

(No Model.)

M. McNALLEY.
VETERINARY SPECULUM.

No. 555,390.

Patented Feb. 25, 1896.

Fig. 1.

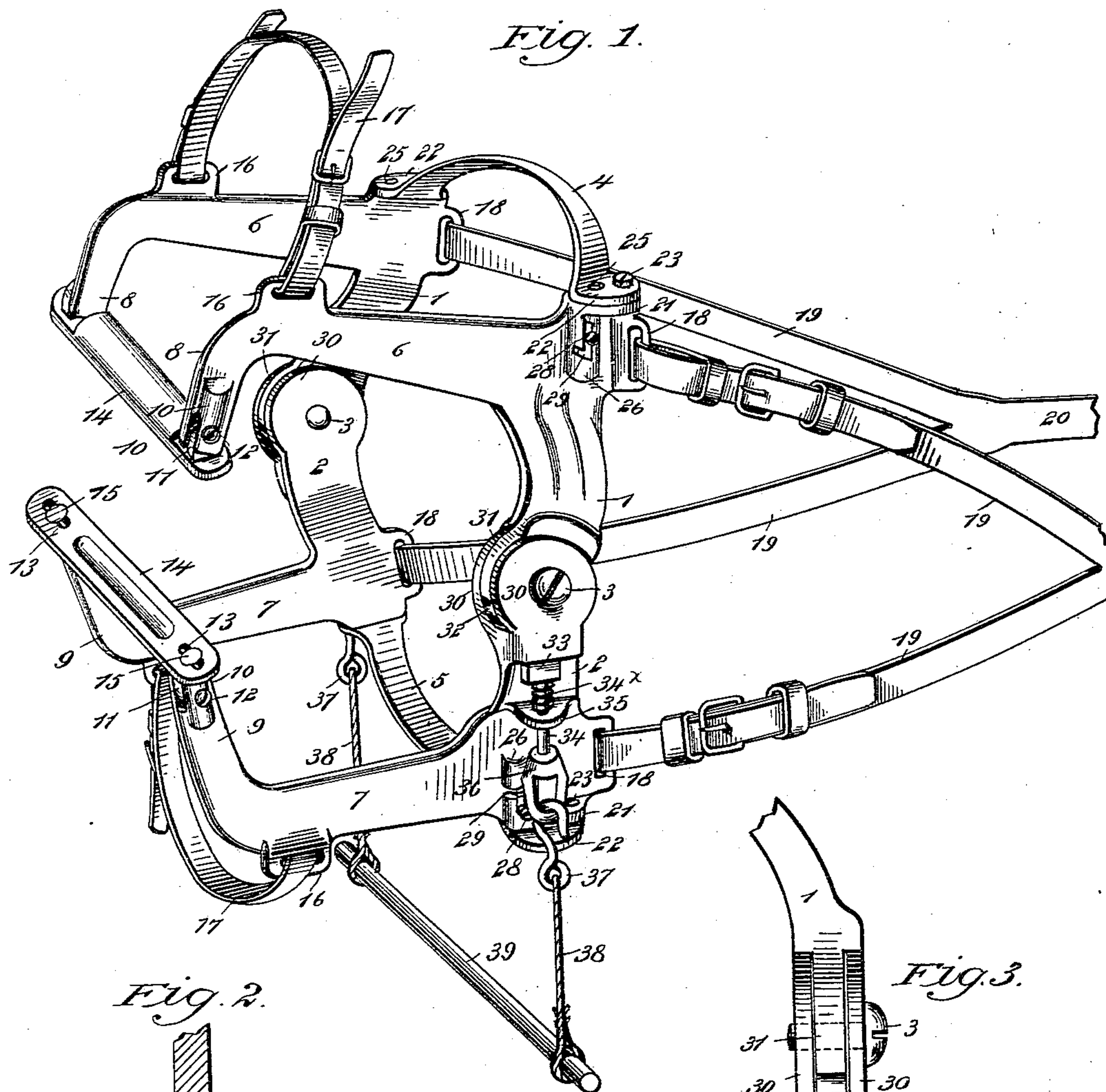
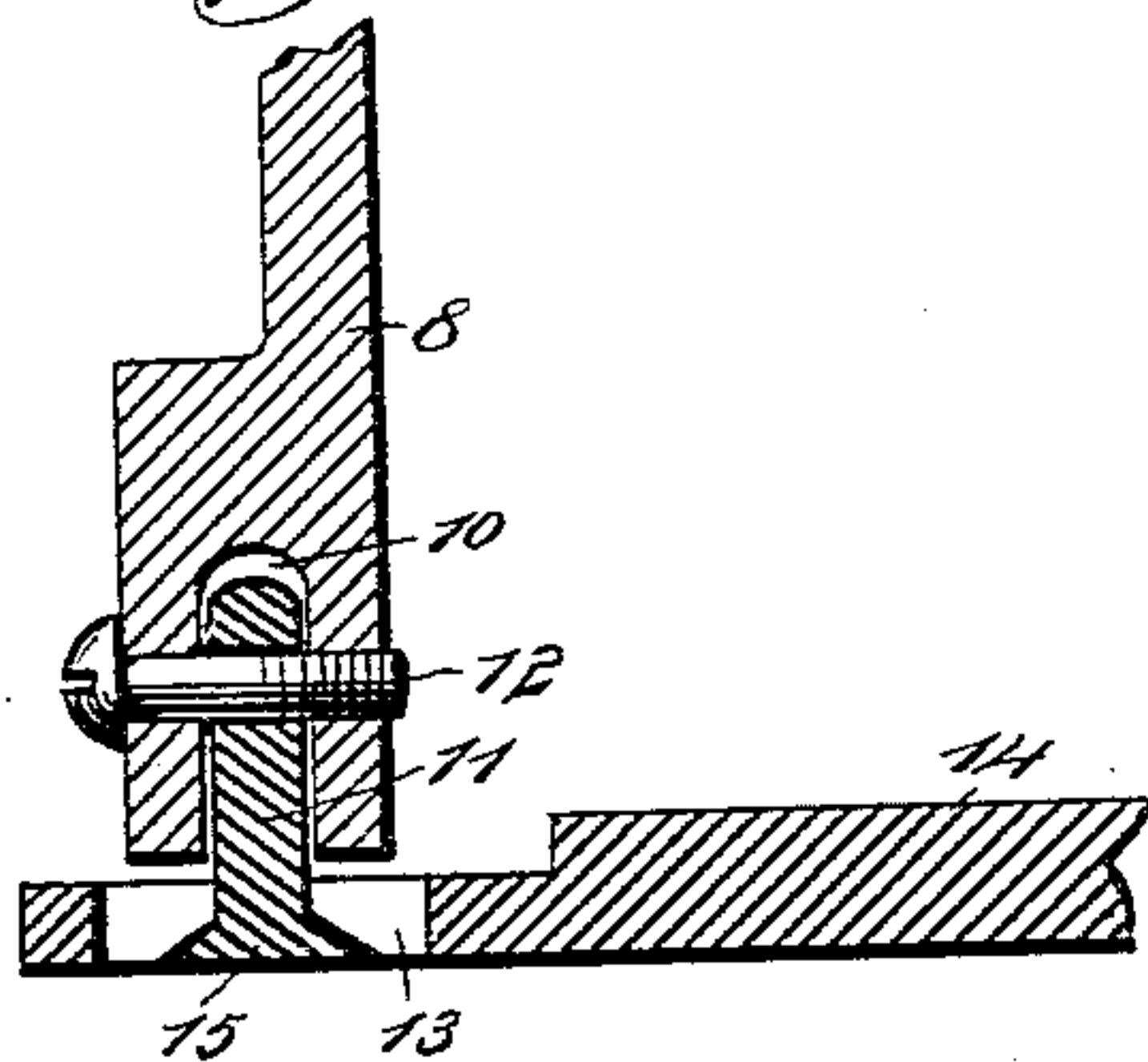


