(No Model.) 3 Sheets—Sheet 1.

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VETERINARY OPERATING TABLE.

No. 439,052. Patented Oct. 21, 1890.

Fig. 1.

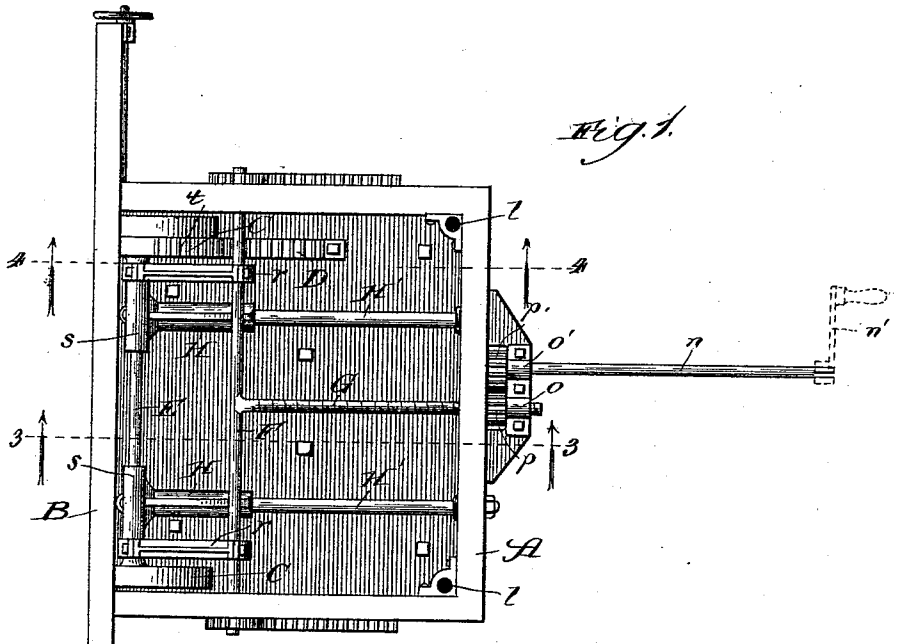
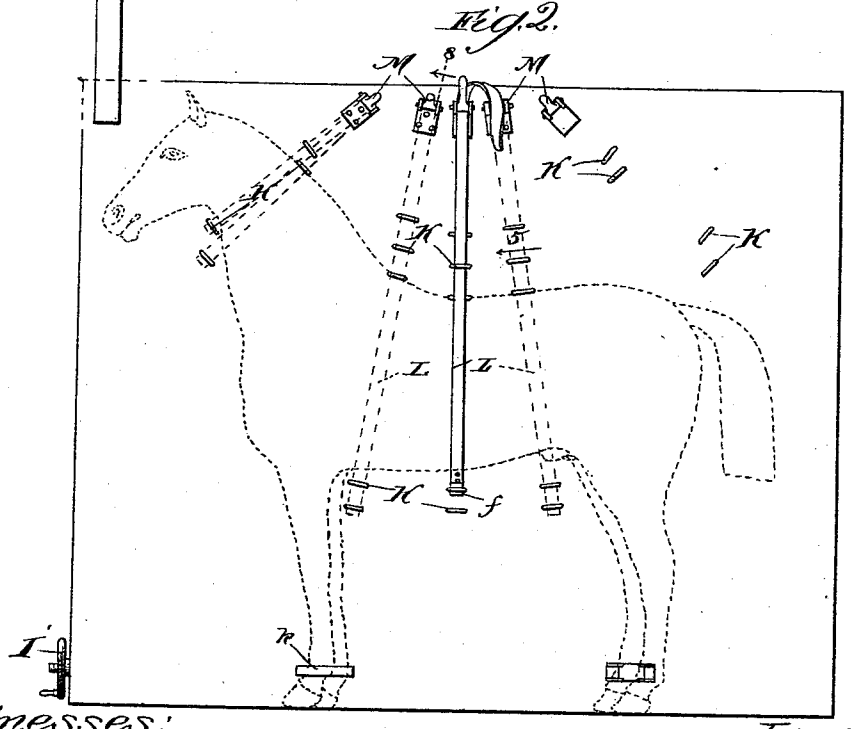


Fig. 2.



