May 15, 1928. 1,669,683

R. TEMPLE ET AL

BED

Filed March 7, 1925

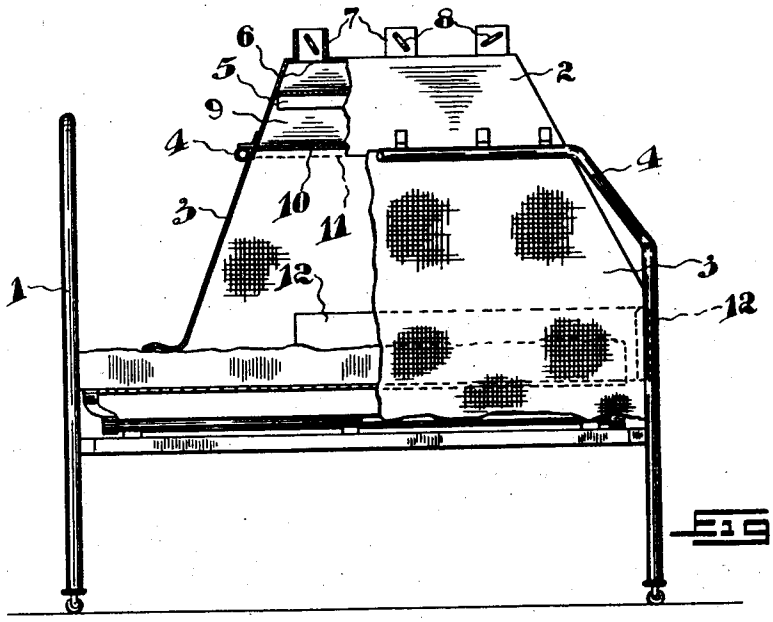

Fig. 1.

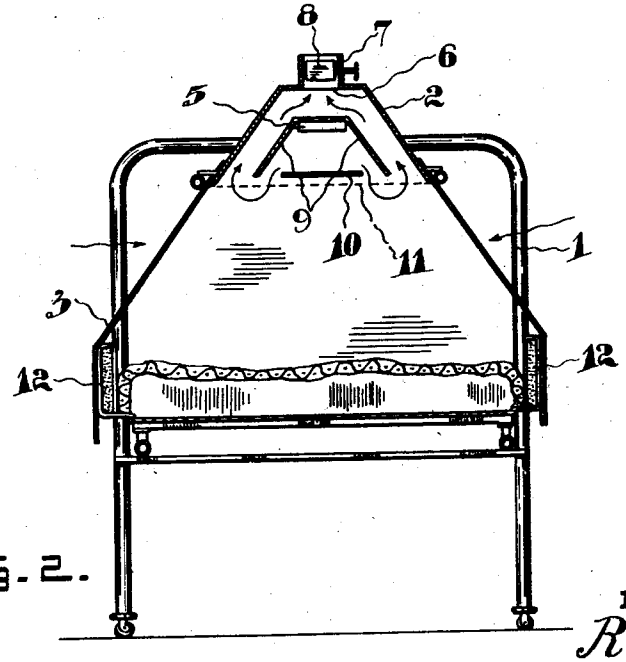

Fig. 2.

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Patented May 15, 1928. 1,669,683

UNITED STATES PATENT OFFICE.

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BED.

Application filed March 7, 1925. Serial No. 13,926.

This invention relates to the construction of beds whereby the temperature of the air surrounding the sleeper's body may be controlled, or the other characteristics of air changed as desired, as, for example, by the addition of moisture or various vapors or gases.

We attain our object by means of the constructions hereinafter described and illustrated in the accompanying drawings in which

Fig. 1 is a side elevation, partly broken away, showing a bed constructed in accordance with this invention; and

Fig. 2 a vertical section of the same.

In the drawings like numerals of reference indicate corresponding parts in the different figures.

1 is a bedstead, which may be of any ordinary form. Over the bed is supported a canopy which comprises a dome 2, preferably of frusto-pyramidal form, and a skirt 3. The dome is formed of any suitable material impervious to air, preferably bright sheet aluminum, while the skirt is formed of a suitable textile fabric, through which air may pass more or less freely. This canopy may be supported in any convenient manner.

In order that the bed may be independent of any exterior support and thus be readily portable, we prefer to extend upwardly two of the legs of the bedstead and to connect thereto a U-shaped frame 4 suitably connected with the dome 2.

Within the dome is supported a heating element 5, preferably electric. The dome is also provided with certain partitions to cause the air heated by the heating element 5 to pass downwardly towards the upper surface of the bed before passing upwardly and out of one or more air vents 6 in the top of the dome. These vents may be supplied with chimneys 7 in which are located dampers 8 by means of which the rate of exit of heated air, may be controlled.

The partitions referred to are preferably formed by a frusto-pyramidal reflector 9 substantially parallelling the sides and top of the dome 2. The heating element is preferably located adjacent the top of this reflector, and a shield 10 may be located below the heating element to cut off the direct downward radiation of the heating element. With this arrangement air passes through the material of the skirt and gradually rises to take the place of air heated by the heating element 5 which follows the course indicated by arrows. With this arrangement we find that the air above the sleeper is constantly changed, while its temperature is modified by the heating device shown. With this arrangement, by suitably controlling the heating element, an equable temperature may be obtained within the canopy so that bed clothes may be dispensed with, if desired, and the sleeper obtain the advantage of a constant flow of heated air over his body. It is also evident that the characteristics of this air as to temperature may be varied as desired, and that remedial vapors or gases may be generated through the medium of the heating apparatus.

A wire mesh screen 11 is preferably located at the bottom of the dome to break up the air currents as much as possible, also to intercept anything liable to injure the patient in case of trouble with the heating means.

While, under some circumstances, bed clothes may be dispensed with, in other cases, they would be indispensable, and I therefore provide means whereby the margins of the clothes may be suitably tucked in without interfering with the skirt of the canopy. For this purpose I provide a low wall 12, which preferably extends along each side and across the bottom of the bed from points adjacent but not close up to the head of the bed. This wall is preferably formed of heavily quilted material so as to possess a considerable measure of vertical stiffness while it is readily bent into the U-form shown and its lower edge secured to the mattress at the margins of the undersurfaces thereof. The skirt 3 hangs closely over this wall, while the bed clothes may be tucked in between the wall and the edge of the mattress.

This arrangement is not only applicable for use in the manner hereinbefore described, but provides convenient means for giving light treatments to patients, light emitting means of desired characteristics being substituted for the heating element 5.

What we claim is:—

A canopy adapted to be supported over a bed comprising a dome substantially impervious to air having an air vent at its top;

a porous flexible skirt connected therewith; means for admitting air beneath the canopy; heating means within the dome provided with a reflector located within the dome and spaced therefrom and adapted to throw the heat downward towards the bed, the heated air then flowing upward through the space between the reflector and the dome to the air vent; and a shield below said heating means adapted to intercept the direct downward rays of the heating element.

Signed at Toronto, Canada, this 3rd day of January, 1925.

B. KINGSTON HALL.

Signed at Toronto, Canada, this 3rd day of January, 1925.

ROBERT TEMPLE.