

No. 735,851.

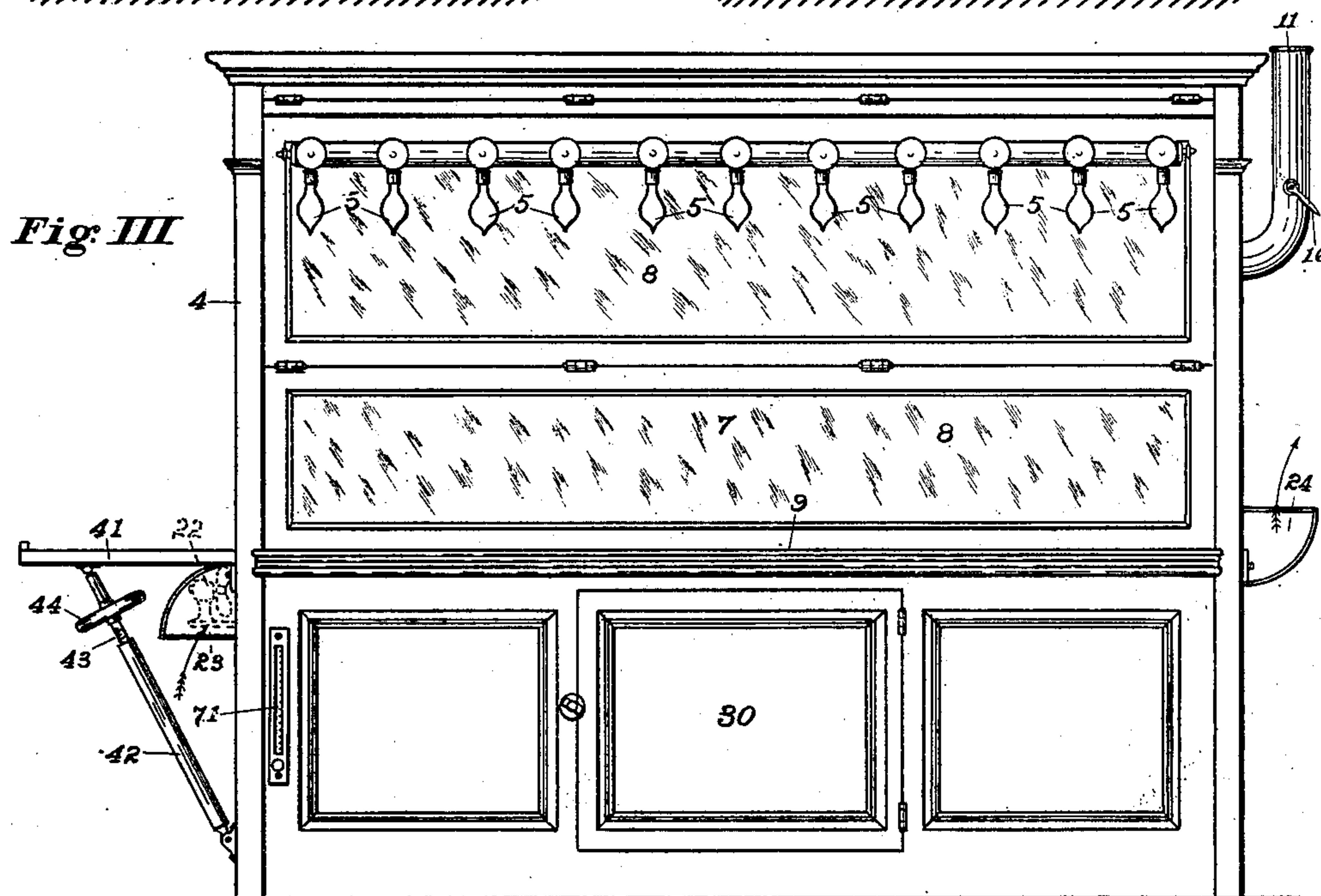
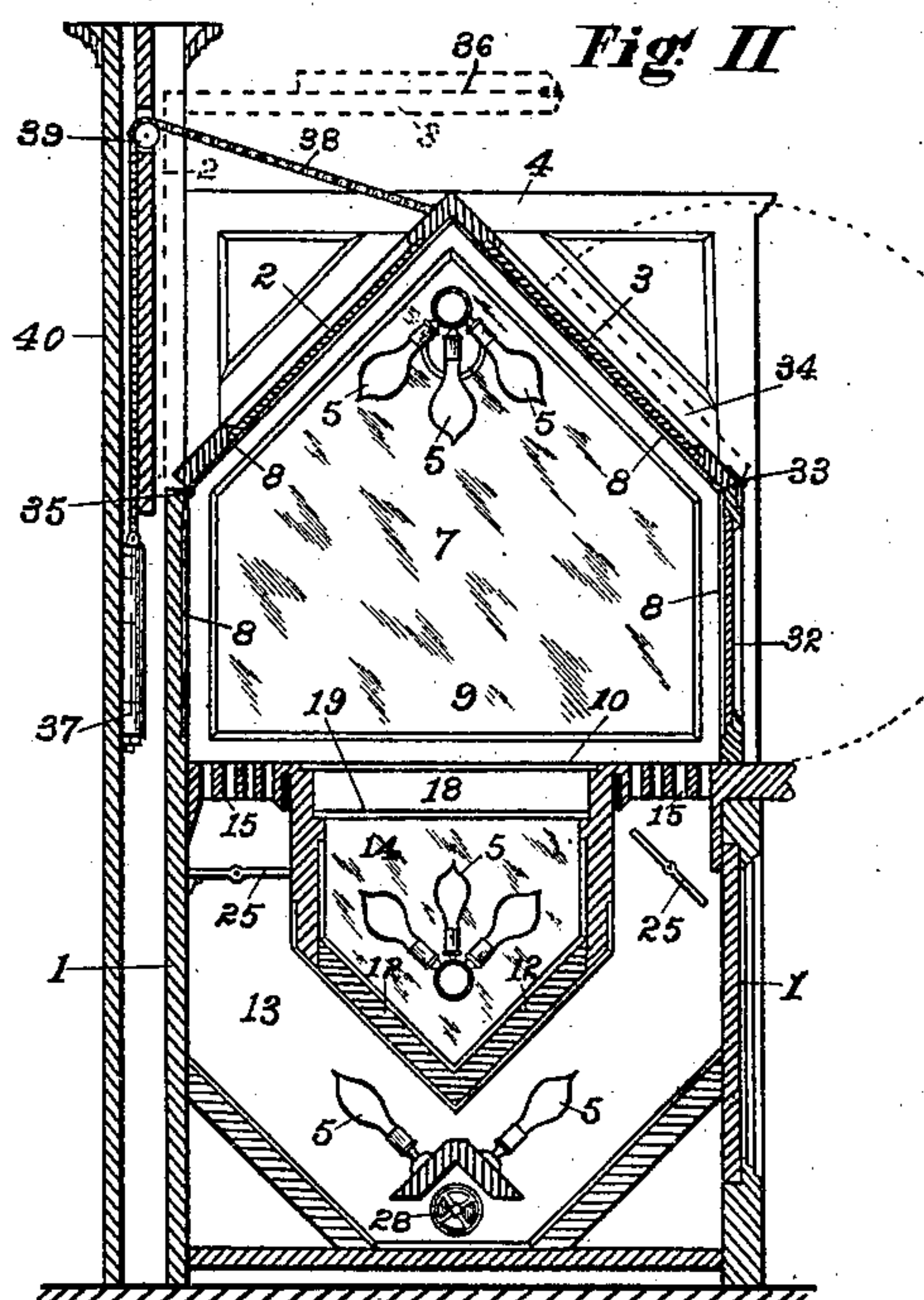
