No. 858,830. PATENTED JULY 2, 1907.

C. M. SHEELEY.

REVOLVING BALL BEARING VETERINARY OPERATING TABLE.

APPLICATION FILED FEB. 18, 1907.

3 SHEETS—SHEET 1.

Fig. 2.

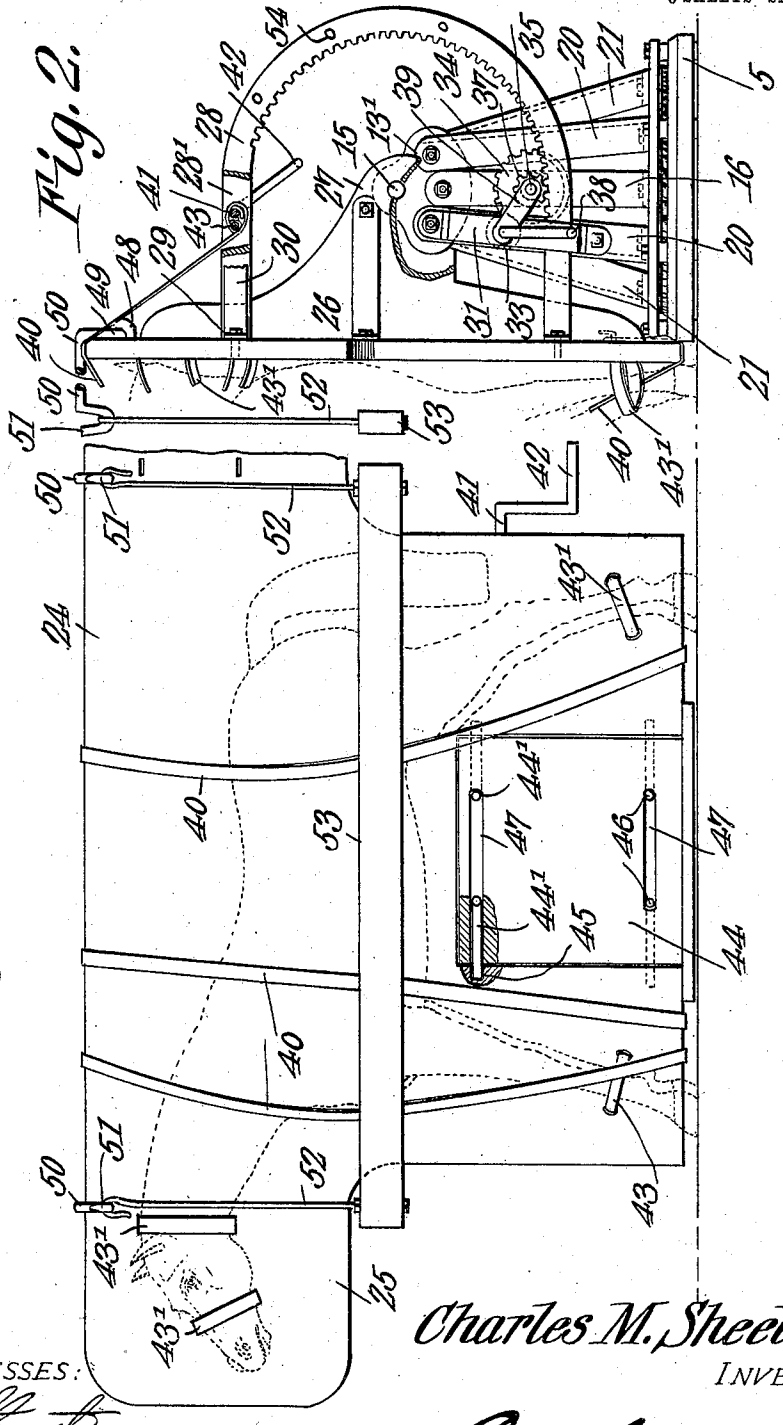


Fig. 1.

