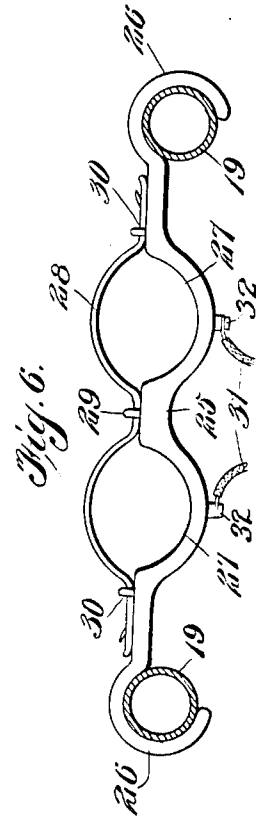
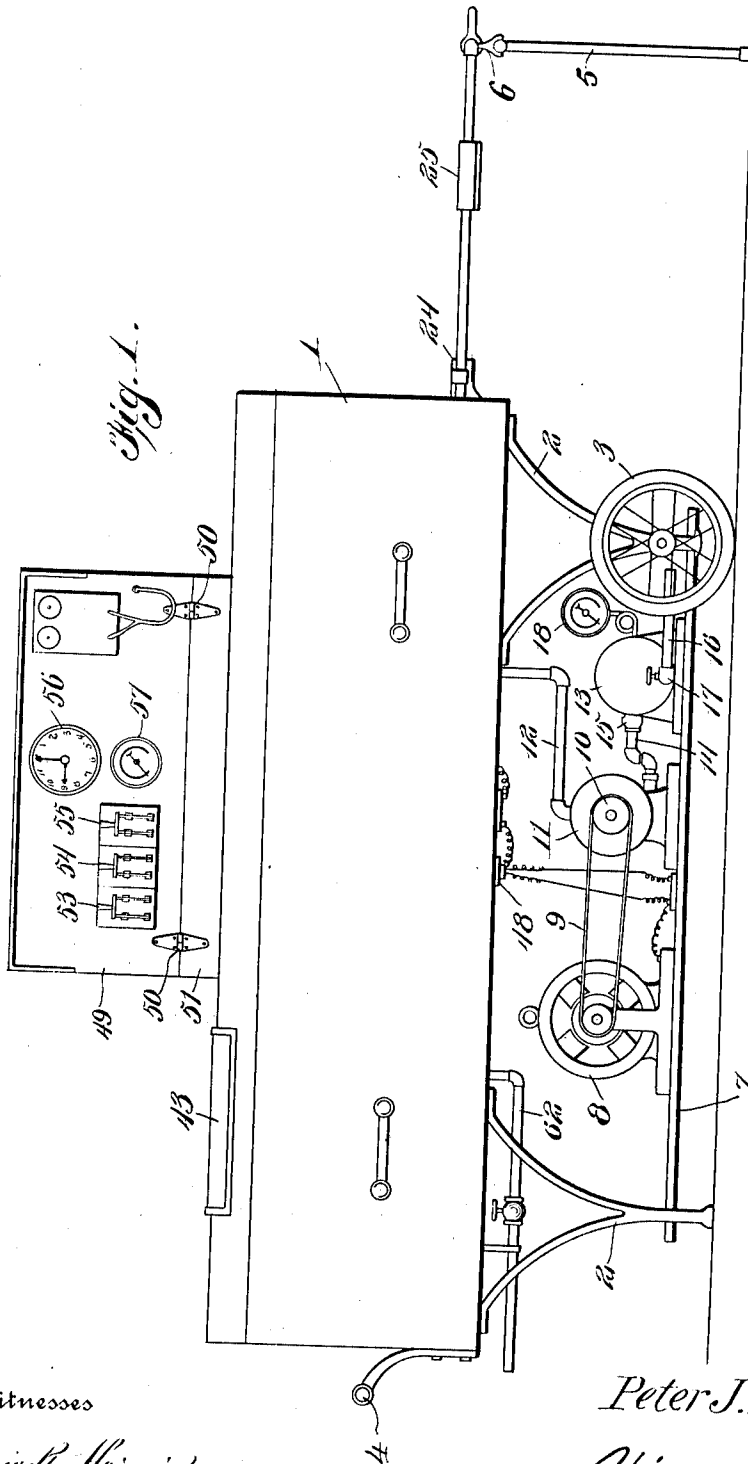


P. J. BACKUS.
LIFE DETECTING APPARATUS.
APPLICATION FILED NOV. 19, 1912.

1,061,802.