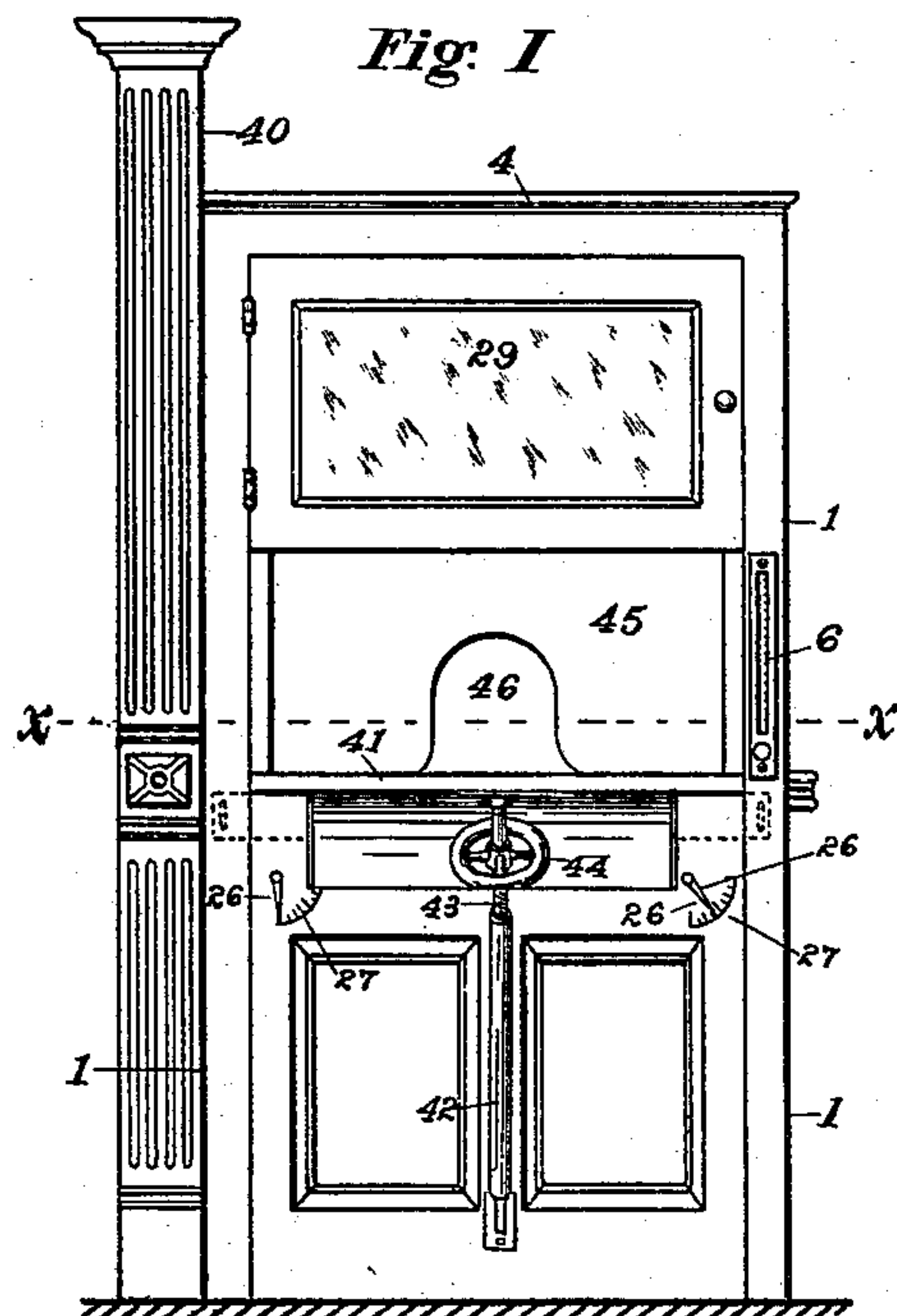
PATENTED AUG. 11, 1903.

