

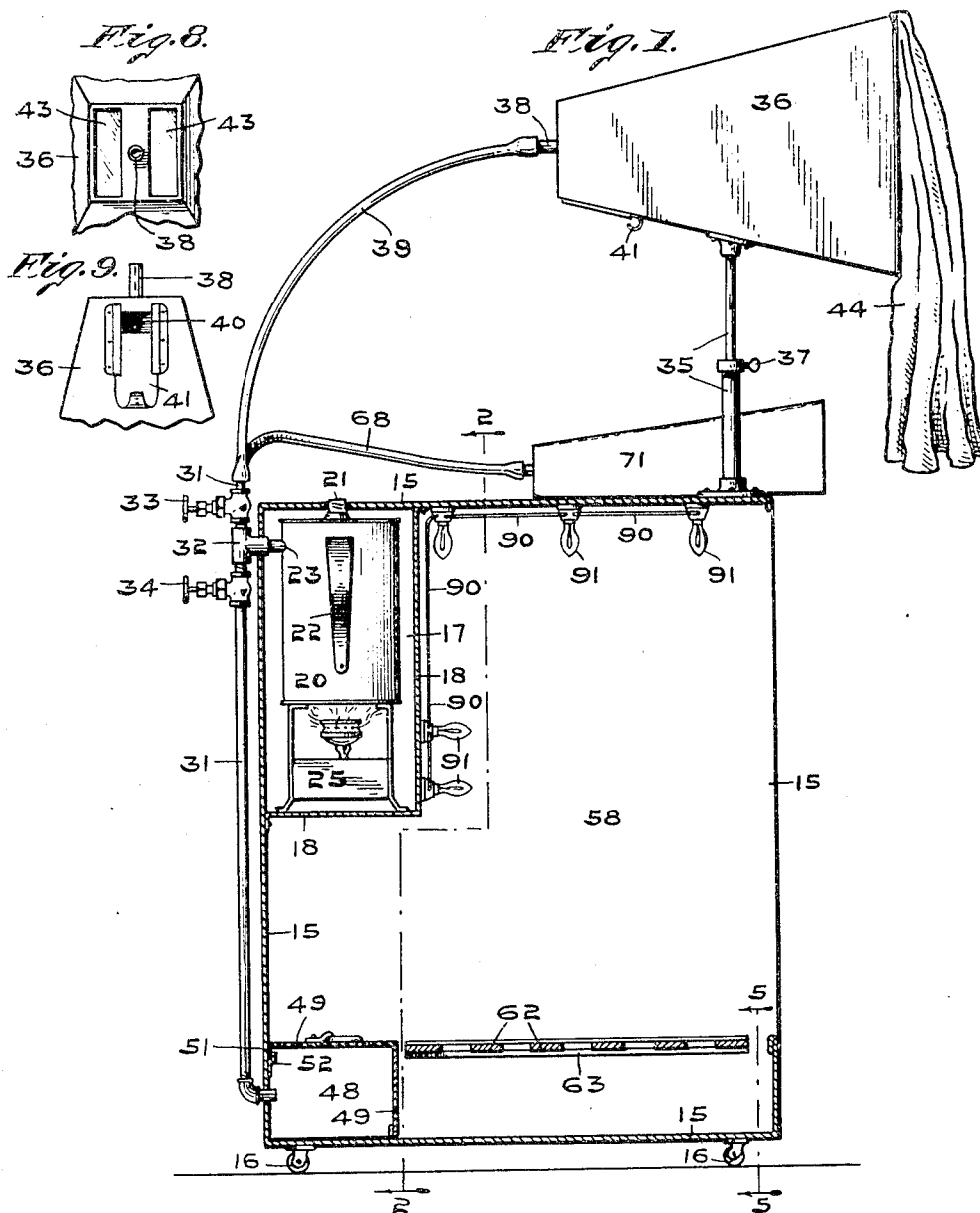
No. 892,441.

