

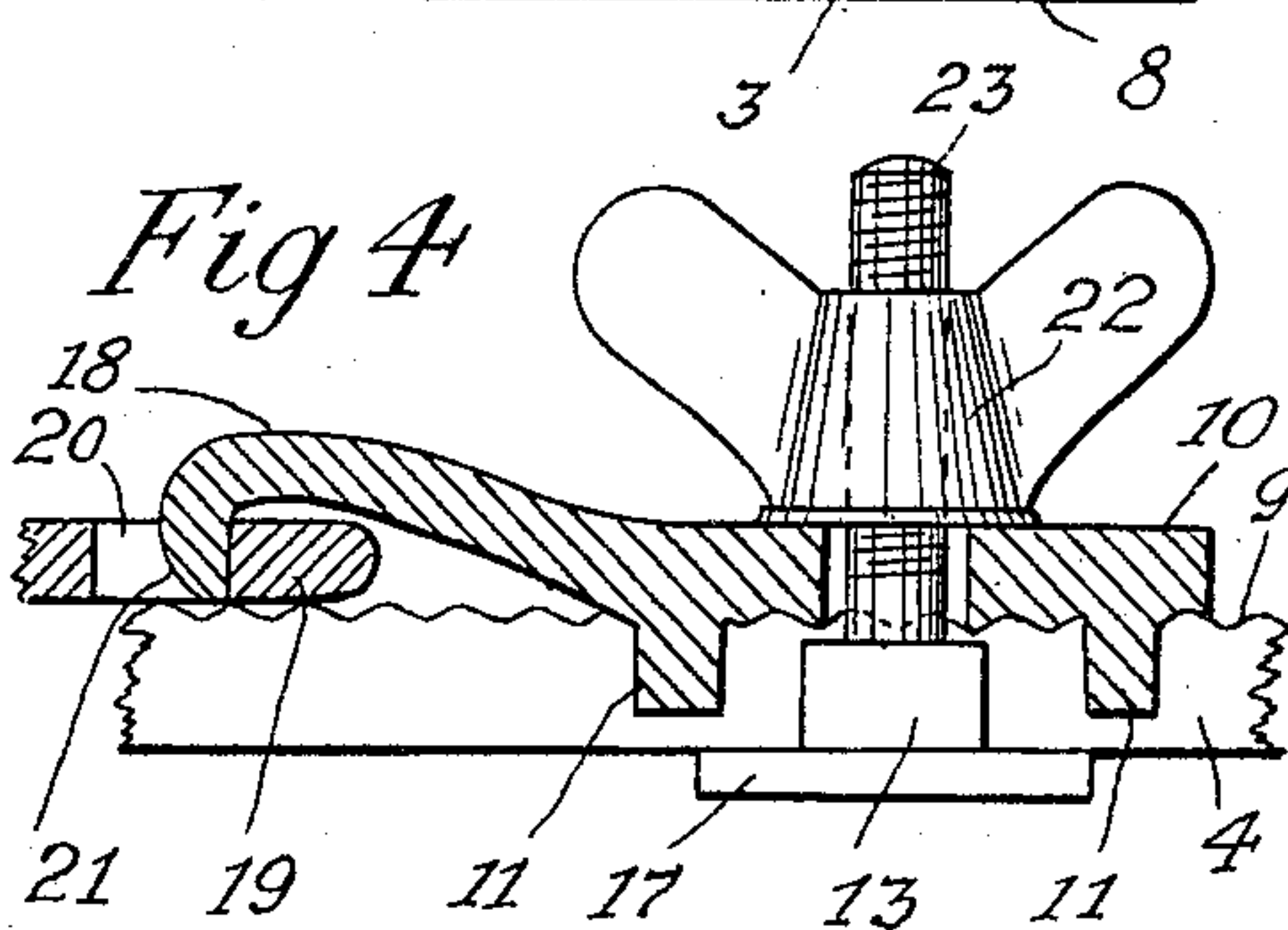
