Oct. 23, 1923. 1,471,329

W. S. EDMANDS

SURGICAL BAKER

Filed Jan. 28, 1922

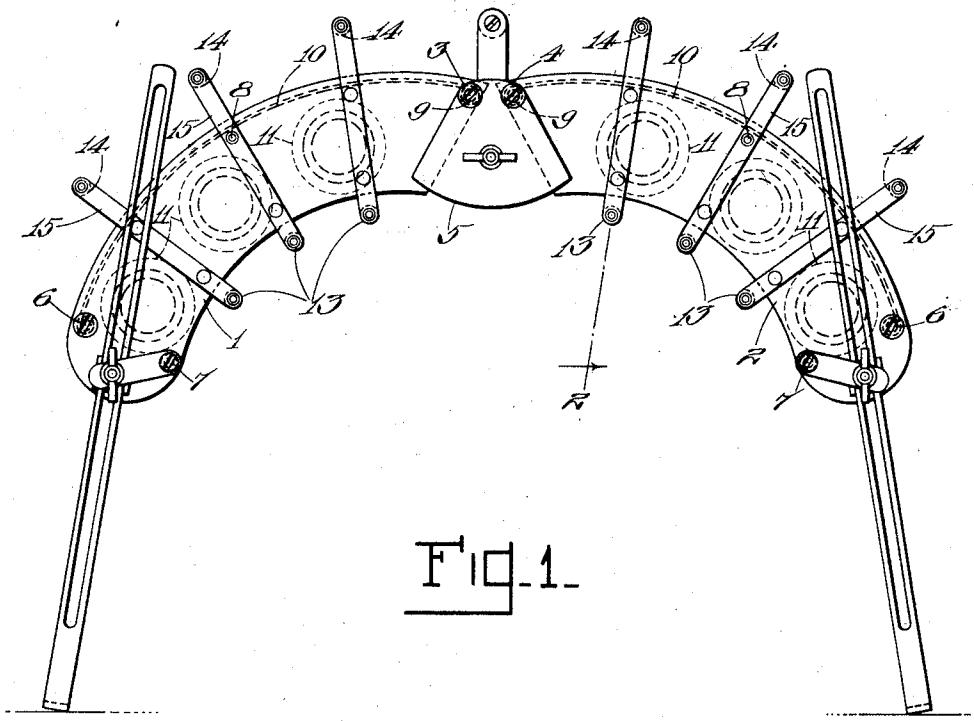


Fig. 1.

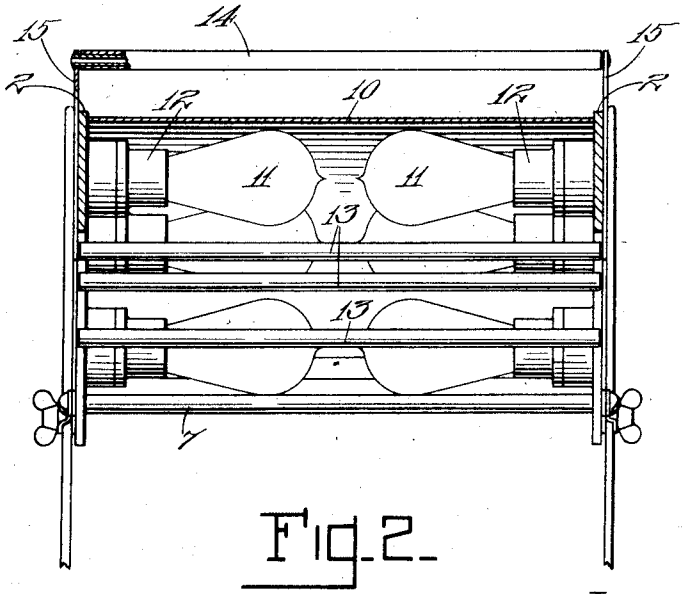


Fig. 2.

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UNITED STATES PATENT OFFICE.

WALTER S. EDMANDS, OF BOSTON, MASSACHUSETTS.