PATENTED JULY 7, 1908.

S. N. METZLER.
ELECTROTHERAPEUTIC GENERATOR.

APPLICATION FILED MAR. 9, 1908.

2 SHEETS—SHEET 1.



WITNESSES:

L. B. Warner.

Wm. Harte.

INVENTOR

Samuel N. Metzler,

Minturn & Hoerner

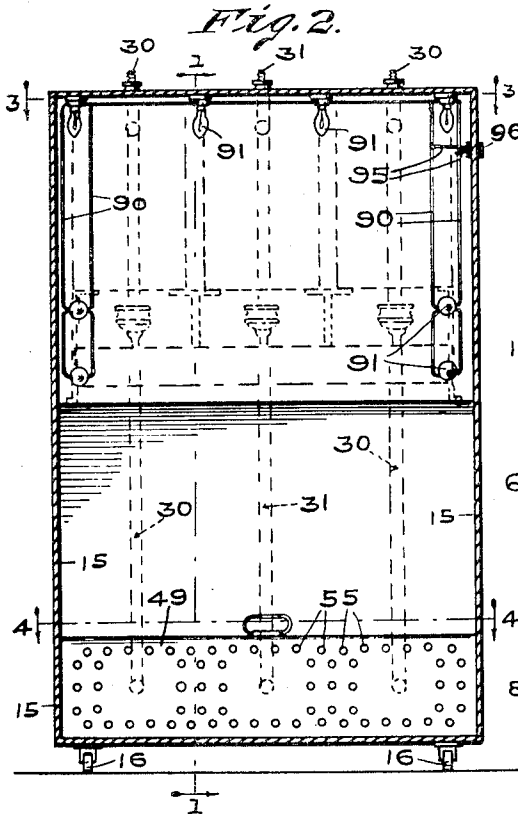
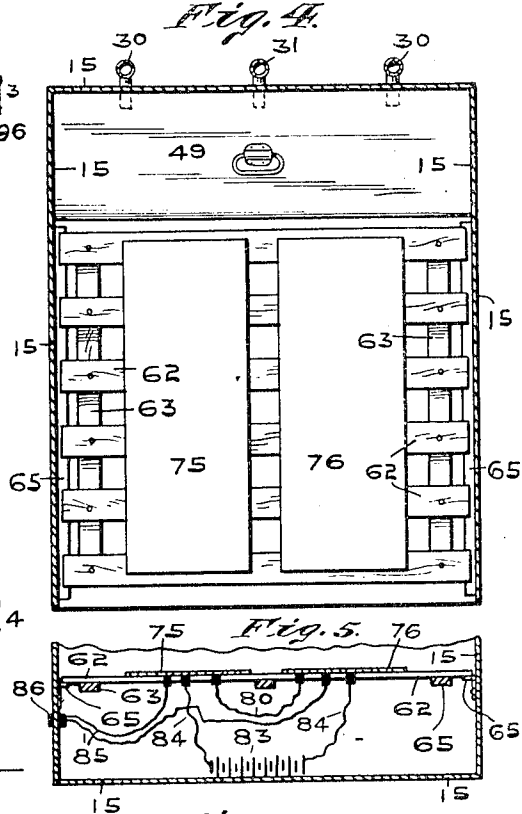
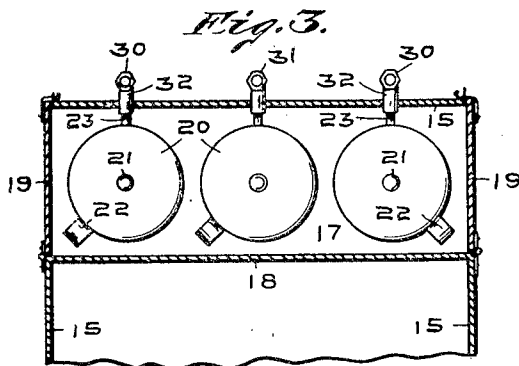
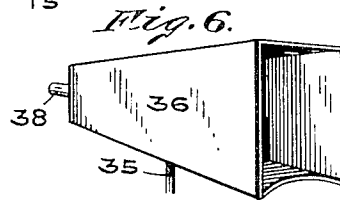
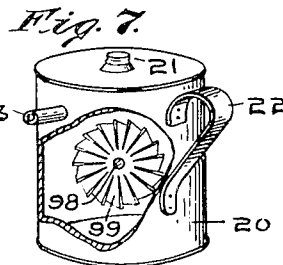
ATT'YS.

