

D. W. RIESLAND.
ANATOMICAL DEVELOPING AND ADJUSTING MACHINE.
APPLICATION FILED AUG. 6, 1907.

935,272.

Patented Sept. 28, 1909.
2 SHEETS—SHEET 1.

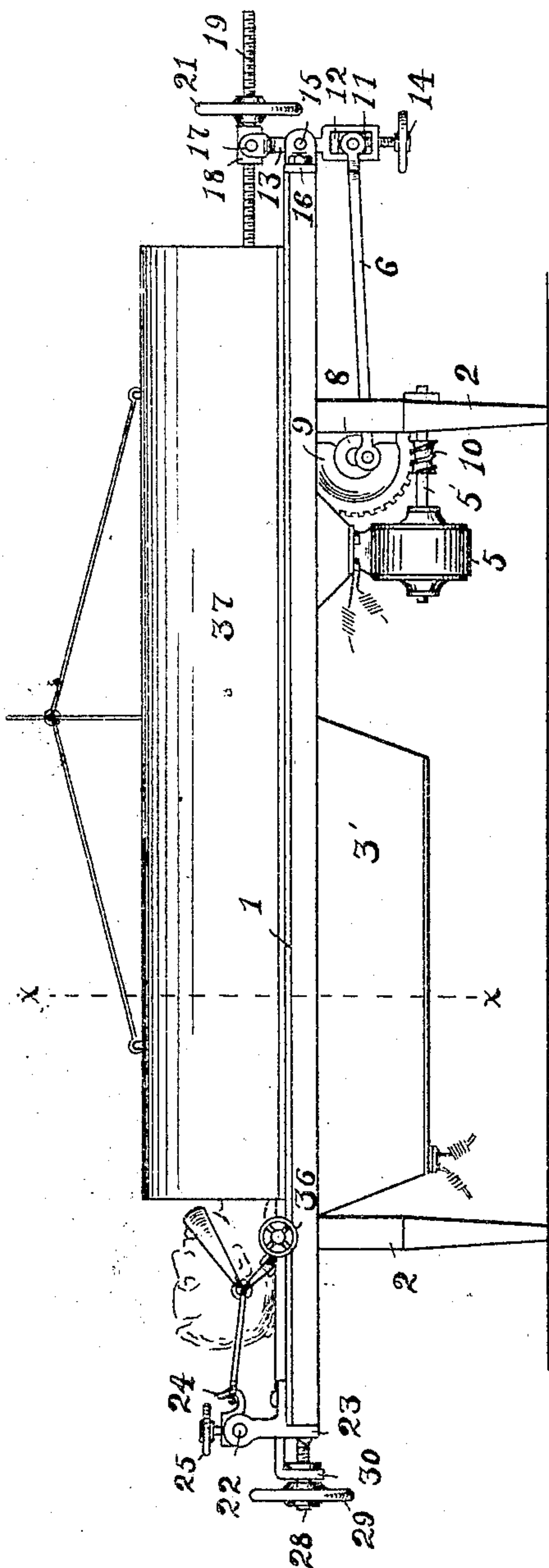


Fig 1.

