

Dec. 16, 1952

S. N. ROSENTHAL

2,622,183

ELECTRICALLY HEATED INSPISSATOR

Filed Dec. 22, 1950

2 SHEETS—SHEET 1

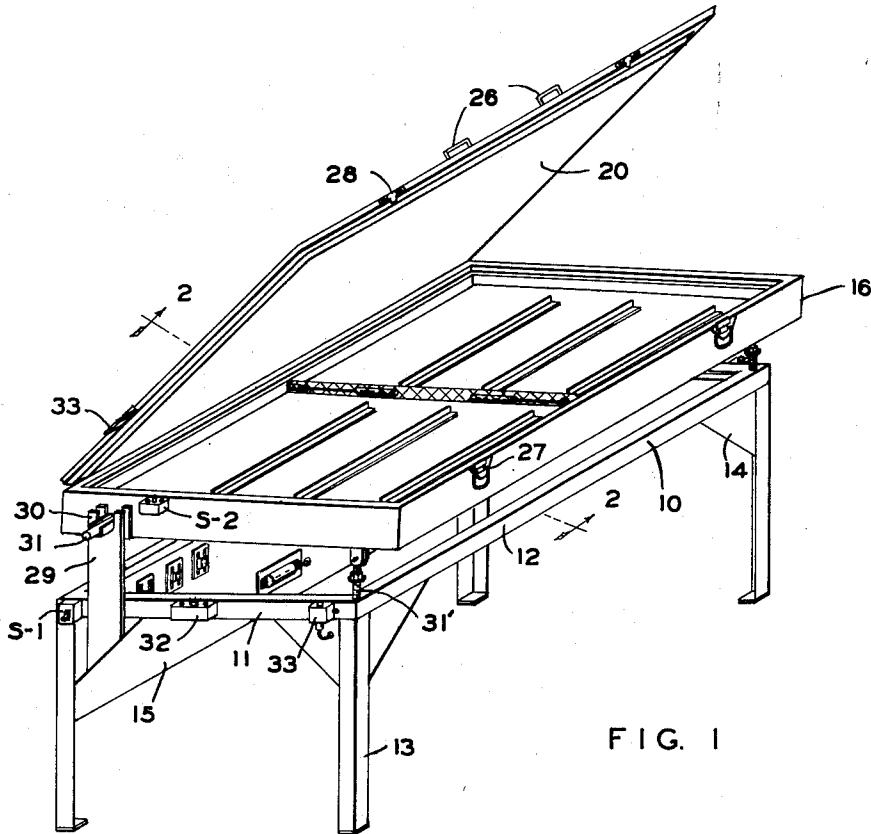


FIG. 1

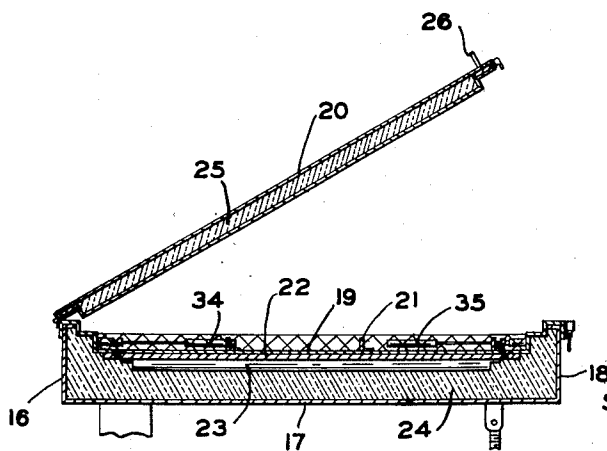


FIG. 2

INVENTOR.
SAMUEL N. ROSENTHAL
BY *Edw. J. Houston*

ATTORNEY

Dec. 16, 1952

S. N. ROSENTHAL

2,622,183

ELECTRICALLY HEATED INSPISSATOR

Filed Dec. 22, 1950

2 SHEETS—SHEET 2

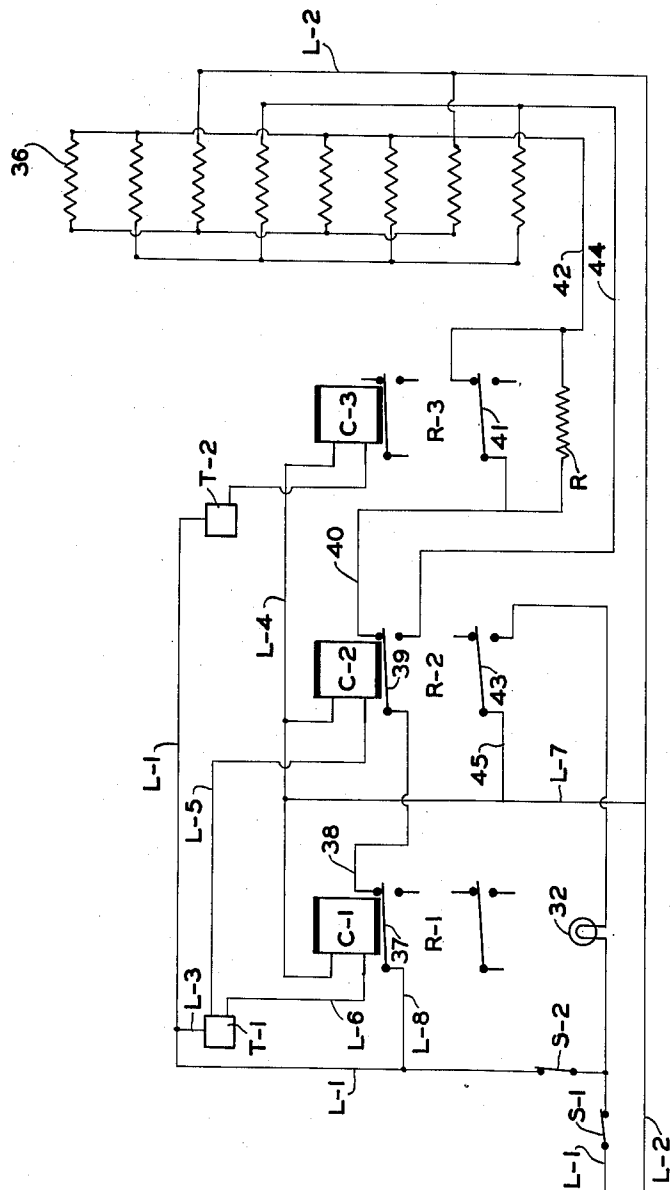


FIG. 3

INVENTOR.
SAMUEL N. ROSENTHAL

BY *Edw. J. Newton*

ATTORNEY

UNITED STATES PATENT OFFICE

2,622,183

ELECTRICALLY HEATED INSPISSATOR

Samuel N. Rosenthal, Decatur, Ga.

Application December 22, 1950, Serial No. 202,363

1 Claim. (Cl. 219—35)

1

My invention relates to inspissators used primarily in medical research associated with communicable diseases.

It is a known fact that certain cultures, bacteria and the like, when being prepared for use or stored in a research laboratory, must be held at given temperatures if desired results are obtained. Quite often these cells or cultures are kept at high temperatures to increase the growth rate and thus lessen the length of the observation period. It is highly important that, when placed in a storage cabinet having controlled heating, the heat be maintained at as nearly the same temperature as possible; and, when removed from the cabinet for testing, the cultures must be returned as quickly as possible if further growth is desired.

It is therefore an object of the present invention to provide such a heat-controlled cabinet, or inspissator, which is heated by electrical heating elements properly controlled to maintain any desired temperature.

It is another object of the invention to provide such a device wherein all the heating elements are used to bring the inner storage area quickly to the desired temperature and wherein certain heating elements are cut out when the desired temperature is reached to reduce the electrical operating cost.

Another object of the invention is to provide an inspissator having an ample storage chamber which is insulated on all sides and which is provided with an externally positioned indicator light which is lighted when the inner storage area has reached the desired temperature.