Patented May 13, 1913.

3 SHEETS—SHEET 1.



Witnesses

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By

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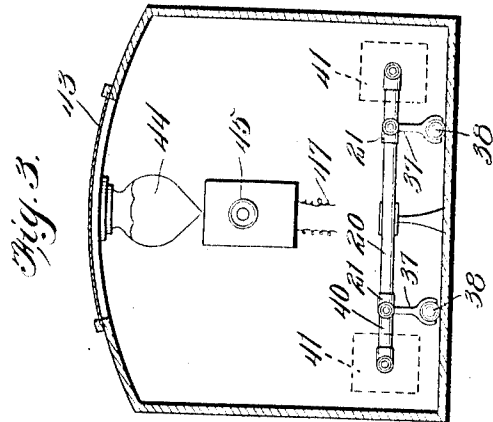
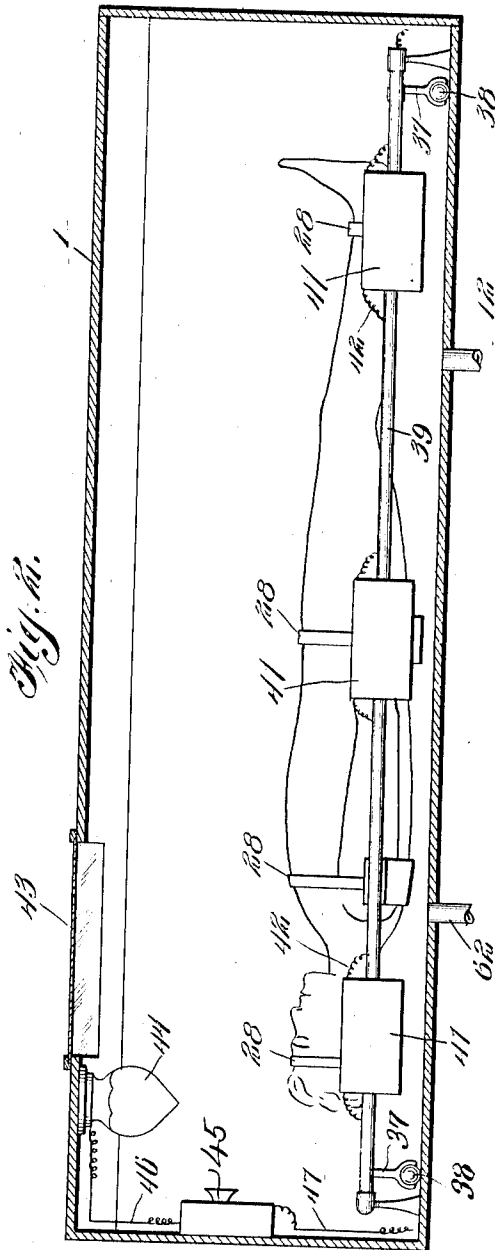
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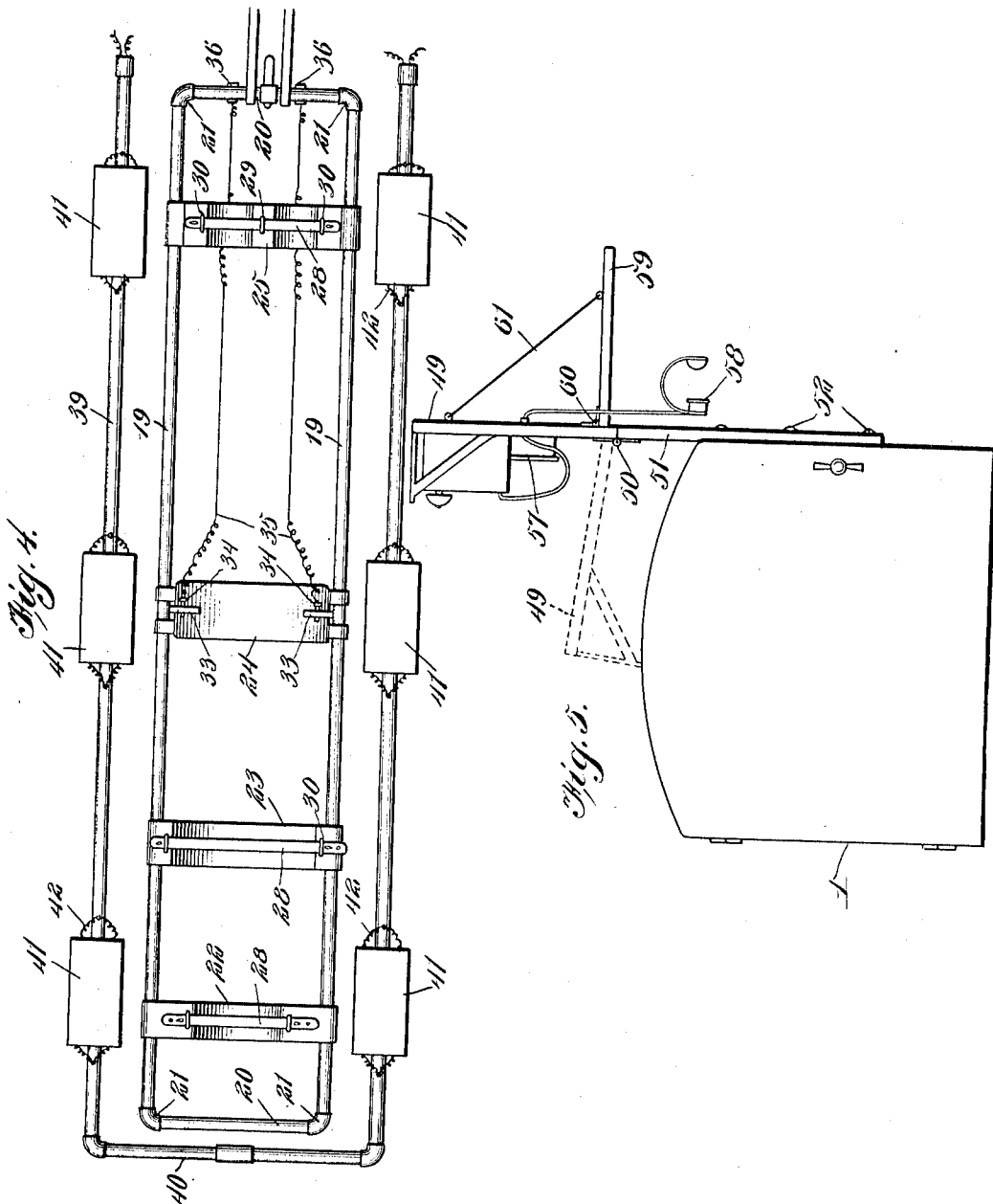
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Witnesses