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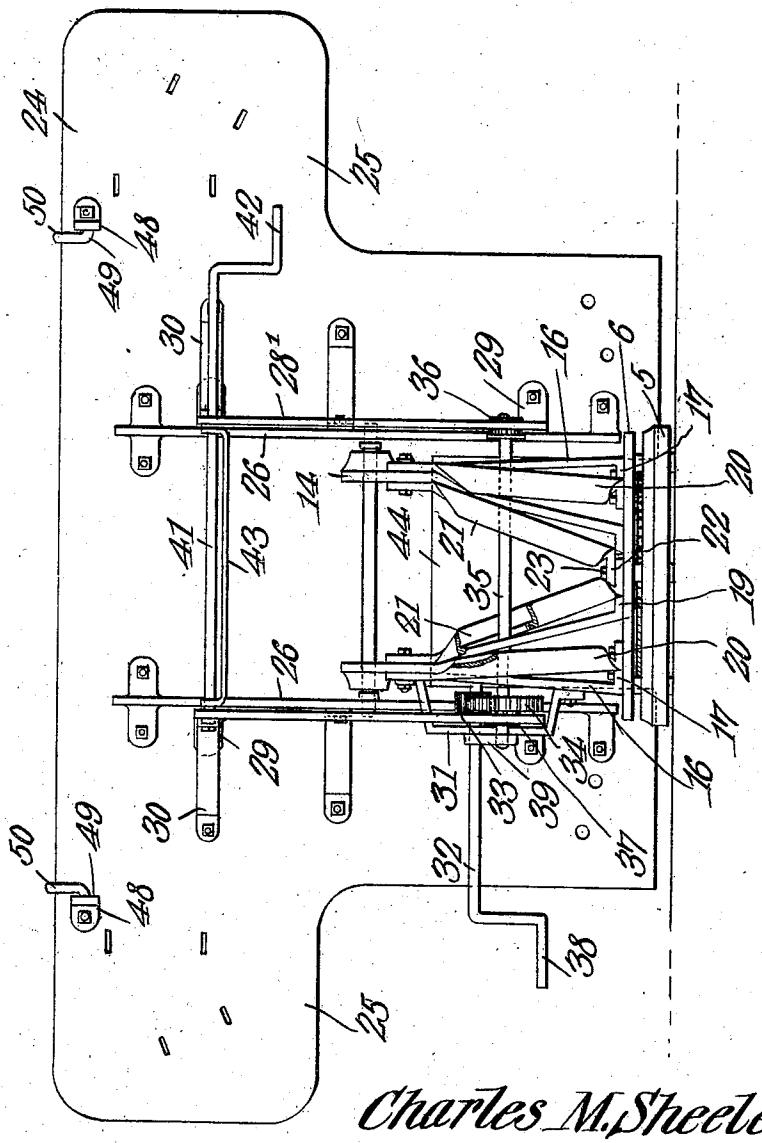
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3 SHEETS—SHEET 2.

Fig. 3.



