

(No Model.)

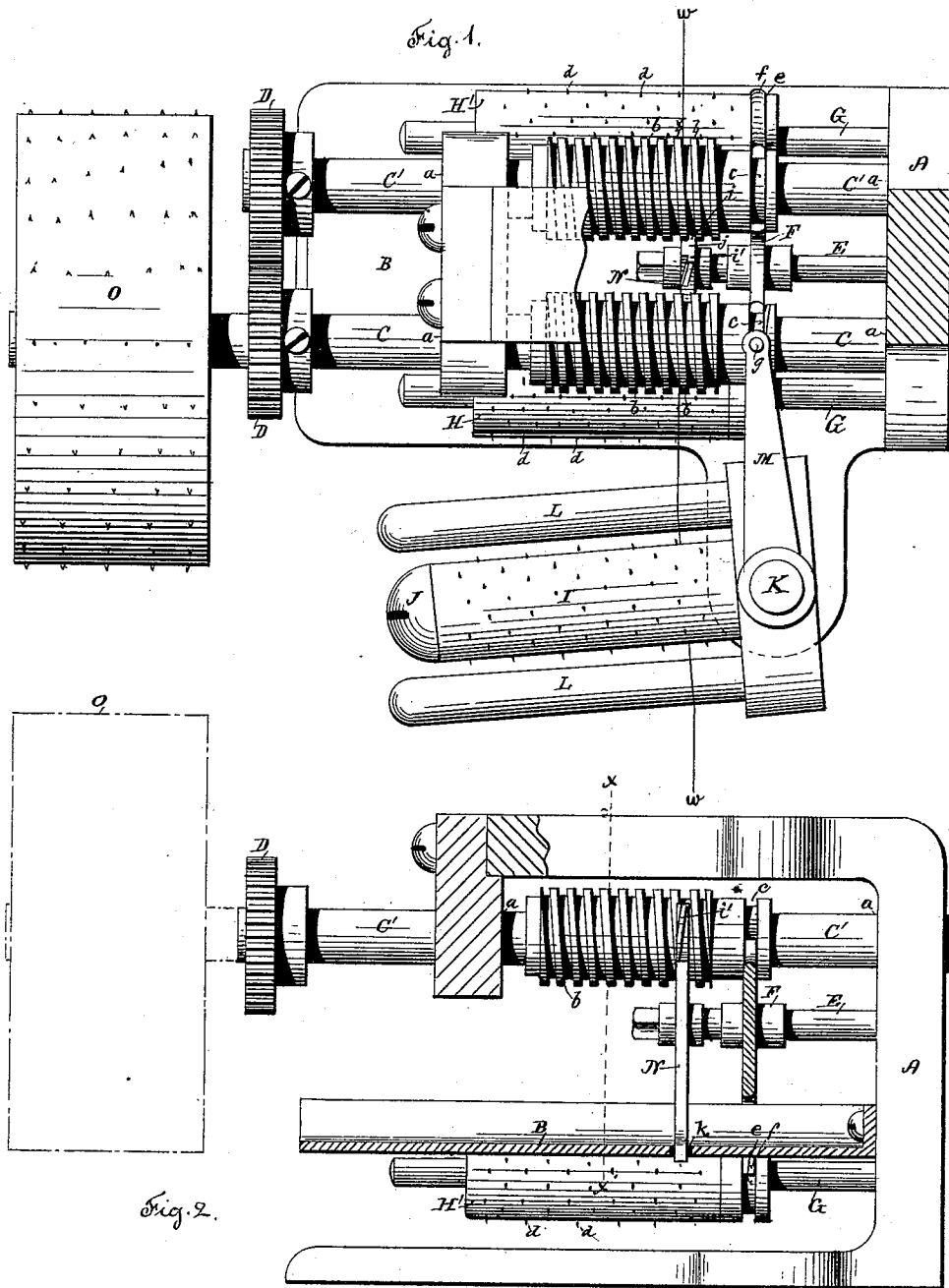
2 Sheets—Sheet 1.