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UNITED STATES PATENT OFFICE.

PETER J. BACKUS, OF DELPHOS, OHIO.

LIFE-DETECTING APPARATUS.

1,061,802.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed November 19, 1912. Serial No. 732,268.

To all whom it may concern:

Be it known that I, PETER JAMES BACKUS, a citizen of the United States, residing at Delphos, in the county of Allen and State of Ohio, have invented new and useful Improvements in Life-Detecting Apparatus, of which the following is a specification.

This invention relates to life detecting apparatus.

There are many instances in which the usual tests as to life and death are very unreliable and unsatisfactory, as where the body has been subjected to anesthetics, and in cases of drowning, mine disasters, and where the body is in a state of coma or apparently lifeless condition, and where the usual artificial respiration and medical aids have failed to resuscitate the body into life. There are frequent cases of suspended animation, where it is next to impossible to determine whether any life remains.

The object of the present invention is to provide an apparatus by means of which the presence of any life remaining in the body may be surely and certainly detected, the apparatus being particularly adapted for use in hospitals, morgues, crematories, at bathing beaches, and on ocean going steamers.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts, as will be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claims hereunto appended.

In the drawings: Figure 1 is a side elevation of the complete testing machine of this invention. Fig. 2 is a vertical longitudinal section through the casket. Fig. 3 is a vertical cross section through the same. Fig. 4 is a plan view of the body supporting stretcher and the heater. Fig. 5 is a detail vertical cross section, showing the hinged and folding switch and indicator board, etc. Fig. 6 is a side elevation of one of the body supports.