G. L. ABELL.
THERAPEUTICAL APPARATUS.

APPLICATION FILED SEPT. 2, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

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Alex. Thomson

INVENTOR:

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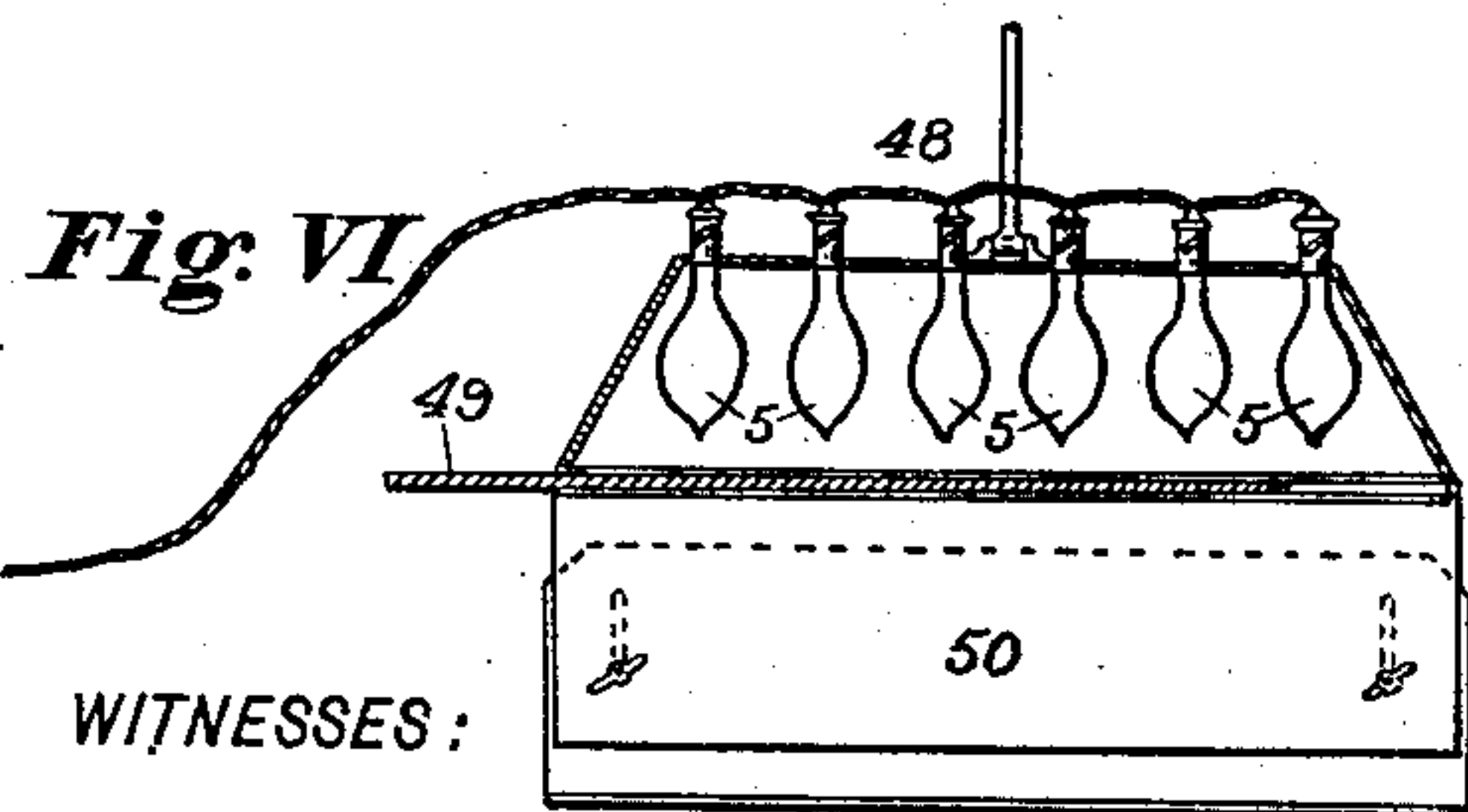
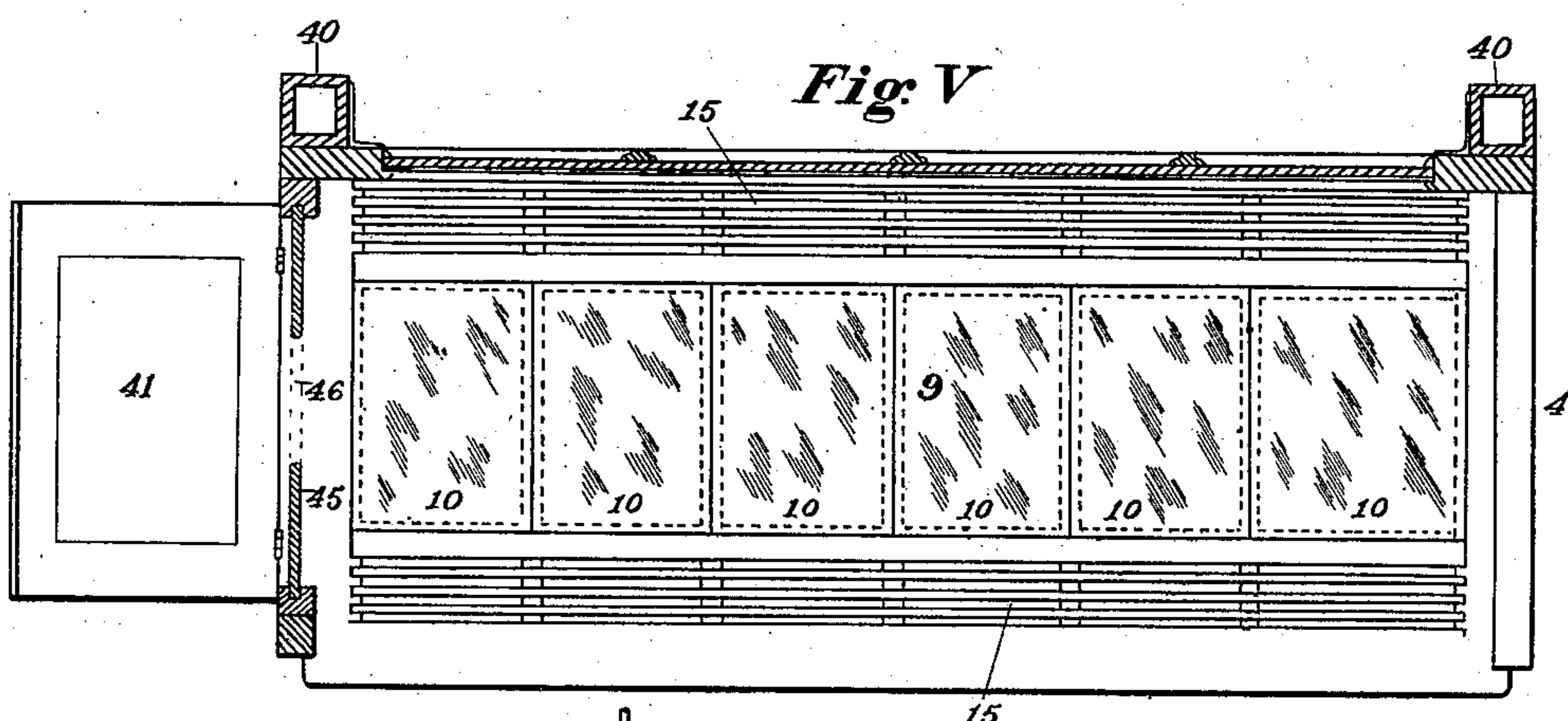
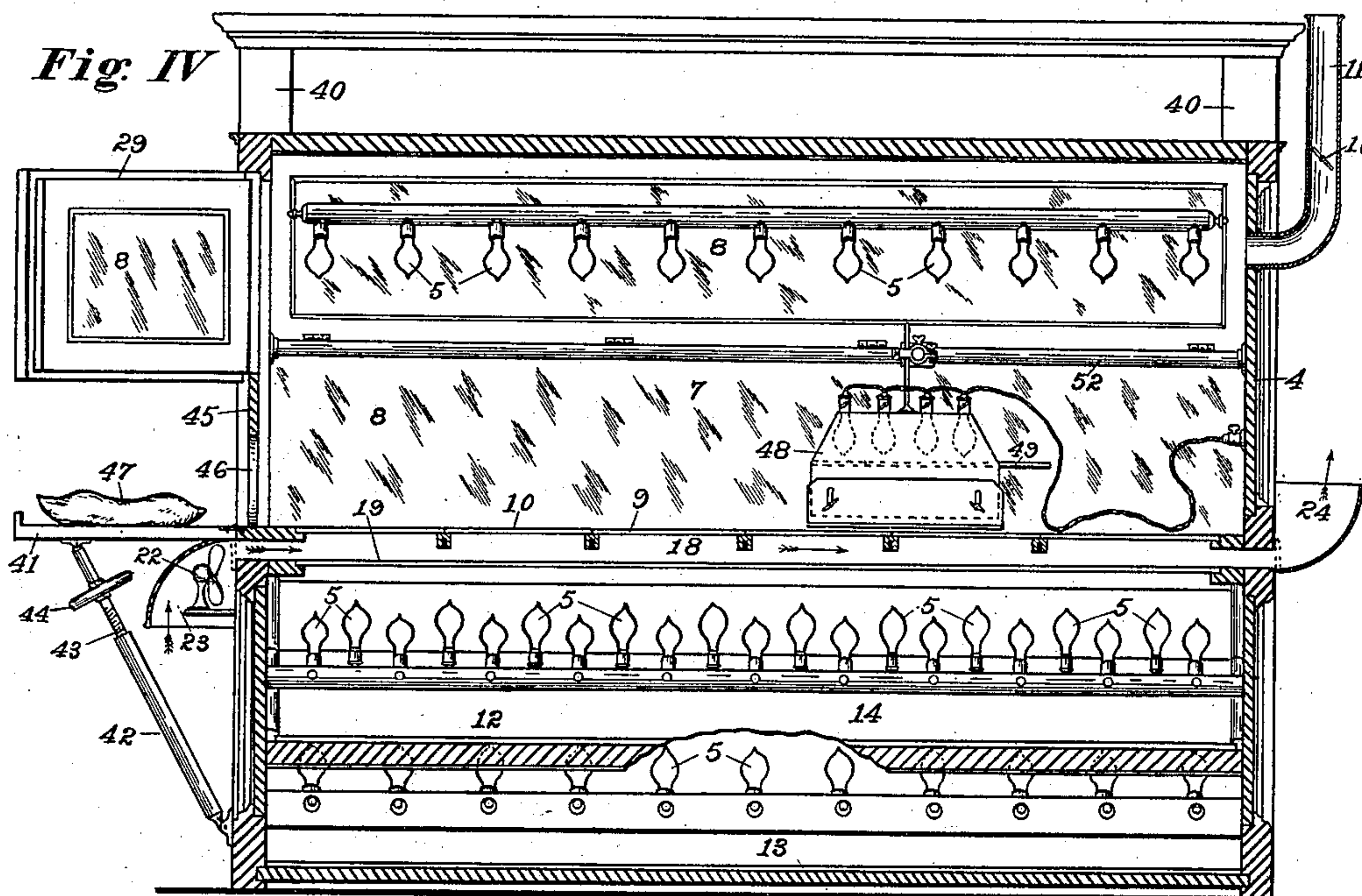