J. J. SCHOLFIELD.

MECHANISM FOR GUIDING THE EDGES OF TEXTILE WEBS.

No. 463,551.

Patented Nov. 17, 1891.



Witnesses
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Fig. 3.

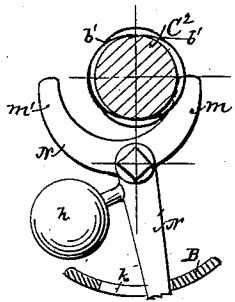
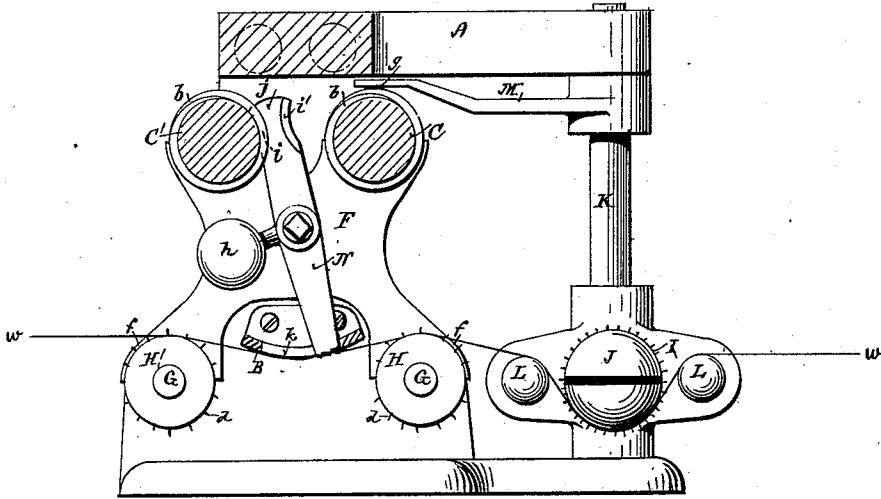


Fig. 4.

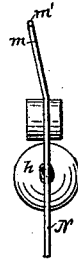


Fig. 5.

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UNITED STATES PATENT OFFICE.

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MECHANISM FOR GUIDING THE EDGES OF TEXTILE WEBS.

SPECIFICATION forming part of Letters Patent No. 463,551, dated November 17, 1891.

Application filed May 26, 1890. Serial No. 353,231. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH J. SCHOLFIELD, a citizen of the United States, residing at Providence, in the State of Rhode Island, have invented a new and useful Improvement in Mechanism for Guiding the Edges of Textile Webs, of which the following is a specification.

In guiding the edges of textile webs to the various finishing-machines automatically it is desirable to provide a guiding mechanism of simple and durable construction; and to this end my invention consists in a guide-roller operatively connected with a movable screw, in combination with a counterbalanced detector, which is operated into engagement with the thread of the screw to cause an endwise movement of the screw, and the proper guiding movement of the roller, by the engagement of the detector with the running edge of the web, as hereinafter fully set forth.

Figure 1 represents a top view of my improved web-guiding mechanism, a portion of the frame being broken away to show the construction of the movable parts. Fig. 2 represents a sectional view, the guide-roller shown in Fig. 1 being removed, and the remaining parts shown in elevation. Fig. 3 represents a vertical section (certain parts being shown in elevation) taken in the line *xx* of Fig. 2. Fig. 4 represents a similar detail section, showing a modification. Fig. 5 represents an edge view of the detector shown in Fig. 4.

