April 11, 1950 J. R. GREENE 2,503,725

OXYGEN TENT SEALING APPLIANCE

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FIG. 1.

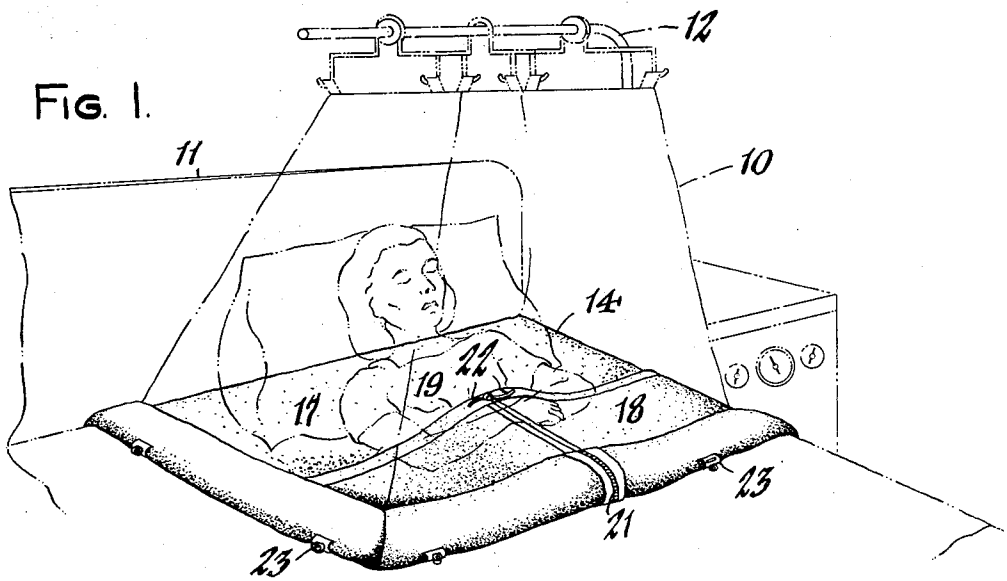


FIG. 2.

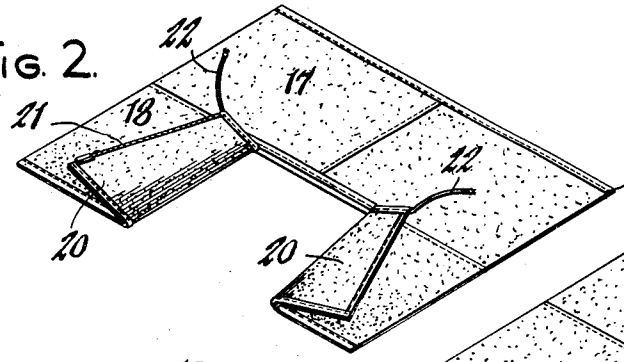


FIG. 3.

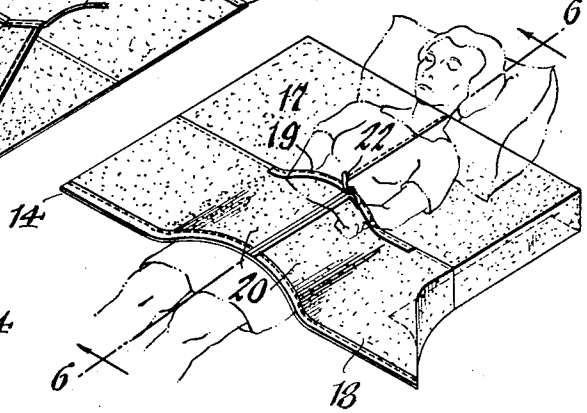


FIG. 4.

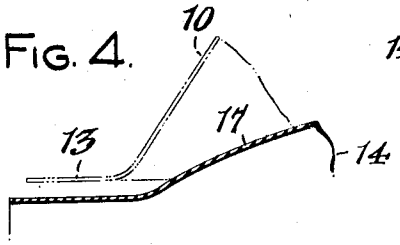
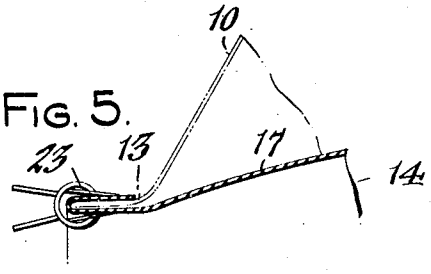


FIG. 5.



