No. 687,177. Patented Nov. 19, 1901.

J. CALDWELL.

LEATHER STRETCHING DEVICE.

(Application filed Nov. 30, 1900.

(No Model.)

Fig 1.

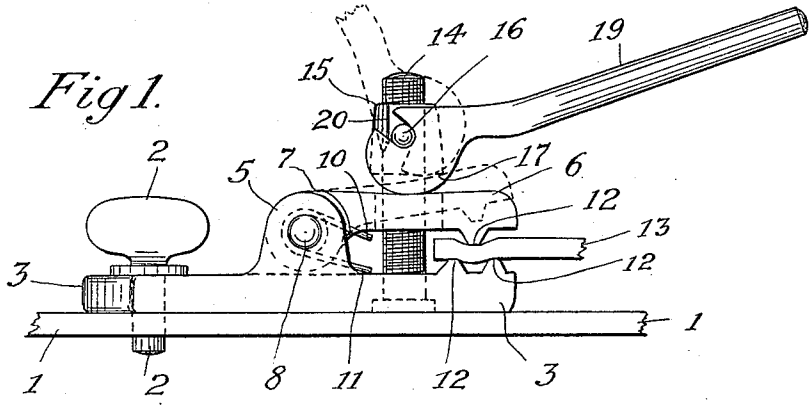


Fig 2

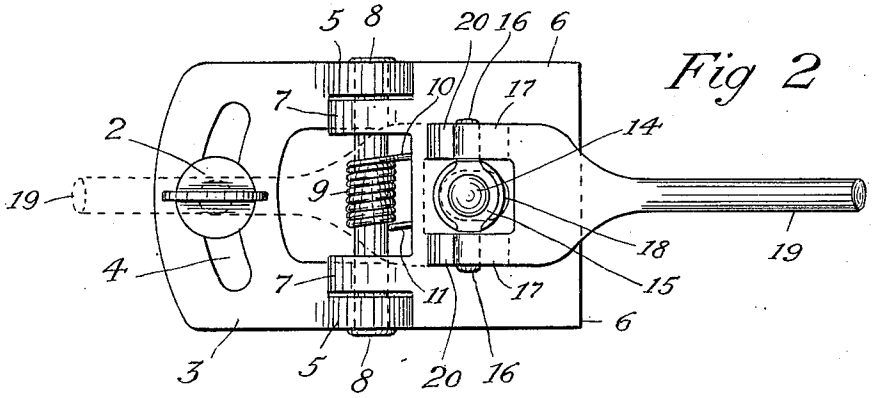


Fig 3

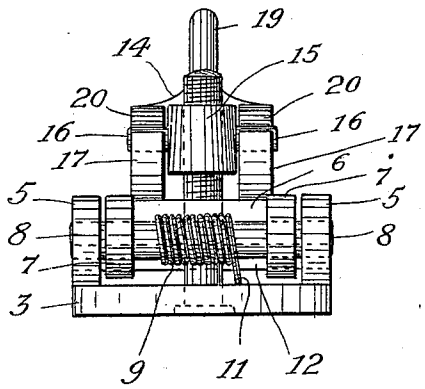
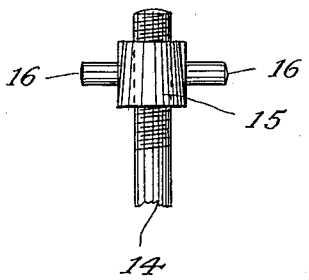


Fig 4.



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UNITED STATES PATENT OFFICE.

JOHN CALDWELL, OF MINNEAPOLIS, MINNESOTA.

LEATHER-STRETCHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 687,177, dated November 19, 1901.

Application filed November 30, 1900. Serial No. 38,138. (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 Leather-Stretching Devices, of which the following is a specification.

