

No. 891,678.

PATENTED JUNE 23, 1908.

J. H. DOWNEY.
OPERATING AND FRACTURE TABLE.

APPLICATION FILED JUNE 21, 1906.

2 SHEETS—SHEET 1.

Fig. 4.

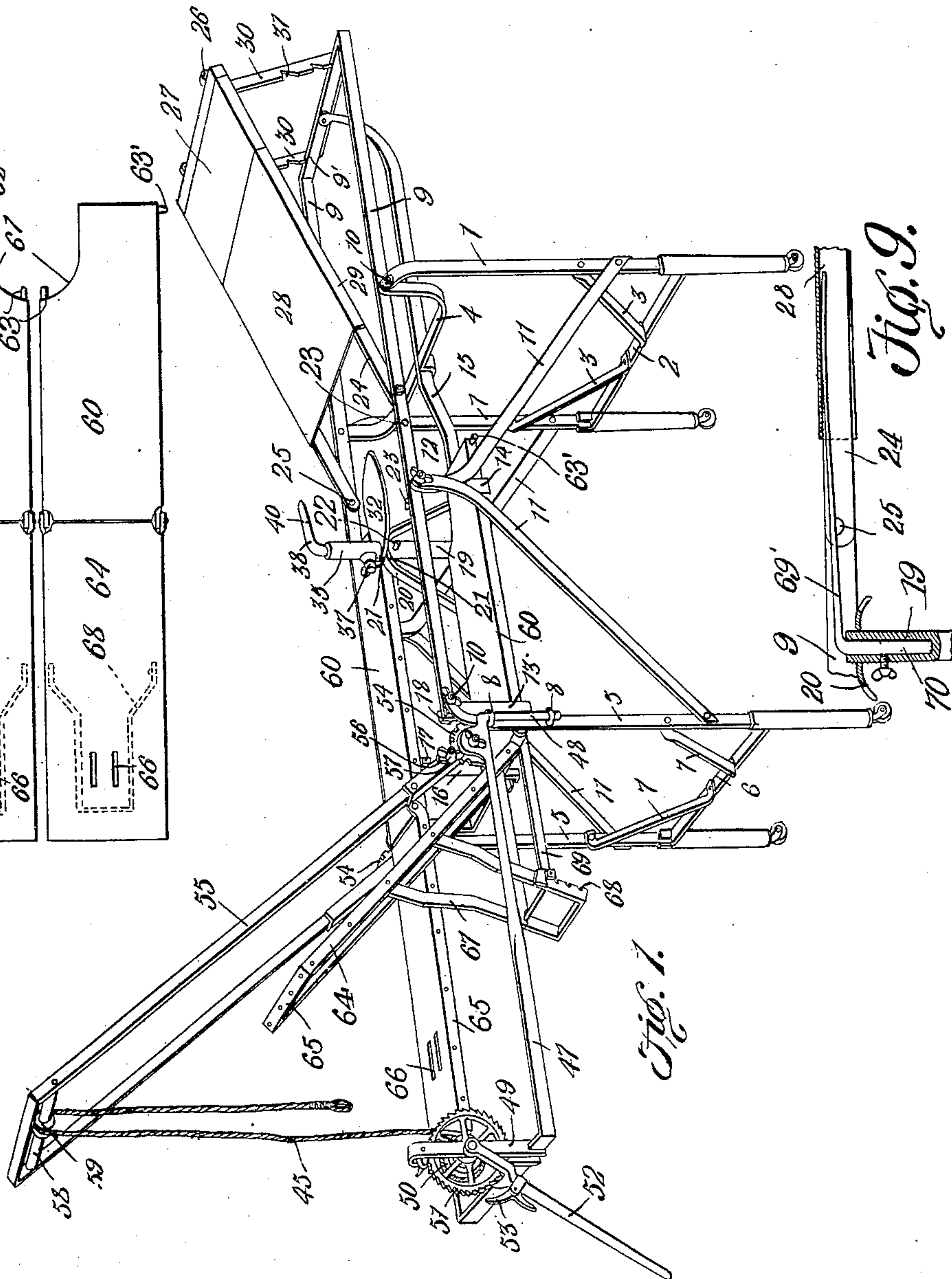
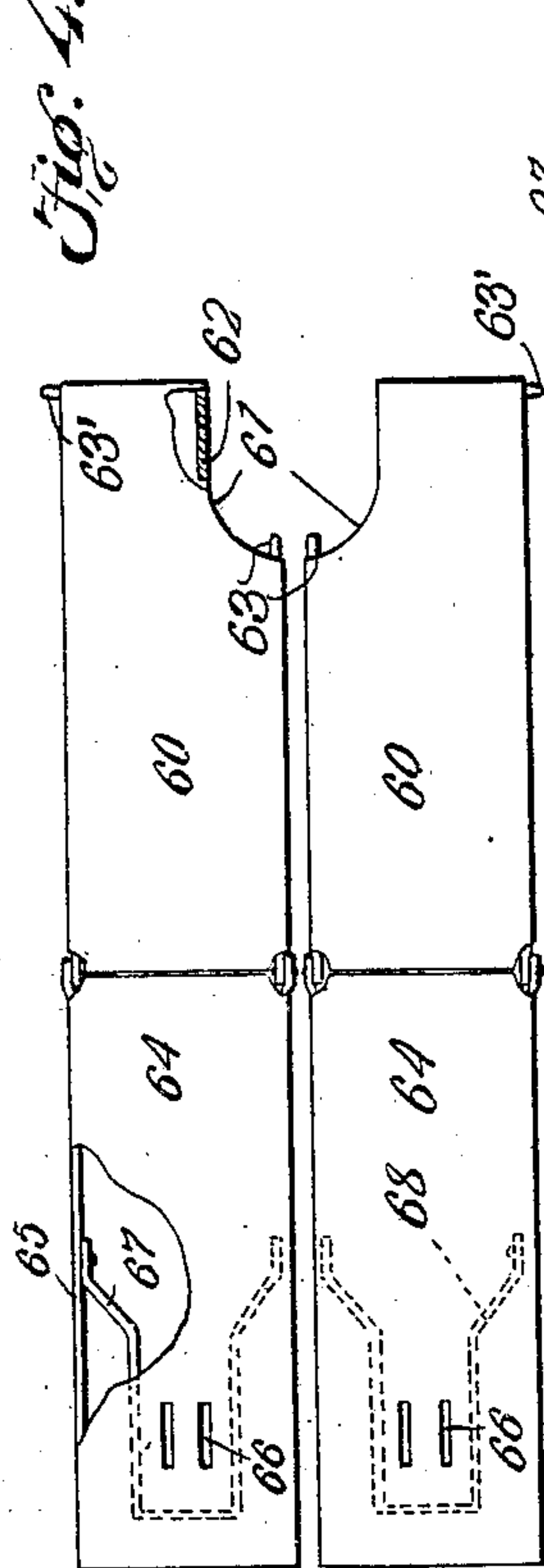