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Fig. 6.

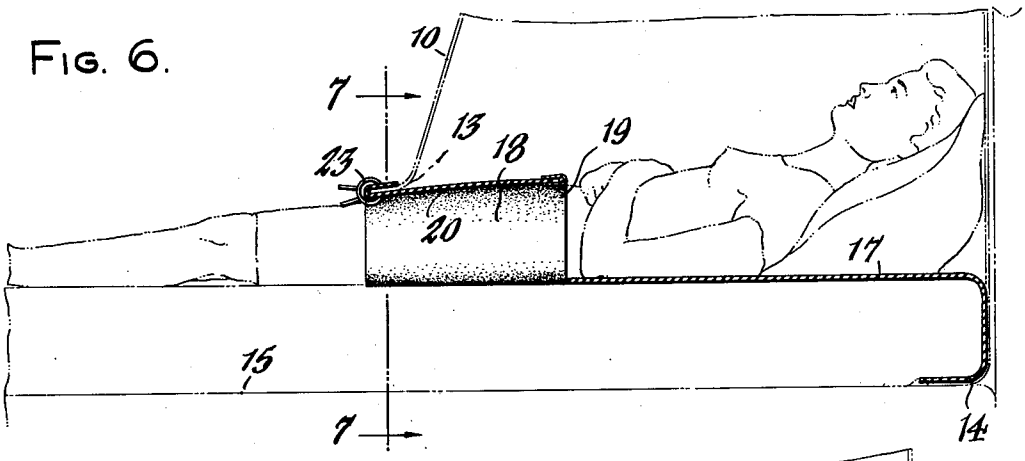


Fig. 7.

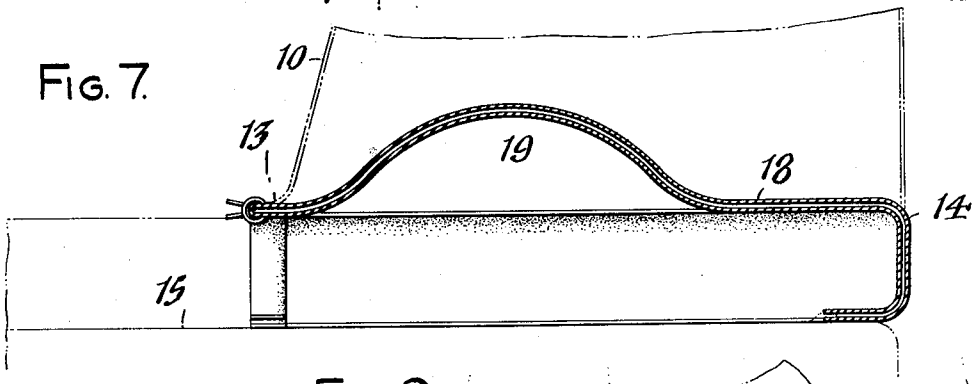


Fig. 9.

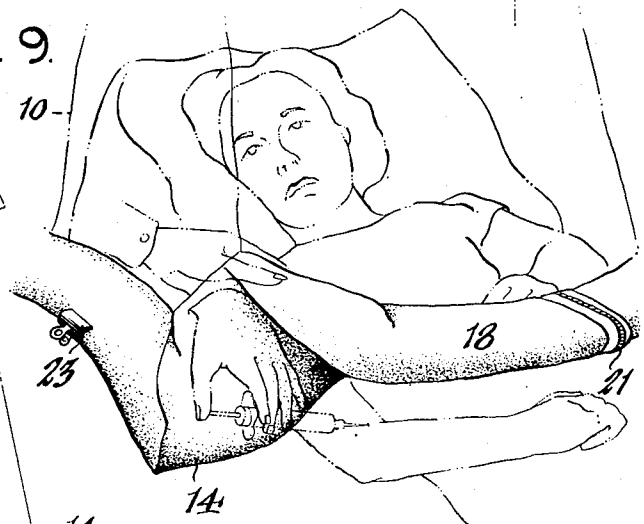
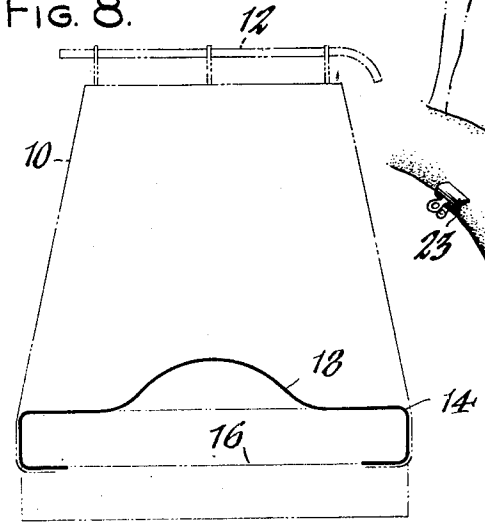


Fig. 8.



