

(No Model.)

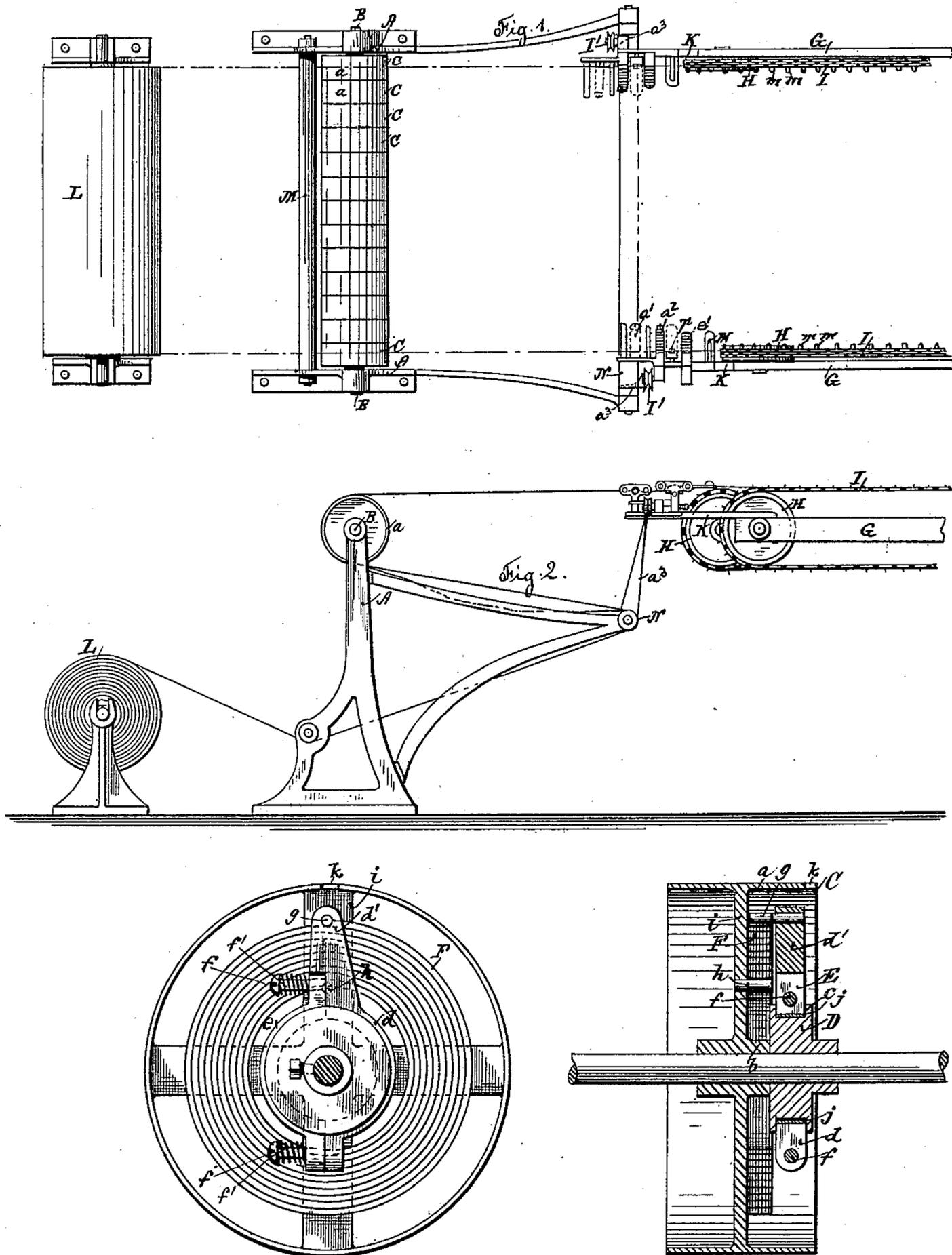
3 Sheets—Sheet 1.

