

A. A. WHITLEY. .
CLIP FOR USE IN STENTERING MACHINES.
APPLICATION FILED JAN. 11, 1910.

996,441.

Patented June 27, 1911.

3 SHEETS-SHEET 1.

Fig. 1.

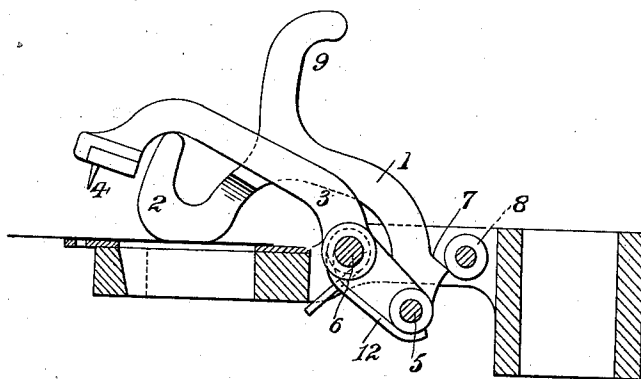
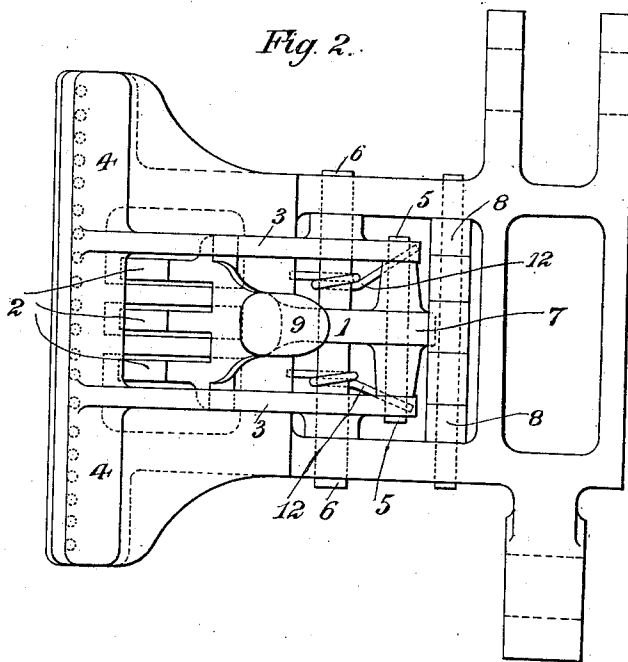


Fig. 2.



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3 SHEETS-SHEET 2.

Fig. 3.

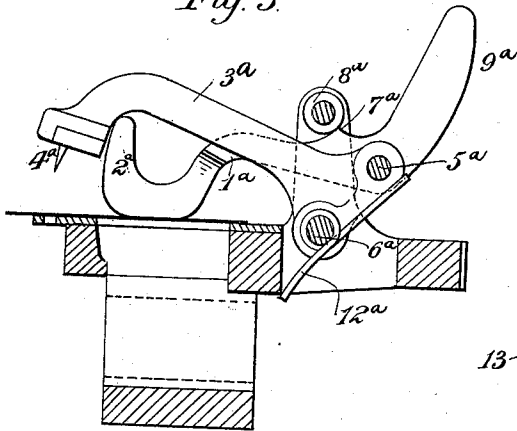


Fig. 6.

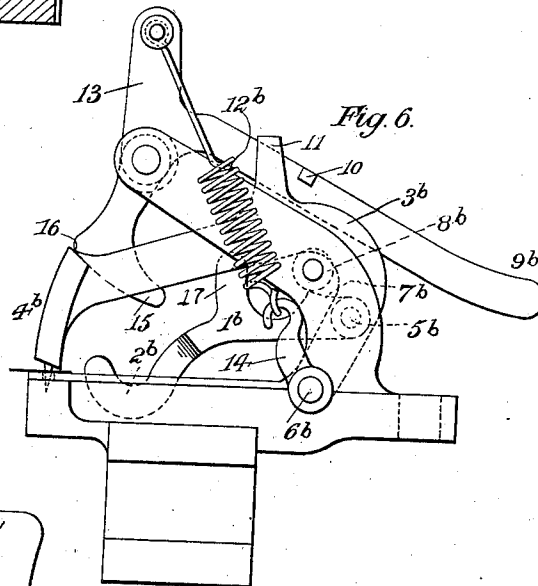
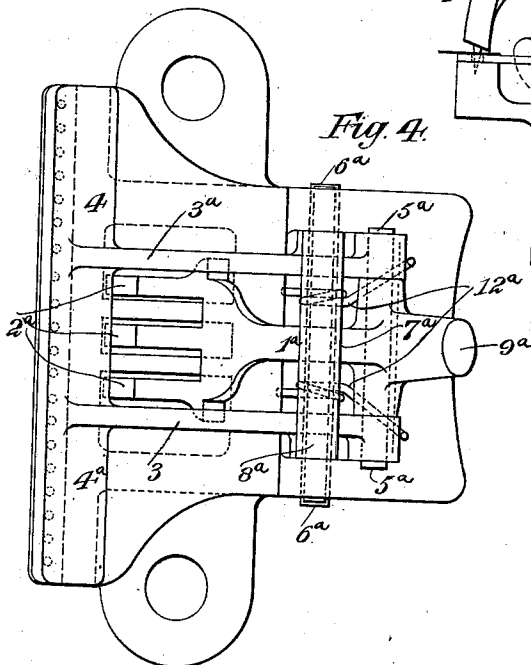


Fig. 4.



