No. 685,253. Patented Oct. 29, 1901.

J. CALDWELL.

CLAMP FOR LEATHER STRETCHING MACHINES.

(Application filed Dec. 1, 1900.)

(No Model.)

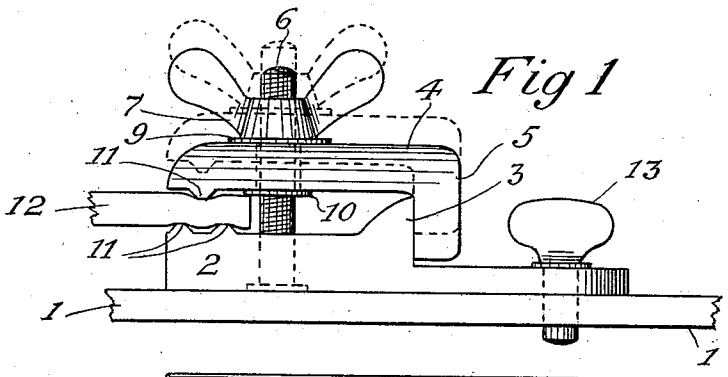


Fig 1

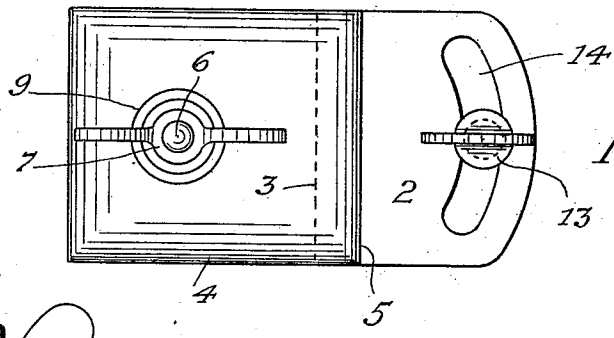
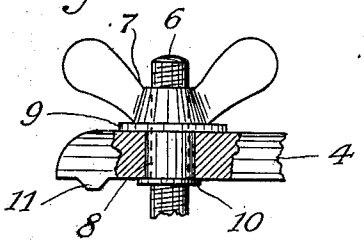


Fig 2

Fig 3



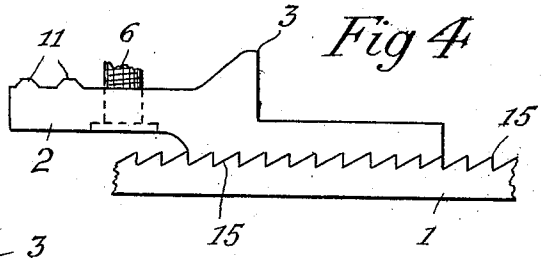


Fig 4

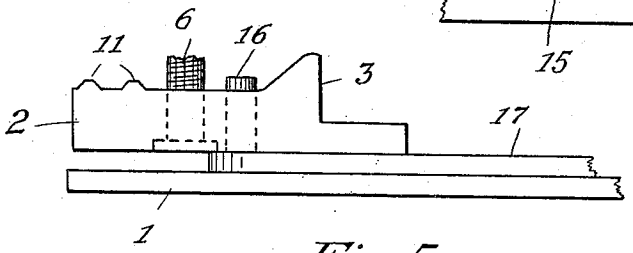


Fig 5.

Witnesses
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UNITED STATES PATENT OFFICE.

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CLAMP FOR LEATHER-STRETCHING MACHINES.

SPECIFICATION forming part of Letters Patent No. 685,253, dated October 29, 1901.

Application filed December 1, 1900. Serial No. 38,313. (No model.)

To all whom it may concern:

Be it known that I, JOHN CALDWELL, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Clamps for Leather-Stretching Machines, of which the following is a specification.

My improvements relate to devices for engaging marginal portions of leather to hold it during the operation of stretching it on a stretcher-frame. Heretofore, so far as I am aware, the clamps designed for engaging successive marginal portions of leather and to be independently connected to the stretcher-frame have consisted of gripping-jaws permanently hinged together.