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OXYGEN TENT SEALING APPLIANCE

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Application July 24, 1948, Serial No. 40,452

5 Claims. (Cl. 128—191)

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This invention relates generally to oxygen tents used in the treatment of patients but more particularly to a device or appliance for use in conjunction with such tents to prevent the waste or leakage of oxygen therefrom.

It has for one of its objects to provide a device of this character which is so designed as to be readily applied to the bed and detachably interconnected with the free lower edges of the oxygen tent or canopy as to effectually seal in the oxygen chamber and reduce to a minimum the escape of oxygen therefrom and thereby prevent waste or loss of the oxygen.

Another object of the invention is to provide an oxygen tent sealing device or sheet which not only effectually seals the oxygen chamber about the patient but which at the same time permits the patient to move in the bed without disturbing the sealed connection and enables such bodily treatment of the patient that may be necessary while so confined without loss of oxygen.

Other features of the invention reside in the construction and arrangement of parts hereinafter described and particularly pointed out in the appended claims.

In the accompanying drawings—

Figure 1 is a perspective view of my tent sealing device in its operative tent sealing position and as used on a double bed. Figure 2 is a detached perspective view of the sealing sheet. Figure 3 is a perspective view of the same showing the manner in which it is applied to the bed and partially about the patient. Figure 4 is an enlarged fragmentary cross section showing the relationship of the sealing sheet to the lower edge of the tent or canopy before making the sealed connection. Figure 5 is a similar section showing the parts in their connected or sealed position. Figure 6 is a fragmentary longitudinal section taken substantially in the plane of line 6—6, Figure 3, the tent being shown by dot-dash lines. Figure 7 is a cross section taken on line 7—7, Figure 6. Figure 8 is a view similar to Figure 7 but showing the sealing sheet as applied to a single bed. Figure 9 is a fragmentary perspective view showing the manner of ready access to the patient for bodily treatment without disturbing the seal between the sealing sheet and the canopy.

Similar characters of reference indicate corresponding parts throughout the several views.

In the present treatment of patients in an oxygen tent, which is usually supported at the head of the bed, there is considerable loss and waste of oxygen because there is no means to seal in

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the canopy about the patient or bedding, and it is the purpose of my invention to provide an appliance in the form of a sheet-like member for application to the bed in predetermined relation to the patient and adapted for intersealing connection to the canopy.

Referring now to the drawings, 10 indicates the customary transparent flexible canopy of an oxygen tent supported in pendant fashion at the head of the bed 11 on a suitable frame 12 and of such dimensions as to provide marginal extensions 13 at its lower edges for purposes which will hereinafter appear. My appliance designed for application to the bed and in detachably joined and sealing relation to the open or lower end of the canopy to, in effect, provide a floor therefor and prevent leakage of oxygen from the tent is preferably in the form of a sheet 14 of rubberized or like non-porous material impervious to the escape of oxygen and adapted to be applied to the bed in much the same manner as a bed sheet. In the case of a double bed it is adapted, for example, to be wrapped and tucked at its top edge and an adjoining side edge about the corresponding portions of the mattress 15, as shown in Figures 1, 3, 6 and 7, while in the case of a single bed it is adapted to be wrapped and tucked at its top and opposite side edges about the corresponding portions of the mattress 16, as shown in Figure 8. This sheet is somewhat shorter than the length of the bed and includes a top section 17 on which the upper portion of the patient's body lies, and a coextensive bottom section 18 designed to extend partially over the mid-section of the patient, as shown in Figures 3 and 6. For this purpose the sheet 14 is slit transversely at the junction between the top and bottom sections thereof to provide a resulting opening 19 through which the lower portion of the patient's body is adapted to extend, as shown in Figure 3. To facilitate this condition, the sheet-section 18 is slit centrally and longitudinally thereof from such opening to the lower edge of the sheet to provide resulting flaps 20, 20 which may be opened, as shown in Figure 2, to receive the patient and then detachably closed over the patient. Along their opposing edges these flaps are provided with a zipper-type fastening 21 or the like and, if desired, ties or draw strings 22 may be also used for detachably holding the top edges of the flaps together over the body of the patient. By constructing the sheet in this manner, there is provided a floor or bottom closure for the open lower end of the tent-canopy and the patient is free to move on it or relative to it with the lower ex-

tremities of the patient covered by the usual bedcovers.