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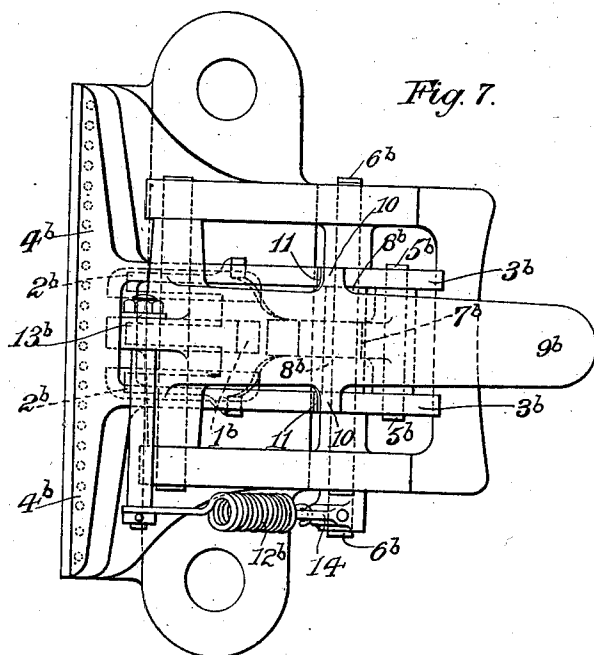
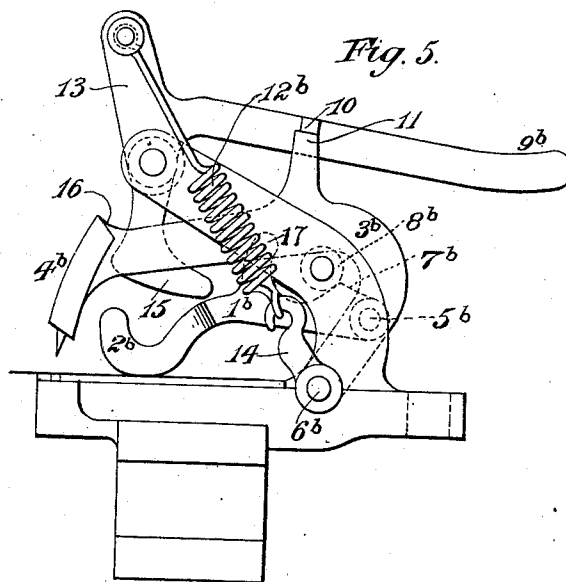
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3 SHEETS-SHEET 3.



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UNITED STATES PATENT OFFICE.

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CLIP FOR USE IN STENTERING-MACHINES.

996,441.

Specification of Letters Patent. Patented June 27, 1911.

Application filed January 11, 1910. Serial No. 537,533.

To all whom it may concern:

Be it known that I, ALFRED AUSTIN WHITLEY, a subject of the King of Great Britain and Ireland, of East View, Higher Lane, Whitefield, Bury, in the county of Lancaster, England, have invented new and useful Improvements in Clips for Use in Stentering-Machines, of which the following is a specification.

My invention relates to clips for use in stentering machines and consists in improvements by which clips of the general character described in the specification of British Letters Patent Nos. 8,535 A. D. 1905, 6,417 A. D. 1906 and 28,744 A. D. 1907 are rendered simpler in construction and more certain in action, while the gage-tongue, or finger, has a minimum of pressure on the fabric beneath it.

I will describe my present invention with reference to the accompanying drawings.

Figure 1 is a sectional elevation and Fig. 2 a plan of a clip in accordance with my said invention. Fig. 3 is a sectional elevation and Fig. 4 a plan of a modification. Figs. 5 and 6 are elevations, respectively with the jaws open and closed, and Fig. 7 is a plan of a further modification.

In the modifications Figs. 3, 4 and 5 to 7 respectively I have indicated the parts corresponding to those in Figs. 1-2, by the same numerals but with the exponents "a" and "b" respectively.