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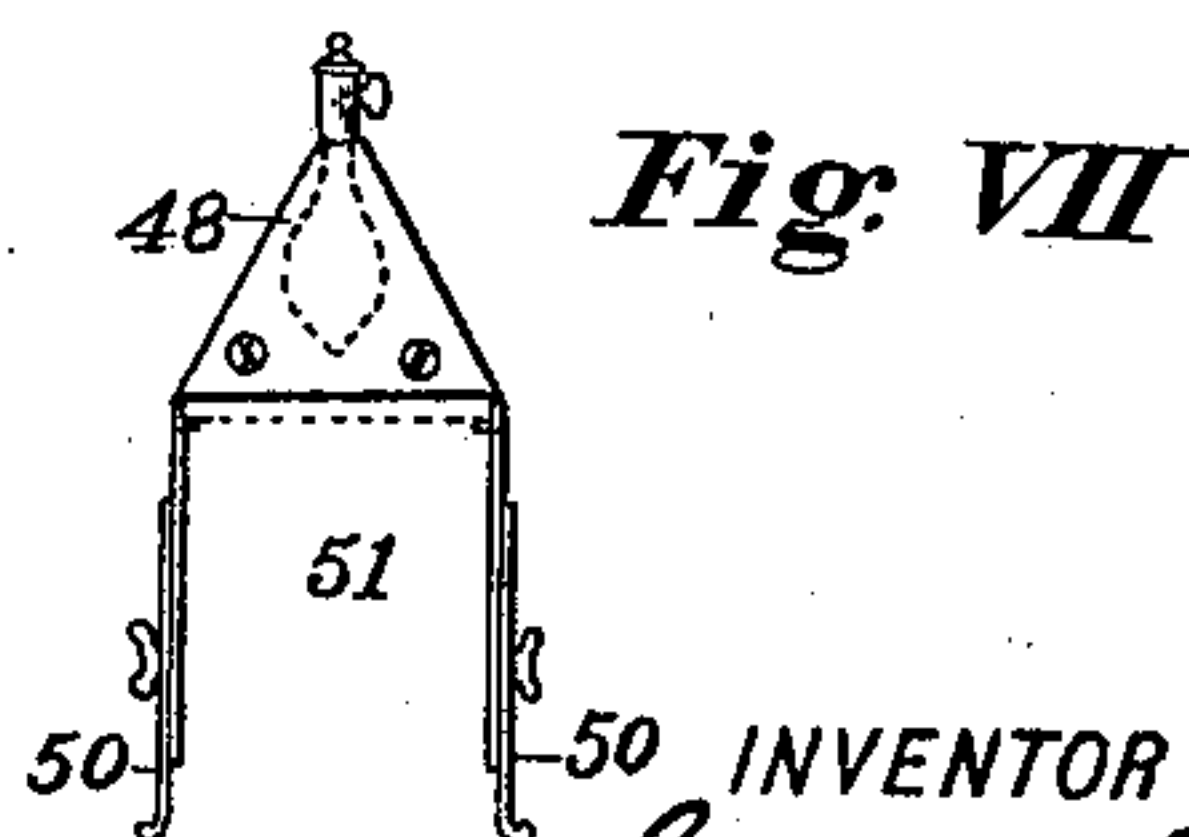
NO MODEL.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