SURGICAL BAKER.

Application filed January 28, 1922. Serial No. 532,461.

To all whom it may concern:

Be it known that I, WALTER S. EDMANDS, a citizen of the United States, residing at Boston, county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Surgical Bakers, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to a new and useful improvement in bakers for surgical purposes. It relates especially to that class of such bakers as are adapted to embrace or partially embrace the body or limb of the patient. In the preferred form of construction the baker comprises two or more segmental members hinged together at their upper ends so that the lower ends may be brought either closer together or farther apart according to the conditions and according to the size of the body or limb which is intended to be embraced. The present invention, however, is applicable to a device whether made of a single rigid segment-shaped member or a plurality of segment-shaped members hinged together. In devices of this character heating instrumentalities are provided on or adjacent to the inner periphery of the segment-shaped members and the inner periphery of said members is formed with reflecting surfaces to throw the heat against the body or limb of the patient. The usual and preferred form of heating instrumentalities is electric lamps. As heretofore constructed, these lamps have been so exposed that unless great care is exercised there is danger of the lamp coming in contact with the body of the patient or with the hands of the operator who is manipulating it, thereby causing dangerous burns. The outside periphery also of the segment-shaped members becomes highly heated and the hands of the operator sometimes are burned by coming in contact with the heated surface. The object of the present invention is to provide a suitable guard to protect the operator and the patient from direct contact with the lamps or with the heated surface of the said embracing members of the baker.

The invention will be fully understood from the following description when taken in connection with the accompanying drawings, and the novel features thereof will be pointed out and clearly defined in the claims at the close of this specification.

In the drawings, Fig. 1 is a side elevation of a device embodying the invention.

Fig. 2 is a section on line 2—2 of Fig. 1.

Referring now to the drawings, the supporting frame for the reflector, lighting and heating apparatus consists of two segmental side plates 1, 2 at each side of the apparatus which are pivotally connected together at their upper ends by any suitable means. As shown in the drawings, the two members 1, 2 are respectively hinged at 3, 4 to an intermediate connecting member 5 but the particular manner of making the pivot connection is immaterial to the present application. It is intended to make the particular form of construction of the hinge and connecting member shown in the drawings the subject of a separate application.

Preferably suitable means are provided by which when they have been adjusted to a suitable spread they may be clamped so as to hold them tightly together, but this also does not form a part of the present invention and is, therefore, not shown in detail in the drawings nor described herein.

Each segmental side plate 1, 2 is connected with the corresponding side plate 1, 2 at the opposite side of the device by a plurality of tie rods. As shown in the drawings each pair of segmental members is tied together near its lower ends by the transverse tie rods 6, 7 the tie rods 6 being near the outer periphery and the tie rods 7 being near the inner periphery. They are also tied together by an intermediate tie rod 8 near the outer periphery intermediate between the upper and lower ends of the side plate. Each pair of side plates are tied together at their upper ends by means of the pivot screws 3 and 4 respectively which engage with a stiffening rod 9 around which the upper edge of the reflector plate 10 is curled.

Each reflector member consists of a curved plate 10 preferably of metal which is bent to the proper shape, preferably in the form of the segment of a cylinder and has an inner reflecting surface. Said reflector is of sufficient width to bridge the space between the two opposite side plates 11 and 2, 2.

Any suitable means for furnishing light and heat for the baker may be employed, the means shown being similar to that shown in the patent to W. S. Edmands and C. A. Hoyt, No. 775,105, dated November 15, 1904, and in itself forms no part of the present invention. Briefly described, the heating and lighting means consists of electric lamps 11 fitted into sockets 12 attached to the side plates 1, 2 of the apparatus, and these lamps are suitably wired up and provided with switch connections to turn on and off the heat.

In order to protect the patient as well as the operator from direct contact with the lamps, I provide a plurality of rods 13 extending transversely from one side plate to the other, said rods being at sufficiently short intervals to answer the purposes of a guard and at the same time not being so frequent as to obstruct the passage of the heat and the light. These rods may be made of any suitable heat resisting substance. Preferably they are metal rods having a tubular covering of hard fibre or other heat resisting material. The lowermost tie rods 7 may be also utilized as a part of the heat guard by covering them with a hard fibre tube the same as the others.