Fig. 9.

Fig. 7.

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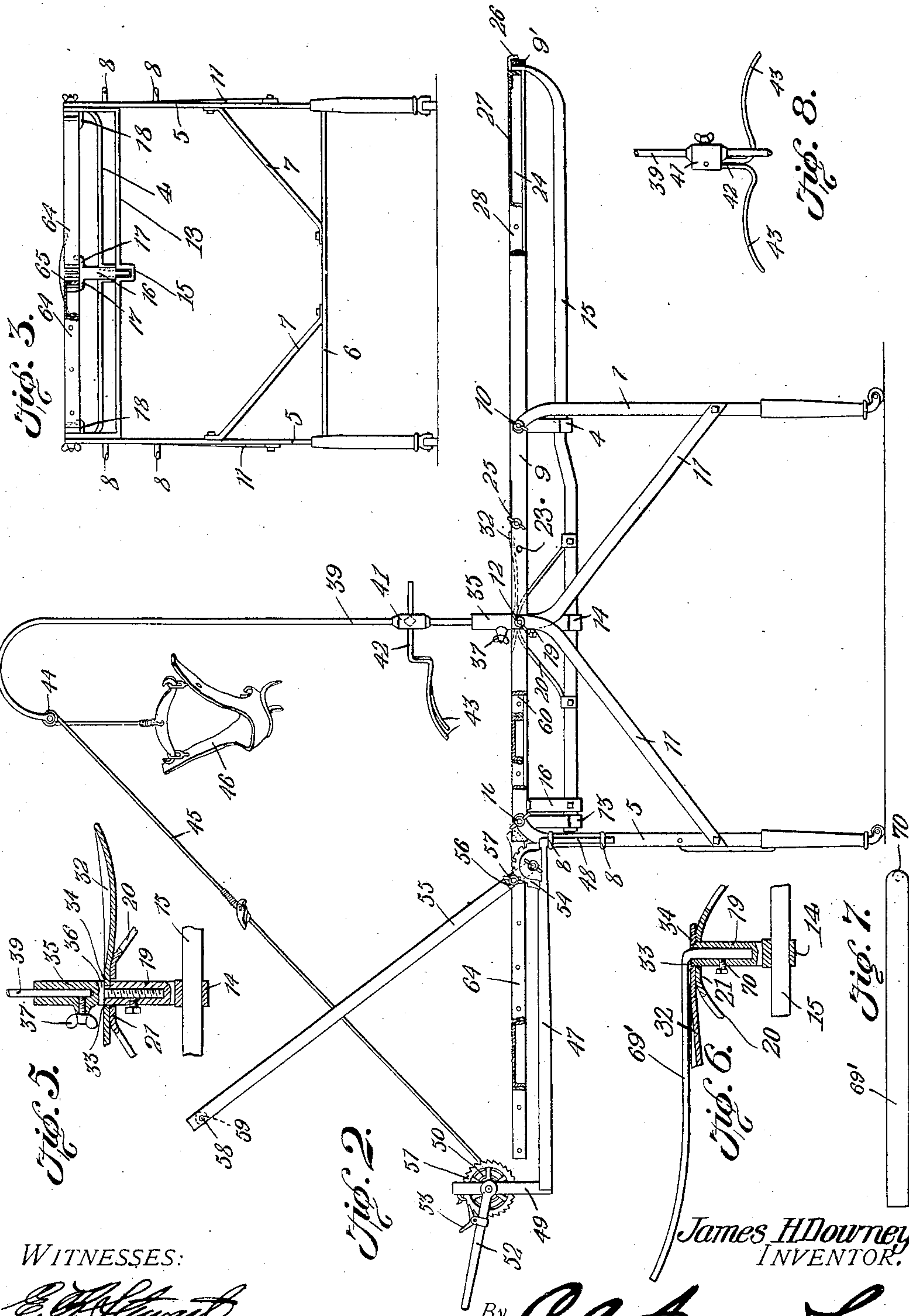
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JAMES H. DOWNEY, OF GAINESVILLE, GEORGIA.

OPERATING AND FRACTURE TABLE.

No. 891,678.

Specification of Letters Patent.

Patented June 23, 1908.

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To all whom it may concern:

Be it known that I, JAMES H. DOWNEY, a citizen of the United States, residing at Gainesville, in the county of Hall and State of Georgia, have invented a new and useful Operating and Fracture Table, of which the following is a specification.

This invention has relation to operating tables and it consists in the novel construction and arrangement of its parts as hereafter shown and described.

The object of the invention is to provide a table with adjustable or movable parts which may be so arranged with relation to each other as to properly receive and hold a patient during an operation.

The number of positions of the various parts are so great that the table hereinafter shown and described is capable of being adjusted to be suitable for almost any character of operation. At the same time the parts are compact and when not in use may be readily moved out of the way.

In the accompanying drawings:—Figure 1 is a perspective view of the operating table. Fig. 2 is a side elevation of the table partly in section. Fig. 3 is an end elevation of the table partly in section. Fig. 4 is a top plan view of the leg pallets with parts broken away. Fig. 5 is a vertical sectional view of the seat rest post and attachments. Fig. 6 is a vertical sectional view of the seat rest post with a spine support attached thereto. Fig. 7 is a top plan view of the spine support. Fig. 8 is a detail view of the thigh brace. Fig. 9 is a side elevation of portions of the table illustrating relative positions of the spine rest and head rest.

The table consists of the head end uprights 1, 1 which are joined together near their lower ends by the cross-rail 2, the braces 3, 3 being interposed between the uprights 1, 1 and the said cross rail 2. The upper ends of said uprights 1 are connected together by means of the U-shaped cross-piece 4. The foot end uprights 5, 5 are located in alinement with the head end uprights 1, 1. The said uprights 5, 5 are connected together near their lower ends by the cross rail 6 and the braces 7, 7 are interposed between the cross rail 6 and the uprights 5, 5. The uprights 5, 5 are provided near their upper ends with the eyes 8, 8. The side rails 9, 9 are pivotally secured to the upper ends of the uprights 1, 1 and 5, 5, the screw and thumb taps 10, 10 being provided at the

pivotal points of the side rails in order that the said rails may be secured at a desired angle to the uprights 1, 1 and 5, 5. The side braces 11, 11 are pivoted at their lower ends, one set of braces to the uprights 1, 1 and the other set of braces to the uprights 5, 5. The upper ends of the said braces are pivotally secured to the side rails 9, 9, the set of braces extending from the uprights 1, 1 meeting the upper ends of the braces 11 extending from the uprights 5, 5, the screw and thumb tap 12 being used as a means for securing the upper ends of the braces 11, 11 to the said side rails 9, 9.