GERALD L. ABELL, OF OAKLAND, CALIFORNIA.

THERAPEUTICAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 735,851, dated August 11, 1903.

Application filed September 2, 1902. Serial No. 121,823. (No model.)

To all whom it may concern:

Be it known that I, GERALD L. ABELL, a citizen of the United States of America, residing at Oakland, county of Alameda, and State of California, have invented certain new and useful Improvements in Incandescent-Chromatic-Light Bath-Cabinets; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to certain improvements in incandescent-chromatic-light bath-cabinets for the application of heat, circulated hot air, light, and other agencies of a remedial nature applied in an inclosed cabinet.

My improvements consist in an inclosed cabinet with means to open the side and top thereof to permit the convenient entry and exit of patients, means to control the flow of air heated by lamps within the cabinet and to radiate the heat and rays of light therefrom, means to impel a current of cool air beneath the patient when inclosed in the cabinet, devices to localize, concentrate, and intensify the heat and rays of light upon particular parts of a patient's person, and in other features, that will be hereinafter more particularly described and are illustrated by drawings that form a part of this specification.

The objects of my invention are to apply in a convenient and effective manner certain desirable therapeutical agencies by means of an inclosed cabinet having functions and provided with accessories as hereinafter described.

Referring to the drawings, Figure I is an end elevation of one of my improved cabinets for therapeutical treatment. Fig. II is a transverse vertical section through Fig. I. Fig. III is a side elevation of the cabinet, one side and half the cover being folded back to show the interior. Fig. IV is a central longitudinal vertical section through the cabinet, showing the supplementary device for local treatment. Fig. V is a horizontal section on the line $x-x$ in Fig. I. Fig. VI is a longitudinal section through a device for local treatment. Fig. VII is an end view of Fig. VI.

In therapeutical treatment of the kind to which my invention relates there are various

requirements that modify the success of application—such as the means of ingress and egress from inclosed cabinets, modified exposure of various parts of the body, temperature of the surfaces with which the body is in contact, circulation of air, inclination of a patient's head, and other things—which it is the purpose of my invention to provide, and now to be described by reference to the drawings and numerals of reference thereon.

