No. 646,244. Patented Mar. 27, 1900

C. L. WEICHELT.

CLAMP FOR TEXTILE FABRICS.

(Application filed Aug. 11, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1

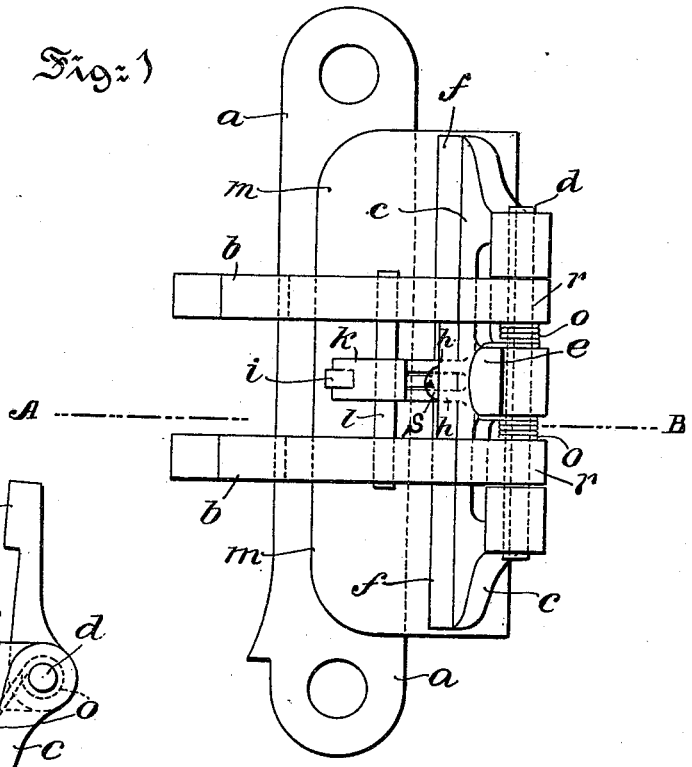


Fig. 2

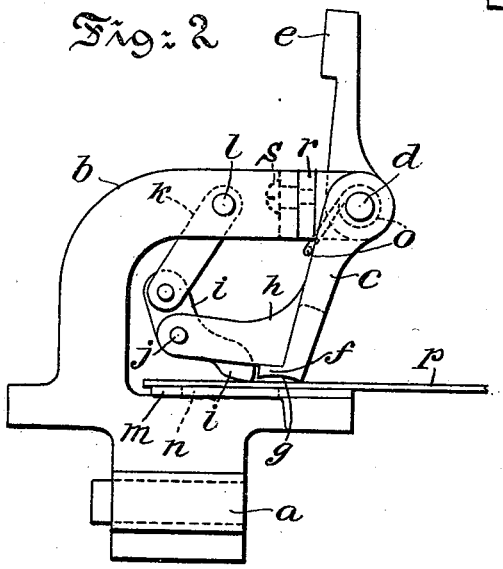
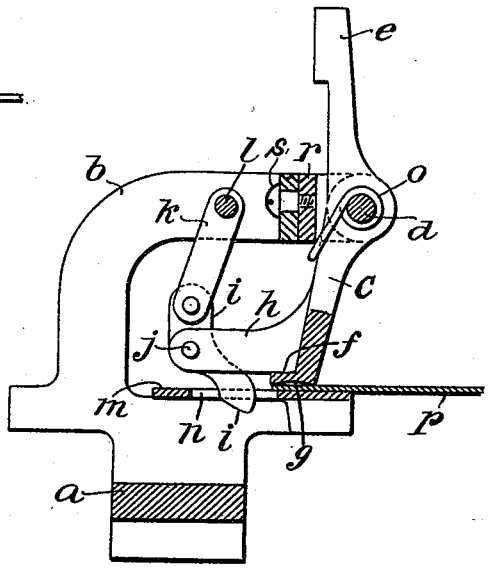


Fig. 3



Witnesses:
W. A. Schaefer.
Craig Sheets

Inventor.
Charles L. Weichelt.
By his Attorney Chas A. Carter.

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2 Sheets—Sheet 2.