J. J. SCHOLFIELD.

CLOTH GUIDING ATTACHMENT FOR TENTERING MACHINES.

No. 463,553.

Patented Nov. 17, 1891.



Witnesses  
 Chas. F. Schmelz  
 Mark A. Heath

Fig. 4. Inventor  
 Joseph P. Scholfield  
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(No Model.)

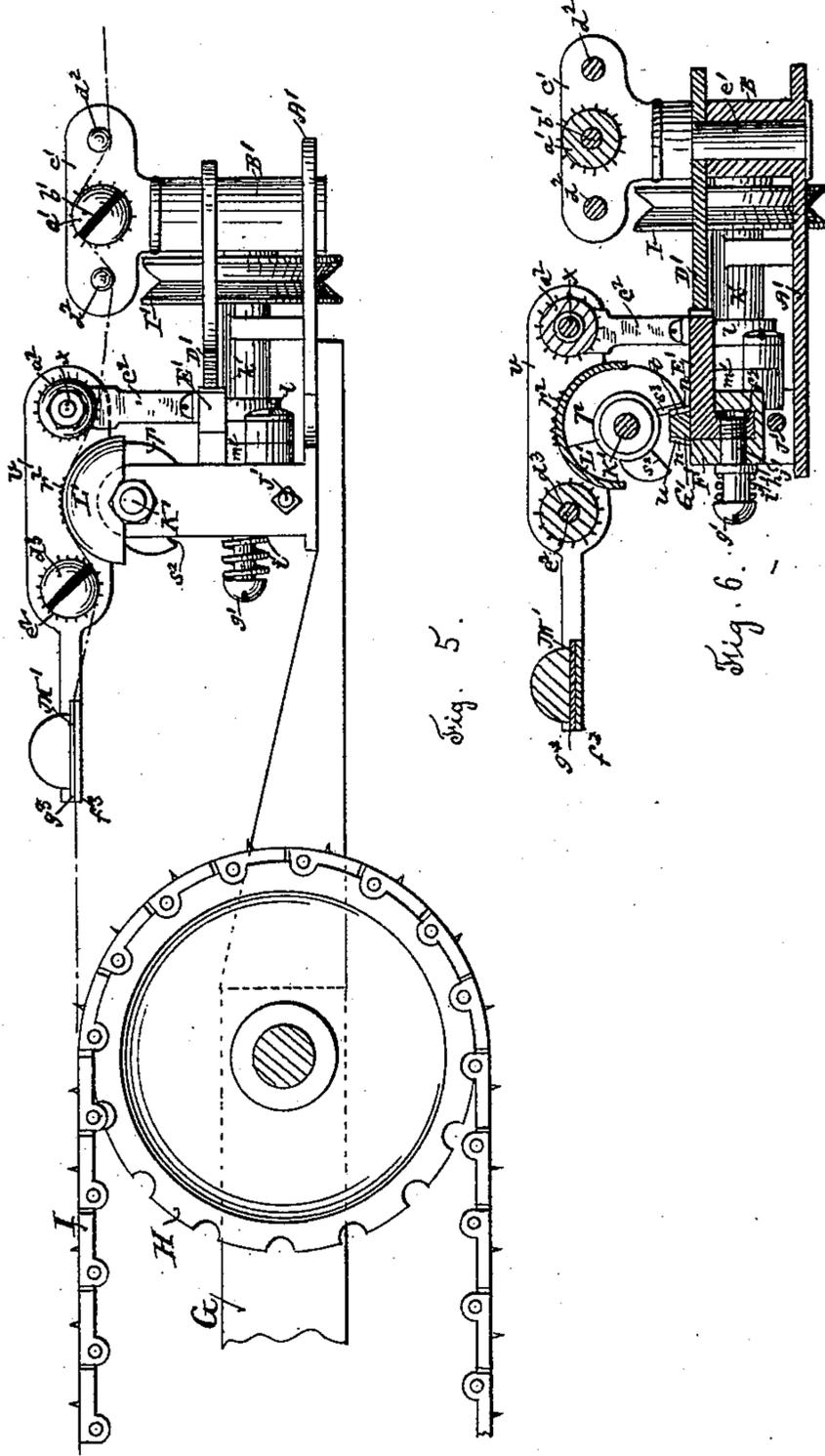
3 Sheets—Sheet 2.

