

No. 612,948.

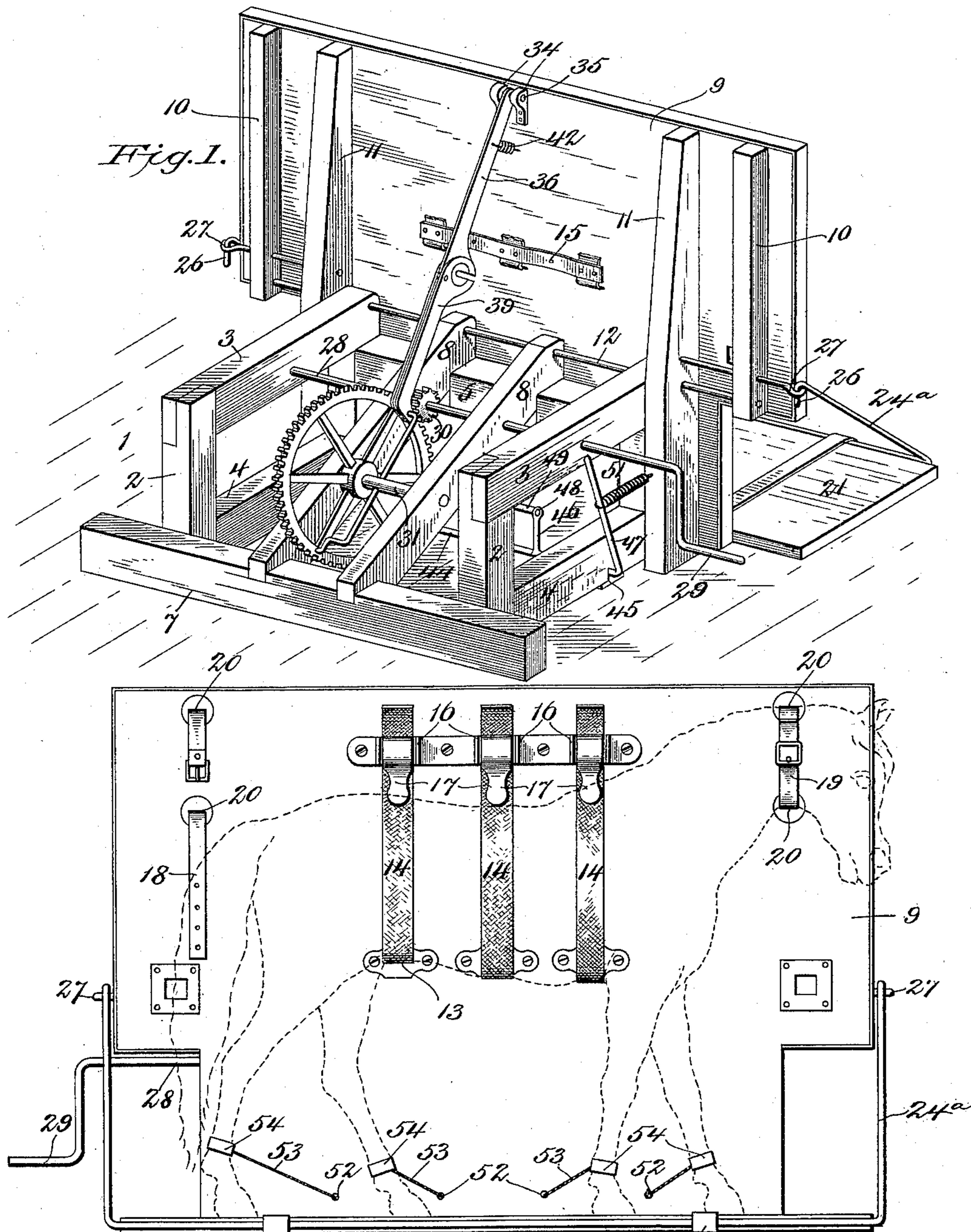
Patented Oct. 25, 1898.