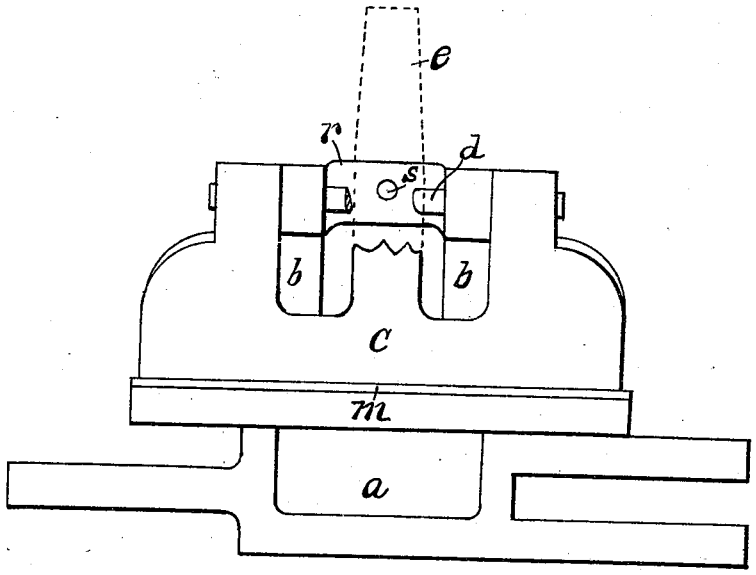

Fig. 4

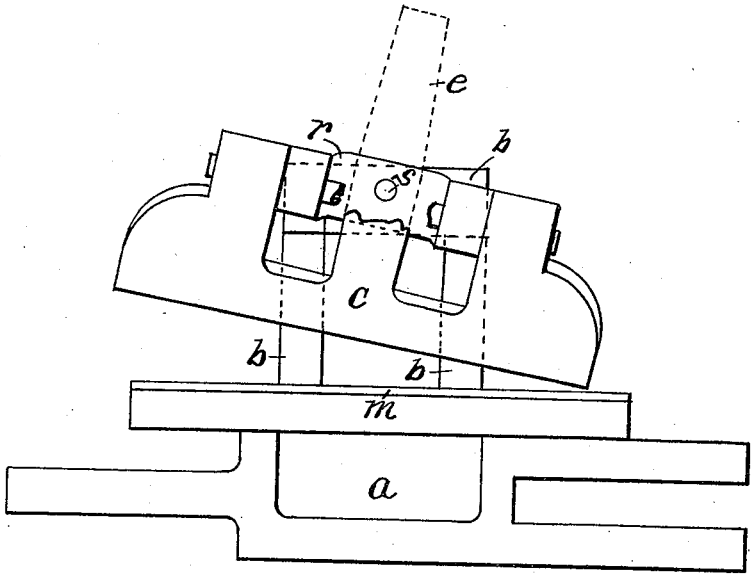

Fig. 5

Witnesses:
Wm. R. Webster
J. Craig Sheets

Inventor.
Charles L. Weichelt.
By his Attorney Chas A. Rutter

UNITED STATES PATENT OFFICE.

CHARLES L. WEICHELT, OF PHILADELPHIA, PENNSYLVANIA.

CLAMP FOR TEXTILE FABRICS.

SPECIFICATION forming part of Letters Patent No. 646,244, dated March 27, 1900.

Application filed August 11, 1899. Serial No. 726,951. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. WEICHELT, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Clamps for Textile Fabrics, of which the following is a specification.

My invention relates to improvements in textile machinery; and the object of my invention is to furnish a clamp to be carried by the conveyer of a tentering-machine which will automatically engage and hold the fabric passing through the machine positively and securely at a predetermined distance from its selvage edge.

My invention consists of a substantially U-shaped arm carried by the conveyer, to the upper part of which is pivoted a movable clamp or jaw, the outer lower edge of which is adapted to engage the fabric and hold it against the table carried by the lower part of the arm and of a finger or trigger pivoted between its two ends to an arm carried by and projecting inwardly from the movable clamp or jaw and at its upper end to a link which is pivotally carried by the upper part of the U-shaped arm. The lower end of this trigger is adapted to engage the fabric and to be supported thereby until the fabric is drawn away from it, when it falls through a slot or opening in the table, at which instant the movable clamp or jaw, which until this time has been supported by the trigger, falls and engages the fabric at a point immediately inside its selvage edge. The movable clamp or jaw upon being released by the trigger or finger may fall by its own weight and engage the fabric, or its falling may be made more positive by the aid of a spring or springs suitably and conveniently located for this purpose.

In the accompanying drawings, forming part of this specification, and in which similar letters of reference indicate similar parts throughout the several views, Figure 1 is a plan of my improved clamp; Fig. 2, a side elevation of Fig. 1; Fig. 3, a section of Fig. 1 on line A B; Fig. 4, a front elevation of Fig. 1, the clamp *c* being closed against the table *m;* Fig. 5, a similar view, the clamp *c* being canted to one side.

In Figs. 4 and 5 the trigger and other parts carried by and attached to clamp *c* are omitted, and in Fig. 5 the clamp *c* is shown much more greatly inclined than it would ever be in practice.

a is a link of the conveyer of a tentering-machine, *b* U-shaped arms projecting out from the link *a*, and *c* a movable clamp or jaw carried upon a shaft or pivot *d*, carried by the upper outer ends of arms *b* or by a frame *r*, pivoted to these arms.

e is an upward extension forming part of clamp or jaw *c*, adapted to be operated by a cam carried by the tentering-machine frame (not shown) in the usual well-known manner.

f is a foot or ledge formed on the lower end of clamp or jaw *c*, the under part of which is preferably concaved, as shown at *g*, Figs. 2 and 3.

h is an arm carried by and projecting backward from clamp or jaw *c*, and *i* a finger or trigger pivoted at *j* to arm *h* and at its upper end to the lower end of a link *k*, the upper end of which is pivoted to a stud or shaft *l*, which is carried by arms *b*.

m is a table forming part of or carried by the lower ends of arms *b;* *n*, a slot in this table through which the lower ends of trigger *i* can pass, as presently described; *o*, springs for quickly and positively causing clamp or jaw *c* to fall when released, and *p*, Figs. 2 and 3, the fabric to be engaged and held by the clamp or jaw.