A further object of the invention is to provide an inspissator wherein the actual storage chamber may be set in a tilted position with respect to its base.

Another object of the invention is the provision of an electrical switch serving to break the electrical circuit to the inner heating elements when the door is opened, so that heat will not be wasted upon opening the door for inspection of the containers therein.

A still further object of the invention is to provide an inspissator which is easy to manufacture and maintain and which may be easily assembled or constructed to suit any range of temperatures and to maintain those temperatures accurately and economically.

Further objects and advantages of the invention will be found in the course of the following detailed description when viewed together with the accompanying drawing in which:

2

Fig. 1 is an isometric view of an inspissator made in accordance with the teachings of the present invention.

Fig. 2 is a cross sectional view taken along line 2—2 of Fig. 1.

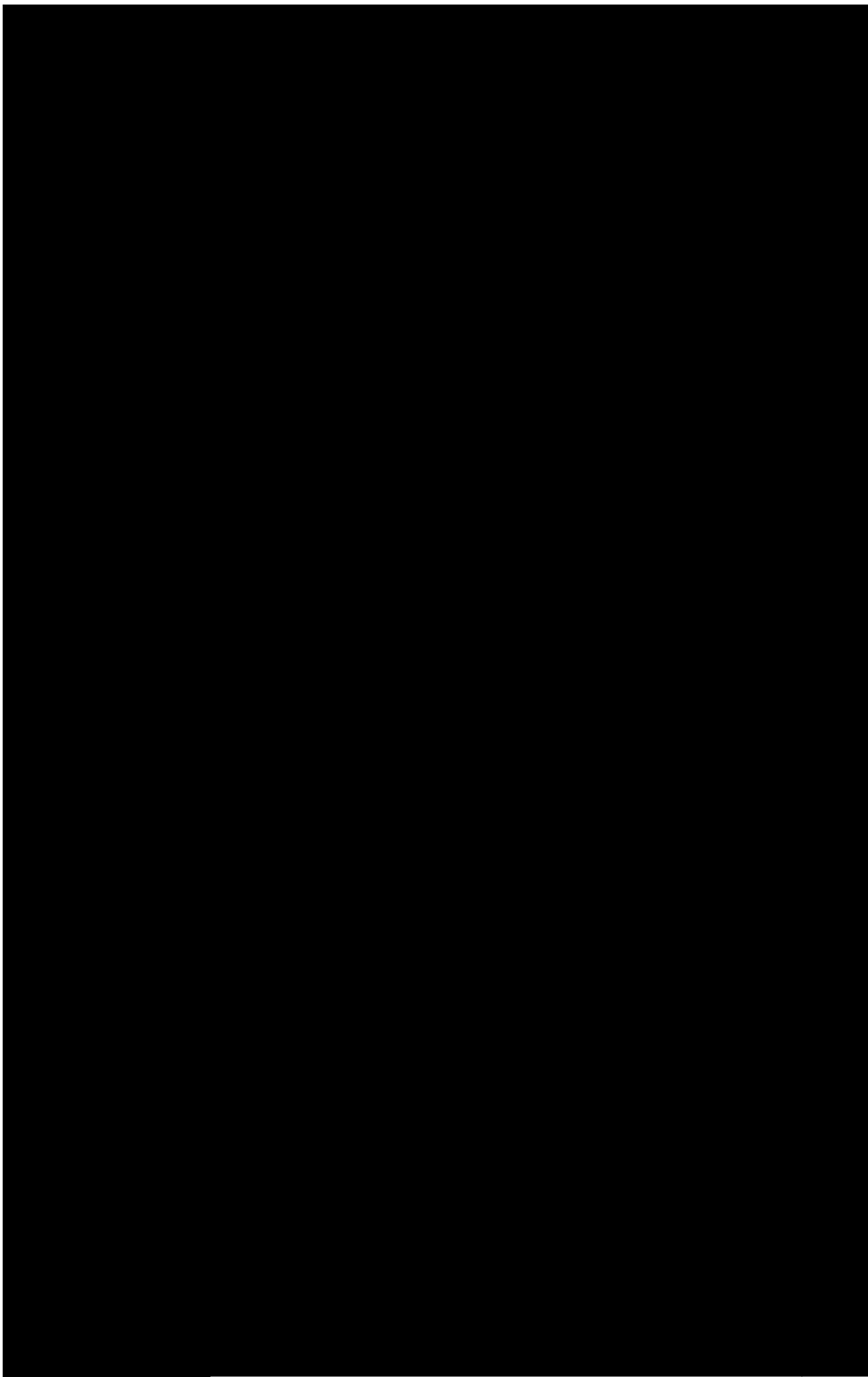
Fig. 3 is a circuit diagram for the inspissator.

