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J. J. McCANN, JR

1,982,683

TEXTILE CLAMP

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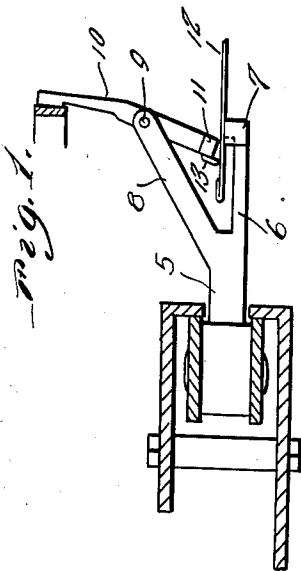
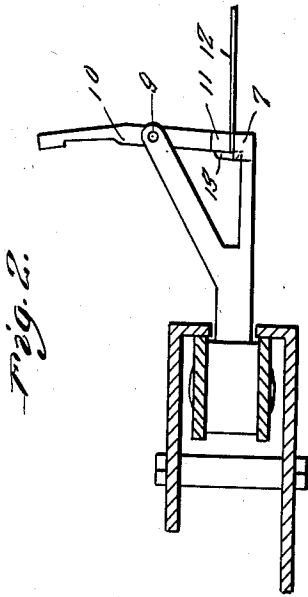


Fig. 3.

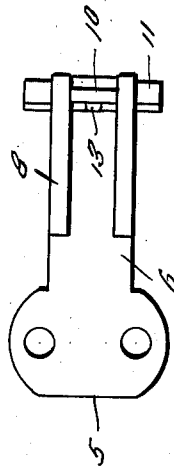


Fig. 4.

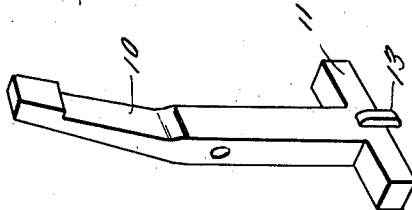


Fig. 6.

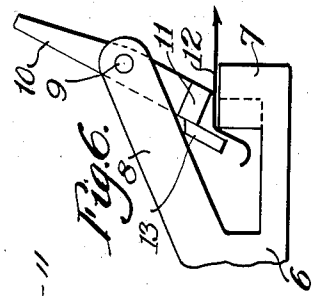
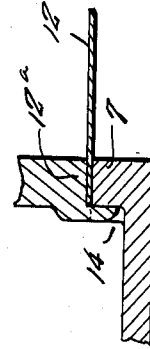


Fig. 5.



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UNITED STATES PATENT OFFICE

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TEXTILE CLAMP

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Application February 11, 1932, Serial No. 592,373

3 Claims. (Cl. 26—62)

This invention relates to a clamp employed in fabric expanding machines or in tentering machines, and which is adapted to firmly hold the fabric while being properly expanded, and the primary object of this invention is to provide a clamp of the character above mentioned specially adapted for that type of fabric expanding or tentering machine fully disclosed in my copending application Ser. No. 589,521, filed January 28, 1932.

A still further object of the invention is to provide a clamp of the character above mentioned which will act directly on the selvage of the fabric piece, and not some distance inwardly from the selvage of the piece.

A still further object of the invention is to provide in a clamp of the character above mentioned, means whereby the clamp will serve to prevent curling or "turning up" of the selvage and which will also serve to uncurl or straighten out any curled or felted edges of the cloth before the clamp will apply a gripping action to the cloth.

Other objects and advantages of the invention will become apparent from a study of the following description, taken in connection with the accompanying drawing wherein:

Figure 1 is a side elevational view of the clamp, the same being shown in a partially open position.

Figure 2 is a view similar to Figure 1, the clamp being shown in a fully closed position.

Figure 3 is a top plan view of the clamp.

Figure 4 is a perspective view of the pivoted jaw of the clamp.

Figure 5 is a fragmentary detail sectional elevational view for clearly illustrating the clamping action of the jaws of the clamp or clip on the selvage of the cloth.

Figure 6 is an enlarged side elevation of the clamp showing the action of the jaws thereof on a fabric piece being drawn therethrough.

With reference more in detail to the drawing, it will be seen that 5 indicates a traveller or link which is mounted upon or forms part of an endless belt, which latter forms a part of an expanding or tentering device described in my aforementioned copending application. Integral with the links 5 and projecting laterally from that side of the link adjacent to the fabric to be expanded, is an arm or extension 6 on the free end of which is integral or otherwise fixed a jaw 7. Extending upwardly and outwardly from the arm 6 intermediate the ends of the arm is a pair of opposed parallel supports 8 between the free ends of which is pivotally mounted as at 9 a lever

10 that forms a part of a movable jaw, said movable jaw including in addition to the lever 10, a laterally extending weighted head 11 that is adapted to be disposed in parallelism to the jaw 7 for clamping therebetween the selvage or edge 12a of the fabric piece 12.

The upper portion of the lever 10 is slightly offset as clearly suggested in Figures 1 and 4. Directly at its rear edge the head 11 is provided with a lug 13 which projects downwardly beyond the head 11, and when the jaws are in their final clamping position, the lug fits in a notch or recess 14 provided in the rear face of the fixed jaw 7.