N. W. KYLE.
VETERINARY OPERATING TABLE.

(Application filed Jan. 31, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:
L. S. Elliott.
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Fig. 2.

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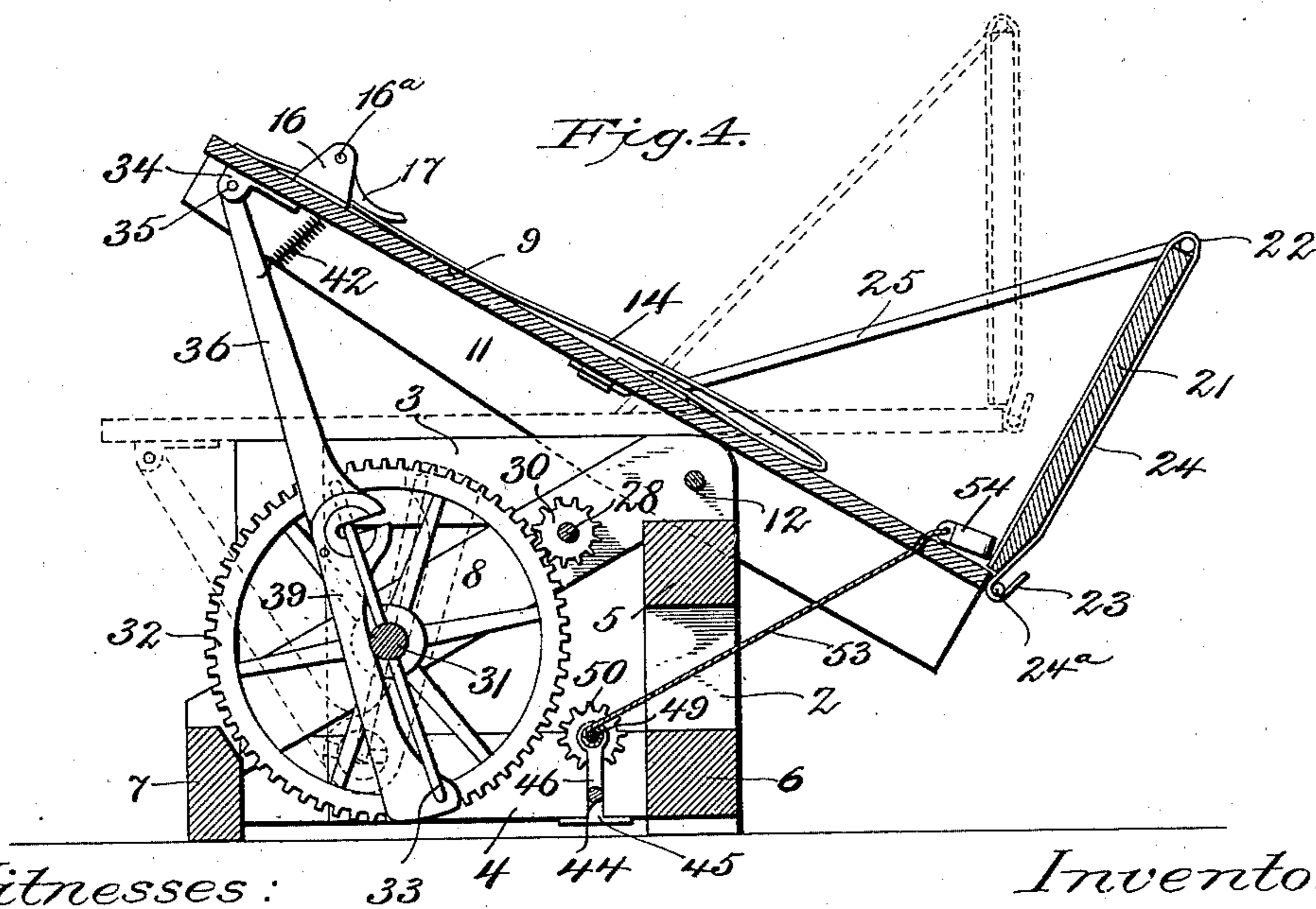
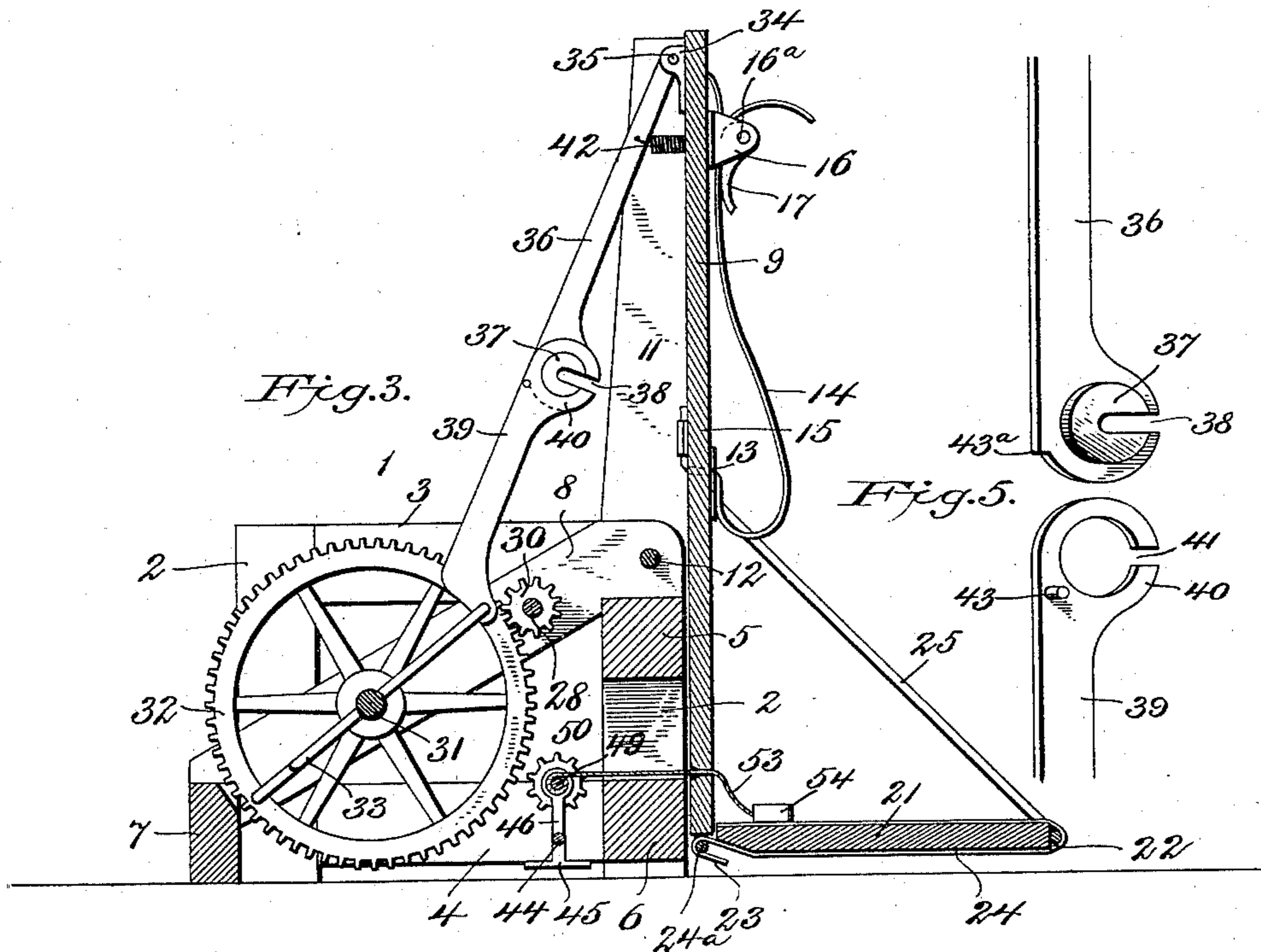
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VETERINARY OPERATING TABLE.