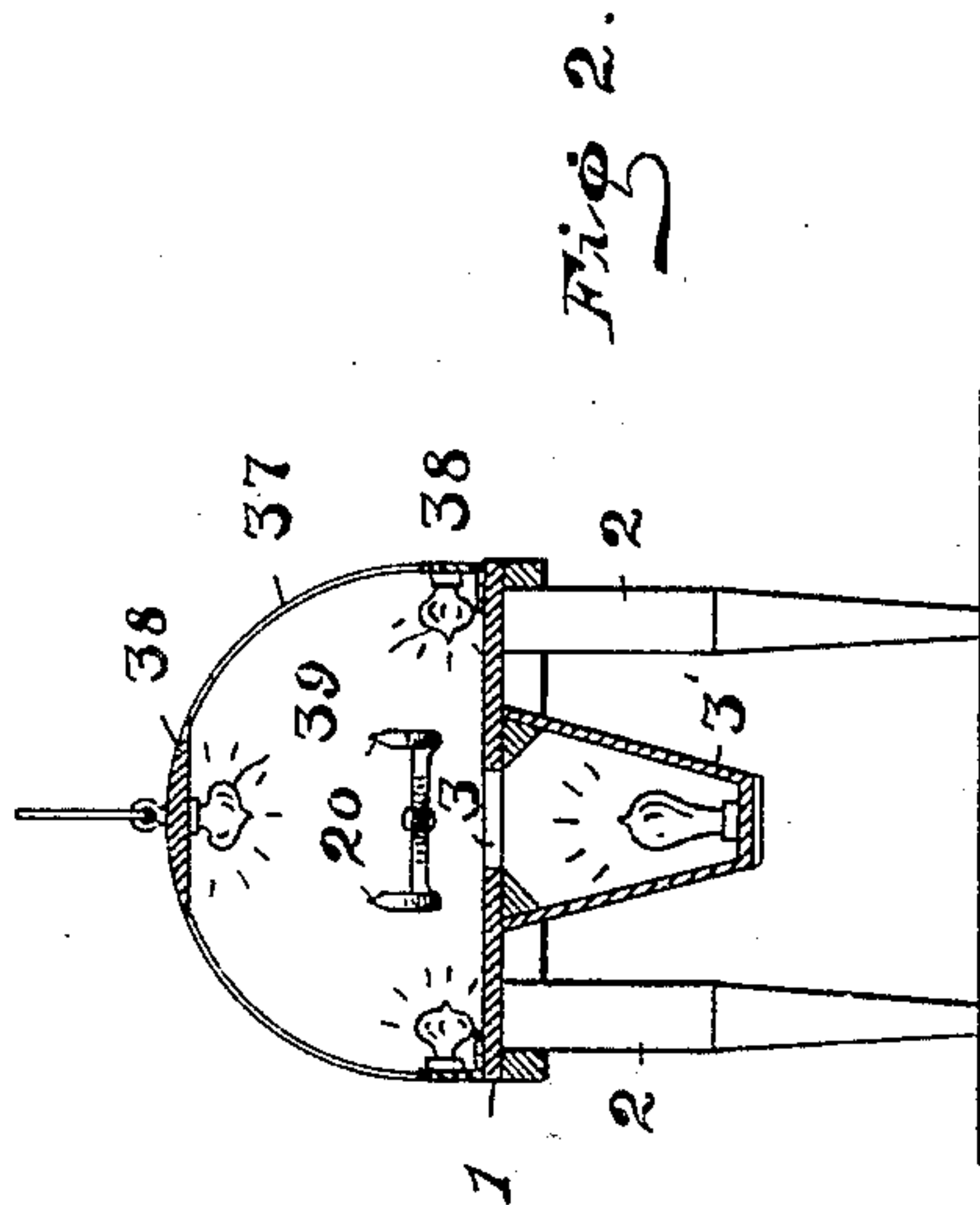


Fig 2.

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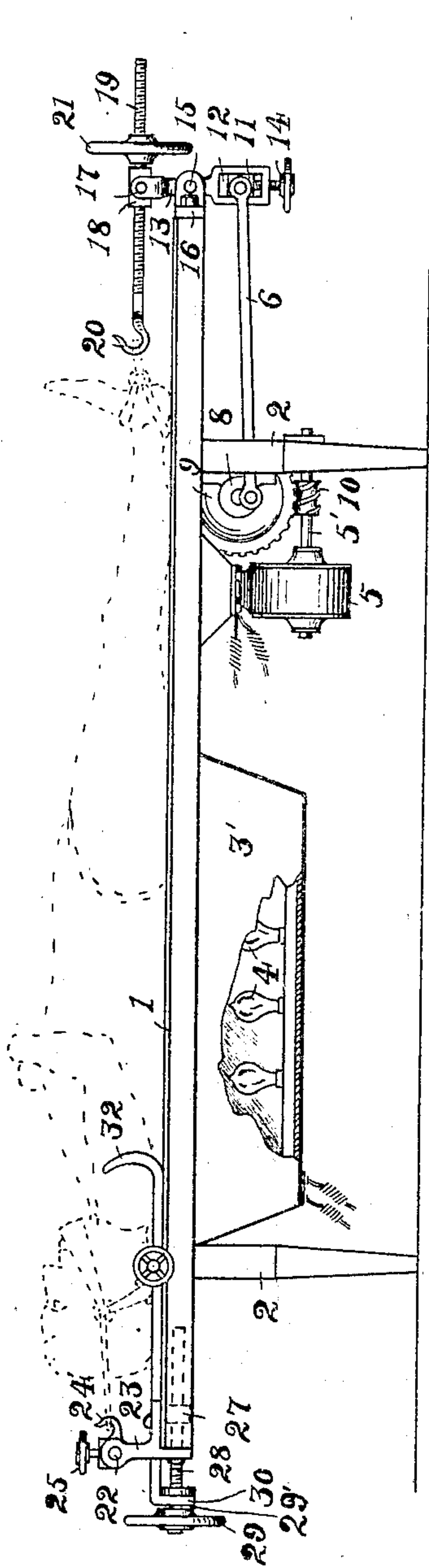
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27-28, 3.