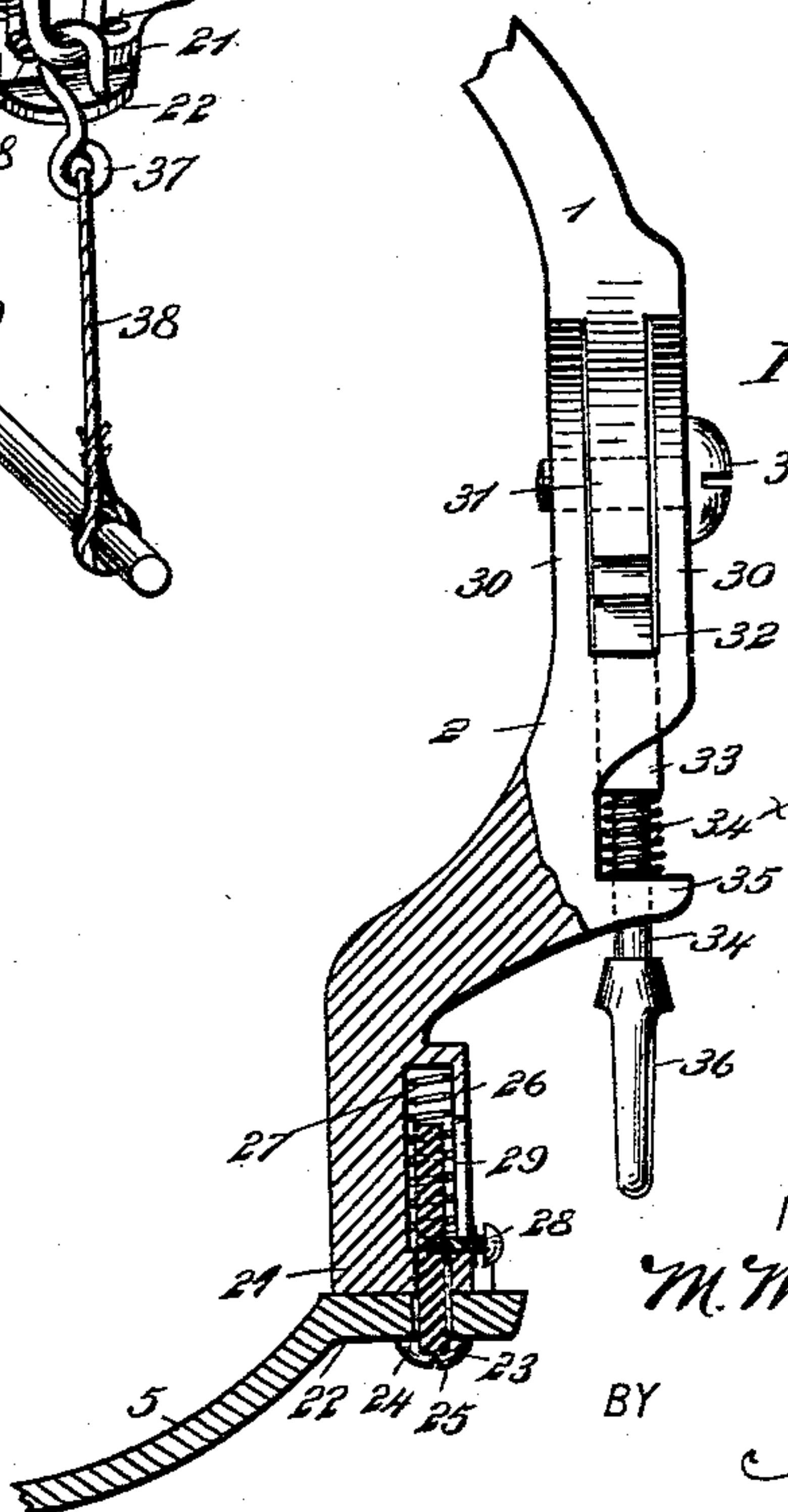
Fig. 2.