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CLOTH GUIDING ATTACHMENT FOR TENTERING MACHINES.

No. 463,553.

Patented Nov. 17, 1891.



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(No Model.)

3 Sheets—Sheet 3.

J. J. SCHOLFIELD.

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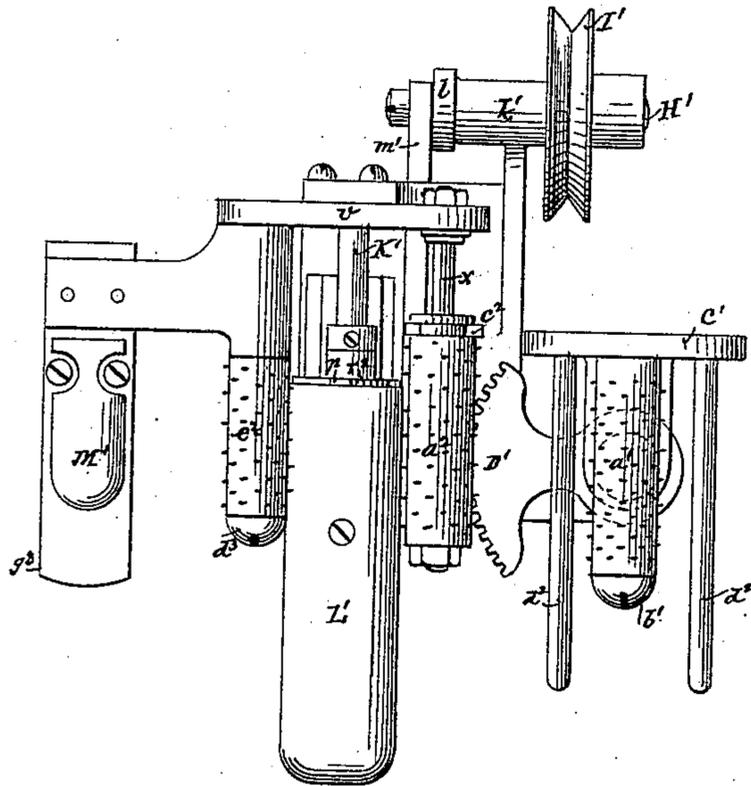


Fig. 7.

Witnesses

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# UNITED STATES PATENT OFFICE.

JOSEPH J. SCHOLFIELD, OF PROVIDENCE, RHODE ISLAND.

## CLOTH-GUIDING ATTACHMENT FOR TENTERING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 463,553, dated November 17, 1891.

Application filed June 28, 1890. Renewed June 22, 1891. Serial No. 397,136. (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 Cloth-Guiding Attachments for Tentering-Machines, of which the following is a specification.

My invention consists in the employment of reaction-wheels for holding the web in a properly-extended condition as the web is being fed onto the hooks or clips of the reciprocating chains of the tentering-machine, as hereinafter fully set forth.

Figure 1 represents a plan view showing the batch-roll, the reaction wheels or rollers, the edge-guiding machines, and the vibrating chains. Fig. 2 represents a side elevation of the same. Fig. 3 represents a side view, and Fig. 4 the axial section, of one of the reaction-wheels. Fig. 5 represents an enlarged elevation of the edge-guiding mechanism. Fig. 6 represents an enlarged vertical section, and Fig. 7 an enlarged top view of the same.

