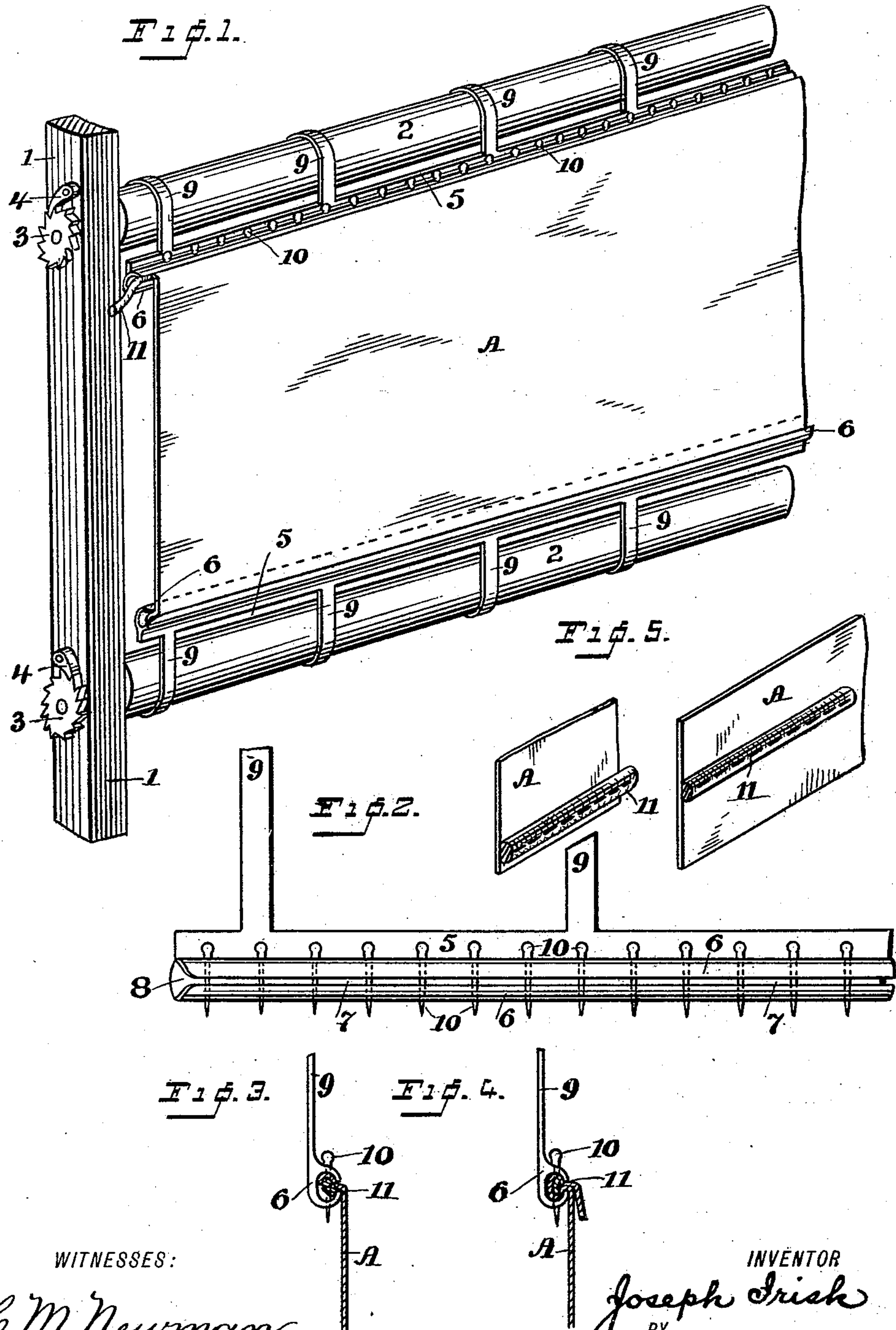
(No Model.)

J. IRISH.

FABRIC HOLDING FRAME FOR EMBROIDERING MACHINES.

No. 471,793.

Patented Mar. 29, 1892.



WITNESSES:

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FABRIC-HOLDING FRAME FOR EMBROIDERING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 471,793, dated March 29, 1892.

Application filed May 15, 1891. Serial No. 392,819. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH IRISH, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Fabric-Holding Frames for Embroidering-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in embroidering-machines of the general type used in the production of edging and embroidery upon silk, and in which the fabric is stretched upon a suitable support for presentation to a multiplicity of needles; and the object of my invention is to improve upon the present methods of inserting and holding the fabric in the machine, and also to provide means whereby a piece of goods may be removed from the machine and returned thereto for the continuation of the pattern, or may be embroidered in part upon one machine and then completed upon another machine; and with these ends in view my invention consists in the construction and combination of elements hereinafter fully explained, and then recited in the claims.