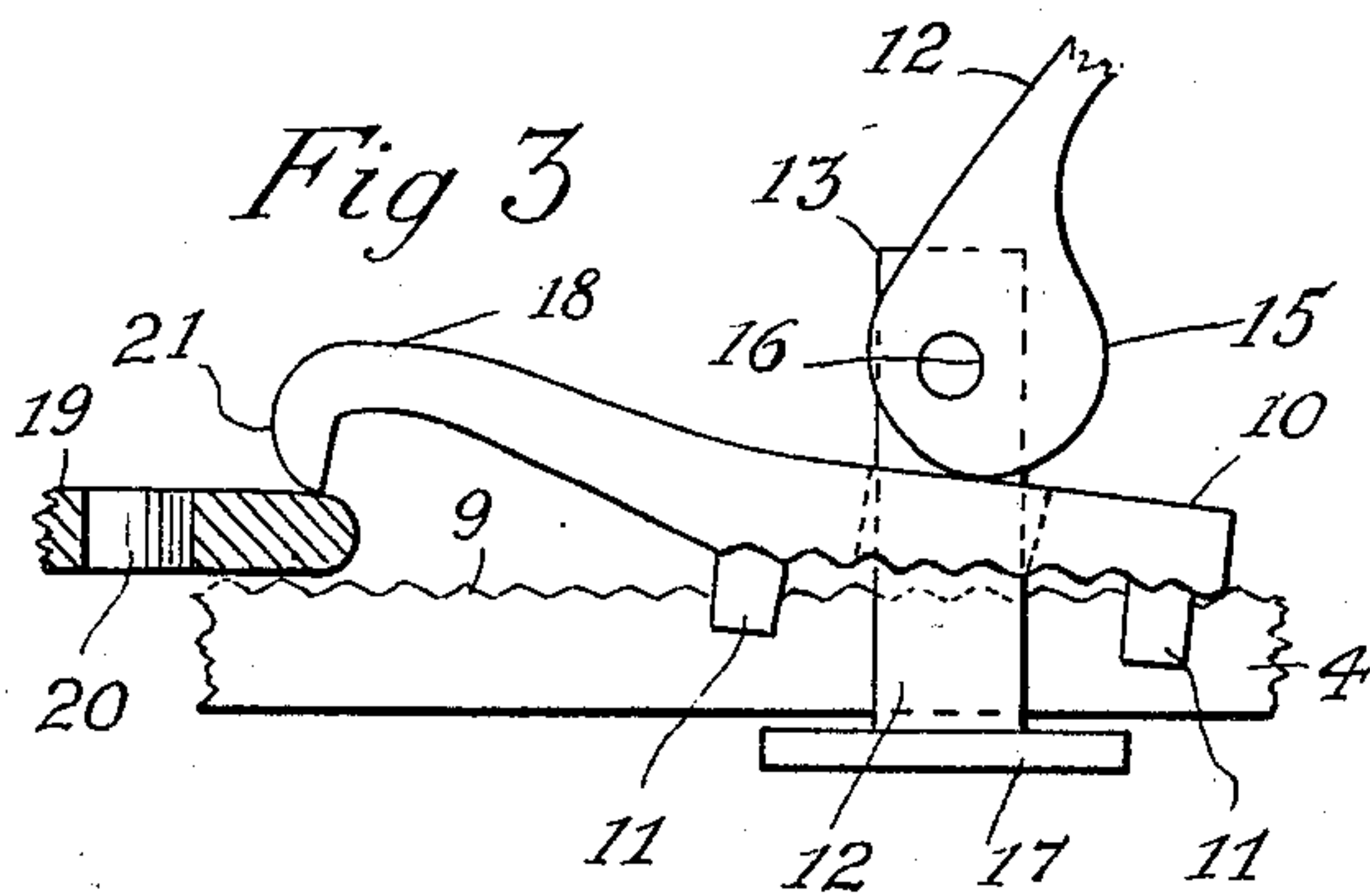