With the patient and the sheet 14 in the relative positions shown in Figures 3 and 6, the lower rear edge and a side edge of the canopy 10 are tucked or wrapped about the companion head end and side of the mattress while the remaining marginal extensions 13 of the canopy are brought into contiguous relation to the bottom edge and remaining side edge of such sheet and jointly interfolded or rolled together to provide a sealed joint between the canopy of the tent and the sheet 14 which thereupon becomes a part of the tent to effectually seal the oxygen therein and prevent its leakage therefrom. Suitable spring clips 23 are provided for securely retaining the folded or rolled joints in place. When applying the invention to a single bed, it is only necessary to interfold the bottom edge of the sheet 14 with the adjoining edge of the canopy, the remaining portions of the sheet and canopy being jointly tucked about the mattress.

The operative position of the device is shown in Figure 1 from which it will be noted that the front and one of the adjoining sides of the canopy 10 are securely sealed at their lower edges to the companion edges of the sheet 14 with the patient free to move about within the tent and without danger of disturbing the joints to cause leakage of oxygen therefrom. Furthermore, should a nurse or attending physician have occasion to examine or treat the patient while under the tent, this can be conveniently done in the manner depicted in Figure 9, by merely lifting a corner of the jointed portions of the canopy and sheet without interfering with the oxygen concentration.

Aside from providing an oxygen tent which prevents the escape or loss of oxygen therefrom, it affords the patient certain comforts not possible with the present tents, it permits care being given to the patient without fear of disturbing the concentration of oxygen therein, and it assures a material saving in the consumption of oxygen used over a period of time because of the effective seal provided by my invention.

I claim as my invention:

1. In an oxygen tent, a canopy of flexible material adapted to be suspended over a bed patient, and a sheet adapted to be applied to the bed and including means defining an upper section for disposition beneath and a lower section for disposition over the patient and for detachable sealed relation along their marginal edges with the companion lower edges of the canopy.

2. In an oxygen tent, a canopy of flexible material adapted to be suspended over a bed patient, and a sheet adapted to be applied to the bed including a top section and a bottom section over which and beneath which corresponding parts of the patient's body lie, respectively, the sheet having a transverse opening at the junction of its top and bottom sections.

3. In an oxygen tent, the combination of a canopy-section adapted to be suspended over the bed with certain of its lower marginal edges arranged to be wrapped and tucked about the mattress, and a sheet-like section constituting the floor of the tent adapted to be placed on the bed with certain of its marginal edges wrapped and tucked about the mattress in contiguous relation to companion lower edges of the canopy-section and any remaining edge or edges adapted to be detachably connected in sealed relation to companion edges of said canopy-section.

4. In an oxygen tent, the combination of a canopy-section adapted to be suspended over the bed with certain of its lower marginal edges arranged to be wrapped and tucked about the mattress, and a sheet-like section constituting the floor of the tent adapted to be placed on the bed with certain of its marginal edges wrapped and tucked about the mattress in contiguous relation to companion lower edges of the canopy-section and any remaining edge or edges adapted to be detachably connected in sealed relation to companion edges of said canopy-section, the sheet-like section having a transverse opening therein through which the lower portion of the patient's body is adapted to extend, the upper portion of the patient's body being adapted to rest directly on the companion portion of said sheet-like section.

5. In an oxygen tent, the combination of a canopy-section adapted to be suspended over the bed with certain of its lower marginal edges arranged to be wrapped and tucked about the mattress, and a sheet-like section constituting the floor of the tent adapted to be placed on the bed with certain of its marginal edges wrapped and tucked about the mattress in contiguous relation to companion lower edges of the canopy-section and any remaining edge or edges adapted to be detachably connected in sealed relation to companion edges of said canopy-section, the sheet-like section having a transverse slit spaced from the lower edge thereof and a longitudinal slit substantially centrally thereof extending from said transverse slit to the lower edge of said sheet-like section to provide resulting flaps adapted to be opened and closed over the adjoining portion of the patient's body.

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