No. 892,441.

PATENTED JULY 7, 1908.

S. N. METZLER.
ELECTROTHERAPEUTIC GENERATOR.
APPLICATION FILED MAR. 9, 1908.

2 SHEETS—SHEET 2.



WITNESSES:

L. B. Moorme.

Wm. Hurte.

INVENTOR

Samuel N. Metzler,
By Minton & Hoerner
ATTYS.

UNITED STATES PATENT OFFICE.

SAMUEL N. METZLER, OF INDIANAPOLIS, INDIANA.

ELECTROTHERAPEUTIC GENERATOR.

No. 892,441.

Specification of Letters Patent.

Patented July 7, 1908.

Application filed March 9, 1908. Serial No. 419,977.

To all whom it may concern:

Be it known that I, SAMUEL N. METZLER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Electrotherapeutic Generators, of which the following is a specification.

This invention relates to a generator for oxygenating and medicating live steam and its administration; and the object of the invention is to provide a generator by which medicine can be effectively administered to a patient by inhalation, endosmosis and exosmosis processes and thereby preclude the distressing disturbances oftentimes arising among greatly debilitated patients when taking medicine directly into the stomach.

A further object consists in providing a generator of the above class whereby a patient may be treated, in addition to the administration of medicine by inhalation, endosmosis and exosmosis processes, with violet or "color light" ray which exerts a soothing influence on the nervous system of patients suffering with nervous diseases, thereby inducing a quiescent state while they are being administered to.

I accomplish the objects of my invention by means of a generator illustrated in the accompanying drawings, forming a part hereof, in which—

Figure 1 is a vertical sectional view of my generator, on the line 1 1 in Fig. 2. Fig. 2 is a cross section of the generator on the line 2 2 in Fig. 1. Fig. 3 is a detail view in section on the line 3 3 in Fig. 2. Fig. 4 is a horizontal sectional view on the line 4 4 in Fig. 2. Fig. 5 is a vertical sectional view, in detail, on the line 5 5 in Fig. 1. Fig. 6 is a perspective view of the truncated pyramidally formed hood. Fig. 7 is a perspective view of one of the containers or boilers wherein the medicated steam is generated. Fig. 8 is a detail view in front elevation of the converged end of the hood. Fig. 9 is a detail underside plan view of the construction shown in Fig. 8, showing the slide valve whereby the inflow of oxygen is regulated.

In the drawings, 15 represents a rectangular box or body preferably formed of thin sheet material, open at the rear, and rests upon the casters 16 so as to be easily moved or shifted. The body 15 is provided with a compartment 17, inclosed by the division wall 18, which forms a chamber for the boil-

ers 20 which contain the medicated liquid and the heating apparatus. The compartment 17 is made accessible at both sides of the body 15 through the doors 19, 19. The generator is usually provided with three boilers 20 which may be round in outline, as shown in the drawings, or square, and are arranged in the manner shown in Figs. 2 and 3. The boilers 20 are provided with screw-caps 21 which seal the openings into the boilers through which the medicated liquid is passed, and the boilers are further provided with the handles 22, and the horizontally extending spouts 23 through which the steam is discharged. The boilers 20 are arranged upon a heating apparatus 25, shown in the drawings as a lamp with a burner for each boiler, but I have no desire to limit myself to any particular style of a heating apparatus as any heating device capable of generating steam may be employed, the character of the device being determined by the surrounding conveniences.