My invention relates to devices employed for holding leather while it is being stretched to adapt it for use in the manufacture of belting, and particularly to the clamp form of leather-holders operated by cams and cam-levers for engaging short marginal portions of the end of a body of leather; and the object of the invention is to provide for the adjustment of the cams and cam-lever connections toward or away from the jaw with which the cams engage.

My improvements are illustrated in the accompanying drawings, in which—

Figure 1 shows a side elevation of a portion of the head of a stretcher-frame provided with the improved clamp. Fig. 2 is a plan view of the clamp. Fig. 3 is an elevation of the clamp viewed from the left of Figs. 1 or 2, and Fig. 4 is a detached view of the screw and nut pivotally supporting the cam-lever.

In such drawings, 1 designates a plate upon or forming a portion of one of the heads of a stretcher-frame, (either the fixed or the slidable head.) The clamps may be connected to the head in any convenient way, for the means of such attachment is not a part of the present invention. I have shown, however, one mode of connection which consists in providing the plate 1 with an opening to receive a pin 2, and the base-plate 3 of the clamp has in its rear portion an opening 4, through which the pin may be passed to a perforation in the plate 1 to hold the clamp against the strain of the tension while the leather is being stretched.

The plate 3 of the clamp is provided with posts or standards 5 at opposite sides near its middle, and the upper plate or jaw 6 of the clamp has ears 7 for pivotally connecting it to the posts 5 by means of a pintle 8, so that the upper jaw may be turned in vertical direction on its hinge connection while the lower plate remains in horizontal position on the stretcher-head. A coil-spring 9 on the middle portion of the pintle has its opposite ends 10 and 11 bearing, respectively, against the upper and lower clamp members, thereby tending to separate them.

The forward adjacent portions of the two clamp members have intermeshing transverse ribs 12 for engaging the leather 13 to prevent slipping under tension. Between the ribs 12 and the hinging connection of the two clamp members is an upright post 14, the upper portion of which is screw-threaded and which is secured to the base member 3 and extends upward through a suitable opening 18, somewhat wider than the post, in the center of the movable jaw. Above this jaw is a threaded nut 15, which has pins or trunnions 16 at opposite sides, adapted to serve as the pivotal supports for a pair of cams 17. These cams are formed on the end of or are rigidly attached to a handle or lever 19, the parts constituting a cam-lever by means of which the movable jaw may be operated. A convenient way of connecting the cam-lever to the nut is to provide slots 20 in the sides of the cams to receive the pins, so that the lever can be readily connected or disconnected. As the nut 15 carries the cam-lever, it is obvious that raising or lowering it by turning it on the screw will vary the extent to which the jaw 6 will be pressed toward the base 3 when the cams are operated. By turning the nut upward or downward on the post 14 the clamp can readily be adapted for properly gripping leather of different thicknesses, and the nut can be turned easily by turning the handle 19 in lateral direction. The handle 19 may extend forward or rearward, as indicated by full and dotted lines in Fig. 2, or toward either side when operating the cams for causing the clamp to grip the leather.

I do not in this application wish to claim, broadly, the devices shown for engaging the leather and for connecting the clamp to a stretcher-head, such matter being 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, and Serial No. 21,061, filed June 21, 1900.

What I claim, and desire to secure by Letters Patent, is—

1. A clamp for a leather-stretching ma-

chine, comprising, in combination, a fixed member consisting of a plate adapted to seat on a flat surface and afford a resisting-base, a movable jaw hinged thereon, a screw secured to the former and extending through an opening in the latter, an adjustable nut thereon provided with trunnions at its sides, and a cam-lever pivotally connected to said trunnions and adapted to press the movable jaw toward the fixed jaw, substantially as set forth.

2. The combination with the head of a stretching-frame, of a leather-clamp comprising a plate adapted to seat on said head and constitute a fixed clamp-jaw, a movable jaw hinged thereon, a screw secured to the former jaw and extending through an opening in the latter jaw, an adjustable nut thereon provided with trunnions at its sides, and a cam-lever pivotally connected to said trunnions and adapted to press the movable jaw toward the fixed jaw, 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.