In order that those skilled in the art to which my invention appertains may fully understand its construction and method of operation, I will describe the same in detail, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 represents a fabric-holder constructed in accordance with my invention and containing a piece of fabric. Fig. 2 is a detail front elevation of a portion of the fabric-holder; Figs. 3 and 4, end elevations, partly in section, showing the fabric-holder with a piece of goods held therein; and Fig. 5, detail perspectives showing goods with the fastening-cord attached.

The same numerals and letters denote the same parts in all the figures.

In Fig 1 I show a portion of the movable frame which is a constituent element of ordinary Swiss embroidering-machines. One of the vertical ends of the frame is shown in the form of a post or bar 1, its companion being

omitted. Between these two posts are journaled rollers 2, each having means for holding it as against rotation in one direction—such, for instance, as the ratchet-wheel 3 and the pawl 4—adapted to engage it. All these are common and well known. 5 is a bar, in length substantially identical with the rollers 2. Upon its lower edge is formed or secured a tube 6, having either in its outer side or elsewhere a longitudinal slit 7, extending throughout its entire length. The end of the tube is flared slightly, as shown at 8, to facilitate the entrance of the fabric. Secured to the bar 5 at short intervals are flexible metallic ribbons 9 or leather or fabric straps or bands, whose ends are adapted to be attached either removably or permanently to the roller 2. The foregoing constitutes a complete and operative holding device; but I prefer to provide additional holding means, which consist of a series of perforations extending through the tube from top to bottom and adapted to admit pins 10, for purposes which will presently be fully explained. Upon the edge of the fabric (lettered A) or near said edge I stitch a cord 11.

In the operation of my invention I take the fabric, which has attached thereto the cord, and slip the latter into the flared end of the tube and then draw it along therein in such manner that the cord will lie within the tube and wholly or partially fill the same, and the fabric will protrude through the narrow slit. Where the cord is stitched upon the edge, a single fold of the fabric only issues from the slit; but where the cord is stitched at a little distance from the edge, as shown at the right hand of Fig. 5, the fabric is doubled over the cord, and then passed into the tube, where it is held in the manner shown at Fig. 4. When the fabric has been inserted, it is drawn smoothly in the direction of its length to remove any wrinkles or folds, and then the pins 10 may be passed downwardly through the holes in the tube and the fabric and cord therein contained, as shown at Fig. 1. When thus secured, the fabric is tightened by revolving the rollers 2, the ribbons or straps being wound upon the rollers, which latter are then held by means of the ratchet-and-pawl devices. The pins serve another purpose beside holding the fabric by acting as guides for the insertion of the goods when the latter

has been in part embroidered. The needles in ordinary embroidering-machines are set about one and nine-sixteenths inches apart, and I prefer that the holes for the pins shall
 5 correspond with the spacing of the needles, there being a hole for each needle or for each alternate needle, as may be found convenient.

When a piece of goods has been embroidered in part upon one machine and it is desired to
 10 complete it on another machine, it is difficult to joint the patterns perfectly by the methods now used for holding the goods. In my improvement, however, the fabric may be drawn in and the points for the entry of the needles
 15 accurately determined and spaced by the use of the holes as guides, and as fast as adjusted the goods may, if desired, be firmly secured by the pins.

In Fig. 1 I have shown the top and bottom
 20 rollers both provided with my improved form of holder; but the fabric may be attached to one roller, preferably the bottom one, either by winding it upon said roller or by any other suitable means of attachment. Furthermore,
 25 it is not vital that the roller provided with my holder should be revoluble, as all slack may be taken up by means of the lower roller. While I have shown the pins in connection with the other parts and consider them very
 30 useful as accessory thereto, they are not essential, since the hold of the slitted tube upon the goods is amply sufficient to retain the fabric.

I have shown the cords stitched upon the
 35 surface of the fabric; but it will of course be readily apparent that other means can be substituted therefor—as, for instance, the edge of the cloth may be rolled, thereby forming

an enlarged bead or edge which will not draw through the slit—or the edge of the cloth may
 40 be rolled about a small wire and held by the insertion of the latter into the tube. These are so obviously the equivalent of the cord that I deem it unnecessary to describe them further.

I claim—

1. In a machine of the character described, the combination, with the rollers 2 and means for turning and holding them, of the bar 5, having upon its lower edge the tube 6, slotted
 50 longitudinally upon its outside and throughout its entire length, and means, as described, secured at one end thereof to the bar and at the other end thereof to one of the rollers, whereby the tube may be drawn toward and
 55 parallel with the roller for the tautening of the fabric.

2. In a machine of the character described, the combination, with the rollers and means for turning and holding them, of the bar 5, 60 having upon its lower edge the tube 6, slotted longitudinally upon its outside for its whole length and provided with pin-sockets in its top and bottom, and connecting means, as described, secured at one end thereof to the bar 65 and at the other end thereof to one of the rollers, and pins 10, adapted to be inserted in the sockets and to hold the fabric within the tube, substantially as set forth.

In testimony whereof I affix my signature in
 70 presence of two witnesses.

JOSEPH IRISH.

Witnesses:

SHERMAN HARTWELL HUBBARD.
 M. C. HINCHCLIFFE.