According to my present invention I hinge the lever 1 carrying the gage-tongue, or finger, 2 to the members of the lever 3 (which carries the upper gripping jaw 4) at a point 5 on the lever 3, at the side of the center 6 on which the said lever 3 turns, opposite the side at which the jaw 4 is situated, and I provide the said lever 1 of the gage-tongue, or finger, with an inclined, or curved, projection or cam 7, which bears against an abutment, such as a pin 8, (or roller on such pin) carried by the body-part, or framing, of the clip. The opening lever 9 may be hinged to the said body-part, or framing, or arms projecting therefrom, as shown in Figs. 5, 6 and 7, or it may be formed in one with the lever 1 of the gage-tongue, or finger, as shown in Figs. 1 to 4. In the former case (Figs. 5, 6 and 7), the opening lever 9 can be supported in the position required when out of action by a projection, or projections, 10 on the opening lever 9 resting on a projection, or projections, 11 from the

lever 3 carrying the upper gripping jaw 4. This arrangement also serves to give a wedging action on the upper jaw by reason of the wedge part 15 on a projection from the opening lever acting on the part 16 of the jaw 4 immediately the projection, or projections, 11 passes, or pass, from beneath the projection, or projections, 10 as the jaw 4 closes. The closing action, or pressure, of the upper jaw 4 can be increased and its operation expedited by a spring, or springs, 12, which can be carried on the center-pin 6 of the upper jaw lever and bear at one end on the body-part, or framing, and at the other end on the said gripping jaw lever 3, as shown in Figs. 1 to 4, or, when an opening lever separate from the gage-tongue, or finger, lever is used, as shown in Figs. 5, 6 and 7, a spiral spring, or spiral springs, 12 may be used connected at one end to a projection 13 from the opening lever and at the other end to the center pin of the upper jaw lever, or to a hook, or hooks, 14 on this center, or to the pin 8 against which (or against a roller on which) the inclined, or curved, projection 7 on the gage-tongue, or finger, lever 1 bears.

The upper gripping jaw 4 may have either a plain, or a pin, grip.

In the arrangements described, an advantage is that the gage-tongue, or finger, moves before the upper jaw in opening the clip, so preventing the cloth being fed over, instead of under, the gage-tongue, or finger.

The action of the clips, shown in Figs. 1, 2, 3 and 4 is as follows:—Assuming the gage-tongue or finger 2 to have fallen to its lowest position, in which position, the clip will be closed, then the opening lever 9, when operated to open the clip, raises the respective parts into such a position, as will permit of the entry of the fabric underneath the gage-tongue or finger and allow the said gage-tongue or finger to rest on the fabric, such position being shown in Figs. 1 and 2. In this position, that is the position in which the gage-tongue or finger is resting on the fabric, it will be seen that the pressure, exerted by the spring 12, and the weight of all the parts except the weight of part of the inner end of the lever 1, that is the gage-tongue or finger proper, is balanced by the reaction of the pin 8. As the clip is drawn outwardly the fabric is removed from underneath the gage-tongue or finger, and this latter consequently falls, which permits the

upper jaw 4 to close on and firmly grip the fabric.

The action of the clip shown in Figs. 5, 6 and 7 is the same as that described with reference to Figs. 1, 2, 3 and 4, except as regards the movement of the opening lever 9. In this case, the said lever 9 is operated by raising the projections 10 off the projections 11. At the same time the gage-tongue or finger and upper jaw are raised by the tooth 15 acting on the tooth 17, thus permitting the entry of the fabric. When the gage-tongue is resting on the fabric, as shown in Fig. 5, the opening lever is supported, by the projections 10, which rest on the projections 11, so that in this position the centers 6 and 8 and the point of contact of the projections 10 and 11 are practically in alinement. When the gage-tongue drops, the upper jaw is released, and the projections 11 pass from under the projections 10, thus allowing the opening lever to fall and thereby causing the wedge-part 15 to act on the part 16 of the upper jaw and so wedge and lock the clip.

What I claim is:—

1. A clip for stentering machines having a pivoted upper gripping jaw, a gage-tongue lever hinged to said jaw, a cam lug on said gage tongue and an abutment rigid with the clip frame over which said lug rides to hold the jaw in raised position, as and for the purpose specified.

2. A clip for stentering machines having a pivoted upper gripping jaw, a gage-tongue lever hinged to said jaw, a cam lug on said gage-tongue and an abutment rigid with the clip frame over which said lug rides to hold the jaw in raised position, as and for the purpose specified, in combination with a spring device to press the upper gripping jaw upon the fabric when the jaw is closed.

3. A clip for stentering machines having a pivoted upper gripping jaw, a gage-tongue lever hinged to said jaw, a cam lug on said gage-tongue and an abutment rigid with the clip frame over which said lug rides to hold the jaw in raised position, as and for the purpose specified, in combination with an opening lever rigid with the gage-tongue.

4. A clip for stentering machines having a two-arm pivoted lever, one arm forming the upper gripping jaw of the clip, a gage tongue lever hinged to the other arm of said lever, a cam lug on said gage tongue and an abutment rigid with the clip frame over which said lug rides to hold the jaw in raised position, as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALFRED AUSTIN WHITLEY.

Witnesses:

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