Referring to the drawings, 1 designates a casket, which is so constructed that when closed it may be hermetically sealed, so as to render the same absolutely air tight. The casket 1 is provided with suitable supporting legs 2 of the necessary height to support it at the required elevation above the floor, and to one set of legs supporting wheels 3 are connected, in order to enable the apparatus

as a whole to be trundled from place to place.

4 designates a suitable handle at one end of the casket for facilitating the handling thereof, 5 designating a prop adapted to engage a socket 6 at the under side of the handle, so as to maintain the casket in a certain predetermined position.

Extending between and connecting the legs 2 is a low-down platform 7, upon which the heavier portion of the apparatus is mounted. Upon said platform, I have shown an electric motor 8, from which a belt 9 extends around the pulley 10 of a vacuum pump 11 which extracts air from the casket 1 by means of an exhaust pipe 12 leading from the pump into said casket. The pump 11 is mounted on the platform 7 and also a receiving or storage tank 13, which is connected with the discharge of the pump by a compressed air pipe 14 provided with a check valve 15. An outlet pipe 16 leads off from the tank to any suitable point and is controlled by a stop cock or outlet valve 17. 18 designates a pressure gage in communication with the receiving tank 13.

Referring now to Figs. 2, 3 and 4, it will be observed that a body supporting stretcher is mounted upon the floor of the casket, said stretcher being formed of tubing and comprising the substantially parallel side bars 19, and end bars 20, said bars being connected together by means of elbows 21 in the form of an open rectangular frame.

Mounted upon the stretcher just hereinabove described are body supporting rests, 22 designating the head rest, 23 the shoulder rest, 24 the hip rest, and 25 the foot rest. Each of said rests is in the main formed as shown in Fig. 6, the body thereof extending across and bridging the space between the side bars 19, and being terminally provided with hooks 26 which embrace the tubular side bars 19 and adapt the said rests to be shifted longitudinally of the stretcher frame in accordance with the size of the body to be treated. Each of said rests may be suitably padded and shaped to better accommodate the contour of the portions of the body resting thereon. For instance, the foot rest, illustrated in side elevation in Fig. 6, is provided with the downwardly offset portions forming sockets 27 to receive the ankles, and is provided with a leather or similar strap 28 to embrace the ankles, said strap passing through a centrally arranged

guide 29, and having its opposite ends connected to buckles 30 which admit of the adjustment of said strap. In said Fig. 6, the terminals 31 of an electric circuit are shown as connected to binding posts 32 for applying a current of electricity to the ankles.

Adjacent to the hip rest 24 are electrodes 33 adapted to embrace the wrists and having binding posts 34, to which are connected the extremities of electric current wires 35 which lead to a suitable source of energy, the wires 35 being shown as terminating in electric plug sockets 36 at the end of the stretcher frame, said sockets being adapted to receive plugs on extension wires of the circuit. The stretcher frame is also shown as provided at or near the corners thereof with short feet 37 provided at the bottom with insulators 38 in the form of balls of glass or like material, which will thoroughly insulate the stretcher and body, while the latter is being electrically treated.

Extending around the stretcher and resting on the floor of the casket is a rectangular heater, consisting of the parallel side runs 39 of tubing, connected at one end by the tubular cross bar 40 and provided at suitable intervals in their length with resistance coils 41. Current wires 42 lead through the tubular side bars 39 to the different resistance coils, as shown, thereby enabling all of said coils to be simultaneously energized. This provides for heating the interior of the casket during tests.

In the top wall of the casket is an air tight observation panel 43, enabling the face of the body to be observed, and arranged adjacent to said panel is a light 44 for illuminating the face. Close to the head and preferably secured to one end of the casket and within the same is the transmitter 45 of a telephone apparatus, the wires from the light 44 and telephone transmitter 45, designated at 46 and 47, leading through a small conduit 48 in the bottom of the casket which is air tight.