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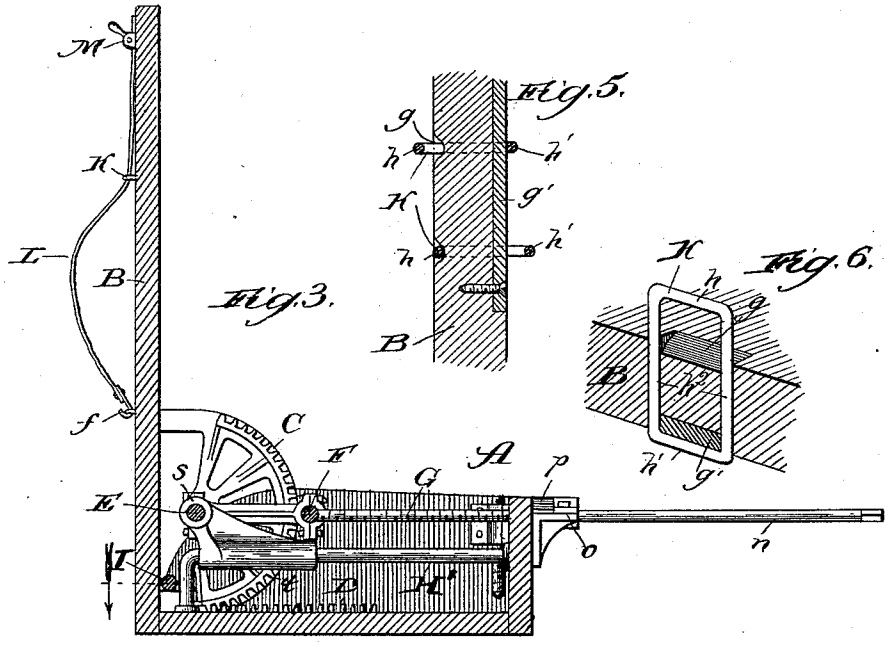


Fig. 3.

Fig. 5.

Fig. 6.

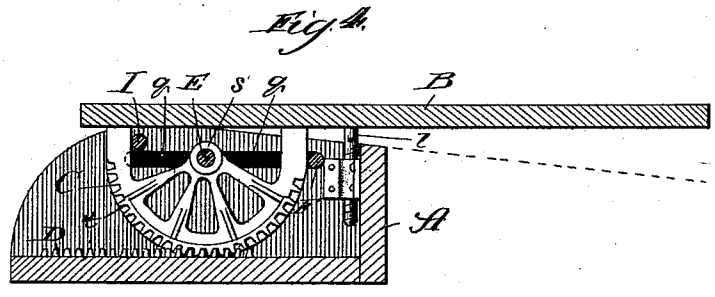


Fig. 4.

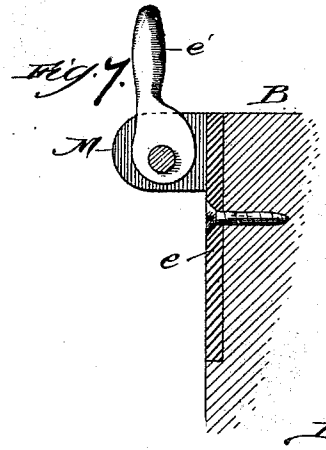


Fig. 7.

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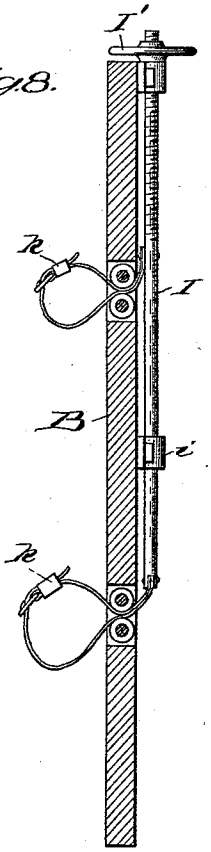
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VETERINARY OPERATING TABLE.

No. 439,052. Patented Oct. 21, 1890.

Fig. 8.



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UNITED STATES PATENT OFFICE.

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VETERINARY OPERATING-TABLE.

SPECIFICATION forming part of Letters Patent No. 439,052, dated October 21, 1890.

Application filed April 8, 1890. Serial No. 347,020. (No model.)

To all whom it may concern:

Be it known that I, MONROE M. COPP, a citizen of the United States, residing at Elm Hall, in the county of Gratiot and State of Michigan, have invented a new and useful Improvement in Veterinary Operating-Tables, of which the following is a specification.

My invention relates to an improvement in the class of veterinary operating-tables wherein the table-top or platform is pivotally mounted on its supporting-frame to swing from a vertical plane to a horizontal plane and back, and is provided on its face with straps or other means for fastening the horse at different parts of his body to the platform while in the vertical plane, whereby in the act of turning the platform to the horizontal plane the horse will be lifted and turned upon its side, still being held firmly to the table.