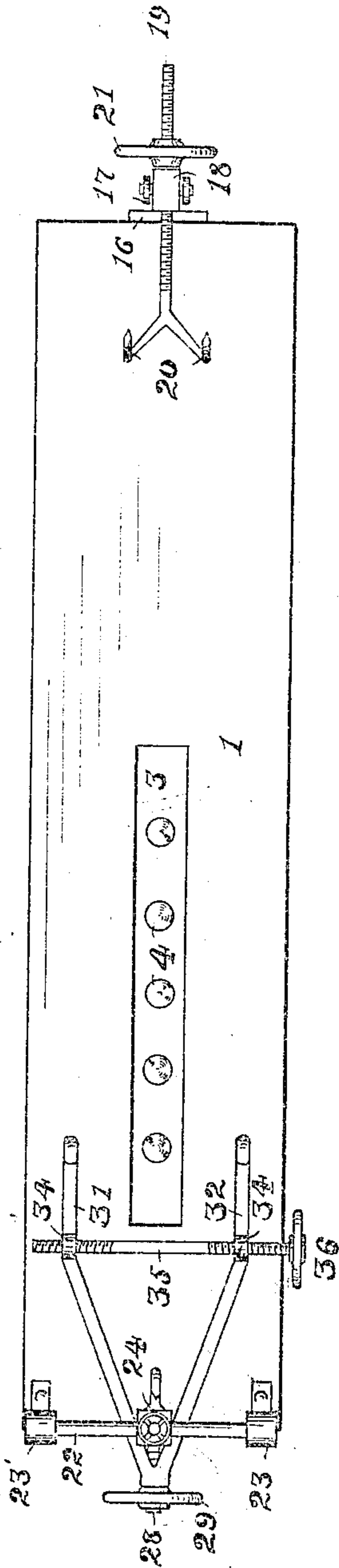


Fig 4.

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UNITED STATES PATENT OFFICE.

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ANATOMICAL DEVELOPING AND ADJUSTING MACHINE.

935,272.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed August 6, 1907. Serial No. 387,324.

To all whom it may concern:

Be it known that I, DANIEL W. RIESLAND, citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Anatomical Developing and Adjusting Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in anatomical developing and adjusting machines.

The object of my invention is to provide a machine or table of this character for the development and improvement of the human organism and is designed with a view of being more particularly adapted to the development of the fibro-cartilage of the back bone and of simple construction and having a wide range of adjustment as possible.

Another object of my invention is to provide a machine of this character which can be quickly and readily adjusted to suit circumstances and one that affords a maximum of efficiency.

In the accompanying drawings, Figure 1 is a side elevation of my complete invention in operation. Fig. 2 is a transverse vertical sectional view taken on the line $x-x$ of Fig. 1. Fig. 3 is a side elevation partly in section and with the hood removed. Fig. 4 is a top plan view of Fig. 3.

Referring now to the drawings 1 represents a flat rectangular shaped table top supported at the proper height by suitable legs 2 and upon which the patient lies when being treated as shown in full line Fig. 1 and dotted line Fig. 3. The table intermediate its legs adjacent one end has an elongated central opening 3. Below said opening and secured to the underside of the table is an elongated housing 3' which as shown in Fig. 4 has the opening 3 communicating therewith and is of V shaped form as shown in Fig. 2. The said housing has located therein a number of electric light bulbs 4 and by which the proper heat and light may be radiated therefrom through the opening 3, the purpose of which will be hereinafter more fully described.

At any convenient place upon the lower face of the table 1 is secured the motor 5 for imparting a reciprocating motion to the rearwardly extending pitman 6. This motor as shown is preferably of an electrical form although any other form of motor

could be used. The drive shaft 5' of the motor has its outer end journaled in a cross bar carried by the legs and intermediate said cross bar and the motor the shaft is provided with a worm 10 meshing with the worm gear 9, thus imparting a slow rotary motion to the worm gear. The said worm gear carries a crank 8 to which the pitman 6 is connected and by means of which a reciprocating motion is imparted thereto. The opposite end of the pitman is pivotally connected to a block 11, which is vertically slidably mounted in the slot 12 carried by the lower end of the lever 13. In order to vertically adjust said nut I provide the lower end of the lever 13 with a set screw 14, which screws upwardly and engages the lower end of the block and thus by raising and lowering said block it will be seen that the throw of the lever 13 will be increased or decreased the purpose of which will be hereinafter more fully described.