The conveyers are arranged as usual, one upon each side of the machine, and each link is furnished with a clamp. As the clamps come to the front of the machine they are opened in the usual manner and the fabric to be operated upon is fed in, resting upon the tops of the tables *m*. At the proper time the clamp is released in the usual manner and falls. The trigger *i* now engages the top of the fabric *p*, as shown in Fig. 2, and holds the clamp or jaw *c* clear of the fabric. As the conveyers advance through the machine the fabric is gradually drawn toward the outer edge of table *m* and presently is drawn from under trigger *i*, which then falls through slot *n* in the table *m*. This releases the clamp or jaw *c*, which falls, its outer edge engaging the fabric along a line parallel and close to its edge, as shown.

As has before been stated, the clamp or jaw *c* is preferably slightly concaved along its lower side, as shown at *g*, Figs. 2 and 3. It engages the fabric only along its outer edge, and the greater the tension upon the fabric the tighter will the grip be.

The L-shaped form of the lower side of the jaw prevents the curling up of the edge of the fabric while in the grip of the jaw. This L-shaped portion or foot of the movable jaw may extend continuously the whole length of the jaw, as shown. It may extend only along part of the length of the jaw, or it may extend brokenly along the jaw.

The construction of the device is such that the trigger bears very lightly on the material—so lightly, in fact, that it will not mark or mar the most delicate fabric. At the same time it positively holds the jaw *c* clear until the trigger has been tripped, as described.

The jaw engages the fabric almost at its very edge, and consequently there is no loss of fabric by the use of the device.

The pivot or shaft *d*, upon which the clamp *c* is carried, may be carried directly by the arms *b*, but on account of the difficulty of getting the shaft perfectly parallel with the table *m* and on account of the difficulty of making the lower edge of the clamp *c* engage this table throughout its entire length I prefer to support the shaft in a frame *r*, which is pivotally secured to the arms *b* by a screw or pivot *s*. This construction permits the clamp *c* when moved backward to swing either to the right or left. In Fig. 5 it is shown swinging to the left; but when it is dropped its entire lower edge engages the table *m* or the fabric carried thereby. This construction is also useful in enabling the lower edge of the clamp to engage a fabric of unequal thickness firmly and along its entire length, as the clamp will adjust itself to the fabric.

In Fig. 5 the clamp is swung over much more than would ever occur in practice where a movement of one-eighth of an inch more or less would be about the greatest movement that would ever occur. This movement would not be sufficient to cause the trigger, levers, &c., connected with the clamps to bind, as they are loosely carried by their supporting and connecting pivots.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a clamp for textile fabrics, in combination, a movable clamp or jaw, a table furnished with a slot as described, an arm carried by the movable jaw, a trigger pivoted between its ends to said arm, a link the lower end of which is pivoted to the upper end of said trigger and the upper end of which is pivoted to a fixed point.

2. In a clamp for textile fabrics, in combination, a movable clamp or jaw, a table furnished with a slot as described, an arm carried by the movable jaw, a trigger pivoted between its ends to said arm, a link the lower end of which is pivoted to the upper end of said trigger and the upper end of which is pivoted to a fixed point, and a spring for normally throwing said clamp or jaw downward.

3. In a clamp for textile fabrics, in combination, an arm having substantially a U shape, a movable clamp or jaw pivoted to the upper portion of said arm, a table carried by or forming part of the lower part of said arm and furnished with a slot as described, an arm carried by the movable jaw, a trigger pivoted between its ends to said arm, and a link the lower end of which is pivoted to the upper end of said trigger and the upper end of which is pivoted to a shaft or stud carried by the upper portion of said U-shaped arm.

4. In a clamp for textile fabrics, in combination, a movable jaw furnished with a projecting arm, a stationary arm to which said jaw is pivoted, a trigger pivoted at or near its center to said projecting arm, and a link the upper end of which is pivoted to said stationary arm and the lower end of which is pivoted to the upper end of said trigger.

5. A movable jaw for engaging and holding a fabric in a tentering-machine the lower end of which is L-shaped and concaved on its bottom substantially as and for the purposes set forth.

6. In a clamp for textile fabrics, in combination, an arm having substantially a U shape, a table carried by or forming part of the lower part of said arm, a frame pivotally secured to the upper part of said arm, and a movable clamp or jaw pivotally carried on said frame.

CHARLES L. WEICHELT.

Witnesses:
CHARLES J. GADD,
WM. R. WEBSTER.