WITNESSES:

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Fig. 3.



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VETERINARY SPECULUM.

SPECIFICATION forming part of Letters Patent No. 555,390, dated February 25, 1896.

Application filed May 9, 1895. Serial No. 548,721. (No model.)

To all whom it may concern:

Be it known that I, MICHEAL McNALLEY, of St. Louis, Missouri, have invented a new and Improved Mouth-Speculum for Veterinary Use, of which the following is a full, clear, and exact description.

This invention relates to that class of devices known commonly as "mouth-speculums," which are employed by veterinary surgeons for opening and holding open the jaws of horses, &c., when it is desired to examine or operate on any portion of the throat or mouth, or administer medicine to the animal; and the object of the invention is to provide a device of this character of a simple and inexpensive construction.

The invention comprises a frame composed of two pivoted sections provided with bits adapted to enter the animal's mouth and bear on the jaws, said frame being provided with a convenient locking device for holding its sections rigidly in position after they have been adjusted.

The invention also contemplates certain novel features of construction and combination of parts whereby certain important advantages are attained, and the frame of the speculum is made to fold and is otherwise better adapted for use than other similar devices heretofore employed, all as will be hereinafter fully set forth. The novel features of the invention will be carefully defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view showing the construction of the mouth-speculum. Fig. 2 is a detail sectional view, drawn to an enlarged scale, showing the adjustable connection of the bit with the frame of the device; and Fig. 3 is a fragmentary detail view, also drawn to an enlarged scale, showing the means for connecting the upper and lower frames adjustably together, the lower part of said figure being shown in section to illustrate the construction of the latch device for connecting the tie-bar to the frame.