The upper ends of the uprights 5, 5 are connected together by the U-shaped cross-piece 13 and the upper ends of the braces 11, 11 are secured together by the U-shaped cross-piece 14 which is of the same dimensions and configuration as the cross piece 13. The intermediate portions of the said U-shaped cross-pieces 13 and 14 lie in the same horizontal plane while the intermediate portion of the cross-piece 4 is in a relatively higher horizontal plane. The center rail 15 is attached at one end to the cross-piece 13 and at intermediate points to the cross pieces 14 and 4 and at its other end to the cross-piece 9' which is located at the ends of the side rails 9, 9. The said center rail maintains the said cross-pieces in proper position with relation to each other.

The post 16 is erected upon the center rail 15 near the end thereof that connects with the cross-piece 13. Said post is provided at its upper end with the laterally extending lugs 17, 17. The lugs 18, 18 are in horizontal alinement with the lugs 17 and are attached to the ends of the said rails 9 that lie opposite the post 16. The post 19 is erected upon the center rail 15 at the point where the rail connects with the cross-piece 14. The brace 20 is attached at its ends to the center rail 15 and its intermediate portion is elevated and is provided with a horizontal section 21 which is perforated to receive the upper end of the post 19. The said post 19 is provided with the laterally extending lugs 22, 22. The perforations 23, 23 are located on said rails 9, 9 at points intermediate the ends thereof.

The back rest consists of the U-shaped member 24 which is pivoted at the points 25, 25 to the side rails 9, 9. The intermediate portion of the back rest 24 is provided with the lugs 26, 26 which, when the said back is

lying in horizontal position; engage the cross-bar 9' which connects the extended ends of the side rails 9, 9 together. The back piece 24 is provided at its end with the relatively fixed head rest 27. The back rest section 28 is provided with the curled edges 29 which receive the side portions of the back rest frame 24. The said back rest section 28 is adapted to slide along the side portions of the frame 24 and may be moved over the head rest 27. The arms 30 are pivoted at their ends to the intermediate portion of the back rest frame 24. Said arms are provided in their sides with the notches 31 which are adapted to receive the edge of the cross-piece 9' when the end of the back rest frame 24 is swung up. Thus the said arms 30 serve as props for supporting the back rest frame in such swung up position.

The pelvis seat or support 32 is provided with a perforation 33 which is adapted to receive the upper end of the post 19. The said support 32 is of elliptical or oval configuration and the perforation 33 is located near one of the ends thereof. The edge of the perforation 33 is provided with a lip 34 which is adapted to enter a corresponding groove or recess in the edge of the end of the post 19 and thus the said seat support 32 is prevented from moving horizontally with relation to the said post. The socket 35 is provided with a screw threaded end which is adapted to enter the internal thread of the post 19. At the end of the thread of the socket, the shoulder 36 is formed. Said shoulder is adapted to come in contact with the end of the post 19 or parts resting upon the end of the said post. The set screw 37 passes laterally through the side of the socket 35. Said socket is adapted to receive a pelvis clamp 38 or the end of a crook member 39, the said screw 37 retaining such attachments within the socket. The pelvis clamp 38 is provided with the horizontal portion 40 which is adapted to be passed over the thigh of a patient during certain operations and clamp the part in position on the seat rest 32. The crook member 39 is provided with the vertically adjustable sleeve 41 to which is attached the laterally adjustable thigh brace 42. Said brace 42 is provided with the curved members 43 which are adapted to be passed over the thighs during certain operations and brace the patient in position upon the table.

The upper end of the crook member 39 is provided with a pulley wheel 44. The cord 45 passes over the said wheel and is provided at one end with the head or neck clamp 46. Means is provided for operating the cord 45 which will be hereinafter explained.