(Application filed Jan. 31, 1898.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

NICHOLAS W. KYLE, OF COLFAX, ILLINOIS.

VETERINARY OPERATING-TABLE.

SPECIFICATION forming part of Letters Patent No. 612,948, dated October 25, 1898.

Application filed January 31, 1898. Serial No. 668,655. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS W. KYLE, a citizen of the United States, residing at Colfax, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Veterinary Surgical 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.

This invention relates to improvements in veterinary operating-tables, and has for its main object the production of a table of stable and economic construction that is especially adapted to support in a secure, safe, and convenient manner cattle and horses during surgical operations performed on any part of their anatomy.

Various other objects and advantages of my invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective view of the rear of a veterinary surgical table constructed in accordance with my invention, and Fig. 2 is a front elevation of the same, the table in these two figures being shown in position to receive the animal. Fig. 3 is a vertical transverse sectional view of Fig. 1. Fig. 4 is a view similar to Fig. 3, the table being shown as in the act of raising the animal to position to be operated upon, and in dotted lines to such position. Fig. 5 is a detail in perspective of the connecting or working ends of the toggle-lever members.

Like numerals of reference indicate like parts in all the figures of the drawings.

The foundation may comprise the opposite end frames 1, each consisting of a pair of vertical posts 2, connected by upper and lower transverse frame-bars 3 and 4, respectively. These side frames 1 may be connected at their front ends by upper and lower longitudinal sills 5 and 6 and at their lower rear ends by a longitudinal sill 7. Let into gains formed in the upper sides of the upper front longitudinal sill 5 and the rear lower longitudinal sill 7 may be the opposite ends of a pair of inclined bars 8, which may be bolted to position, these parts all combining to produce a most stable and rigid foundation-frame for the apparatus.

A table 9 surmounts the frame described and may have secured to its under side end and intermediate transverse cleats, (designated as 10 and 11, respectively.) The front corners of the table 9 may be angularly recessed to give access to the operator, so that the end cleats 10 are shorter than the intermediate cleats 11. These intermediate cleats 11 are such a distance apart as adapts them to loosely embrace the opposite side frames 1, and a horizontal shaft 12 may be passed through the end and intermediate cleats a slight distance in advance of the middle of the latter and through the front upper corners of the two side frames and upper ends of the pair of inclined bars 8. In this manner it is apparent that the table 9 is capable of being swung or tilted on the shaft 12 either to a vertical position in front of the framework or to a horizontal position thereupon.

Let into or through a plurality of alining slots 13, that may be suitably faced with metal, is a plurality of girths 14, the lower ends of which may be extended under the tilting table 9 and secured in position by a metal or other cleat 15, secured to the under side of the table.

In a plurality of lugs 16, located at the upper or rear edge of the table, I may locate a pintle 16^a, the same serving as journals for a plurality of cam-levers 17, under which the free ends of the girths 14 pass and by means of which said free ends may be secured in position subsequent to passing them about the body of the animal to be operated upon and by means of which the said animal will be securely strapped at its middle to the table.

Halter-straps 18 and 19 may be passed through suitable pairs of openings 20, formed in the table 9, the ends of the straps being adjustably secured together by ordinary buckles.

A platform 21, of oblong shape, may be located in front of the framework, upon which the animal may stand during the operation of "tying up." This platform agrees in length with the table 9 and is provided with eyes at its outer edge and with hooks 23 at its opposite or inner edge. A convenient way of producing both the eyes and hooks mentioned and at the same time strengthening the platform is to bind or surround the latter with

metallic straps 24, the same being bent sufficiently far beyond the outer edge of the platform to produce the eyes 22 and having their free ends extended beyond the rear edge of the platform and bent to form the hooks 23. The hooks 23 are designed to loosely and removably engage with a front longitudinally-disposed bail 24^a, located in the front edge of the table 9, while the eyes 22 receive a U-shaped bail 25. The bail 25 has its terminals at their ends bent to form hooks 26, which when the platform is swung to a right angle with the table 9, to which it is loosely and removably connected, may be thrown into engagement with eyes 27, that project from the opposite ends of the table 9.