Mounted along the external front end of the body 15 is a series of vertically extending pipes 30 and 31 for carrying and distributing the steam from the boilers 20 to the various points of utilization about the generator. A pipe is provided for each of the boilers 20 which connects by means of T-shaped connections 32 with the ends of the steam discharge spouts 23, attached to the boilers 20. Each of the pipes 30 and 31 are provided with two valves 33 and 34 situated at each side of the T-connections 32, so that the direction of flow and volume of steam to a given point may be controlled.

Mounted above the body 15 on the extensible standard 35 is a truncated pyramidally formed hood 36, the larger and open end of which is adapted to receive the head of the patient. The standard 35 enables the hood to be adjusted to accommodate itself to the position occupied by the patient's head. When the hood has been properly adjusted it may be secured by means of the lock-screw 37. The reduced end of the hood 36 is provided with a spout 38 to which a tube 39 is attached and which tube leads to and connects with the upper end of the central steam distributing pipe 31. By this means the medicated live steam is conveyed from the central boiler 20 to and discharged into the hood 36. The hood 36 is also provided on its under side with an air inlet 40 (see Fig. 9) through which air and oxygen is permitted

to pass into the hood and be mixed with the medicated steam. The air inlet 40 is provided with a sliding-valve 41 by which the inflowing air can be controlled. The front, or contracted, end of the hood 36, on each side of the spout 38 (see Fig. 8) is inclosed by suitable transparent material 43 to admit light and thereby allay any symptoms of uneasiness that arises among patients from the monotony that ensues constant gazing into the darkness. To prevent a too rapid escape of the steam from the hood 36 past the patient's head, I provide a curtain 44 which is attached to the open end of the hood 36; the free end of the curtain being passed over the head of the patient and then draped around the neck.

The centrally located pipe 31 in addition to directing the medicated steam to the hood 36, through the tube 39, also carries a portion of the steam received from the attached boiler downward and discharges it into a disseminating chamber 48, formed in the lower portion of the body 15 by the removable division wall 49. The wall 49 is formed of sheet material, bent at right angle. The forward end of the horizontal portion is bent downward to form a hook 51 which engages a groove formed by the bent-plate 52 secured to the wall 15 of the body. This arrangement prevents the steam from passing upward along the front wall of the body. The vertically extending portion of the division wall 49 is provided with numerous perforations 55, except immediately in front of the discharge ends of the vertical pipes 30 and 31. See Fig. 2. The purpose of preserving the solid portions of the wall in advance of the discharge ends of the pipes 30 and 31 is to receive and disseminate the steam. After the volumes of steam have been disseminated it is permitted to pass out of the disseminating chamber 48 through the perforations 55 and thence into the chamber 58 formed by the side walls 15 of the body of the generator. The chamber 58 receives the lower limbs of the patient when it is desired to induce absorption in that portion of the anatomy. When such treatment is administrated the patient is seated directly in front of the open end of the generator and the lower limbs are inserted into the chamber 58, the feet resting upon the lattice-floor composed of the wood strips 62 and the tie-cleats 63. The lattice-floor is mounted on the horizontally extending flanges 65 secured to both internal side walls 15 of the generator. The steam which escapes from the chamber 48 through the perforations 55 passes underneath the lattice-floor and thence up between the slats 62. The slats 62 are sufficiently separated to permit free passage of the medicated steam so that the patient will receive full benefit thereof.

A distributing pipe 30, formed similarly to

the pipe 31, is mounted on each side of the latter and their lower portions carry steam to the disseminating chamber 48 in the same manner as the pipe 31, so that said chamber will receive sufficient steam to fill the large chamber 58, heretofore mentioned. The upper ends of the pipes 30 connect with the tubes 68 which extend to and connect with the hoods 71, adapted to receive the patient's arms. The hoods 71 are loosely arranged at each side of the top of the body of the generator. Only one of these hoods is shown in the drawings, but it will be readily understood that in general practice the generator will be provided with two hoods 71,—one for each arm.