The frame of the device is constructed of upper and lower side bars, 1 and 2, said bars being pivoted together in pairs, as indicated at 3, at their inner ends, one pair of said bars

being arranged at each side of the frame, as clearly shown in Fig. 1, and at their upper ends the respective upper and lower side bars are connected together by tie-bars 4 and 5, which extend between the opposite sides of the frame and are curved and adapted to bear at the upper and lower portions of the head of the animal when the device is in use. The side bars 1 and 2 are each provided with arms 6 and 7, respectively, projecting forwardly from their extremities, and said arms are of equal length and are provided at their front ends with bent portions 8 and 9 directed toward each other, and provided at their extremities with bifurcations 10 to receive flattened bolts 11, perforated at their upper ends to receive screws 12 extending between the forks of the bifurcated ends of said bent portions 8 and 9, as clearly seen in the sectional view, Fig. 2. The flattened bolts 11 are adapted to pass through slots 13 formed longitudinally at opposite ends of the bit-bars 14, which extend transversely across the frame between the bent ends 8 and 9 of the arms 6 and 7 of the side bars, and said bolts are headed at their lower ends and adapted when inserted in the slots 13 in said bars 14 to be turned at right angles, so as to be locked against withdrawal therefrom.

The arms 6 and 7 are provided adjacent to their bent portions 8 and 9 with integral loops 16, formed at their upper and lower edges, respectively, and aligned with one another, and said loops are adapted to serve as means of attachment for the ends of straps 17 or equivalent devices, adapted when the device is in place on a horse's head to be strapped down closely over the upper and lower portions of the same, so as to secure the device tightly in place, and the rear sides of the respective upper and lower side bars, 1 and 2, are similarly provided with integral loops 18, adapted to receive straps 19, connected at their rear ends with other straps 20, adapted to pass over the head of the horse, whereby the device may be secured in place thereon.

At their upper and lower portions, adjacent to the points of attachment of the tie-bars 4 and 5, the respective side bars of the device are provided with exteriorly-projecting flattened flanges 21, and the said tie-bars 4 and 5 are similarly provided with flattened pro-

jections 22, secured to said flanges by means of screws 23, one screw being set at each end of each tie-bar, as clearly indicated in Fig. 1, and in order to facilitate the removal of the tie-bars 4 and 5 and their attachment to the said bars I provide a latch device attached to each end of said tie-bars, which latch device comprises a longitudinally-movable pin or bolt 25, arranged in a tubular casing 26, formed at the end of the side bar, said bolt being provided with a projecting handle 28, extending through a slot 29 formed in the side of said casing 26, and being adapted to be normally pressed outward from the end of the side bar by means of a spring 27, arranged in said casing behind the bolt, and said bolt 25 is adapted to engage a perforation 24, formed in the end of the tie-bar, as clearly seen in Fig. 3.

The upper end of each of the lower side bars 2 is bifurcated, as indicated at 30 in the drawings, and the lower end, 31, of each of the side bars, 1, is reduced and inserted between the bifurcations 30 of the corresponding lower side bar, 2, and the reduced lower end, 31, of the upper side bar, 1, is provided, as clearly seen in Figs. 1 and 3, with rack-teeth 32 on its lower side, said rack-teeth being arranged in segmental form concentric with the pivot-pin 3, which binds the side bars together, and being adapted to be engaged by a bolt 33, arranged to slide through a perforation formed in the lower side bar, 2, and being provided with a reduced spindle or shaft 34, which extends vertically downward and is guided in a perforation formed in a flange or projection 35 on the outer side of the side bar, 2, between which flange and the bolt 33 is arranged a spring 34^x, serving to hold the said bolt normally in engagement with the teeth of the segment-rack 32 on the side bar, 1. The lower end of the shaft or spindle 34 is provided with an eye 36, adapted to be engaged by a hook 37, and the hooks 37 at opposite sides of the device are connected with cords or similar devices 38, which extend down and are connected to opposite ends of a handle 39, extending across the space between the side bars and adapted to be grasped by the hand of the operator when it is desired to move the upper and lower frames toward or from one another.