49 designates a folding switch and indicator supporting board which is hinged, as shown at 50, to an extension board 51 secured to the casket, at 52, and extending above the same a suitable distance. Mounted on said board is a motor switch 53, a current switch 54 for the stretcher, and a spot light switch 55. A clock 56 and vacuum gage 57 are also mounted on said board, and also a telephone receiver 58 which, when applied to the ear of the observer, will transmit any sounds coming from the interior of the casket. The vacuum gage 57 is connected with the interior of the casket, so as to clearly indicate when the necessary vacuum has been obtained therein, after which the vacuum pump 11 may be stopped. When not in use, the board 49 may be folded downward from the full line position shown in

Figs. 1 and 5 to the dotted line position shown in Fig. 5. For convenience, a desk leaf 59 is hinged to the board 49, as shown at 60, and supported by suitable flexible stays 61. This is for the convenience of enabling the observer to keep a record of what is transpiring.

Suitable electric or other connections (not shown) will be provided to connect the devices on the board 49 with the remainder of the apparatus.

62 and 12, respectively, designate inlet and outlet tubes communicating with the interior of the casket, preferably through the bottom thereof.

From the foregoing description, it will be seen that the machine as a whole may be easily transported from place to place, the entire apparatus being combined in one machine which carries its own electric motor vacuum pump, etc. By means of the apparatus, the usual heating, vacuum, and electrical tests may be applied to the body, to induce respiration and activity of the muscular and nerve system in order to finally and definitely determine as to whether or not life is extinct. During the application of these tests, the countenance of the body may be observed, and any sounds proceeding from the casket may be heard on the receiver of the telephone instrument.

What is claimed is:

1. Apparatus of the class specified, comprising an air tight casket, a body-supporting stretcher therein embodying side bars spaced apart in substantially parallel relation, body supporting rests shiftable along said bars, a vacuum pump in communication with the casket, and means controlled exteriorly of the casket for subjecting the body to life tests while resting in the vacuum.

2. Apparatus of the class specified, comprising an air tight casket, a body-supporting stretcher therein embodying side bars spaced apart in substantially parallel relation, body supporting rests shiftable along said bars, a vacuum pump in communication with the casket, and an electric heating coil in said casket controlled from outside the casket.

3. Apparatus of the class specified, comprising an air tight casket, a body-supporting stretcher therein embodying side bars spaced apart in substantially parallel relation, body supporting rests shiftable along said bars, a vacuum pump in communication with the casket, and apparatus controlled exteriorly of the casket for electrifying the body.

4. Apparatus of the class specified, comprising an air tight casket, a body-supporting stretcher therein embodying side bars spaced apart in substantially parallel relation, body supporting rests shiftable along

said bars, a vacuum pump in communication with the casket, wrist and ankle holders on said rests, and electrodes connected with said holders and arranged in an electric circuit.

5 5. Apparatus of the class specified, comprising an air tight casket, a body-supporting stretcher therein embodying side bars spaced apart in substantially parallel relation, body supporting rests shiftable along
10 said bars, a vacuum pump in communication with the casket, means controlled exteriorly of the casket for subjecting the body to life tests while resting in the vacuum,
15 and telephone apparatus having the transmitter arranged in the casket.

6. Apparatus of the class specified, comprising an air tight casket, a body-supporting stretcher therein embodying side bars
20 spaced apart in substantially parallel relation, body supporting rests shiftable along said bars, a vacuum pump in communication with the casket, means controlled exteriorly of the casket for subjecting the
25 body to life tests while resting in the vacuum, and a folding switch and indicator supporting board hinged to the casket.

7. Apparatus of the class specified, comprising an air tight casket, a body-supporting
30 ing stretcher therein embodying side bars

spaced apart in substantially parallel relation, body supporting rests shiftable along said bars, a vacuum pump in communication with the casket, means controlled exteriorly of the casket for subjecting the
35 body to life tests while resting in the vacuum, legs supporting the casket at an elevation, and an apparatus supporting platform attached to said legs below the casket.

8. Apparatus of the class specified, comprising an air tight casket, a body-supporting stretcher therein embodying side bars
40 spaced apart in substantially parallel relation, body supporting rests shiftable along said bars, a vacuum pump in communication with the casket, means controlled exteriorly of the casket for subjecting the
45 body to life tests while resting in the vacuum, legs supporting the casket at an elevation, an apparatus supporting platform attached to said legs below the casket, and
50 trundling wheels on which the apparatus as a whole is mounted.

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

PETER J. BACKUS.

Witnesses:

GURNEY SERRELS,
H. Y. HALEY.