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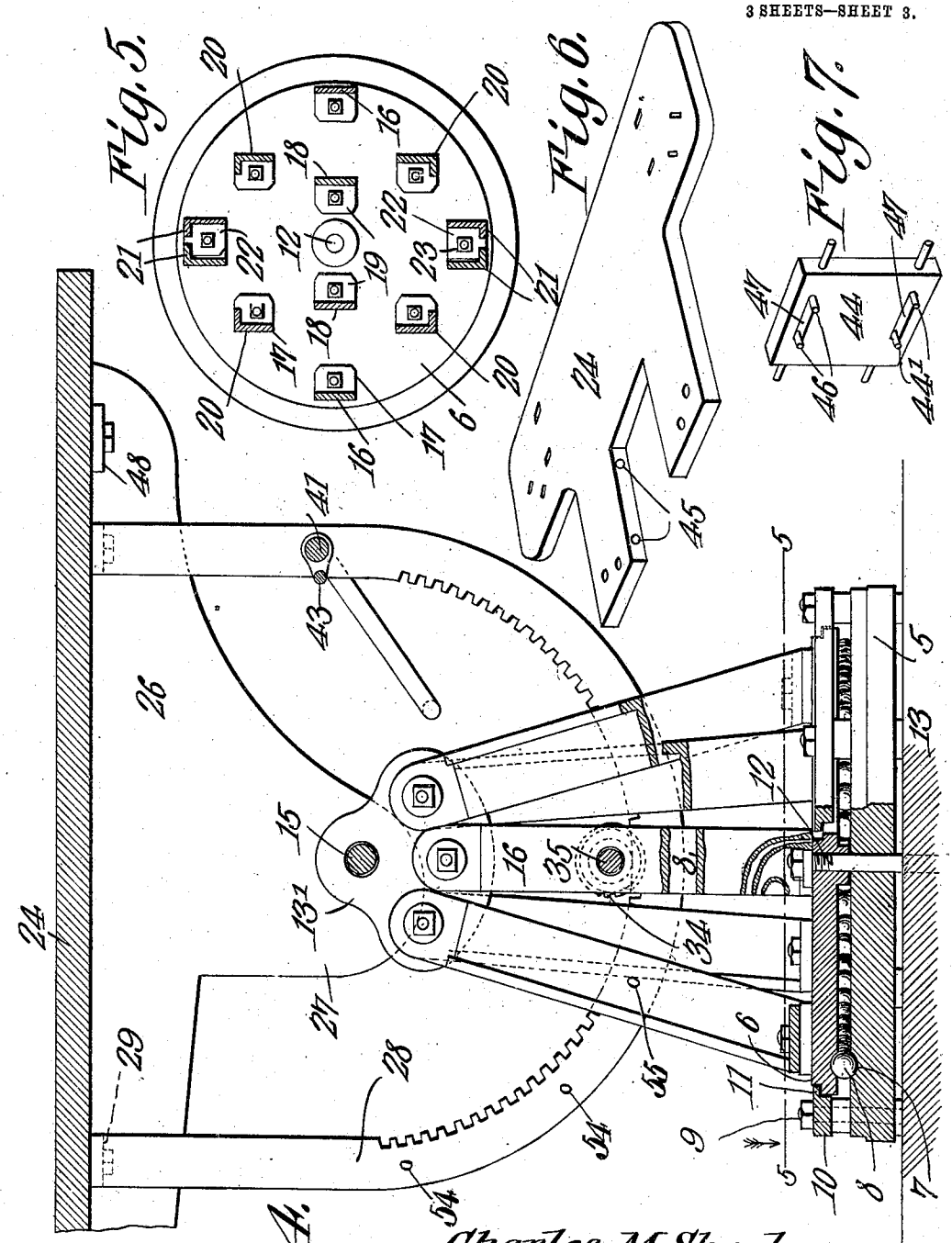
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REVOLVING BALL-BEARING VETERINARY OPERATING-TABLE.

No. 858,830. Specification of Letters Patent. Patented July 2, 1907.

Application filed February 18, 1907. Serial No. 358,000.

To all whom it may concern:

Be it known that I, CHARLES M. SHEELEY, a citizen of the United States, residing at Kearney, in the county of Buffalo and State of Nebraska, have invented a new and useful Revolving Ball-Bearing Veterinary Operating-Table, of which the following is a specification.

This invention relates to veterinary operating tables and has for its object to provide a rotary table or platform adapted to support a horse or other animal and capable of being adjusted at any desired angle or inclination to the supporting base so that the animal may be conveniently operated upon.

A further object of the invention is to provide an operating table having a detachable over-hanging guard rail combined therewith and which in connection with the table constitutes a stall whereby the animal may be readily led or guided to the operating table and secured in position thereon.

