No. 701,838

Patented June 10, 1902.

J. CALDWELL.

LEATHER STRETCHING MACHINE.

(Application filed Jan. 6, 1902.)

(No Model.)

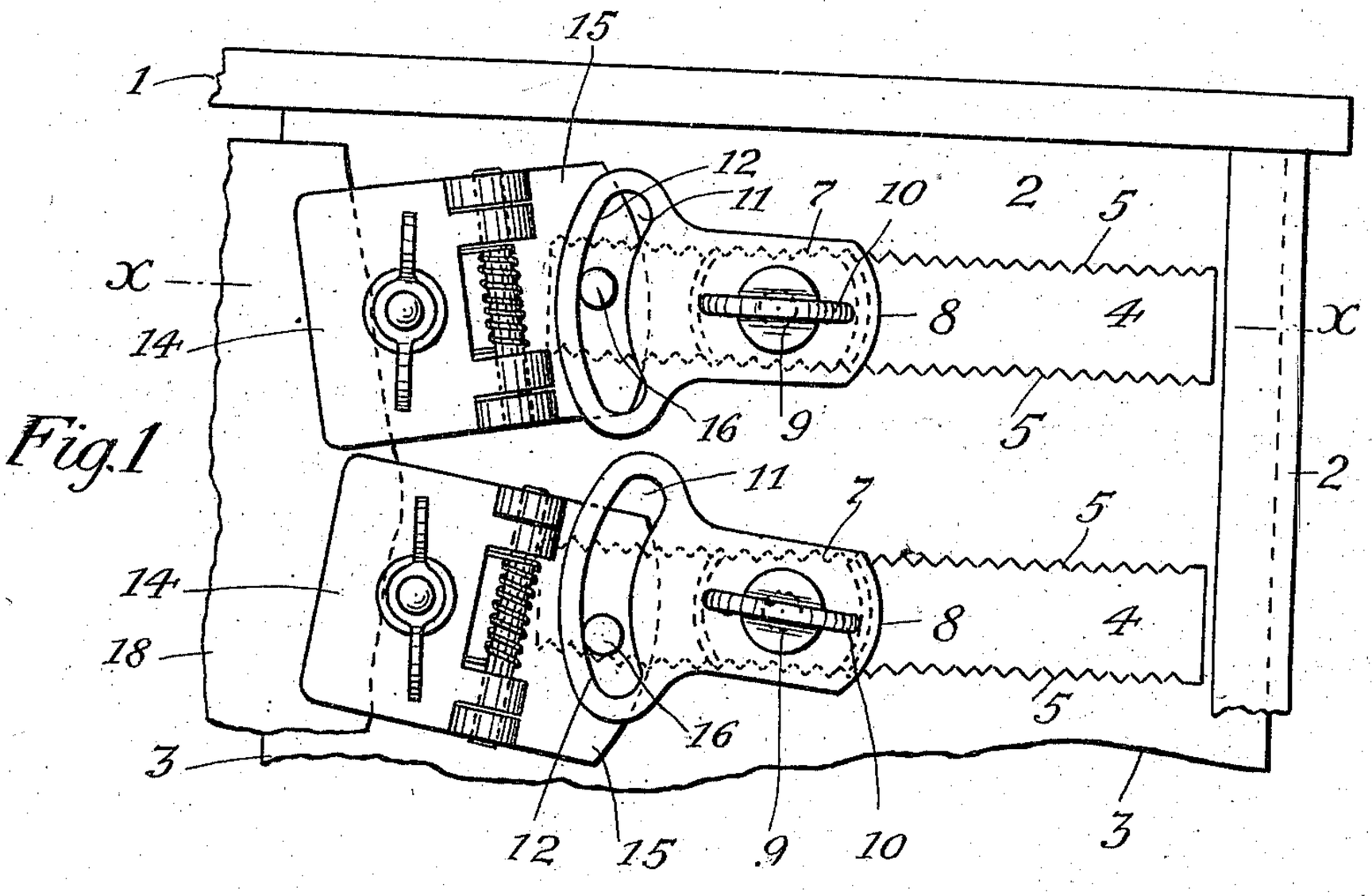


Fig. 1

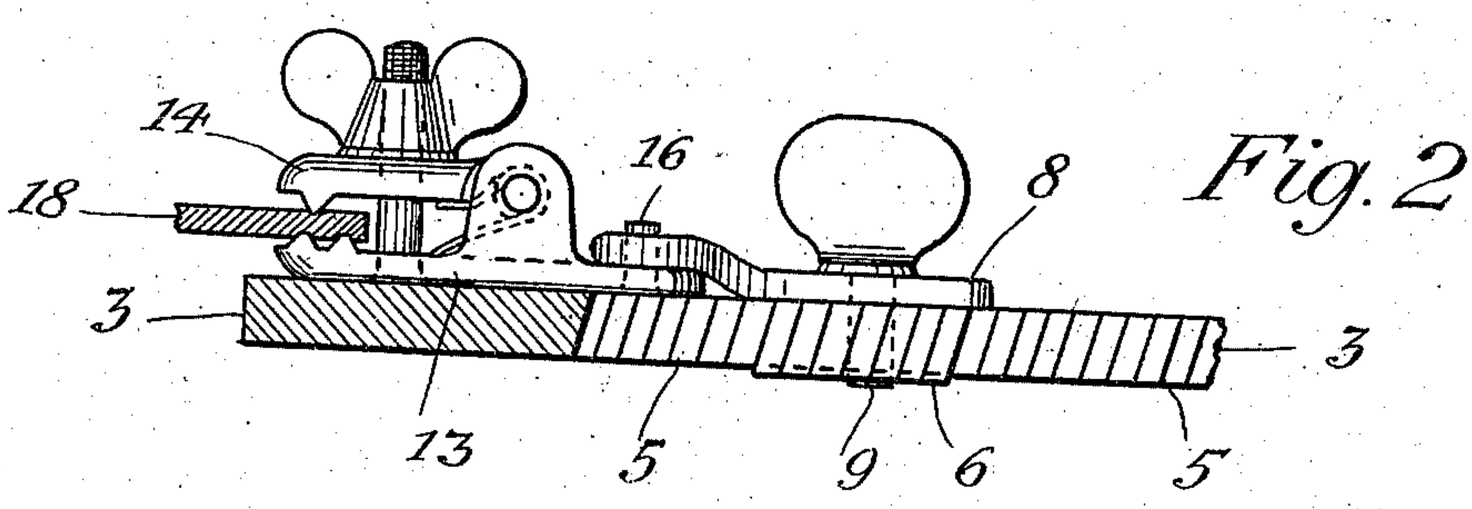


Fig. 2

Fig. 3.

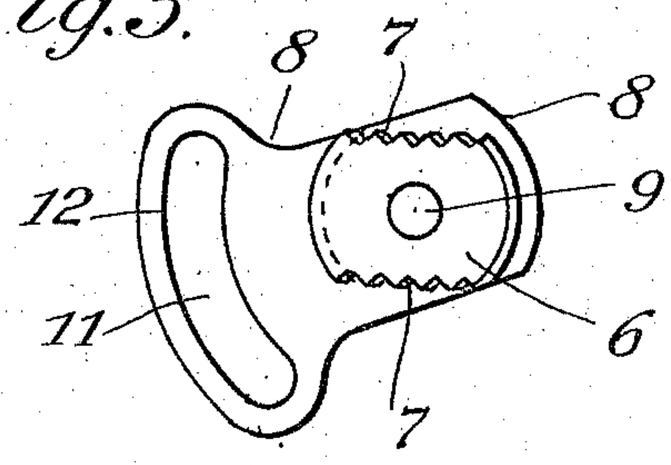
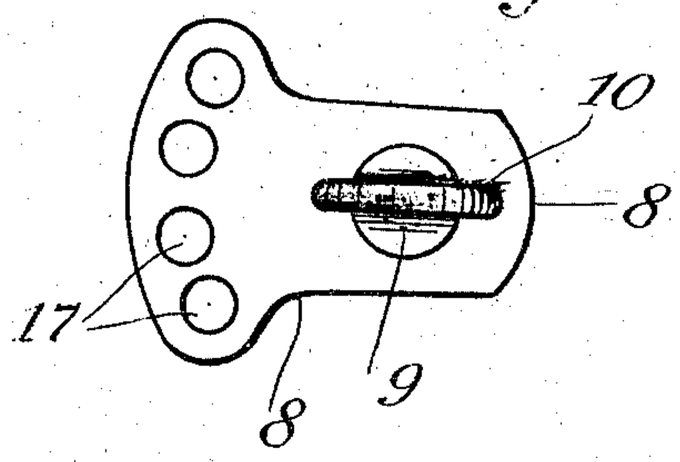


Fig. 4



Witnesses
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UNITED STATES PATENT OFFICE.

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LEATHER-STRETCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 701,838, dated June 10, 1902.

Application filed January 6, 1902. Serial No. 88,575. (No model.)

To all whom it may concern:

Be it known that I, JOHN CALDWELL, a citizen of the United States, residing at Minneapolis, 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 the clamps or devices used in connection with leather-stretching machines for holding the ends of the leather during the operation of stretching it; and the object of the present invention is improvement of the means for connecting such leather-holders to the heads or other appropriate parts of the stretching mechanism.