From a study of Figures 1 and 2, it will be seen that in actual practice, when an edge portion of the fabric is placed on the jaws 7, the edge of the fabric will extend rearwardly with respect to the jaw 7 toward the traveller 5. Lever 10 by gravity will move to the position shown in Figure 1 with the lug 13 engaging the fabric 12 rearwardly with respect to the jaw 7.

Upon lateral or outward strain on the fabric 12, by reason of the engagement of the member 13 with the fabric, the lever 10 will be rocked about its pivot for moving the head 11 of the movable jaw into parallel clamping relation with respect to the jaw 7 as shown in Figure 2 for securely clamping an edge of the fabric between the jaws. When the movable jaw has moved to the position shown in Figure 2, which is the final clamping position, the lug 13 will move into the notch 14 as more clearly shown in Figure 5.

As also shown in Figs. 1 and 6, the fixed jaw 7 has its rear upper edge formed into an abrupt shoulder extending along the width of the jaw. The selvage edge of the fabric may be curled upwardly on itself or felted upon itself at the opposite side thereof. The lug 13 and its cooperation with the shoulder on the jaw 7 serve to straighten out either of these edge conditions before the fabric is gripped, as shown in Figs. 2 and 5. In the case of a curled edge, the lug 13 engages the fabric as it is drawn forwardly between the jaws and straightens out the curl. It will also be clear that the lug 13 holds the selvage edge of the fabric in close engagement with the shoulder on the jaw 7 so that any felted edge thereof is straightened out as it is drawn over such shoulder. Either of such edges is thereafter flattened out when gripped between the jaws. It should be particularly noted that the use of the shoulder on the rear edge of the jaw 7 and the location of the lug 13 directly at the rear edge of the jaw 11 causes the fabric to be engaged only at the extreme selvage edge thereof, it being clear that, as shown

in Fig. 6, the edge portion of the fabric may drop down into the free space of the arm 6 rearwardly of said shoulder on jaw 7 and that the gravitational action of the movable jaw holds the fabric pressed between the lug 13 and said shoulder. Furthermore, drawing of the fabric outwardly of the jaws tends to open rather than close the jaws, thereby preventing any binding or gripping of the fabric until the extreme edge thereof has passed inwardly of the lug 13.

To release the fabric, it is necessary only to swing lever 10 about its pivot in a clockwise direction, so as to relatively position the jaws as shown in Figure 1, any suitable means being provided for automatically actuating the lever 10 and retaining it in the position shown in Figure 1 against rotation in an anti-clockwise direction until the fabric has been removed from the jaws.

Even though I have herein shown and described the preferred embodiment of the invention, it is to be understood that the same is susceptible of further changes, modifications and improvements coming within the scope of the appended claims.

Having thus described my invention, what I claim as new is:

1. In a tenter clamp, a fixed jaw having a fabric-engaging top surface with an abrupt shoulder along the rear edge thereof, the clamp having a free space rearwardly of said shoulder extending below the plane and along the width of said surface and adapted freely to receive thereinto the edge portion of a fabric resting on said surface, a movable jaw coacting with said surface of the fixed jaw to clamp the edge portion of a fabric therebetween, and a lug carried by the movable jaw at its rear edge for engaging one surface of the fabric and uncurling the edge thereof, the lug being adapted to cause the opposite surface of the fabric to be dragged over said shoulder whereby to straighten out any felted edge thereof, and the lug acting to keep the movable jaw from closing onto the fabric while the fabric is beneath the lug.

2. In a tenter clamp, a fixed jaw having a

fabric-engaging top surface with an abrupt shoulder along the rear edge thereof, the clamp having a free space rearwardly of said shoulder extending below the plane and along the width of said surface and adapted freely to receive thereinto the edge portion of a fabric resting on said surface, a pivoted jaw coacting with said surface of the fixed jaw to clamp the edge portion of a fabric therebetween, and a lug carried by the pivoted jaw at its rear edge and extending downwardly below the pivoted jaw in position to pass through a portion of said free space adjacent to the rear edge of the fixed jaw upon clamping movement of the pivoted jaw, the lug being adapted to engage the edge portion of fabric drawn forwardly between the jaws and uncurl the edge thereof, keep the pivoted jaw from closing onto the fabric while the fabric is beneath the lug and cause the fabric to be dragged over said shoulder in a manner straightening out felted portions of the edge thereof, and the rear portion of the fixed jaw being recessed to receive the lug thereinto when the pivoted jaw is fully closed onto the fixed jaw.

3. In a tenter clamp, a fixed jaw, an arm extending forwardly toward and supporting the jaw on the front end thereof, the arm being recessed within its top surface rearwardly of and along its entire contact with the jaw in a manner providing a shoulder along the rear edge of the jaw, a pivoted jaw coacting with the top surface of the fixed jaw for clamping therebetween the edge portion of a fabric, and a lug carried by the pivoted jaw at its rear edge in position to pass through a portion of the recess adjacent to the rear edge of the fixed jaw upon clamping movement of the pivoted jaw, the lug being adapted to engage the edge portion of fabric drawn forwardly between the jaws and uncurl the edge thereof, keep the pivoted jaw from closing onto the fabric while the fabric is beneath the lug, and cause the fabric to be dragged over said shoulder in a manner straightening out felted portions of the edge thereof.

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