A further object is to improve and strengthen the revolving standard or support by the provision of vertical and diagonally disposed braces which form a support for the platform or table and sustain the weight of the horse or other animal.

A further object is to provide the platform or table with a detachable section adapted to be removed when performing certain operations on the animal.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a front elevation of a veterinary operating table constructed in accordance with my invention showing the table in vertical position and a horse in position thereon. Fig. 2 is a side elevation partly in section of the same. Fig. 3 is a rear elevation of the table. Fig. 4 is a vertical sectional view showing the table in horizontal position. Fig. 5 is a transverse sectional view taken on the line 5—5 of Fig. 4 and looking in the direction of the arrow. Fig. 6 is a perspective view of the table top removed. Fig. 7 is a similar view of the detachable section of the table removed.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved operating table comprises a stationary base or plate 5 and a movable or rotary plate 6, said plates being provided with race ways 7 for the reception of a series of antifriction balls 8 whereby the plate 6 is free to rotate without undue friction on the parts. The marginal edge of the plate 5 is extended beyond the adjacent marginal edge of the plate 6, and secured to the extended portion of the plate 5 by bolts or similar fastening devices 9 is an annular retaining ring 10 provided with a laterally extending lip 11 which engages a correspondingly shaped recess formed in the adjacent edge of the upper plate 6 thus serving to lock said plates in engagement with each other and prevent accidental displacement of the antifriction balls or rollers. The upper plate 6 is preferably centered on the lower plate 5 by means of a pivot pin or bolt 12 which pierces both plates and is anchored in any suitable manner to the ground or other support, indicated at 13.

Secured to the revolving plate 6 is a table supporting stand preferably consisting of a plurality of brace bars having their lower ends secured to the plate 6 and their upper ends riveted or otherwise rigidly fastened to spaced juncture blocks 13′ and 14 which constitute bearings for a transverse shaft 15.

Secured to the outer faces of the bearing or juncture plates 13′ and 14 are substantially vertically disposed braces 16 preferably formed of flat metal and having their lower ends provided with laterally extending arms 17 for attachment to the revolving plate 6, there being inclined brace bars 18 also preferably formed of flat metal and secured to the inner faces of the bearing plates 13′ and 14 and having their flanged ends 19 disposed one on each side of the pivot pin 12 and bolted or otherwise rigidly secured to the plate 6, as shown.

Secured to the outer faces of the bearing plates 13′ and 14 on each side of the vertical braces 16 are auxiliary braces 20 preferably formed of angle iron and disposed at an inclination to the braces 16, there being cooperating downwardly inclined auxiliary braces or bars 21 secured to the inner faces of the plates 13′ and 14 and having their lower ends provided with perforated attaching arms 22 which over-lap and are rigidly secured to the revolving plate 6 in any suitable manner, as by bolts or similar fastening devices 23.

The bars or braces 16 and 18 are preferably arranged in alinement with each other while the lower ends of the inclined bars 21 are disposed at right angles to the bars 16 and 18 and arranged on a line intersecting the center of the plate thereby to produce a strong, rigid support for the operating table 24.

The operating table 24 is preferably provided with longitudinal extensions 25 and is reinforced and strengthened by the provision of transverse reinforcing ribs 26 provided with integral ears or lugs 27 which over-lap the juncture or bearing plates 13′ and 14 and are provided with alined openings for the reception of the shaft 15, the latter forming a pivotal connection between the plates 13′ and 14 and the table or platform 24 so that the same may be tilted at any angle or inclination with respect to the base plate 5.

Depending from the bottom of the platform or table 24 are spaced segmental racks 28 and 28′ preferably secured to the bottom of the platform by attaching

lugs 29 and reinforced and strengthened by one or more lateral braces 30.

