(No Model.)

J. C. MILNES.

VETERINARY OPERATING TABLE.

No. 492,819. Patented Mar. 7, 1893.

Fig. 1.

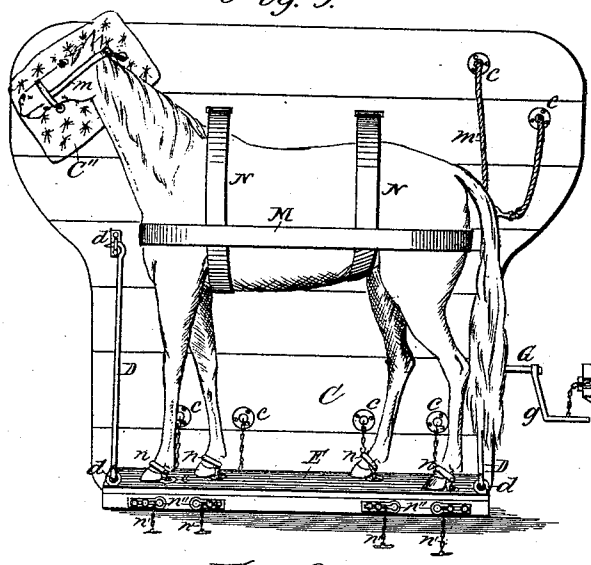


Fig. 5.

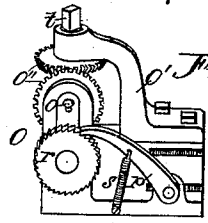


Fig. 6.

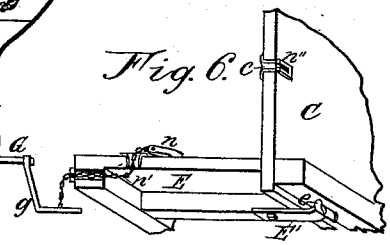


Fig. 2.

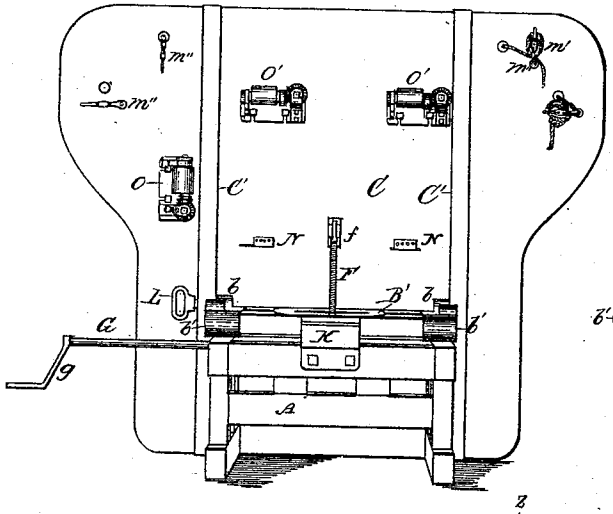


Fig. 3.

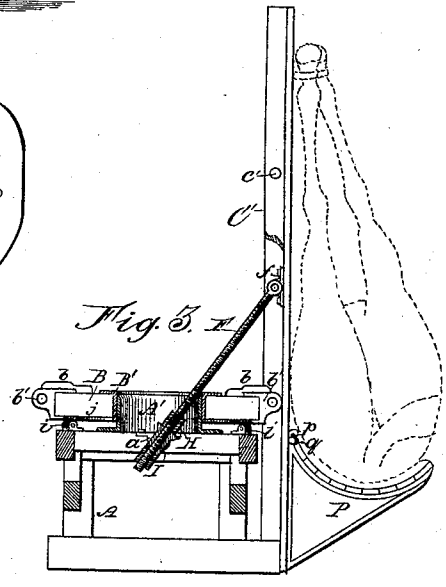


Fig. 4.

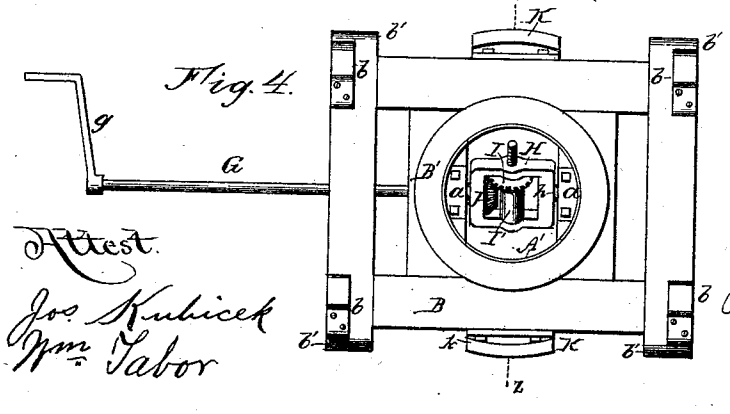
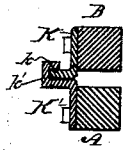


Fig. 7.