The patient in addition to being treated with medicated live steam by inhalation, endosmosis and exosmosis processes may simultaneously be treated by being exposed to the violet or color light ray, and by electricity. The electric treatment is accomplished by providing the copper plate 75 and the zinc plate 76 which are both secured to the slats 62 comprising the lattice-floor. These plates form the base upon which the patient places the feet, and by connecting the plates together by means of the wire 80 and then saturating the plates with an active chemical solution an electric current can be produced. It will be understood that in this instance the circuit is completed when the feet are brought into contact with the plates. The plates 75 and 76 may also be connected with a battery 83 by means of the wires 84 if desired, and a direct current may be applied to the plates by the wires 85 running to the insulated plug 86 located in the wall 15 of the generator, by which a connection can be effected to derive the current from a source located exteriorly of the generator.

Certain patients, with peculiar maladies, oftentimes require in addition to inhalation, endosmosis and exosmosis treatment, some treatment to soothe and quiet the nervous system, manifestations of which are easily recognized in patients suffering with nervous diseases. To meet this condition the generator is equipped to employ the violet or color light ray which has been found to produce marked beneficial results, which is accomplished by providing the wires 90 so that an electric lighting circuit within the chamber 58 can be established. Numerous lamps 91 are interposed within the several lines of wires 90 and the lamps are arranged so that a thorough distribution of the light is obtained to produce a salutary effect upon the anatomy. The circuit formed by the wires 90 is connected by the lead wires 95 which run to an insulated plug 96 located in the wall 15 of the generator, and by which means connection can be made with a high tension circuit.

Having thus fully described my said in-

vention, what I desire to secure by Letters Patent, is—

1. An electro-therapeutic generator comprising a body and including a heating apparatus, a plurality of boilers arranged within said body, a hood adapted to receive the head of the patient, pipes communicating with the boilers and adapted to convey steam to both the hood and body, and means on said hood adapted to control the admission of air to said hood.

2. An electro-therapeutic generator comprising a body and including a heating apparatus, a plurality of boilers arranged within said body, a hood adapted to receive the head of the patient, pipes communicating with the boilers and adapted to convey steam to both the hood and body, means for controlling both the volume and direction of travel of the steam in said pipes, and means on the hood adapted to control the admission of air to said hood.

3. An electro-therapeutic generator comprising a body and including a heating apparatus, a plurality of boilers arranged within said body, a hood arranged above the generator body, means for changing the position of said hood with relation to the body, pipes communicating with the boilers and adapted to convey steam to said hood, means adapted to control the admission of air to said hood, and a curtain to close the open end of said hood.

4. An electro-therapeutic generator comprising a body and including a heating apparatus, a plurality of boilers arranged within said body, a hood including a transparent

covered opening, a removable wall arranged within the generator body adapted to form a steam disseminating chamber, pipes communicating with the boilers and adapted to convey steam to both the hood and disseminating chamber, and a removably mounted perforated floor arranged within the generator body adapted to form a support for the patient's feet.

5. An electro-therapeutic generator comprising a body and including a heating apparatus, a plurality of boilers arranged within said body, a hood, pipes communicating with the boilers and adapted to convey steam to said hood, a pair of electrodes arranged within the generator body, and means for connecting the electrodes together, whereby an electric circuit may be established.

6. An electro-therapeutic generator comprising a body and including a heating apparatus, a plurality of boilers arranged within said body, a hood, pipes communicating with the boilers and adapted to convey steam to said hood, wires arranged within the generator body whereby an electric light circuit within said body may be established, lamps interposed within said wire circuit, and an inclosure adapted to surround said wire circuit.

In witness whereof, I have hereunto set my hand and seal at Indianapolis, Indiana, this fourth day of March, A. D. one thousand nine hundred and eight.

SAMUEL N. METZLER. [L. S.]

Witnesses:

F. W. WOERNER,
J. A. MINTURN.