

(No Model.)

2 Sheets—Sheet 1.

J. C. WHITTLES.

SSELVAGE GUIDE FOR CLOTH TENTERING MACHINES.

No. 499,072.

Patented June 6, 1893.

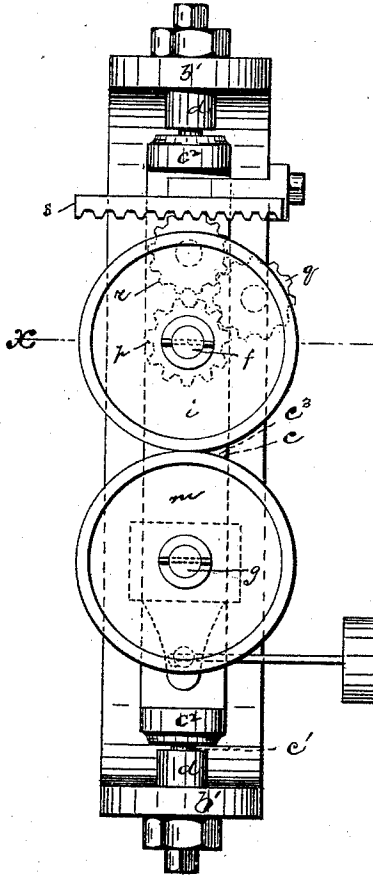


Fig. 1.

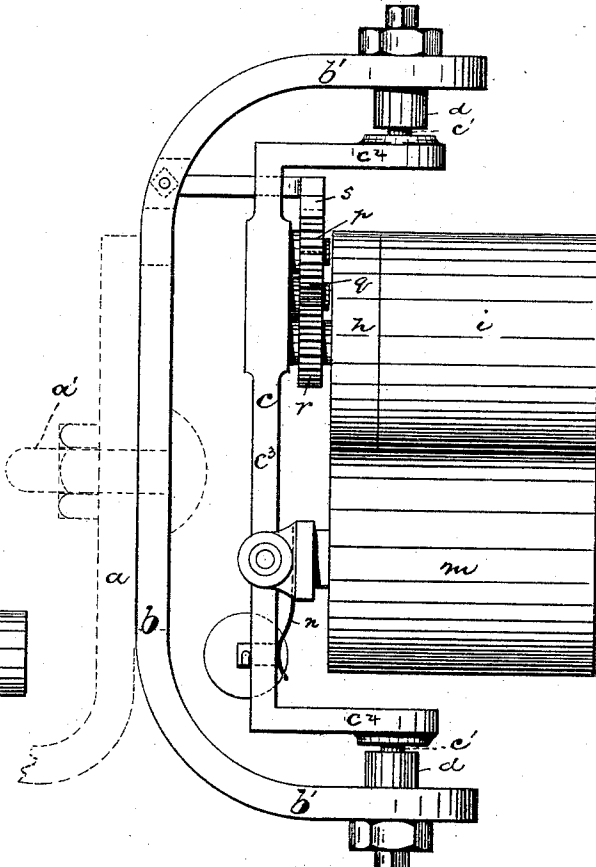


Fig. 2.

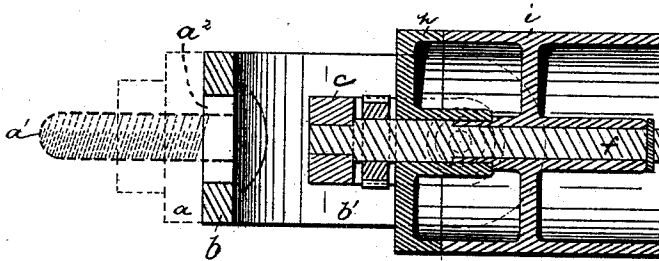


Fig. 3.

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2 Sheets—Sheet 2.

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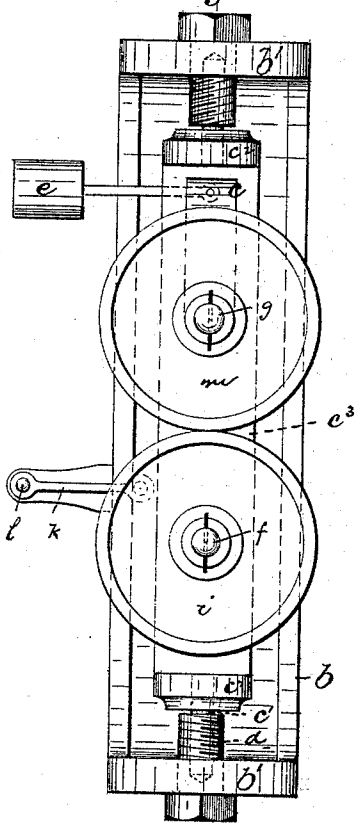


Fig. 4.