It is the principal object of the present improvements to dispense with a pivot or hinge for connecting the clamp members and to provide the lower or stationary jaw with a transverse abutment having a vertical rear wall and the upper or movable jaw with a pendent transverse flange or rib arranged to engage and slide vertically upon such abutment-wall and means for operating the upper jaw bodily in vertical direction toward or away from the lower jaw without changing the parallelism of the two jaws. The overlapping parts of the jaws are thus made to coöperate in withstanding the tension of the leather when in service in substitution for the hinging connections of the other form of clamps. Such improvements are illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of one of the improved clamps, together with a portion of the stretcher-frame head. Fig. 2 is a plan view of the clamp. Fig. 3 is a detail showing the device for raising and lowering the upper jaw, and Figs. 4 and 5 show variations of the means for connecting the clamp to the stretcher-head.

In the drawings, 1 designates a surface-plate or other suitable portion of one of the heads of a stretcher-frame, to which the clamp is to be temporarily secured during the operation of stretching a piece of leather. The lower member or base 2 of the leather-clamp consists of a plate, preferably about two to two and a half inches wide and about two and a half to three and a half inches long, having a transverse rib or raised portion 3 in rear of the gripping-face, designed as a guiding and resisting abutment for the rear portion of the upper clamp member. The latter member or jaw 4 may be a flat metal plate having a downward flange or rib 5 arranged to engage the rear wall of the abutment 3. The movement of the jaw 4 toward or away from the fixed jaw 2 is preferably effected, as shown, by means of an upright screw 6, secured to the latter and extending through an opening in the former. A suitable nut 7 on the screw above the jaw 4 is connected to a sleeve 8 in the opening in the jaw, the sleeve having suitable flanges 9 and 10, respectively, at the opposite surface of the jaw, whereby the nut is swiveled to the jaw. The movable jaw being thus carried by the nut on the screw, it can be readily raised or lowered and when desired may be made to press a marginal portion of leather 12 upon the lower jaw to grip and hold the leather during the operation of stretching it. The engagement of the flanges 5 with the abutment 3 serves to retain the upper jaw in operative connection with the lower jaw and enables the clamp to hold the leather during the operation of the machine.

In order that the leather may be gripped firmly, it is desirable to provide the jaws with intermeshing transverse ribs 11, as shown, or other suitable irregularities of surface.

The temporary connection of the clamp to the stretcher-head may be made in any desired way. Several ways of making such connection are shown in the drawings.

In Figs. 1 and 2 the connection is illustrated as being made by means of a pin or key 13, passed through a slot 14 (or it might be one of a number of holes) in the rear portion of the base-plate 2 into one of a series of holes in the plate 1 on the stretcher-head.

In Fig. 4 the plates 1 and 2 are shown as having corresponding transverse serrations 15, adapted to intermesh and hold the clamp in place under tension.

In Fig. 5 the base member 2 is shown as pivoted on a stud 16, projecting upward from an underlying plate or bar 17 through an opening in the plate 2, whereby the clamp may be

turned in a plane parallel with the plates 1 and 17. The plate or bar 17 may be connected to the stretcher-head in the manner above described or in any other desired way.

As the objects aimed at and the operations described could be accomplished by modifications of the devices shown, I do not wish to limit my claims to the specific forms and arrangements of the means illustrated and described.

The improvement herein disclosed relative to the manner of connecting the holder to a part of a stretching-machine is not here claimed, but is reserved to be claimed in my pending applications, Serial No. 1,424, filed January 15, 1900; Serial No. 9,199, filed March 19, 1900; Serial No. 40,215, filed March 26, 1900; Serial No. 21,061, filed June 21, 1900, and Serial No. 10,128, filed March 26, 1900.

Having described my invention, what I claim is—

1. In a leather-clamp, the combination with a base member or plate provided with a transverse abutment having its rear wall substantially perpendicular, of a movable upper member provided with a shouldered portion slidable vertically upon said abutment, said base and upper members being provided with leather-engaging means, an upright screw in the base member, and a nut swiveled on the upper member for raising and lowering the latter member bodily while maintaing its parallelism to the base member, whereby said abutment is adapted to resist the tension of the leather upon the upper clamp member, substantially as set forth.

2. The combination with the head of a stretching-frame, of a leather-clamp comprising a base member adjustably connected to said head and provided with a transverse abutment having its rear wall substantially perpendicular, a vertically-movable member having a shouldered portion adapted to engage such abutment, whereby said abutment is adapted to resist the tension of the leather upon the upper clamp member, and means for effecting the vertical movements of the upper member, substantially as set forth.

In testimony whereof I have hereunto set my hand this 22d day of November, 1900.

JOHN CALDWELL.

In presence of—

P. H. GUNCKEL,

A. L. WHELAN.