Stated more specifically, my improvements relate to the means for making adjustable pivotal connection between the leather-holding device and the stretcher-head, and described in a general way the improved devices consist of a leather-holder having a suitable stud on its rear portion and a coupling device provided with a laterally-elongated slot or a corresponding series of holes for receiving the holder-stud and means for adjustably connecting the coupling device to the stretching mechanism. Such improvements are illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a portion of a stretcher head and frame equipped with my improved coupling devices. Fig. 2 is a side view of the leather-holder and coupling device and shows a portion of the stretcher-head in section on the line *x x* of Fig. 1. Fig. 3 is a detail of the coupling device viewed from beneath, and Fig. 4 shows a modification of the latter device.

In the drawings the reference-number 1 designates one of the sides of an ordinary rectangular stretcher-frame, and 2 its stationary head, secured thereto by bolts or in any suitable way. The portion of the apparatus containing the stationary head is selected for convenience of illustration; but my improvements are applicable as well to the slidable head of the machine.

On the surface of the head (which may be of wood) is secured a metal plate 3, extending from side to side of the head and having a series of slots 4 a suitable distance apart and extending parallel with the frame sides 1—in other words, in line with the direction of movement of the sliding stretcher-head. The side walls of the slots 4 are provided with notches, corrugations, or like irregularities 5, extending in vertical or suitably-slanting direction.

The coupling device may consist of a plug or short metal body 6 of proper size to enter a slot 4 and having on its side walls suitable notches or irregularities 7 for engaging the irregularities of surface of the slot-walls to hold the plug against movement along the slot when subjected to tension. On the upper surface of the plug is placed a plate or other suitable body of metal 8, and the two members are connected by a pivot 9, so that the plate may turn freely on the plug. For convenience in handling the device the plate 8 is provided with a handle 10, which may be formed on the upper end of the pivot 9. The forward end of the plate 8 is preferably provided with a slot 11 or opening for making connection with a leather-holder, and the outer wall 12 of the slot or opening is preferably concaved toward the rear of the plate 8—that is, in direction away from the leather-holder. The leather-holder selected for illustration is of the clamp form, comprising a base-plate 13 and an upper movable jaw 14, the base member having its tailpiece 15 provided with a pin or stud or projection 16, adapted to enter the slot 11, and thereby pivotally connect the holder to the coupling device and permit such point of connection to be automatically varied in lateral direction and allow the holder to swing freely under tension.

In the modification shown in Fig. 4 a series of separate holes 17 is substituted for the single opening 11; but it is apparent that this construction while permitting manual will not serve to effect automatic lateral adjustment of the pivotal point of connection of the holder relative to the coupling device.

In putting the devices to use, as illustrated in Fig. 1, a series of the holders may be made to engage portions of the irregular end of a side or other division of leather 18 and the leather and the holders placed on the stretcher-head, and the holders may then be succes-

sively connected to the head by inserting the plugs of the coupling devices at proper points in the slots 4 to enable the holder-studs to enter the openings in the coupling devices. The pivotal connection of the plates 8 to the plugs 6 enables them to be turned laterally when necessary to proper position to engage the holder-studs and serve also thereafter to permit free swinging movement of the holders with respect to the plug 6.

I do not limit myself to the specific means set forth for connecting the coupling device to the stretcher-head nor to the exact form or construction of coupling device shown, for I believe it to be novel to provide a coupling device for a leather-holder with means for the lateral adjustment of the point of its pivotal connection to the holder.

Having described my invention, what I claim is—

1. The combination with a leather-holder having a projection in rear of its leather-engaging means, of a coupling device provided with means for making laterally-variable pivotal connection with said projection, and means for adjustably and pivotally connecting the coupling device to a part of a stretching mechanism, substantially as set forth.

2. The combination with a leather-holder having a projection in rear of its leather-engaging means, of a coupling device having means for making laterally-variable connection with said projection, and means for pivotally and adjustably connecting the coupling device to a part of a stretching mechanism, substantially as set forth.

3. The combination with a leather-holder having a projection in rear of its leather-engaging means, of a coupling device having a transverse slot convexed toward the leather-holder for making laterally-variable pivotal connection with said projection, and means for adjustably and pivotally connecting the coupling device to a part of a stretching mechanism, substantially as set forth.

4. The combination with a stretcher-head, of a series of leather-holders having projections in rear of their leather-engaging means, a corresponding series of coupling devices having means for making laterally-variable pivotal connection with said projections, and means for adjustably and pivotally connecting the coupling devices to the stretcher-head, substantially as set forth.

5. The combination with a stretcher-head having guideways extending parallel with the direction of tension of the machine, of a series of leather-holders having projections in rear of their leather-engaging means, a corresponding series of coupling devices having means for making laterally-variable pivotal connection with said projections and provided with pivotally-connected bodies adapted to be adjustably inserted and retained in said guideways, substantially as set forth.

In testimony whereof I have hereunto set my hand this 2d day of January, 1902.

JOHN CALDWELL.

In presence of—
WM. G. BRACKETT,
P. H. GUNCKEL.