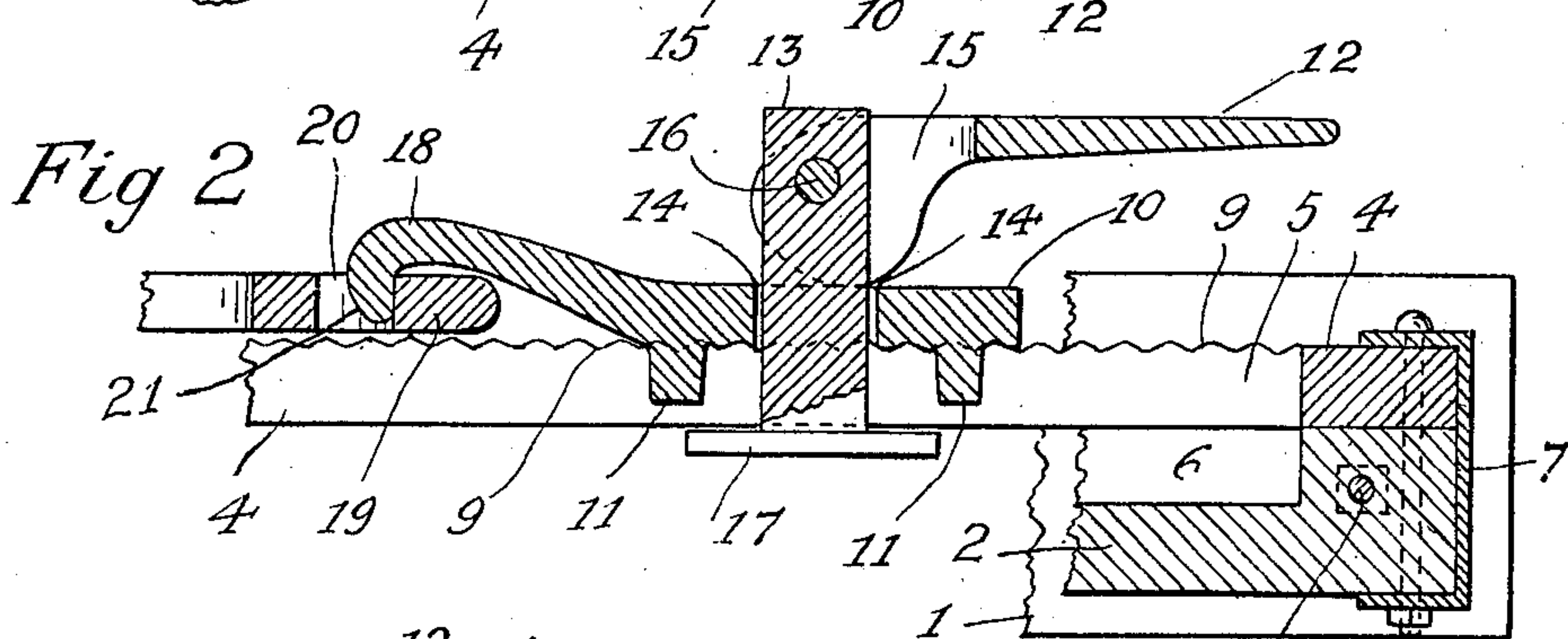