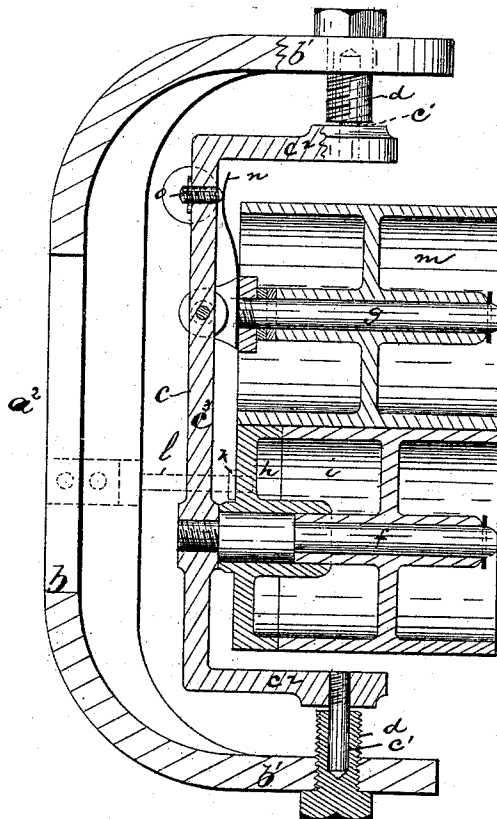


Fig. 5.

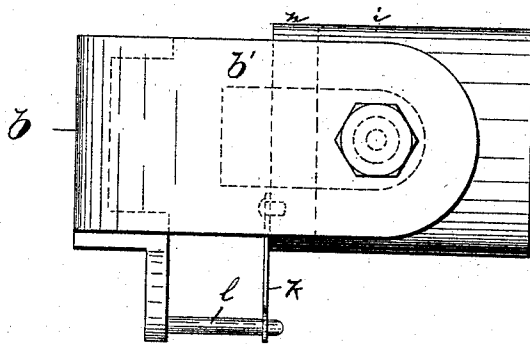


Fig. 6.

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UNITED STATES PATENT OFFICE.

JEREMIAH CLARE WHITTLES, OF KEARNEY, NEW JERSEY.

SELVAGE-GUIDE FOR CLOTH-TENTERING MACHINES.

SPECIFICATION forming part of Letters Patent No. 499,072, dated June 6, 1893.

Application filed January 2, 1892. Serial No. 416,806. (No model.)

To all whom it may concern:

Be it known that I, JEREMIAH CLARE WHITTLES, a citizen of the United States, residing at Kearney, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Selvage-Guides for Cloth-Tentering 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to automatically guide cloth onto a drying or tentering machine whereby the said cloth is evenly and regularly disposed in said machine and prevented from working laterally out of proper relative position.

The invention consists in the improved guiding attachment and in the arrangements and combinations of parts thereof substantially as will be hereinafter set forth and finally embodied in the clauses of the claim.

Referring to the accompanying drawings in which like letters indicate corresponding parts in each of the several views, Figure 1 is a side view of the improved attachment. Fig. 2 is a front view and Fig. 3 is a sectional view of the same taken on line x Fig. 1. Figs. 4, 5 and 6 are views showing another variety of construction which is in many cases preferred, Fig. 4 being a view similar to Fig. 1, Fig. 5 a section of the same on line y , Fig. 4, and Fig. 6 an end view.

In said drawings, a indicates a bracket or fixture of a tentering or cloth drying machine through which latter the cloth is caused to travel slowly and be stretched and dried in any ordinary manner. To said fixture my improved attachment is secured by a bolt, a' , or by other suitable means. Of said attachment, b indicates a bed, which is preferably slotted horizontally, as at a^2 , to receive the said bolt, a' , and admit of an adjustment of said bed as will be understood. The said bed is provided with arms b' , b' , between which a carrier, c , is pivotally centered.

The construction of the pivotal bearings is shown clearly in Fig. 5, where d , d , indicate

hollow screws adjusted in said arms b' , b' , forming journal boxes or bearings, and c' , c' , are pivotal pins or screws adjusted in the arms c^2 , c^2 , of the carrier and extending outwardly into the said hollow screws d , d , said pins having conical extremities which engage corresponding bearings in said screws. The connecting bar or portion c^3 of the carrier is eccentric in its relation to the pivotal centers and has a vertical vibration controlled by the cloth and a weight e . The said connecting portion c^3 provides bearings for a fixed pivotal stud f , and a swing stud g , and on the former of said studs are two friction wheels or pulleys h , i , one of which is larger than the other and is loosely disposed thereon so as to revolve freely with the cloth. The smaller wheel, h , is allowed but a limited movement, being held by a connecting rod, k , eccentrically attached to the wheel or roller at one end and at its opposite end pivoted upon an arm l , fixed to or forming part of the bed b . As will be understood upon examination of Figs. 4 and 6. When the cloth, as it works to one side in passing to the tentering machine, engages the said small wheel h , and causes it to partly revolve or turn. Because of the connecting rod, the pivotal movement is very limited. The cloth drags on the roller and the latter, because of its connection with the fixed arm l , raises the pivotal carrier, so that the rollers assume a different angle and the cloth is forced to return to its proper relative position.