Journalled in suitable alining bearings formed in the upper ends of the side frames 1 and the inclined bars 8 is the winding-shaft 28, one end of which is extended beyond one of the side frames and is shaped to form or is provided with an ordinary crank-handle 29. Fixedly mounted on this winding-shaft 28, between the inclined bars 8, is a small gear-wheel 30.

In the rear of and below the winding-shaft 28 there is journalled in the inclined bars 8 a main operating-shaft 31, the same having mounted thereon in a rigid manner a large master gear-wheel 32, which is always in engagement with the small gear-wheel 30. Spanning the master-gear 32 is a rigid yoke or bail 33, the same preferably intersecting or passing through the shaft 31 and having its opposite angular terminals rigidly secured to the rim of the master gear-wheel at diametrically opposite points.

In a pair of lugs 34, located on the under side and at the rear edge of the tilting table, is pivoted, as at 35, the upper end of toggle-lever member 36, the same being free to swing freely and terminating at its lower end in an enlarged head, widened at opposite sides to form disk-like enlargements 37. The head at this widened point is provided at its front side with a radial slot 38. The corresponding toggle-lever member 39 is pivoted at its lower end upon one of the angular terminals of the radial yoke or bail 33. The upper end of this lower toggle-lever member 39 has its upper end bifurcated to embrace the lower end of the upper toggle member, and its upper end is widened to accord with the lower end of the upper toggle member and is provided with opposite eyes 40, which loosely receive the disk-like projections 37 of the upper toggle member, whereby the two toggle members become properly pivoted together. The two eyes 40 are provided with narrow openings 41, which aline with the radial slot in the lower end of the lower toggle member when the two toggles are in alinement, said eyes closing said slot when the said toggles are not in such alinement.

A coiled spring 42 may be connected at one end to the upper toggle member and at its opposite end to the under side of the table,

and thus serve to normally draw the toggle-joint forward, such forward movement being limited to an alining position of the two toggles by means, in the present instance, of a stop-pin 43, which connects the upper bifurcated ends of the lower toggle member and lies in the path of an angular stop-shoulder 43^a, with which the rear edge of the upper toggle member is provided in rear of its radial slot.

A rock-shaft 44 may be journalled in the lower cross-sills of the end frames 1 in bearings 45, provided for the purpose, and from the shaft, between the side frames 1, there may extend upwardly a pair of rock-arms 46, the ends of the said rock-shaft beyond the side frames being provided with upwardly-disposed operating-handles 47, located adjacent to the operating-crank of the winding-shaft. The free ends of the two rock-arms form journals or bearings 48, in which I locate a rotatable windlass-shaft 49, at the center of which there is mounted and adapted to revolve therewith a small spur-gear 50. This gear 50 is capable of being thrown in mesh with the master-gear and of being rotated thereby, but is normally out of such mesh or engagement and may be maintained thus by means of a coiled spring 51, connected to one of the operating-handles 47 and to an adjacent part of the machine.

Near the front edge of the table four holes 52 may be formed, and in each is designed to loosely run a hopple-rope 53. The lower or rear ends of these ropes are secured to the windlass-shaft 49, each hopple-rope above the table being made fast to a hopple 54, designed to be secured about the pastern of the animal to be operated upon.

In operation the table is tilted to a vertical position, such being accomplished through a manipulation of the crank and winding-shaft. The animal to be operated upon is led to the platform alongside of the table, and the hopples, girths, and any other securing devices employed are adjusted. It now simply remains to reverse the crank of the winding-shaft, which operates the master-gear slowly and gradually lowers the table, with the animal thereon, to a horizontal position upon its foundation-frame. When the table lowers at its upper or rear end, its front end rises and with it the platform, which maintains its relative right-angular position. If the platform is not in the way of the operator, it may be left in position; but if it is, as would be the case in shoeing or treating the hoofs, &c., it can be readily removed. It will be observed that as the table lowers and about when it reaches an angle of forty-five degrees the toggle-lever is about vertical and the uppermost of the angular terminals of the bail or yoke 33 enters the passages of the eyes of the lower toggle-lever member and the radial slot of the upper toggle-lever member. A further lowering of the table causes the bail or yoke 33 to become seated in the lower end of said radial slot and