In the accompanying drawings, A A represent the upright standards, which serve to support the fixed shaft or rod B, upon which are placed a series of reaction-wheels C C C, which are preferably constructed with a wheel *a*, made loose upon the rod B, and upon the rod B, at one side of the hub *b* of the wheel *a*, is secured the stationarily-held friction-wheel D, which is provided with a groove *c*, adapted to hold the friction-strap E, the said strap being made in two parts *d* and *e* and adjustably held upon the wheel D by means of the adjusting-screws *f f* and springs *f'* to friction the periphery of the wheel *a*. The arm *d'* is made to extend outward from the part *d* and is provided with the pin *g*, upon which is secured one end of the volute spring F, the opposite end of the same being secured to the pin *h*, which projects from the arm *i* of the wheel *a*.

Between the parts *d* and *e* of the friction-strap E and the periphery of the friction-wheel D in the groove *c* is placed a strip of felt or other suitable material *j*, adapted to hold the oil for lubricating the friction-joint, and a suitable hole for reaching the same for oiling purposes can be provided at *k* in the rim of the wheel C. The wheels C may be

provided upon their peripheries with a covering of rubber or other material adapted to create suitable friction with the web to cause the proper rotation of the said wheels, and the said wheels can be either set close together upon the rod B, as shown in Fig. 1, or be set at any desired distance apart upon the said rod.

To the oppositely-moving reciprocated bars G G, which carry the end pulleys H H for the chains I I at the opposite sides of the machine, are secured the brackets K K, which are to support the automatic mechanism for guiding the edge of the web onto the hooks or clips *m m* of the said chains, the said mechanism consisting, essentially, of the pivoted guide-roller *a'*, the endwise-moving guide-roller *a''*, and the detector *p*, which engages with the edge of the web, as shown by the broken lines which extend from the batch-roll L over the reaction wheels C C and forward to the chains I I, the movement of the said detector being adapted to cause a regulating movement of the said guide-rollers, as set forth in my Letters Patent of the United States, No. 402,483, and in my pending applications for Letters Patent, Serial Nos. 352,054 and 353,846, to which reference is made for a complete description of the same. The hooks or clips *m m* of the chains I I being caused to move progressively forward and the chain-supporting pulleys H H being reciprocated in opposite directions, as usual in tentering-machines, the web will be drawn progressively from the batch-roll L over the reaction-wheels and in contact with the guide-rollers and the detector of the web-guiding mechanism at each side of the machine, and when one edge of the web is being drawn forward by the forwardly-directed movement of the chain-carrying pulley H at one side of the machine, an additional movement of rotation will be imparted to the reaction-wheels C at that side of the axis of the web, while upon the opposite side of the machine the slack of the web due to the reverse movement of the chain-carrying pulley H at that side of the machine will be taken up by the reaction and consequent slower or reverse movement of the wheels C upon that side of the axis of the web, due to the resilient action of the spring F, thus keeping the edge of the web in a

properly-tightened condition to insure the correct action of the guide-rollers, which would otherwise be caused to operate imperfectly, the slack edge of the web being first  
5 thrown to one side and then to the other at the back of the reaction-wheels C, and between the said wheels and the deflecting-roller N, as shown in Fig. 2, the web being kept in a uniformly-tightened condition at its en-  
10 gagement with the guide-rollers of the web-guiding mechanism which reciprocate with the chains I I of the tentering-machine.

The automatic mechanism which serves to operate the guide-rollers is shown enlarged  
15 in Figs. 5 and 6, in which A' is the bed-plate to which the mechanism is attached, B' an upwardly-projecting hub, within the cavity of which is pivoted the supporting-head c' for the guide-roller a', which has its periph-  
20 ery set with spurs, the said roller being held for rotation upon the screw-stud b', which is secured to the head c', the said head being also provided with the guide wires or fingers d<sup>2</sup> d<sup>2</sup>, and the angular movement of the guide-  
25 roller a' upon the pivot e' in either direction will serve to cause a corresponding change in the position of the running edge of the web.