The main walls or external structure consists of the side walls 1, angular sloping roof or covers 2 and 3, and rectangular ends 4. The interior of the cabinet is provided with a series of electric lamps 5, disposed substantially as shown in the various figures of the drawings and in number more or less as their intensity and amount of heat and light emitted. The interior of the cabinet 7 is lined with reflecting-surfaces, preferably mirrors 8, that reflect the heat and light from the lamps 5 and cause their impingement on the patient, who lies on the bottom 9, formed of transparent plates 10, as shown in Fig. V. The sloping top sides 2 and 3 of the chamber 7 greatly reduce the inclosed space without interfering with the freedom of patients therein. Besides being normal to the patient's body they reflect and radiate the heat and light directly and more effectually than in the case of a chamber of rectangular form. The various groups of electric lamps are connected with switches in the usual manner, so each or any of the groups can be brought into action, as may be required. The bottom division of the cabinet is constructed with two chambers 13 and 14, the former connecting with the upper chamber 7 through the grated passages 15, as shown in Figs. II and V. The inner chamber 14 of the lower division of the cabinet has sloping sides 12, is provided with lamps 5, and at the top of this chamber is a longitudinal passage 18, formed by the transparent plates 10 and 19, through which heat and light can pass to a patient when resting on the upper plates 10, but in a modified manner, as will be explained. As the temperature of the plates 10 is by contact and pressure communicated directly to the body of a patient resting thereon and as such temperature may exceed what can be borne or desired, I provide for impelling a current of

cool air through the passage 18 by means of a rotary fan 22, that draws in air at 23, forces it through the passage 18, and discharges it at 24, as shown in Fig. III.

5 The bottom of the main chamber 7 is composed of a series of removable plates 10, which can be conveniently replaced by others of more or less thickness and of different-colored glass, as the circumstances of treatment
10 may require.

In the passages from the chamber 13 to the grated ways 15 I place pivoted valves 25, operated by external index-pointers 26, that pass over arc scales 27 and indicate the
15 amount of heated air passing through the grated ways 15 into the main chamber 7. By these controllable passages between the chambers 7 and 13 they can be connected, or the lamps in either chamber can be operated in-
20 dependently, thus saving current when the whole series of lamps are not required.

At one or both ends of the lower chamber 13 I provide adjustable registers or air-inlets, as shown at 28 in Fig. II.

25 To ventilate the main chamber 7 and to cause a current of hot air through the grating 15, I provide a pipe 11, having a regulating-valve 16, as shown in Fig. IV.

29 is a door giving access to the ends of the
30 main chamber 7.

6 and 71 are thermometers to indicate the temperature in the chambers 7 and 13.

To open the front side of the chamber 7 for the passage of patients out and in and for
35 other purposes, the side 32 is hinged at 33 to the angular top 3, so as to be folded back thereon, as indicated by dotted lines at 34 in Fig. II, and as the angular top 2 and 3 is hinged at 35 the whole can be set up to the
40 position indicated at 36 in the same figure, so the whole front and top of the chamber 7 will be open for inspection, cleaning, or other purposes. The top 2 and 3 and front side 32 are provided with counterweights 37, attached
45 to chains or ropes 38, that pass over pulleys 39, so the weights 37 will be concealed by and slide up and down in the boxes 40, as shown in Figs. I and II. These devices enable the cabinet to be conveniently opened and closed.

50 At the front end of the cabinet is provided a pivoted shell 41, by which a patient's head is supported. This shelf 41 is provided with an extensible strut 42, having a screw 43 and hand-wheel 44, by means of which the shelf
55 can be adjusted to various degrees of inclination, as the convenience and condition of a patient may demand.

At the front end of the chamber 7 I provide a vertically-removable panel 45, preferably of woven wire covered with cloth, cut
60 out at 46 to fit around the neck of a patient whose head is resting on a cushion 47 on the shelf 41.

For local application to the limbs, chest,
65 abdomen, or other parts of a patient I provide a separate and portable apparatus 48,

(illustrated in Figs. IV, VI, and VII,) having a series of lamps 5, a movable translucent slide 49, and adjustable plates 50 at the sides. The slide 49 being within reach of a patient's
70 hands enables the temperature in the chamber 51 to be controlled without opening the cabinet for that purpose. This auxiliary apparatus 48 can be modified in form to fit over
75 any part of the body and when required can be closed at the ends by an elastic cover in the usual manner of such devices. To sustain the auxiliary apparatus 48, I provide a longitudinal bar or tube 52, as shown in Fig. IV, on which this apparatus is suspended by
80 devices permitting vertical and longitudinal adjustment and preventing pressure on a patient. A flexible insulated connection 53 conveys current to the lamps 5.

In the treatment of patients it is discovered
85 that there is a difference in the influence of different colors of the reflected light, and to employ such influence I provide in the chamber 7 red lamps, in the chamber 13 white lights, and in the chamber 14 blue lights.
90 The order may, however, be changed in the different groups of lamps as occasion may require, the intensity of each group being regulated accordingly.

Having thus explained the nature and ob-
95 jects of my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cabinet for therapeutical treatment, a main chamber having rectangular ends and a top formed of two united sloping members
100 included between said ends, hinged at one side to a fixed side, counterbalanced, provided on the interior of said sloping members with reflecting-surfaces, and lamps arranged in the angle between said reflecting-
105 surfaces, substantially as specified.