The lever 13 is vertically disposed and is centrally pivoted to the end of the table 1 by means of the pin 15 which is journaled in the box 16 which is rigidly attached to the table by means of bolts or screws. The upper end of the lever is bifurcated as indicated at 17 and pivotally within said bifurcated end of the lever is a block 18. The block 18 is provided with a horizontal opening through which the screw threaded rod 19 loosely passes, and having a longitudinal movement therein. The inner end of the screw threaded rod is formed with one or more hooks 20 but preferably two hooks will be employed as shown. The said screw threaded rod on the outside of the block 18 is provided with a screw threaded hand-wheel 21 and by screwing the same upon the rod the distance between the hooked end 20 and the block 18 may be readily varied. The hooked end 20 of the rod is designed to engage any suitable form of stirrups or bridle for attachment to the feet or other part of the body of the patient whereby a continuous vibrating movement is imparted thereto. The opposite end of the table has attached thereto the holdfast means consisting of two separate devices, one for attachment to the head of the patient and one for attachment under the arms. The head attachment device consists of a transverse shaft 22 mounted in suitable bearings 23 and 23' carried by the sides of the table at or adjacent the ends and having slidably mounted thereon a hook

carrying member or block 24 which is provided with a set screw 25 for securing it at its adjusted position upon the shaft. The said member carrying the hook 26 has attached thereto any suitable form of halter which is secured around the neck of the patient. This member 24, being slidable upon the shaft 22 admits of the direction of draft upon the patient being changed laterally as desired. The second holdfast means consists of a fixed screw threaded nut 27 carried by the end of the table 1, through which is screwed the rod 28, the same having at its outer end a hand operating wheel 29 just inside of which the same is provided with a circumferential groove 29'. Within said circumferential groove is the downwardly turned bifurcated end 30 of the holdfast means. The said bifurcated portion 30 is provided with the diverging arms 31 and 32 which are provided with the enlarged portions 34 provided with screw threaded openings through which screw threaded rod 35 passes. The end of said rod is provided with a hand operating wheel 36.

The threaded portion of the two ends of the rod 35 are provided with oppositely disposed threads that is, one right and the other left hand so that when the rod 35 is turned by the hand wheel 36, it will either draw the arms 31 and 32 together or separate them, thus a perfect adjustment to the patient may be readily had. The arms 31 and 32 are beyond the enlarged portions 34 and bent to extend parallel with the side of the table 1 and have at their inner ends the hooks 33 which are adapted to hook under the arms of the patient. I have shown these two forms of hold fast means as different conditions of patients require different treatment thus with some it is better that the attachment be made to the head while with others it is better from under the arms and again, some require a combination of both and it is with this latter combination cases that a fine adjustment of the two hold fast means is required so that the proper tension may be applied to either the head or arms as is desired.

In Figs. 1 and 2 I have shown a hood 37 which rests upon the edge of the table and extends nearly the whole length of the table. This hood is preferably made of canvas carried upon a wooden frame 38. Secured to the inside of the hood on each side are a number of bulbs 39 which causes additional heat when desired, as will be hereafter more fully described. The canopy as shown is preferably constructed to cover the whole body except the head, and that end thereof having an opening shaped as shown to fit the neck, whereby the heat is retained within the hood and in this manner the patient may be heated just as required, it being understood that the lights in the canopy are connected up to any suitable and well

known electric switch or rheostat. The motor 5 is set in motion which imparts a reciprocating motion to the pitman through the worm and worm gear which greatly reduces the speed thereof, and said pitman imparting an oscillating motion to the lever 13, it will be seen by changing the relative position of the pivot of the pitman 6 upon the levers the extent of the reciprocation may be nicely adjusted.

The operation of the device is as follows. The patient is first placed upon his back upon the table with his spine directly over the opening communicating with the light or heating chamber when the hold fast means is either connected to the head or under the arms or both as circumstances may call for. The stirrups are then applied to the feet and connected to the hooks 20 the motor is then started until the rod 19 is at its extreme outward limit when the motor is stopped. The hand wheel 21 is then turned in a direction to increase the tension upon the patient till the limit desired is reached. The motor is again started and allowed to run continuously imparting a reciprocating motion to the patient by stretching and releasing at regular intervals. Heat, light or both may be applied to the spine as before described, which warms up and relaxes the structural elements of the body, and thus admit of a greater reciprocation in which it is thought the greatest advantages reside. It is also shown that light is beneficial and thus the electric lights supply both heat and light. While I have shown this form of heating it has been found desirous in some cases to use steam or hot water instead of the electric lights. The hood heretofore described retains the heat around the body and also the lamps supply any additional heat that may be desired.

Having thus described my invention what I claim and desire to secure by Letters Patent is.