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VETERINARY OPERATING-TABLE.

SPECIFICATION forming part of Letters Patent No. 492,819, dated March 7, 1893.

Application filed April 18, 1892. Serial No. 429,518. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. MILNES, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Veterinary Operating-Tables; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to produce an operating table for the use of veterinary surgeons, which shall be easily manipulated, and capable of a more extended range of movements than the tables in general use for that purpose.

The invention consists in the construction, combination and arrangement of parts, as hereinafter fully set forth and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a front elevation of a table embodying my invention, with the horse thereon in the initial position. Fig. 2 is a rear elevation of the same, partially in perspective. Fig. 3 is an end elevation of the same, showing the table reversed to place the animal in the final position, the frame supporting the table, and its connections, being in central, transverse section. Fig. 4 is a plan view of the turn-table and connected parts. Fig. 5 is a view in perspective of the girth-reel. Fig. 6 is a fragmentary sectional view in perspective of the table and platform, showing the manner of connecting the two. Fig. 7 is a fragmentary sectional view, on the line *z z*, showing the construction of guide-plates for the turn-table.

Similar letters of reference indicate corresponding parts.

Referring now to the drawings, A represents the bed or frame of the device, which is stoutly built of wood or iron, and of any desired general form. This frame is provided with a central pivot-ring A′. It is also supplied with bearings *a a*, and preferably, though not necessarily, with anti-friction rollers *i i* these serving the better to steady the turn-table above, and permit it to revolve freely. On this frame is mounted the turn-table B, a rectangular structure, which should also be strong, and may be made of wood or iron. In the center it is provided with a pivot ring B′, which is large enough to revolve outside the ring A′. To serve as a track for the anti-friction rollers, the turn-table should have a ring *j* on the under side, as indicated in Fig. 3. At each corner is a casting *b′* with a hole through it (a pair on each side of the turn-table being in line) which receives a pivot-rod L, connecting the turn-table with the table C. The blocks *b b b b* simply form a stop for the table when in a horizontal position.

The table C is strongly built of planks secured to transverse beams C′ C′. At the upper end (Fig. 1) it is extended on both sides, so as to give a resting place for the animal's head when placed with either side to the table.

In practice I prefer not to pad the table, since it is practically impossible to keep a padded table as clean and free from infection as it should be. I therefore leave the table perfectly bare, thereby making it easy to wash it clean of blood or other exudations, and in place of a padded table top provide an adjustable and removable padded blanket (not shown). The cushion C″ for the animal's head will serve to illustrate the device, which forms no necessary part of this invention.

The shorter side of the table is provided with a removable platform E, on which the animal stands in the initial position, and while being secured to the table. For this purpose the table is provided with a pair of stirrups *e*, and the platform with a pair of engaging, slightly hooked plates E′. These support the platform on the side next the table, while the outer side is upheld by a pair of hooked rods D D, connected to the platform by suitable eye-bolts *d d*, and hooking into eyes *d′ d′* attached to the table. When the table is elevated, and the animal detached, the rods may be unhooked, and by dropping the platform it also may be unhooked from the table and taken entirely out of the operator's way, if desired. In practice I prefer to first fasten the animal's feet to this platform, which I do by means of hopples *n n* and connected chains *n′ n′*, which pass through holes in the platform near the animal's feet, and thence through holes in the outer side thereof, as clearly illustrated in Fig. 6. The chain is fastened in the desired position by a slotted plate *n″* adapted to slip over a link, in a simple manner as in-

dicated. For convenience these plates are permanently attached to the platform, and at one end have an eye large enough to allow the chain to pass through, while at the same time preventing its becoming detached therefrom. It will be understood that the said plates are intended to be slipped back and forth, as the manipulation of the chains may require.

The special advantage of the platform and the fastening of the animal's feet thereto is that it gives in the first place a natural and unconstrained support for him while being turned over on his side, thus making it unnecessary to cinch him tightly, body and legs, to the table, and rendering the operation much more comfortable for the animal and easy for the operator, than if no platform were provided.

As it is sometimes necessary to get access to the animal's feet, I provide for the removal of the platform, by the simple operation above described. In that case his legs may be fastened separately, or altogether, to the table, suitable holes *c c* being provided for that purpose, with means for fastening the chains as already described.