The head or neck clamp 46 is adapted to receive the head of the patient and is used when it is desired that the spinal column of the patient be elongated, the thigh brace 42

retaining the pelvis of the patient while the head clamp 46 is being elevated. The shelf member 47 is adapted to be attached or detached from the uprights 5, 5. Said shelf member is provided with the downwardly extending ends 48, 48 which are adapted to enter the eyes 8, 8. The said shelf member 47 is substantially U-shaped in horizontal plan. The frame 49 is adapted to be adjustably secured to the intermediate portion of the said shelf member 47. The winding drum 50 is journaled in the frame 49. The ratchet wheel 51 is attached to said drum, the ratchet lever 52 is fulcrumed to the frame 49 and is provided with the pawl 53 which is adapted to engage the ratchet wheel 51. The end of the cord 45 is adapted to wind upon the drum 50. The ends of the shelf member 47 are provided with the gear segments 54. The ends of the derrick member 55 are pivotally secured to the gear segments 54. The ends of the said member 55 are provided with the clamps 56 which are adapted to be secured by the thumb tap and bolt 57 in the gear of the segments 54. Thus when the member 55 is inclined, it may be secured at such inclination by means of the clamps 56 operated by the thumb screw and tap 57. The cross rod 58 is located between the sides of the member 55 and is spaced from the intermediate portion thereof. The pulley 59 is loosely journaled upon the cross rod 58 and is free to move from one end of said rod to the other. For certain operations, it is necessary and desirable that the cord 45 pass over the pulley 59 and it is also necessary in some instances that the said pulley may be shifted laterally upon the rod 58 and that the frame 49 be correspondingly shifted upon the shelf member 47.

A pair of leg pallets is provided to be used in connection with the table. With the exception of being rights and lefts such pallets are of the same construction and a description of one will answer for both. Each pallet consists of an upper leg member 60 which is cut away at one corner as at 61 in order to receive the end of the seat rest 32. The flange 62 extends around the edge of the said member 60. The lugs 63, 63 located in the cut away corner 61 are adapted to rest upon the lugs 22 while the lugs 63', at the opposite side of the member 60 are adapted to enter the perforations 23. That is, when the leg pallets are at the same level as the pelvis seat or rest 32. When it is desired that the said pallets be lower than the seat rest 32, the edges of the flanges 62 rest upon the cross-pieces 13 and 14 or 14 and 4. When resting upon the cross-pieces 13 and 14, the member 60 will be horizontal and while resting upon the cross-pieces 14 and 4, the member 60 will be inclined. The lower leg member 64 is hinged to the upper leg member 60 and is provided on three sides with the flange 65.

The member 64 is provided with the apertures through which straps (not shown) may be passed for the purpose of securing the patient to the pallet.

5 One of the principal advantages to be gained by the use of the sectional and movable leg pallets is that the pallet members may be independently adjusted to positions wholly free from contact with the leg and
10 thigh, so that a dressing of any nature may be readily applied without the necessity of elevating or moving the patient in any manner. It is sometimes necessary to apply a dressing that reaches up beyond the thigh,
15 and in such cases the back rest may be moved in the direction of the head of the patient to expose the lumbar region, so that the dressing may be applied around the lower part of the trunk and any part of the
20 limb or limbs.

The U-shaped prop 67 is hinged to the flange 65 of the lower leg member 64. Said prop is provided in its edge with a number of recesses 68. The prop support 69 slides
25 longitudinally within the flange 62 of the member 60 and is adapted to enter at its end the notches 68 of the prop 67. Thus the lower leg member 64 may be pitched at any desired angle with relation to the upper leg
30 member 60 and secured by means of the prop 67 and the prop support 69 in such position.

An attachment for supporting the spine during the operation of setting the fractured
35 parts of a clavicle is provided. Said support consists of the arm 69' which is provided at one end with a stub 70. Said stub is adapted to be secured to the upper end of the post 19 and the arm 69' will extend under the sliding
40 back rest 28 along the central axis thereof. Consequently the said back rest 28 may be moved over the head rest 27 and the spine of the patient will be supported by the arm 69' leaving the shoulders free to be rotated
45 during the operation of setting the fractured parts of the clavicle.

It is obvious that the table and its parts may be adjusted and located in numerous and various positions. As the arrangement
50 of parts for different uses and different operations are so numerous and as the adjustment of the parts for specific purposes are apparent it is unnecessary that the numerous different adjustments be described herein.

55 Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A table such as described consisting of head-end uprights, foot-end uprights, side
60 rails pivotally attached to said uprights, cross-pieces connecting the ends of said uprights together, a cross-piece connecting the intermediate portions of said rails together, the last said cross-piece and the cross-piece at the foot-
65 end uprights being at the same elevation,

the cross-piece at the head end uprights being at a higher elevation, a head-rest pivoted to said rails and movable leg pallets adapted to rest upon the cross-pieces or engage the rails.