In operation the device is secured on the head of a horse, the tie-bars 4 and 5 and straps 17 bearing at the upper and lower sides of the head, the straps 20 being passed around the back of the head, and the bit-bars 14, which will of course be provided with suitable shields of rubber or the like, being passed between the jaws. The chin-strap 17 is now grasped by the operator and the lower frame is drawn downward, the teeth of the segment-racks being adapted to slide over the bolts 33 when the frames are forced apart, and being engaged by said bolts in such a way as to lock the frames against moving toward one another when released.

When it is desired to release the frames so as to allow the animal to close its mouth, the handle 39 is grasped and drawn downward, so as to disengage the bolt 33 from the segment-racks, whereupon the frames may be closed together, moving freely on their pivots 3. In order to permit the device to be compactly folded up when not in use, I have pivoted or swiveled the tie-bars 4 and 5 on the screws 23, and have provided latches for locking said tie-bars to the side bars of the upper and lower frames.

When it is desired to fold the device, the latch-bolts 25 are disengaged from the apertures 24 in the tie-bars 4 and 5, so as to permit the side bars to be swung toward one another, said bars being also pivoted or swiveled at their forward parts to the ends of the bit-bars. In this way the side bars at one side of the device may be folded compactly against those at the other side of the device, and when unfolded the tie-bars may be securely locked to the side bars by the engagement of the latch-bolt 25 with the aperture 24.

The construction of the device as above described is an exceedingly simple, convenient and inexpensive construction, and permits of ready adjustment after the device has been placed in position on the head of the horse, it being only necessary to draw down on the handle 39 and simultaneously force the upper and lower frames apart to the required distance. The arrangement of the latch-bolts 25 at opposite ends of the tie-bars 4 and 5 permits the same to be readily removed or applied, since it will be seen that the ends of the said tie-bars are guided to their proper positions by said latch-bolts, and are secured in place by but one screw at each end. The means employed for connecting the bit-bars 14 to the upper and lower frames is also of an improved and simple construction, and permits said bit-bars to adjust themselves automatically to the teeth of the animal when the device is in place. Moreover, the arrangement of this adjustable connection is such that the bit-bars 14 may be removed and replaced at will.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a veterinary mouth-speculum, the combination of upper and lower frames each formed of side bars pivotally connected at their adjacent ends, said side bars being provided with arms at their extremities, tie-bars connecting the extremities of the side bars of the upper and lower frames and adapted to pass over the upper and lower sides of the head of the animal, bit-bars engaging the extremities of the arms of the upper and lower frames and adapted to be inserted between the jaws of the animal, and means for securing said frames adjustably together, substantially as set forth.

2. In a veterinary mouth-speculum, the combination of two frames pivotally connect-

ed together and provided with means for securing them adjustably together, said frames being provided with arms having bifurcated ends, slotted bit-bars extending between the arms of said frames, and flattened bolts extending through the slots of said bit-bars and pivoted to the bifurcations of said arms, substantially as set forth.

3. In a veterinary mouth-speculum, the combination of upper and lower frames pivoted together at their opposite sides, each of said frames comprising two side bars and a bit-bar pivotally connecting the said side bars at the forward portion of the frame, tie-bars also pivotally connecting said side bars at the rear portions of the frames, and means for securing said frames adjustably in position, substantially as set forth.

4. In a veterinary mouth-speculum, the combination of upper and lower frames pivoted together at their opposite sides, each of said frames comprising two side bars and a bit-bar pivotally connecting said side bars at the forward portion of the frame, tie-bars also pivotally connecting the rear portions of the frames, whereby the frames may be folded, means for holding said frames in unfolded position, and means for securing the upper and lower frames adjustably in position, substantially as set forth.

5. In a veterinary mouth-speculum, the

combination of upper and lower frames pivoted together at their opposite sides, each of said frames comprising two side bars, and a bit-bar pivoted at its opposite ends to said side bars at the forward portion of the frame, tie-bars also pivotally connected at their ends to the side bars at the rear parts of the frames, whereby the frames may be folded, said tie-bars having apertures adjacent to their pivot-points, latches on the side bars to engage the apertures in the tie-bars to hold the frames in unfolded position, and means for securing the upper and lower frames adjustably in position, substantially as set forth.

6. In a veterinary mouth-speculum, the combination of upper and lower frames pivoted together at their opposite sides, each of said frames comprising two side bars and a tie-bar pivotally connecting the same and adapted to permit the side bars of the frame to be folded toward each other, the side bars of each frame being provided with latch devices arranged to hold them in unfolded position, and means for securing the upper and lower frame adjustably in position, substantially as set forth.

MICHEAL McNALLEY.

Witnesses:

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FRED ARTHUR.