For securing the animal's body to the table, I provide the same with transverse girths N N and a longitudinal girth M. Evidently a single girth might serve, but in practice I prefer three, as shown, whereby the animal is bound very securely to the table, the longitudinal girth effectually preventing him from slipping endwise on the table in any struggles he may make. For cinching up the girths I provide the under side of the table with reels O O′ O′. These are all alike, save in position, and are composed essentially of a windlass mounted in suitable bearings, and with studs *o* thereon to engage with button-holes in the ends of the girth; a pair of bevel gears O″ to actuate the windlass, the axle of one of them being mounted in a bearing O′ and having a squared end *t* to take a crank; and a ratchet *r*, pawl *p* and spring *s*, to hold the take-up. By this means the cinching is done with very little effort, and as tightly as may be required. For fastening the head nothing more is required than a rope *m′* connected to the upper and lower extremities of the halter *m*, and cleats *m″* around which the surplus rope is wound. The cushion, C″, for this purpose, is provided with holes through which the rope passes.

In the center of the supporting frame A is mounted a yoke H, with holes in two sides of it and a trunnion *h* on another side. The trunnion is mounted in one of the bearings *a*, before referred to. In the hole opposite thereto is mounted a shaft G extending to the limits of the table, and provided with a crank *g*. On the inner end of this shaft is a bevel pinion, J engaging with a similar pinion I, the hub of which is a nut engaging with the screw F connecting at the upper end with the plate *f* fastened to the middle of the table. The pivot-rod L is provided with a suitable hand-hold at one end, whereby it may be withdrawn from the holes *c′* in the beams C′, and the bearings *b′*. The operation of this part of the invention will be readily understood. The table being in the initial position, with the pivot-rod as in Fig. 2, and the animal being attached to the table as described, the operator turns the crank *g*, causing the revolution of the nut and pinion referred to, which gradually draws the table down to a horizontal position. If now it is desired to turn the animal on his back the pivot-rod is withdrawn and inserted in the corresponding bearings on the other side of the machine, when by reversing the motion of the crank the table is elevated to the final position shown in Fig. 3.

It will of course be understood that the table may be stopped and held at any intermediate position, as well as those mentioned. By this means I am able to place the animal in any desired position for treatment, the advantages of which are so obvious as to require no detailed statement.

To give easy and comfortable support to the animal when on his back, the table is provided with one or more saddles, preferably two, one for the hips and another for the withers. These are in the nature of brackets P, removably attached to the table, as by hooks *p* and eye-bolts *q*. The upper sides of these saddles should be suitably padded, and conform to the shape of the animal at the proper points.

By means of the turn-table described, the table may be turned completely or partially around, to secure better light, or for any other purpose.

To prevent the tilting of the turn-table by the weight of the animal, it and the frame are connected by two or more guide-plates K K′. One of these has an outwardly extended flange *k* entering a groove *k′* in the other, as shown in Fig. 7.

It will be understood that the platform (not attached in Fig. 3) may be left in the initial position, when it is desired to hold the animal's feet apart or away from the table, in any position in which he may be placed.

Having thus described my invention, I claim—

1. In a veterinary operating table, the combination of a tilting table and a platform substantially at right angles thereto removably attached at one side, for the purpose set forth.

2. The combination of a tilting table, a platform removably attached to it at one side, and means substantially as described for fastening the animal to said table and platform.

3. The combination of the tilting table C, having holes *c c* therein and provided with stirrups *e*, and the platform E having hook-plates E′, and hook-rods and connections D

D *d d'* holes in the bottom and sides for fastening-chains and chain-holders *n''*, substantially as described.

4. In a veterinary operating table, the combination of a table having a slot therein for the passage of a girth, a girth secured by one end to the said table, the body thereof passing through said slot, and having holes in the free end to engage with the studs of the windlass, and the herein described girth-reel, consisting essentially in a windlass having buttons or studs thereon, a ratchet and pawl to hold the takeup of the windlass, gearing connected with the windlass and a crank connection therewith.

5. In a veterinary operating table, the combination of a supporting frame having pivot-bearings on opposite sides thereof, a table having pivot-holes coinciding with said bearings, and a removable pivot, whereby the table may be pivoted on one side or the other of said frame.

6. In a veterinary operating table, the combination of a supporting frame having pivot-bearings on opposite sides thereof, a table having bearings coinciding with those of the frame, and separable with respect thereto, and means substantially as described connecting with the middle of said table, whereby it may be tilted in either direction.

7. In a veterinary operating table, the combination of a supporting frame, a table pivoted thereto by separable joints at both sides of the frame, a screw F pivotally connected therewith, a geared nut I mounted in a pivoted yoke H, a pinion J meshing therewith, and a crank-shaft G *g*, substantially as and for the purpose set forth.

8. The combination of the supporting frame A, pivot-ring A' secured thereto, turn-table B having pivot-ring B' secured thereto, and revoluble on the ring A', an operating table pivotally connected with the turn-table, and a tilting device for the same, mounted central to the rings, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN C. MILNES.

Witnesses:
A. O. LATIMER,
JOSEPH KUBICIK.