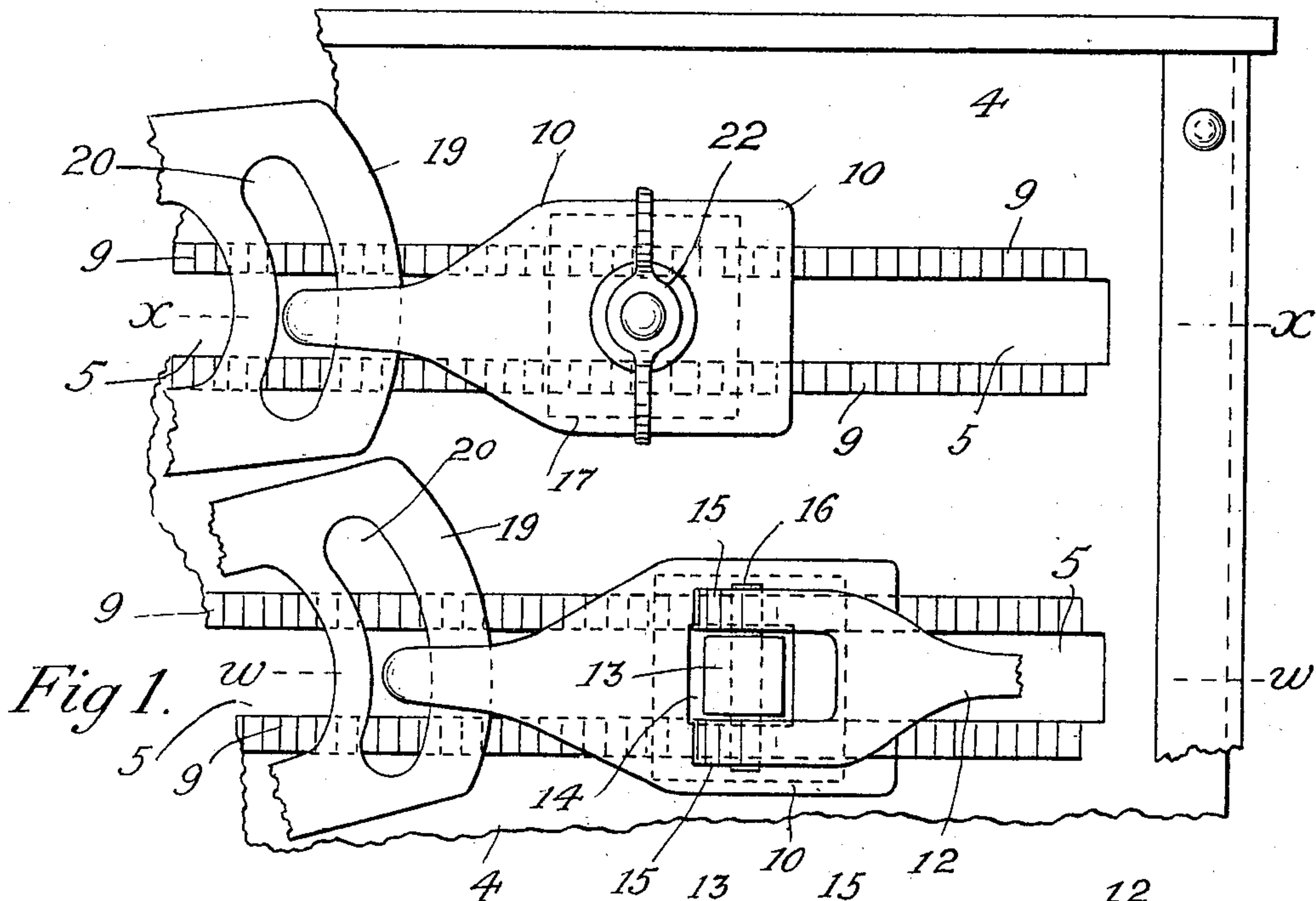
No. 682,786.