1. A device of the character described, comprising a table having a holdfast means at one end for the head and arms and independently adjustable, and a vibrating means at the opposite end adapted to be connected to the feet or hips.

2. A device of the character described, comprising a table, laterally-adjustable head hold-fast means at one end of the table, and a vibrating means at the opposite end adapted to be connected to the feet or hips.

3. A device of the character described, comprising a table, longitudinally and transversely adjustable hold-fast means adapted to engage the head or shoulders of the patient, and a vibrating means at the opposite end of the table and adapted to be connected to the feet or hips of the patient.

4. A device of the character described, comprising a table, a laterally adjustable

holdfast means for the head of the patient, a longitudinally adjustable holdfast means for the arms and a vibrating means at the opposite end of the table connected to the feet or hips of the patient.

5 5. A device of the character described, comprising a table, a laterally-adjustable hold-fast means at one end of the table, and an adjustable vibrating means at the opposite end of the table, and adapted to be connected to the feet or hips of the patient.

10 6. A device of the character described, comprising a table, holdfast means at one end, a vibrating means at the opposite end, a halter connected to said vibrating means, a motor for driving said vibrating means and an adjustable means between the motor and vibrating means for varying the vibrating means.

20 7. A device of the character described, comprising a table, holdfast means carried by one end, a vertically disposed intermediately pivoted lever, means carried by the upper end, for connecting it with the bridle and means for reciprocating the lower end of the lever.

25 8. A device of the character described, comprising a table, a holdfast means carried by one end, a vertically disposed intermediately pivoted lever means carried by the upper end of the lever for connecting it with the feet of the patient, a motor below the table, means connecting the motor and the lower end of the lever, and means for adjusting the said connecting means whereby the oscillation of the lever is adjusted.

30 9. A device of the character described comprising a table, a holdfast means carried by one end, a heating receptacle below the table and communicating with the upper face thereof through an opening in the table, a vibrating means at the opposite end and a hood adapted to fit over the table, and having an additional heating means.

40 10. A device of the character described, comprising a table, holdfast means at one end, an intermediately pivoted lever carried by the opposite end, an adjustable halter carried by the upper end of said lever, a motor carried by the lower face of the table adjacent the lever, a worm driven by the motor, a worm gear in mesh with said worm, a crank connected to said worm gear, a pitman connected to said crank, the opposite end of the pitman connected to a block, said block vertically movable in a slot within the lower end of the vertical lever, and a set screw adapted to adjust said block in the slot.

60 11. A device of the character described, comprising a table, two independent hold-fast means carried by one end, an intermediately pivoted lever carried by the opposite end, a pivoted block carried by the upper

end of the lever a screw rod loosely passing 65 through the block, a halter connected to the inner end of the rod, a hand-wheel screwed upon the opposite end of the rod for adjusting it within the block the lower end of the lever having an elongated slot, a block vertically adjustable within said slot, a set screw 70 for holding the block in its adjusted position, a pitman pivotally connected to said block and means for driving said pitman.

12. A device of the character described, 75 comprising a table, a transverse bar carried by one end, a block longitudinally adjustable on said bar, a set screw for holding the block in its adjusted position, means for attaching a bridle thereto, a set screw below 80 said bar, and having a circumferential groove therein, a bifurcated member resting in said groove and having rearwardly extending arms, a rod passing through said arms and having a right and left threaded 85 connection therewith, means for rotating said rod for drawing the arms together, an intermediately pivoted lever carried by the opposite end of the table, a pivoted block carried by the upper end of the lever a screw 90 rod passing through said block, a halter carried by rod means for adjusting said rod, the lower end of the lever having an elongated slot therein, a block vertically adjustable within said slot a set screw for holding the 95 block in its adjusted position, a pitman pivotally connected to said block, means for driving said pitman.

13. A device of the character described, comprising a table, hold-fast means at one 100 end, a vibrating means at the opposite end, a halter connected to said vibrating means, and means for driving said vibrating means.

14. A device of the character described, comprising a table, hold-fast means at one 105 end, a vibrating means at the opposite end, a halter connected to said vibrating means, means for driving said vibrating means, and an adjustable connection between the vibrating means and driving means whereby 110 the limit of vibration is adjusted.

15. A device of the character described, comprising a table, hold-fast means carried by one end, a vertically-arranged intermediately-pivoted lever carried by the opposite 115 end of the table, a halter connected to the upper end of the lever, a pitman having an adjustable connection with the lower end of the lever, and means carried by the lower face of the table for reciprocating said pit- 120 man.

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

DANIEL W. RIESLAND.

Witnesses:

H. H. PHELPS.

THOMAS A. MERRITT.