In the accompanying drawings, A represents the frame, and B the detector-plate under which the web is to be drawn. The screw-shafts C C' are operatively connected by means of the gears D D and are adapted to slide within the bearings *a a* of the frame, and are each provided with a screw-thread *b* and with the annular groove *c*, and upon the shaft C is placed the driving pulley or roller O, which may be set with spurs or provided with a frictional surface adapted to engage with the running web, and upon the stud E is placed the sliding guide F, which is provided with recesses adapted to fit within the grooves *c* of the shafts C C'. Upon the studs G G, which project from the frame A parallel with the shafts C C', are placed the sliding guide-rollers H H', which are preferably set with spurs *d d*, adapted to engage with the fabric, and

provided with the annular groove *e*, which is adapted to receive the arm *f* of the sliding guide F, so that whenever the shafts C C' are moved in either direction a corresponding movement will be imparted to the guide-rollers H H'. The guide-roller I is adapted to revolve loosely upon the stud J, which partakes of the angular movement of the upright shaft K, and at each side of the guide-roller I are placed the guide-rods L L. At the upper end of the shaft K is secured the arm M, which projects over the shaft C and is provided with a pin *g*, which enters the groove *c* in the shaft, so that upon the endwise movement of the shaft in either direction a corresponding angular movement will be imparted to the guide-roller I.

The detector N is pivoted to the end of the stud E, and is provided with the counterbalancing-weight *h*, so that when not in engagement with the edge of the fabric the upper end *j* of the detector will be in engagement with the screw-thread *b* of the shaft C', the said detector being provided with an inclined feather *i*, which is adapted to enter the space between the threads *b* of the screw to cause the endwise movement of the shafts C C' until the edge of the fabric has been brought by the action of the guide-roller into engagement with the lower end of the detector, and then the forward movement of the web will cause the feather *i'* at the upper end *j* of the detector, to be carried into engagement with the screw-thread *b* of the shaft C, which will cause the movement of the shafts C C' in the opposite direction, and a corresponding opposite movement of the guide-roller to check the variation in the running edge of the web and carry the same back to the true line.

The lower end of the detector N projects downward through a slot *k* in the detector-plate B, against which the fabric is held by its tension when being drawn through the machine. The web, as shown by the line *w* in Figs. 1 and 3, is first threaded over the guide-rods L L, and under the guide-roller I, thence over the guide-rollers H H', and under the intermediate detector-plate B.

A modification of my invention is shown in Fig. 4, in which a single screw C² is employed, the same being provided with right-hand and

left-hand grooves $b'b'$, with which the forked end of the detector N is made to engage, the resulting movement of the guide-roller being as before. The forked arms $m m'$ of the detector may be made of the proper thickness and inclination to enter the opposite grooves of the screw, as shown in Fig. 5, so that when the arm m is thrown into engagement the screw will be moved in one direction, and when the opposite arm m' is thrown into engagement the screw will be moved in the opposite direction, a corresponding opposite movement being thus imparted to the guide-roller.

In carrying out my invention to guide webs of cloth it is common to duplicate the automatic guiding devices, one set of said devices being located at each side of the machine.

I do not in this application claim the combination, with a guide for supporting the edge portion of the web, of the detector having its engaging end or shoe presented to the upper surface of the fabric, the same having been claimed in my pending application, Serial No. 353,846.

I claim as my invention—

1. The combination, with a direct-moving guide-roller adapted to carry the edge of the web to the true line, of an endwise-moving screw for imparting the direct regulating movement to the guide-roller, an operative connection between the screw and the guide-roller, and a detector, which engages with the

screw to produce the required regulating movement, substantially as described.

2. The combination, with a pivoted guide-roller adapted to guide the edge of the web to the true line, of an endwise-moving screw for imparting an angular regulating movement to the guide-roller, an operative connection between the screw and the guide-roller, and a detector which engages with the screw to produce the required regulating movement, substantially as described.

3. The combination, with the direct-moving guide-roller and the pivoted guide-roller, of the endwise-moving screw, an operative connection between the screw and the said guide-rollers, and the detector adapted to engage with the screw to cause the required regulating movement of the guide-rollers, substantially as described.

4. The combination, with a guide-roller, an endwise-moving screw, an operative connection between the screw and the guide-roller, and a driving-roller adapted to engage with the running web, of a detector adapted for engagement with the screw to cause an endwise movement of the same and the regulating movement of the guide-rollers, substantially as described.

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Witnesses:

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