Patented Sept. 17, 1901.

J. CALDWELL.
LEATHER STRETCHING DEVICE.

(Application filed Dec. 18, 1900.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN CALDWELL, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO THE W. S. NOTT COMPANY, OF SAME PLACE.

LEATHER-STRETCHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 682,786, dated September 17, 1901.

Application filed December 18, 1900. Serial No. 40,239. (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 stretcher mechanism.

My improvements, stated in a general way, consist in providing the stretcher-head with a series of guideways extending lengthwise of the stretcher-frame, slidable coupling devices adapted to be guided by said ways, with means for locking them in positions of adjustment, and means for temporarily and preferably pivotally connecting leather-holders to them. The means shown for the purpose may be specifically stated as consisting in a plate on the stretcher-head provided with a series of slots extending lengthwise of the stretcher-frame, and transverse corrugations or serrations on the upper surface of the plate adjacent to the slots, corrugated plates on equivalent devices for engaging the corrugations or serrations on the head-plate, bolts or equivalent devices extending vertically through the slots and through said locking-plates; cams, nuts, or other suitable means for raising or lowering the bolts for clamping or releasing said locking-plates, and means for connecting such locking-plates to appropriate portions of the leather-holders. Such devices are illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of portions of a stretcher head and frame equipped with my improvements. Fig. 2 is a vertical sectional view of the same, on the line *ww* of Fig. 1, showing the parts in their locked positions. Fig. 3 is a side elevation showing the same parts as Fig. 2, but in their disengaged or unlocked positions; and Fig. 4 is a similar view of a modified form of the devices, as

illustrated in Fig. 1, Fig. 4 being a section on the line *xx* of Fig. 1.

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 3 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 apparatus.

On the surface of the head (which may be of wood) is secured a metal plate 4, extending from side to side of the head and having a series of slots 5 or othersuitable guideways a suitable distance apart and extending parallel with the frame sides 1, or, in other words, in line with the direction of movement of the sliding stretcher-head. The head 2 is recessed, as shown at 6, to provide a sufficient space between its surface and the under side of the plate 4 for the free movement of the holder-locking devices. The plate 4 may be secured to the head by means of flanged end plates 7 and bolts 8 or in any other convenient way.

On the upper surface of the plate 4, adjacent to the slots 5 and running parallel therewith, are racks or serrated or corrugated portions 9, and on these are suitable locking-plates 10, having serrations or corrugations 9, similar to those on the surface of the plate 4. The locking-plates 10 may have downward lugs or portions 11 extending into the slots 5 for guiding the movements of the plates 10 and preventing them from turning on the surface of the plate 4. By slightly lifting the plates 10 they may be freely adjusted on the plate 4 in the direction in which the slots 5 extend.

The preferable way of clamping the plate 10 to engagement with the racks on the plate 4 is by means of a cam-lever 12, pivotally supported on a post 13, that extends through the slot 5 in the plate 4 and through an opening 14 in the plate 10. The lever has cams 15, which are eccentrically connected by pins 16 to the post 13, so as to bear on the surface of the locking-plate when the lever is turned downward, and the post has a head or flange

17 at its lower end for engaging the under surface of the plate 4 when lifted. Thus the plate 10 may be securely locked in place on the stretcher-head, as clearly indicated in Fig. 2, and it likewise may be freed to render it capable of being adjusted along the slot 5 or tilted to a limited extent, as indicated in Fig. 3, for connecting or disconnecting the leather-holder. For the latter purpose the forward portion of the plate 10 is provided with a hook 18 or other suitable means for engaging a portion of the leather-holder, and the latter, as illustrated, may have a tailpiece or connection 19, provided with one or more openings 20, adapted for receiving the hook. It is desirable that the hook or equivalent device have a rounded or inclined outer surface, as at 21, so that the tailpiece 19 will lift it when pressed against it and permit it to gravitate to engagement in the slot 20. Instead of the cam devices referred to a nut 22 on a threaded upper portion 23 of the post 13 may be used, and by turning the nut to raise or lower the post the same results may be accomplished.

In use the cams or nuts or equivalent means having been operated to unlock the plates, the tailpieces of the leather-holders are brought to engagement with the hooks by pressing the one against the other until the hooks enter the slots, when the levers or nuts are again operated to secure the locking devices in place and to connect the leather-holders to the stretcher-head while tension is applied to the leather they hold. It will be noted that the connection of the hooks in the openings of the tailpieces permits the latter to be turned toward either side in a horizontal plane, thus enabling the holders to engage the leather at different angles to its body.