Upon the swinging stud, g , is arranged a roller, m , which presses against the rollers h , i , or the cloth therebetween and tends to increase the friction of the cloth upon the rollers h , i . The pressure of the roll, m , is regulated by a spring n and an adjusting screw o bearing upon said spring. The pivotal stud, g , controlled by said spring and in connection with its roll, m , regulates the pressure referred to and allows the wheel or pulley, m , to be turned or forced from the pulleys h , i , so that the cloth can be adjusted between or otherwise manipulated. The spring n is secured on the pivotal stud and extends into engagement with the regulating or adjusting screw, o , which has its bearings in the carrier, e , so that when the screw is turned in one way or the other the tension of the spring

and the pressure of the roller *m*, are either increased or diminished as will be apparent.

In lieu of the connecting rod, *k*, eccentrically secured to the roller, *h*, and at its opposite end to the fixture of the bed, I may employ other means to secure the desired change in the inclinations or positions of the rollers. For example, I may employ, in connection with the wheel, *h*, a series of cog or gear wheels shown in Figs. 1 and 2 at *p*, *q*, *r*, which engage a rack, *s*, fastened upon the bed. In this construction when the wheel, *h*, is turned, the swinging carrier and its wheels are caused to move out of their normal positions and cause a return movement of the cloth as in case before described.

Other variations in construction may be employed without departing from the spirit of the invention.

Having thus described the invention, what I claim as new is—

1. The improved regulating attachment for tentering machines herein described, in which is combined a stationary bed adapted to be secured upon said tentering machine, a pivoted carrier, *c*, having rolls *h*, *i*, thereon arranged end to end, one of said rolls, *h*, being provided with an eccentric connection, *k*, with the bed, substantially as and for the purposes set forth.

2. In combination with the bed *b* having arms *b'*, *b'*, a carrier pivoted between said arms, rolls *h*, and *i*, arranged end to end, a stud, *f*, extending from said carrier and carrying said rolls, the roll, *i*, being free to revolve and the roll *h* having a limited movement pivotally being eccentrically connected to the bed, substantially as and for the purposes set forth.

3. The combination with the tentering machine having the fixed attachment, *b*, of a swinging carrier having a stud, *f*, and rolls *h*, *i*, pivoted thereon, the roll, *h*, having a limited movement, being connected eccentrically to the said attachment *b*, substantially as and for the purposes set forth.

4. The combination with the adjustable bed having arms *b'*, *b'*, a carrier eccentrically suspended between said arms and provided with a pivotal stud, rolls *h*, *i*, arranged end to end

on said stud, and the roll *h* having an eccentric connection with the bed substantially as and for the purposes set forth.

5. The regulating attachment or guide herein described, in which are combined with the bracket or fixture *b*, and pivotal carrier *c*, rolls *h*, *i*, arranged end to end, a roll *m* for pressing the cloth against said rolls *h*, *i*, said rolls *h*, *i*, and *m* being carried by said carrier and said roll *h* having a connection with said bracket or fixture, substantially as and for the purposes set forth.

6. The improved regulating attachment or guide herein described in which are combined with the fixture and pivotal carrier, rolls *h*, *i*, *m*, the last being a pressure roll pressing the cloth against the rolls *h*, *i*, disposed end to end, and connecting rod, *k*, eccentrically secured to said roll *h* and to said fixture substantially as and for the purposes set forth.

7. The improved automatic guide for tentering machines herein described, in which is combined an adjustable bed, *b*, having arms, *b'*, a carrier arranged between said arms and movable in its relation thereto, rolls arranged on said carrier one of which is connected to said bed and adapted to draw the frame out of normal position substantially as set forth.

8. In combination, the adjustable bed, *b*, having arms *b'*, *b'*, and screw bearings *d*, *d*, a carrier, *c*, having arms *c'*, *c'*, with pivotal pins *c'*, *c'*, working in said bearings *d*, a rigid stud *f* and a swinging stud *g*, carried by the carrier, the rigid stud being provided with rolls *h*, *i*, the first of which is connected to the bed and the latter free to revolve on said stud, a roller *m* arranged on the swinging stud and adapted to press the cloth onto said rollers *h*, *i*, and a spring *n*, and regulating or adjusting screw *o*, all said parts being arranged and adapted to operate substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of December, 1891.

JEREMIAH CLARE WHITTLES.

Witnesses:

CHARLES H. PELL,

OSCAR A. MICHEL.