Secured to one of the inclined braces or bars 20 is a spaced plate or bracket 31 in which is journaled a stub shaft 32 having its inner end also journaled in the adjacent brace 20 and provided with a pinion 33 which meshes with a gear wheel 34 carried by a transmitting shaft 35, the latter being extended through the vertical braces 16 and 18 and provided with a terminal pinion 36 for engagement with the teeth on the adjacent segmental rack 28′.

Secured to or formed integral with the gear-wheel 34 is a pinion 37 preferably of the same size as the pinion 36 and adapted to mesh with the teeth on the rack 28 so that by rotating the terminal crank or handle 38 on the stub shaft 32 motion may be imparted through the intermediate gearing to the pinions 36 and 37 and thence to the segmental racks 28 and 28′ thereby to tilt the platform or table 24 at any desired angle or inclination with respect to the supporting base.

One end of the shaft 35 is journaled in a connecting link 39 secured to the shaft 32 and which serves to assist in preventing lateral displacement of the gear 34 and pinion 37.

As a means for securing the horse or other animal in position on the supporting table 34 there are provided suitable attaching straps 40 each having one end thereof secured in any suitable manner to one longitudinal edge of the table or platform and their opposite ends extended over the opposite longitudinal edge of the platform for engagement with a winding shaft 41. The winding shaft 41 is journaled in suitable bearings formed in the segmental racks 28 and 28′ and is provided with a terminal crank or handle 42 by means of which the tension of the straps or belts 40 may be regulated at will. The adjacent ends of the straps 40 are preferably secured to the winding shaft 41 by an auxiliary shaft or rod 43, said straps being coiled around both shafts so that when the winding shaft 41 is operated the straps will bite on said shafts and thus prevent the same from slipping when the handle 42 is rotated. Suitable hopples 43′ are also preferably secured to the table at points adjacent the opposite longitudinal edges thereof for attachment to the head and legs of the animal thereby to prevent the animal from kicking. The table or platform 24 is also preferably provided with a detachable section 44 which may be removed so that the surgeon may operate upon the horse without the necessity of bending over the edge of the platform.

As a means for retaining the removable section in position on the platform there are provided a plurality of locking bolts 44′ adapted to engage corresponding recesses 45 formed in the platform or table 24, the inner ends of the bolts 44′ being provided with terminal finger pieces or handles 46 which are slidably mounted in suitable recesses 47 formed in the upper face of the removable section 44 whereby the bolts may be readily retracted so as to release the section when desired.

Secured to the bottom or platform of the table 24 are depending lugs 48 having perforations formed therein for the reception of the hooked ends 49 of suitable supporting brackets 50, the latter being extended over and beyond one longitudinal edge of the platform when the latter is supported in vertical position and are provided with terminal loops or hooks 51 for the reception of suitable hangers 52. The hangers 52 are secured in any manner to a guard rail 53 which in connection with the platform constitutes a stall and serves to guide the animal to the operating table.

In operation the table is moved to vertical position by rotating the operating handle or crank 38 after which the brackets 50 are fastened in the lugs 48 and the guard rail 53 suspended from the free ends of the brackets by means of the hangers 52. The horse or other animal is then led into the stall formed between the guide rail and the adjacent face of the table and the straps 40 passed over the body of the animal and the latter clamped to the table by rotating the winding shaft 41, the hopples 43′ being subsequently adjusted so as to prevent movement of the head or legs of the animal, as best shown in Figs. 1 and 2 of the drawings. The guard rail 53 and supporting brackets 50 are then detached and the supporting table tilted laterally until it assumes a horizontal or substantially horizontal position, after which the detachable section 44 is removed and the animal operated upon. It will thus be seen that the table or platform may be tilted at any angle or inclination to the base plate 5 and said platform rotated upon the plate so as to present any particular portion of the anatomy of the horse without the necessity of walking around the table.

If desired the segmental racks 28 and 28′ may be formed with one or more openings 54 adapted to register with a corresponding opening 55 formed in one of the brace bars of the revolving stand thereby to permit the insertion of a rod or bolt to assist in locking the platform in adjusted position.