The devices shown and described may be varied in structure in many respects without changing their mode of operation, and hence I do not limit myself to the specific forms of devices set forth.

Subject-matters of invention disclosed herein, but not claimed, are reserved to be claimed in my preceding applications, Serial No. 9,199, filed March 19, 1900; Serial No. 10,128, filed March 26, 1900; Serial No. 39,844, filed December 14, 1900; Serial No. 40,714, filed December 22, 1900, and Serial No. 10,128, filed March 26, 1900.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with the head of a stretcher-frame having a guideway extending in the direction of the machine's tension, of an adjustable coupling device for a leather-holder guided in its movements by such guideway, an independent leather-holder adapted to be detachably connected to said coupling device, and means for locking the latter to the head in its adjusted positions thereon, substantially as set forth.

2. The combination with a stretcher-head having a guideway extending in the direction of the machine's tension, of a leather-holder coupling device slidable along said way and having a tilting vertical but no lateral movement, means for permitting it to be tilted to engage with the leather-holder and means for locking it in engagement with the holder and in place on the head, substantially as set forth.

3. The combination with a stretcher-head having a guideway extending in the direction of the machine's tension, a leather-holder coupling device slidable along said way and having a gravitating hook, an independent leather-holder having a tailpiece or like part adapted to lift the hook by lateral pressure against it and to permit the hook to gravitate to engagement for pivotally connecting the holder, and means for locking the hook and coupling device in place when so engaging the holder, substantially as set forth.

4. The combination with a stretcher-head, of an adjustable longitudinally-guided leather-holder coupling device, adapted to pivotally and detachably connect an independent leather-holder to the head, and means for locking the coupling device to the head, substantially as set forth.

5. A coupling and locking device for connecting a leather-holder to a stretcher-head, comprising a coupling device provided with a hook for engaging the holder, a bolt extending through an opening in the coupling device and a slot in the head, and means for operating the bolt to clamp the coupling device to the head, substantially as set forth.

6. The combination with a stretcher-head having a slot, of an adjustable coupling device for a leather-holder guided in its movements by said slot, gravitating means for pivotally connecting a leather-holder to such coupling device, interlocking contact-surfaces on the head and coupling device, and means for clamping the latter on the former, substantially as set forth.

7. The combination with a stretcher-head having a series of parallel guideways extending longitudinally of the stretcher-frame, a series of devices adjustable along said ways and having gravitating means for pivotally connecting a corresponding series of leather-holders, substantially as set forth.

8. The combination with a stretcher-head having slots extending longitudinally of the stretcher-frame, of adjustable locking devices including vertically-movable plates arranged to operate in said slots, means for pivotally and detachably connecting leather-holders to said movable plates, and means for clamping the latter plates to the stretcher-head, substantially as set forth.

9. The combination with a stretcher-head having slots extending longitudinally of the stretcher-frame, of adjustable locking devices including vertically-movable plates arranged

to operate in said slots, means for detachably connecting leather-holders to said movable plates, and means for clamping the latter plates to the stretcher-head, substantially as set forth.

5 10. The combination with a stretcher-head having a series of parallel guideways, a corresponding series of slidable coupling devices severally controlled in their movements by
10 said ways and provided with hooks, leather-holders adapted to be separately connected to the hooks, and means for separately locking the coupling devices to the head after their connection with the holders, substantially as
15 set forth.

11. The combination with a stretcher-head

having a series of parallel guideways, a corresponding series of slidable coupling devices severally controlled in their movements by said ways and provided with hooks, leather- 20 holders provided with means for laterally-adjustable pivotal connection with said hooks, and means for locking the coupling devices independently and successively to the head, substantially as set forth.

25 In testimony whereof I have hereunto set my hand this 10th day of December, 1900.

JOHN CALDWELL.

Witnesses:

P. H. GUNCKEL,
A. L. WHELAN.