the two toggle members to so rotate one upon the other that the rings of the lower member close the entrance to the slot in the upper member, so that when the table finally reaches its horizontal position the lower member is practically vertical, and any weight put upon the front portion of the table cannot serve to raise or tilt the same. In other words, the table is securely locked in its lowered position. It will be seen that as the table is being lowered the operator or his assistant may through the medium of either of the operating-handles swing the rock-shaft to such a position as to cause the gear-wheel of the windlass-shaft to mesh with the master-gear, and thus the hopple-ropes may be drawn sufficiently tight to securely confine the feet of the animal.

By employing the platform the animal's feet are prevented from scraping the ground as the table is lowered.

I do not limit my invention to the details of construction herein shown and described, but hold that I may vary the same in any manner within the scope of my invention.

Having described my invention, what I claim is—

1. The combination with a supporting-framework, and a tilting table, of a gear-wheel, means for operating said gear-wheel and a connection between the gear-wheel and the free edge of the table, of a windlass-shaft located in the framework, hopple-straps extending from the table and provided with hopples and having their opposite ends wound upon the windlass-shaft, and means for intermittently operating the windlass-shaft through said gear.

2. The combination with a supporting-framework and a table hinged to the front edge thereof, of a gear-wheel, a connection between the same and the free edge of the table, a movable windlass-shaft, a gear thereon, means for throwing the same into and out of connection with the gear for operating the table, means for operating the table-operating gear, and hopple-straps carrying hopples at their upper ends and at their lower ends secured to said windlass-shaft.

3. The combination with a supporting-framework, a tilting table hinged to the same, and a master-gear journaled in the framework, of means for operating the master-gear, a connection between the gear and the free edge of the table, a rock-shaft having an operating-handle and rock-arms located in the framework, a windlass-shaft supported in the rock-arms, a gear carried by the windlass-shaft and adapted to engage with the master-gear, means for normally preventing such en-

gagement and a series of hopple-straps carrying hopples and at their lower ends secured to the windlass-shaft.

4. The combination with a supporting-framework and a table hinged to the upper front corner of the same, of a gear-wheel having its axle journaled in the framework below the table, a toggle-lever having its outer ends pivoted to the free edge of the table and to the gear-wheel respectively, its lower member being so arranged with relation to the gear-wheel as to pass at its joint beyond the vertical when said table is lowered, whereby said table is locked in such position.

5. The combination with a supporting-framework, and a table hinged to the upper front corner thereof, of a gear-wheel supporting the framework below the table, a toggle member pivoted to the free edge of the table and having a radial slot and opposite disk-like projections at its lower end, a second toggle member pivoted to the gear-wheel and having its upper end bifurcated and provided with eyes for engaging said projections, said eyes having openings registering with the slot when the toggle members are in alinement and a projection located on the gear-wheel in alinement with the slot and diametrically opposite the point of connection between the lower toggle member and the gear-wheel, and means for operating the gear-wheel.

6. The combination with a supporting-frame, and a table hinged at one corner of the same, of a master-gear journaled in the frame, means for rotating the same, and a toggle-lever pivoted to the said gear and free edge of the table, said lever being provided with a stop to prevent the members from swinging in one direction beyond alinement.

7. The combination with a framework, and a table pivoted thereto, of a master-gear journaled in the framework, means for rotating said gear, a yoke or bail radially disposed and secured to the face of the master-gear, a toggle-lever composed of two members, the lower one of which is pivoted to one end of said yoke or bail and the other to the free end of the table, said members overlapping one another at their connecting-joint and provided with slots or openings that aline only when the members are in alinement and which are located in the path of the opposite or free end of the bail.

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

NICHOLAS W. KYLE.

Witnesses:

W. B. KNIGHT,
J. W. PUETT.