In the drawing, numeral 10 designates, generally, a base framework consisting of upper cross members 11 and 12 and four legs 13, all suitably braced by means of gusset plates 14. The base frame 10 is preferably made of angle iron with welded joints. The base is thus made sturdy and free from superfluous bracings and drawers which might collect dust. Between the two back legs I have provided a sheet metal strip 15 used to support certain of the electrical control elements of the device.

The storage cabinet proper is designated generally by the numeral 16 and is made rectangular in shape approximating the size of the base 10. The cabinet consists principally of a box having a sheet metal bottom 17 and integrally formed sides 18. In Fig. 2, it will be noted that the rim of the sides, at the top thereof, has been turned inwardly to complete a lock joint with a false bottom designated generally by the numeral 19. The false bottom 19 is also offset at its marginal edges not only for the lid 20 but also to properly enclose racks 21 arranged for supporting test tubes or other containers. It will be noted in Fig. 2 that the false bottom 19 rests directly upon a cover plate 22, also of sheet metal material and which is used to cover heating elements 23 positioned just beneath it. Numeral 24 designates a heat insulating material placed in the entire area defined between the bottom 17 and the cover plate 22.

The lid 20 is also made of sheet metal and is hollow in construction and provided also with heat insulating material 25. As seen in Figs. 1 and 2 the lid is suitably hinged on the back side to permit opening of the same by means of the handles 26. When not in use, the lid may be held firmly closed by means of the latches 27 on the cabinet sides 18 cooperating with hook members 28 on the forward edge of the lid.

As seen in Fig. 1, the cabinet 16 is held somewhat above its base 10 so that the same may be tilted to any desired degree of angularity therewith. To support the cabinet in this manner I have provided an upright 29 on each end of the device, the lower end of each upright 29 being welded or otherwise attached to the base and the upper end provided with a yoke 30 adapted to receive a pin 31 projecting outwardly from the



5

The invention is highly advantageous in medical research laboratories, and is primarily designed for such. However, the device may also be employed in the oil or milk industries, or by any chemical research laboratory where it is desired to keep certain fluids or other compositions at a given temperature. It is understood that the thermocouples and their respective thermostats may be used to actuate the several controlling circuits at any range of temperatures and that the circuits herein described could be extended to employ and operate as many heating elements as desired. The cabinet proper may be changed in its actual construction without departing from the scope of the invention as defined by the following claim.

I claim:

Apparatus of the class described comprising a base, a storage cabinet supported upon said base in tilted position, means for adjusting the angle of tilt of said cabinet upon said base, insulating material in the bottom of said cabinet, a false bottom in said cabinet above said insulating material, transverse racks mounted upon said false

6

bottom, electrical heating elements between said insulating material and said false bottom, thermocouples in said cabinet connected to selectively control the connection of said electrical heating elements to a source of electric power, and an insulated lid hinged to said cabinet for access thereto when open.

SAMUEL N. ROSENTHAL.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,032,647	Bell	July 16, 1912
1,213,163	Dedrick	Jan. 23, 1917
1,695,008	Christensen	Dec. 11, 1928
1,828,257	Rollman	Oct. 20, 1931
2,494,843	Thimblethorpe et al.	Jan. 17, 1950

FOREIGN PATENTS

Number	Country	Date
118,423	Great Britain	Sept. 5, 1918