From the foregoing description it is thought that the construction and operation of the device will be readily understood by those skilled in the art and further description thereof is deemed unnecessary.

Having thus described the invention what is claimed is:

1. A veterinary operating table including a support, a platform pivotally mounted for tilting movement on said support, segmental rack bars carried by the platform, a shaft extending transversely through the support and provided with pinions for engagement with the adjacent rack bars, a bracket secured to the support, an operating shaft journaled in the bracket and provided with a pinion, a gear wheel carried by the transverse shaft and engaging the pinion on the operating shaft and a link connecting the operating and transverse shafts.

2. A veterinary operating table including relatively stationary and movable plates, antifriction balls interposed between said plates, braces secured to the movable plate, bearing plates fastened to the upper ends of the braces, a shaft journaled in said bearing plates, a tilting platform supported by the shaft, and means for tilting the platform.

3. A veterinary operating table including stationary and rotary plates, a retaining ring carried by the stationary plate and engaging the adjacent edge of the rotary plate, antifriction balls interposed between said plates, spaced bearing members, braces secured to the rotary plate and bearing members, respectively, a shaft journaled in said bearing members, a tilting platform supported by the shaft, and means for tilting the platform.

4. A veterinary operating table including spaced stationary and rotary plates, a retaining member secured to the stationary plate and over-lapping the rotary plate, antifriction balls interposed between said plates, spaced bearing members, braces connecting the bearing members and rotary plate, a shaft journaled in said bearing members, a tilting platform, reinforcing ribs secured to the bottom of the platform and provided with perforated ears for

the reception of the shaft, segmental racks carried by the platform, pinions engaging the teeth on the racks, and means for rotating the pinions thereby to tilt the platforms.

5. A veterinary operating table including a support formed of converging angle bars, bearing plates disposed at the juncture of said angle bars, a shaft journaled in the bearing plates, a platform supported by the shaft, and means for tilting the platform.

6. A veterinary operating table including stationary and rotary plates, converging braces secured to the rotary plate, bearing plates secured to the converging ends of the braces, a shaft journaled in the bearing plates above the braces, a tilting platform supported by the shaft, spaced segmental racks depending from the bottom of the platform, and means engaging the racks for tilting the platform.

7. A veterinary operating table including a support consisting of a plurality of vertical and inclined braces united at their upper ends by a bearing plate, a shaft journaled in said bearing plate, a tilting platform supported by the shaft, fastening devices carried by the platform, and means for tilting the latter.

8. A veterinary operating table including stationary and revolving members, balls interposed between the members, converging braces secured to the rotary member, bearing plates disposed at the juncture of the converging braces, a shaft journaled in the bearing plates, a tilting platform supported by the shaft and provided with a removable section, means for locking the removable section in position on the platform, and means for tilting the latter.

9. A veterinary operating table including a platform adapted to support the animal to be operated upon, and means carried by the platform and co-operating with the latter to form a stall for the animal.

10. A veterinary operating table including a tilting platform adapted to support the animal to be operated upon, means suspended from one edge of the platform and forming in connection with the latter a stall for the animal when the platform is supported in vertical position, and means for tilting the platform.

11. A veterinary operating table including a tilting platform adapted to receive the animal to be operated upon, means for moving the platform to vertical position, brackets detachably secured to one edge of the platform and means suspended from the brackets and co-operating with the platform to form a stall adapted to receive the animal when the platform is in vertical position.

12. A veterinary operating table including a tilting platform, and means carried by the platform and co-operating with the latter to form a stall.

13. A veterinary operating table including a support, a platform pivotally mounted for tilting movement on the support and adapted to be supported in vertical position, brackets detachably secured to one edge of the platform, a bar spaced from the platform and co-operating with the latter to form a stall, and means for suspending the bar from the brackets.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHARLES M. SHEELEY.

Witnesses:
F. A. NYE,
W. H. STRAUSBAUGH.