When an animal, particularly a horse, is undergoing certain surgical operations, it is desirable that his head and back be in a plane more or less lower, within comparatively narrow limits, than his feet, as this position renders the animal more helpless and tends to prevent his struggling, thereby limiting the time otherwise necessary for the operation and contributing to its success.

My object is therefore to provide a veterinary operating-table of the class named and of an improved construction, the platform of which shall be capable of being turned from the vertical a desired degree beyond the horizontal plane.

My object is further to provide stops for the swinging end of the platform, which may be adjusted to support the platform at any desired degree of inclination beyond the horizontal plane, and still further to provide improved means for readily securing the animal in place upon the platform.

In the drawings, Figure 1 is a top plan view of my improved operating-table, showing the platform swung into the vertical plane; Fig. 2, a view in elevation of the platform and illustrating the manner of securing a horse thereto; Figs. 3 and 4, sections taken on the lines 3 3 and 4 4 of Fig. 1 and viewed in the direction of the arrows; Fig. 5, a broken section taken on the line 5 of Fig. 2, enlarged, and viewed in the direction of the arrow; Fig. 6, an enlarged broken perspective view, partly sectional, illustrating a detail; Fig. 7, an enlarged broken section taken on the line 8 of Fig. 2 and viewed in the direction of the arrow. Fig. 8 is a sectional view showing a detail.

A is the frame, and B the platform, of the table. The platform is mounted and rigidly secured adjacent to one edge and toward opposite sides upon segmental supports C C, provided on their peripheries with teeth *t*, and in the lower part of the frame are horizontal racks D, upon which the supports are mounted to travel at their peripheries, the teeth of the supports meshing with those of the racks. Each segmental support may be formed with spokes, as shown, which radiate from a central hub *s*, and the supports are connected together by a horizontal shaft E, which extends at opposite ends into the respective hubs.

F is a shaft extending parallel with the shaft E, and connected with the latter by pivotal links *r*. The ends of the shaft F extend through guide-openings *q* in opposite sides of the frame.

Secured to the shaft F midway between the links *r* and extending at a right angle thereto through the frame at the back of the table is a screw-threaded rod G. Upon the rod G beyond the frame is a rotary and internally-screw-threaded pinion *p*, held against longitudinal movement on the rod by a bearing *o* for the rod and the end of the frame. Adjacent to the pinion *p* and in mesh with the latter is a pinion *p'*, rigid upon a rod *n*, mounted in a bearing *o'* and extending therefrom backward beyond the edge of the platform when the latter is in the horizontal plane, where it is provided with a crank *n'*.

When the platform extends in the vertical plane, the actuating mechanism described is in the position shown in Figs. 1 and 3. To turn the platform to the horizontal plane, the rod *n* is turned to rotate the pinions *p' p* and force the rod G in the direction of the back of the table, which draws with it the axle E, owing to the connection with the latter afforded by the links *r*, and cause the segmental supports to rock backward upon the rack D and carry the platform with them as they turn.

The operation is continued until the platform is turned so far as to rest upon the back of the frame, as shown in Fig. 4. As it is desirable in many cases to cause the platform to turn beyond the horizontal plane to incline downward more or less toward the rear side, the upper edge of the back of the frame A should be lower than the top of the supports C and provided with set-screws *l*, which may be adjusted to afford supports for the platform, which will permit the latter to incline at any desired angle.

H H are sleeves arranged to slide on horizontal guide-rods H'. They are secured to the shaft E, and they operate to hold the supports C firmly down against the racks to prevent the supports from being jarred out of mesh with the latter in the operaton of the mechanism from any cause.

The means I employ for securing the animal to the platform are as follows: Near the edge of the platform, which when the latter is in the vertical plane is close to the ground, are slots *k'*, corresponding in position with the fore and hind legs of the animal and at about the height of his fetlocks, and a horizontally-extending and longitudinally-movable rod I is mounted in guides on the rear side of the platform. The rod I extends at one end beyond one of the lateral edges of the platform, at which end it is screw-threaded, as shown, and beyond the guide *i*, which is at the extreme edge of the platform, the rod carries an internally-screw-threaded hand-wheel I'. Connected with the rod I are hopples *k k*, which extend through the slots *k'*. Turning of the hand-wheel I' in the proper direction causes it to bear against the guide *i* and forces the rod to travel through it and draw with it the straps to tighten the hopples *k k*.