To the pivot-stem e' is firmly secured the segment-gear D', which engages with the  
30 rack-piece E', the said rack-piece being frictionally held in the groove f<sup>2</sup> of the reciprocating slide F' by means of the screw g', washer h', and spiral spring i', the said screw being made to pass through the slot j' in the  
35 said slide. To the upper side of the shank portion of the rack-piece is secured the steel bar G', provided on its opposite sides with notches n n, which at the opposite sides of  
40 the bar are inclined in opposite directions.

Within the bearing k', formed upon a pro-  
45 jection of the base-plate A', is placed the driving-shaft H', upon one end of which is secured the driving-pulley I', and at the opposite end of the shaft is placed the crank l, from which operative connection is made with  
the slide F' by means of the connecting-rod m', the said slide being held for reciprocation upon the guide-rod J'.

Upon the fixed rod K' is attached the cy-  
50 lindrically-curved plate L', at the base of which, and loosely upon the said rod is arranged the single detector p, provided with spurs r<sup>2</sup>, adapted for frictional engagement with the edge of the fabric, and also pro-  
55 vided with the beveled edges s<sup>2</sup> and s<sup>3</sup>, which are adapted to engage with the notches of the bar G', to cause the required movement of the said bar. The detector p is over-  
weighted at one side, so that the beveled  
60 edge s<sup>3</sup> will fall by gravity into engagement with the notches n upon the edge t of the bar G, while the reversely-beveled edge s<sup>2</sup> will be held away from contact with the notches n of the edge u of the said bar.

Upon a fixed stud x, secured to the bar v, 65 attached to the frame, is placed the loosely-revolving guide-roller a<sup>2</sup>, which is set with spurs, as in the roller a', and provided with an annular groove adapted to receive the guid-  
ing-fork c<sup>2</sup>, attached to the rack-piece E' and 70 moving therewith, so that whenever movement in either direction is imparted to the said rack-piece a corresponding movement will be imparted to the roller a<sup>2</sup> in the direc-  
75 tion of its axis. Upon the screw-stud d<sup>3</sup>, se- cured to the bar v at the opposite side of the cylindrically-formed plate L', is placed the loosely-revolving holding-roller e<sup>2</sup>, which is also set with spurs, as in the case of the guide-  
80 rollers a' a<sup>2</sup>, and at the extremity of the bar v is secured the fixed supplementary guide M', provided with the jaws g<sup>3</sup> f<sup>3</sup>, from which the edge of the web is delivered to the chains I. When the edge of the web is running forward,  
85 as shown by the broken lines in Fig. 1, and touching the spurs r<sup>2</sup> of the detector, the beveled edge s<sup>2</sup> will be caused to engage with the notches of the edge u of the bar G' to cause a regulating movement of the guide-rollers,  
90 and upon the inward movement of the edge of the web away from contact with the spurs r<sup>2</sup> the detector will turn by gravity, so that the beveled edge s<sup>3</sup> will engage with the notches upon the edge t of the bar G' to cause  
95 the movement of the said bar in the opposite direction to carry the running edge of the web back to the proper line by the resulting movement of the guide-rollers a' a<sup>2</sup>, as fully de-  
scribed in my said Letters Patent No. 402,483.

The guiding mechanism, as above described, 100 may be driven from the periphery of the web-deflecting roller N by means of the belt a<sup>3</sup>, which passes over the pulley I', and either one or both of the guide-rollers a' a<sup>2</sup> may be employed to guide the edge of the web to the  
105 chain.

I claim as my invention—

1. The combination, with the reciprocating chains having pins or clips adapted for en-  
110 gagement with the edge of the web, of automatic reacting wheels adapted to preserve a tightened condition of the edges of the web when passing onto the pins or clips of the chain, substantially as described.

2. The combination, with the chain, a guide-  
115 roller, and a detector which reciprocate together at one side of the machine and are adapted for engagement with the edge of the web, of a reacting wheel adapted to preserve a tightened edge for proper engagement with  
120 the guide-roller, detector, and chain upon the backward movement of the same, substantially as described.

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