2. A table such as described consisting of
70 head end uprights, foot end uprights, side rails pivotally connected to said uprights, side members pivoted at their lower ends to said uprights and being pivoted together and pivotally attached to the side rails at their upper
75 ends, cross-pieces connecting the side rails and uprights together and having intermediate portions which lie at levels below the side rails, a pivoted head-rest mounted upon the
80 rails, a leg pallet adapted to be applied and detached from the side rails and also adapted to rest upon the cross-pieces.

3. A table such as described consisting of head end uprights, foot end uprights, side rails
85 attached to said uprights, cross-pieces connecting said uprights and side rails together, a center rail supported by said cross-pieces, a post erected upon said center rail, a seat rest adapted to be carried by said post, a head-
90 rest pivotally attached to the side rails, and leg pallets adapted to be attached to and detached from said rails and also adapted to rest upon the cross-pieces.

4. A table such as described consisting of
95 head end uprights, foot end uprights, side rails connecting said uprights together, cross-pieces connecting said side rails and said uprights together, said cross-pieces having depressed intermediate portions, a center
100 rail supported by said depressed intermediate portions of the cross-pieces, a post erected upon said center rail, said post having laterally extending lugs, laterally extending lugs located upon the side rails, a head-rest at-
105 tached to the side rails, leg pallets adapted to rest upon said lugs or upon the depressed intermediate portions of the cross-pieces.

5. A table such as described consisting of head end uprights, foot end uprights, side rails
110 attached thereto, cross-pieces connecting said side rails and said uprights together, a center rail supported by said cross-pieces, a head-rest attached to the side rails, a post erected upon said center rail, a seat rest adapted to be ap-
115 plied to said post, and leg pallets adapted to be supported by said side rails.

6. A table such as described consisting of head end uprights, foot end uprights, side
120 rails connecting said uprights together, cross rails connecting said side rails and uprights, a center rail supported by said cross-rails, a post erected upon said center rail, a seat rest adapted to be applied to said post, a pelvis clamp adapted to be applied to said post,
125 and leg pallets adapted to be supported by said side rails one at each side of said center rail.

7. A table such as described consisting of head end uprights, foot end uprights, side
130

rails connecting said uprights together, cross-pieces connecting said side rails and uprights together, a center rail supported by said cross-pieces, a post erected upon said center rail, a seat rest adapted to be applied to said post, a pelvis clamp adapted to be applied to said post, leg pallets adapted to be interposed between the post and the side rails, said leg pallets consisting of members hinged together.

8. A table such as described consisting of head end uprights, foot end uprights, side rails connecting said uprights together, and having extended ends which are connected together, cross-pieces connecting said side rails and said uprights together, a center rail supported by said cross-pieces and extending to the connection between the ends of the side rails, a head-rest pivoted to the side rails, props pivoted to said head-rest and adapted to engage the connection at the ends of the side rails, a post erected upon said center rail, a seat rest adapted to be applied to said post, and leg pallets adapted to be interposed between the post and the side rails.

9. A table such as described consisting of head end uprights, foot end uprights, side rails connecting said uprights together, cross-pieces connecting said side rails and said uprights together, a center rail supported by said cross-pieces, a head-rest pivoted to said side rails, and having means for supporting the same at an angle thereto, a back rest section slidably mounted upon said head-rest, a post erected upon said center rail, a seat rest adapted to be applied to said post, and leg pallets adapted to be interposed between said post and the side rails.

10. A table such as described consisting of

head end uprights, foot end uprights, side rails connecting said uprights together, cross-pieces connecting said side rails and said uprights together, a center rail supported by said cross-pieces, a head-rest pivotally attached to the side rails and having means for supporting the same at an angle with relation to the rails, a post erected upon the center rail, a seat rest adapted to be applied to said post, leg pallets adapted to be interposed between said post and the side rails, said pallets consisting of sections hinged together and being provided with means whereby the said sections may be retained in alinement with each other or at an angle to each other.

11. In a table of the class described, a head rest, and a spine support in the form of a long narrow arm secured at one end to the table and having its free end extending toward the head rest.

12. A table such as described, a head-rest located thereon, a back-rest adapted to slide over said head-rest, a spine-rest attached to the table and extending under the back-rest toward the head-rest.

13. A table such as described, a head-rest located thereon, a back-rest adapted to slide over the head-rest, a spine-rest located on the table and extending toward the head-rest and being upwardly curved, and leg pallets located on the table.

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

JAMES H. DOWNEY.

Witnesses:

M. L. THURSTON,
W. B. LAWSON.