In securing the animal to the platform he is placed in the position shown in Fig. 2 and the hopples passed around the lower part of his legs or fetlocks. At points upon the platform which when the animal is in position would be adjacent to the upper and lower lines of the main part of his body, including the neck, are holders K. Each holder K may be of the form shown, with top and bottom bars *h h'* and parallel side bars h^2, which latter extend loosely through holes in the platform. The side bars of the holder are somewhat larger than the thickness of the platform, so that when the bar *h'* is against the rear side of the latter the holder affords a loop or eye on the front side thereof. In order that those holders which are not in use, as hereinafter described, may be out of the way, recesses *g* are provided in the face of the platform, in which the bars *h* may lie, to extend flush with the surface of the platform when the holders are drawn back or drop of their own weight when the platform is turned from the vertical plane. Extending between the bars h^2 of each holder and set into recesses in the rear side of the platform are metal plates *g'*, against which the bars *h'* will bear when the holders are in use. The plates *g'* prevent wear upon the surface of the rear of the platform where the bars *h'* strike when the holders are drawn forward, and also strengthen that part.

L L are straps provided at one end with hooks *f*, which may be of the form shown in Fig. 3.

The holders K are provided, preferably, in series of two or more above and below the plane on which the body of the animal is to rest, in order that an animal of any size may be firmly secured thereon, and in direct line with each set of attachments toward the top or back of the platform are clamps M, which may be of the form shown, comprising securing-plates *e*, upon which are mounted pivotal cam-faced levers *e'*.

The animal is secured at the upper part of his body to the platform by fastening each strap L by means of its hook *f* to one of the holders K (which is drawn out for the purpose) at the lower side of that part of the body, drawing it over the body, passing it under the bar *h* of a holder, in line with the first holder above the body of the animal, and passing it thence through the respective clamp M, by which, after drawing it taut, the strap may be firmly held against slipping by pressing upon the lever *e'*. Thus the holders K without change of construction afford a fastening means to secure the end of a strap to the platform, or guides for the portions of the strap, as the circumstances require.

As many series or sets of holders K may be provided as desired, and they may be so located as to insure the perfect securing of an animal of any size, whether he is faced to the right or left.

The securing means afforded by the hopples upon the longitudinally-movable rod, and the straps L, held in place by their hooks and the holders K and clamps M, are readily and easily applied and tightened and as readily unfastened, and when applied will secure the horse as firmly as may be desired.

If desired, the platform may be suitably padded.

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

1. In a veterinary operating-table, the combination of a supporting-frame, a tilting platform mounted toward one end on the frame upon a shifting fulcrum and movable from the vertical beyond the horizontal plane, and adjustable supports upon the frame for regulating the degree of inclination of the platform, as and for the purpose set forth.

2. In a veterinary operating-table, the combination of a supporting-frame A, a platform B, segmental supports for the platform, movable in the frame and affording a shifting fulcrum moving forward as the platform is lowered and back as the platform is raised, a shaft E, connecting the segmental supports together, and operating mechanism upon the frame, connected directly with the shaft to move it back and forth in the frame and rock

the segmental supports, as and for the purpose set forth.

3. In a veterinary operating-table, the combination of a supporting-frame A, a platform B, segmental supports for the platform movable in the frame and affording a shifting fulcrum moving forward as the platform is lowered and back as the platform is raised, a shaft E, connecting the segmental supports together, operating mechanism upon the frame connected directly with the shaft to move it back and forth in the frame and rock the segmental supports, and a guide upon the frame for the shaft, as and for the purpose set forth.

4. In a veterinary operating-table, the combination of a frame A, racks D on the frame, segmental supports C, provided on their peripheries with teeth and mounted at their peripheries upon the racks, a platform B, secured upon the supports C, a shaft E, connecting the supports together, sleeves H, secured to the shaft and movable on guides H′ on the frame, and means, substantially as described, upon the frame for rocking the supports, as and for the purpose set forth.

5. In a veterinary operating-table, the combination of a frame A, racks D on the frame, segmental supports C, provided on their peripheries with teeth and mounted at their peripheries upon the racks, a platform B, secured upon the supports C, a horizontal shaft E, connecting the supports together, a shaft F, parallel with the shaft E, links r, connecting the said shafts together, and means, substantially as described, connected with the shaft F for moving the latter and through it the shaft E to rock the supports, as and for the purpose set forth.

6. In a veterinary operating-table, the combination of a frame A, racks D, segmental supports C on the racks, a platform B, mounted on the supports, a shaft E, connecting the supports together, a shaft F, parallel with the shaft E and movable in guides q on the frame, links r, securing the shafts E F together, a screw-threaded rod G, secured to the shaft F and extending through the back of the frame, an internally-threaded pinion p on the shaft G beyond the frame, a pinion p' on a crank-rod n, in mesh with the pinion p, the whole being constructed and arranged to operate substantially as described.

MONROE M. COPP.

In presence of—
J. W. DYRENFORTH,
M. J. FROST.