2. In a cabinet for therapeutical treatment, a main chamber having a roof formed of two united sloping members hinged at one side to a fixed side and at the other side to a folding
110 side, counterbalanced, provided on the interior of said sloping members with reflecting-surfaces, and lamps arranged in the angle between said reflecting-surfaces, substantially
115 as specified.

3. In a cabinet for therapeutical treatment, a main lamp-heated upper chamber to receive the patient, a lamp-heated lower chamber beneath the patient, having a transparent floor,
120 side passages connecting said lower and upper chambers, regulating-valves in said passages, and means for supplying a current of air through said connected chambers, substantially as specified.

4. In a cabinet for therapeutical treatment,
125 a main lamp-heated receiving-chamber, a lamp-heated lower chamber, a double transparent floor between said chambers, side passages connecting said lower and upper chambers, with regulating-valves therein, means
130 for supplying air between the plates of the double transparent floor, and means for sup-

plying a current of air through said connected upper and lower chambers, substantially as specified.

5. A cabinet for therapeutical treatment, an upper main operating-chamber to receive the patient being treated, a subchamber connected therewith by air-passages, valves to control these passages, the lower chamber provided with lamps set normal to sloping surfaces forming the side walls of the lower chamber, substantially as specified.

6. In a cabinet for therapeutical treatment, a main operating-chamber to receive patients, a subchamber connected therewith by grated passages, a third chamber inclosed by the lower one, sloping bottom walls in this third chamber, and a row of lamps therein set normal to the sloping bottom walls, substantially as specified.

7. In a cabinet for therapeutical treatment, a main operating-chamber to receive patients being treated, a subchamber beneath the main one and an intermediate chamber inclosed by the second or sub chamber, a series of lamps in the sub and third chamber, and a cool-air duct over the latter and beneath the main chamber, substantially as specified.

8. In a cabinet for therapeutical treatment, a main upper chamber, a subchamber connecting therewith, an intermediate chamber between the top and sub chamber, lamps in the main, sub and intermediate chambers and an air-passage over the latter having a translucent bottom and top and devices to impel cool air therethrough, substantially as specified.

9. In a cabinet for therapeutical treatment, a main lamp-heated receiving-chamber, a transparent floor thereto, means for radiating heat into said chamber through the floor from beneath, a vertically-sliding panel at one end of said main chamber, notched to fit the patient's neck, and an adjustable head-rest external to said chamber beyond the vertically-sliding panel, whereby all of the patient except the head can be submitted to radiant-heat treatment, substantially as specified.

10. In a cabinet for therapeutical treatment, a main lamp-heated receiving-chamber, having a hinged double sloping top, provided on its interior inclined faces with reflecting-surfaces, a front side hinged to said top, a double transparent floor, a lamp-heated second chamber beneath said floor, having sloping reflecting-surfaces at its bottom, another lamp-heated chamber beneath said second

chamber, connected with the main receiving-chamber by side passages, air-regulating valves in said passages, means for sending a current of air through said lower and main chambers, and means for supplying air through the plates of said double transparent floor, substantially as specified.

11. In a cabinet for therapeutical treatment, a main lamp-heated receiving-chamber, a second lamp-heated chamber beneath said main chamber, a double floor between said chambers, formed of transparent plates, the upper ones of which are removable, side passages at each side of said double floor leading to the main receiving-chamber, air-regulating valves in said passages, means for sending a current of warm air through said passages into said main chamber, and means for supplying air between the plates of the double transparent floor, substantially as specified.

12. In a cabinet for therapeutical treatment, a main chamber adapted to receive patients, provided with lamps and radiating-surfaces, a supplementary portable chamber adapted to go therein and fit over different parts of a patient, a supporting bar or runway on which this portable chamber is moved, and means to adjust the latter vertically and prevent its weight from bearing on a patient, substantially as specified.

13. In a cabinet for therapeutical treatment, a main operating-chamber provided with lamps and reflecting-surfaces, a supplementary portable chamber to go therein, the latter provided with lamps, a translucent slide beneath the lamps and vertically adjustable sides whereby the height of the portable chamber can be varied, substantially as specified.

14. In a cabinet for therapeutical treatment, a main chamber to receive patients, a subchamber beneath and connected with the main chamber by controllable passages, a third chamber beneath the main one and interposed translucent plates through which heat and light can pass from this third chamber to the main one, and groups of electric lights of different color in these several chambers, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GERALD L. ABELL.

Witnesses:

ALFRED A. ENQUIST,
P. W. J. LANDER.

Correction in Letters Patent No. 735,851.

It is hereby certified that in Letters Patent No. 735,851, granted August 11, 1903, upon the application of Gerald L. Abell, of Oakland, California, the title of the invention was erroneously written and printed "Therapeutical Apparatus," whereas the said title should have been written and printed *Incandescent Chromatic Light Bath Cabinet*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 11th day of August, A. D., 1903.

[SEAL.]

E. B. MOORE,
Acting Commissioner of Patents.