There are also provided a plurality of heat protecting rods 14 a short distance radially away from the outer surface of the reflector, as shown in the drawings, these protector rods being of heat resisting outside covering similar to the rods 13.

In order to form a mount for these heat protecting rods both on the inner and the outer sides of the apparatus, there are preferably provided brackets 15 which are attached to the outer sides of the side plates 1, 2, extending radially of the said side plates and projecting radially outward and radially inward from the side plates, and these protector rods are secured at their ends to said brackets.

The protector rods are thus spaced away from the surface of the reflector on the outer periphery, and are between the patient and the lamps on the under side.

What I claim is:

1. A surgical baker having a frame portion, heating elements mounted on the frame portion in position to have the heat directed toward the patient, and heat resisting members secured to the frame which protect the heating elements from coming in direct contact with the patient, the said heat resisting members having open spaces between them to permit passage of the heat to the patient.

2. A surgical baker having a reflector portion for embracing the limb or body of a patient, heating elements on the inner periphery of the reflector member, and heat resisting members to guard the heating elements from coming in contact with the person of the patient or operator, the heating elements being between the reflector and the heat resisting members, said heat resisting members having open spaces between them for the passage of the heat to the patient.

3. A surgical baker having a reflector portion for embracing the limb or body of a patient, heating elements on the inner periphery of the reflector member, and a plurality of heat resisting members extending transversely of the reflector at some distance radially inward from the inner periphery thereof spaced apart from each other, the heating elements being between said heat resisting elements and the reflector.

4. A surgical baker comprising segmental members for embracing a portion of the patient, said segmental members having a reflector surface, heating elements secured to the frame inside of the inner periphery of said segmental members, and a plurality of heat resisting members spaced apart from each other and extending transversely of said segment members in front of the heating elements to protect the patient from direct contact with the heating elements.

5. A surgical baker comprising a frame for embracing a portion of the patient, said frame having a reflector surface, heating elements secured to the frame inside of the inner periphery of said reflector, a plurality of heat resisting members spaced apart from each other and extending transversely of said reflector radially inward from the heating elements to protect the patient from direct contact with the heating elements, and heat resisting members on the outer side of said frame and extending transversely thereof at some distance away from the outer periphery of said frame.

6. A surgical baker comprising oppositely disposed side members, reflector members secured to said side members, heating elements located radially inward from the inner face of said reflector members, and a plurality of heat resisting rods extending transversely between the said two side members located radially inward from the heating elements to protect the patient from coming in contact with the heating elements.

7. A surgical baker comprising oppositely disposed side members, reflector members secured to said side members, heating elements located radially inward from the inner face of said reflector members, and a plurality of heat resisting rods extending transversely between the said two side members located radially inward from the heating elements to protect the patient from coming in contact with the heating

elements, and brackets secured to said side members and to which said heat resisting members are secured.

8. A surgical baker comprising oppositely disposed side members, reflector members secured to said side members, heating elements located radially inward from the inner face of said reflector members, a plurality of heat resisting rods extending transverse'y between the said two side members located radially inward from the heating elements to protect the patient from coming in contact with the heating elements, and brackets secured to said side members and to which said heat resisting members are secured, said brackets extending outward beyond the outer periphery of said segmental side members, and a plurality of heat resisting members secured to the outer ends of said brackets and extending transversely of the outer periphery of the reflector members at some distance away from the outer periphery thereof.

9. A surgical baker comprising a frame for embracing a portion of the patient, heating elements secured to the frame on the inner side thereof, a plurality of heat resisting members spaced apart from each other on the inner side of said frame, the heating elements being located between the inner face of the frame and said heat resisting members, and heat resisting members secured to the outer side of the frame extending transversely thereof at some distance away from the outer surface of said frame.

In testimony whereof I affix my signature.

WALTER S. EDMANDS.