May 6, 1924. 1,492,595

W. S. EDMANDS

SURGICAL BAKER

Filed May 27, 1921

Fig. 1.

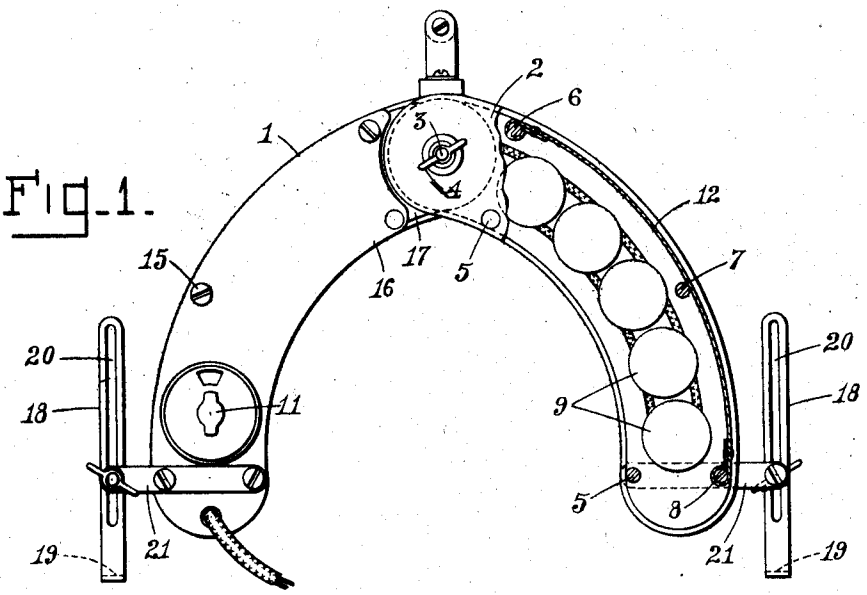


Fig. 2.

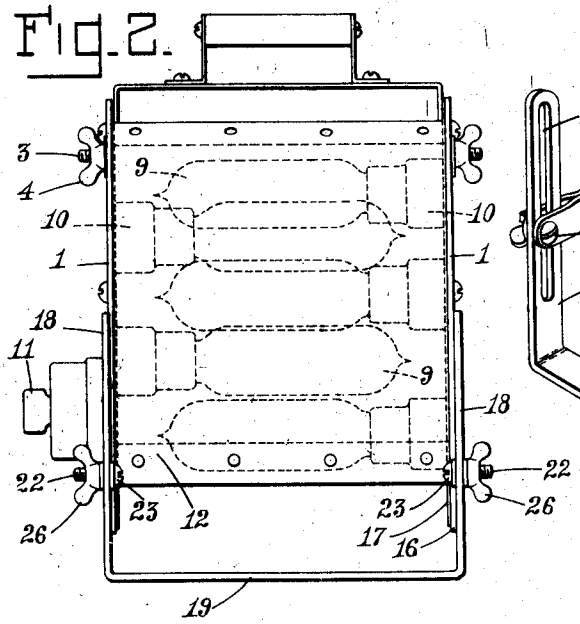


Fig. 3.

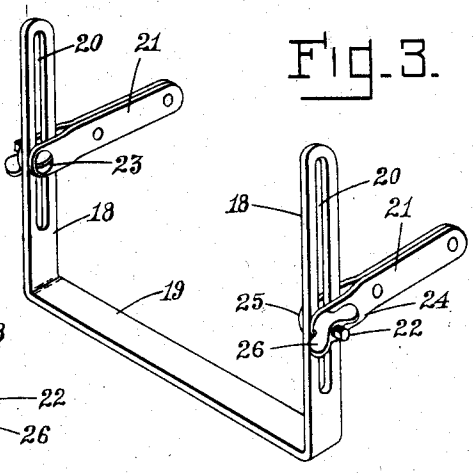
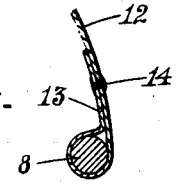


Fig. 4.



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UNITED STATES PATENT OFFICE.

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SURGICAL BAKER.

Application filed May 27, 1921. Serial No. 473,071.

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 a baker for surgical purposes and is an improvement on the device shown in United States Patent, No. 775,105, granted to W. S. Edmands and C. A. Hoyt, dated November 15, 1904, in which the device comprises a plurality of sections hinged together at their upper ends and adjustable toward and away from each other to vary the distance between them.

As shown in said patent the apparatus was provided with means by which it could be suspended from above while in use. One object of the present invention is to provide adjustable legs for the two sections to support the apparatus at an elevation above the floor, table or other support on which it stands, so that the hinge members of the apparatus can be brought into embracing engagement with the body or limb of the patient without necessity of suspending the same from above. By reason of the fact that the sections are segment-shaped and are intended to be adjusted so that the lower ends are brought either closer together or farther apart according to the conditions, if the legs are rigidly and fixedly connected with the pivoted sections the legs will stand in a vertical position only in one particular position of adjustment. When the sections are spread farther apart, the legs will flare away from each other, and when they are brought nearer together they will turn in. One object of the present invention is to provide means of adjustment of the legs so that whatever may be the degree of opening or spread between the two pivoted sections of the apparatus, the legs may be adjusted to a vertical position. Another object of the invention is to provide means for adjusting the connection between the sections and the legs to vary the elevation of the device as desired.

The inner periphery of the two sections usually has a reflecting surface corresponding with the contour of the inner face of said sections. This reflecting face is preferably made of metal having a bright reflecting surface, and this reflector is mounted between two segmental side members and attached at its upper and lower margin to transverse tie rods which unite together the two opposite segmental side members of the device.

Heretofore it has been customary to connect said reflector with the upper and lower tie rods after the tie rods have been connected up with the segmental side members. This union has sometimes been made by forming the upper and lower edges of the reflector plate with notches or slots and connecting the plate with the rod by clamp screws which pass through the said notches or slots into the transverse tapped-out holes in the tie rod. This leaves an exposed raw edge of the reflector plate in which the slots are made. One object of the present invention is to combine the reflector plate with the two tie rods, one at its upper and one at its lower edge permanently before it is assembled with the segmental side members, so that it will be a complete member in itself, and to form such a connection in such manner that there will be no exposed sharp edge of the reflector.

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 partly broken away of a device embodying the invention.

Fig. 2 is a front elevation of the device shown in Fig. 1.

Fig. 3 is an enlarged detail view in perspective showing the double legs and the means for connecting the same with the apparatus.

Fig. 4 is a sectional view showing the manner of connecting one edge of the reflector with the tie rod.

Referring now to the drawings, the supporting frame for the reflector, lighting, and heating apparatus consists of two segmental side bars 1, 2 at each side of the apparatus, which are pivotally connected together at their upper ends by any suitable

pivot as shown at 3. 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. As shown in the drawings a wing nut 4 is provided which is screwed onto the threaded end of the pivot 3, the other end of the pivot being provided with a head so that by turning up the nut 4 the two members may be clamped together. The particular means of clamping is immaterial.

Each segmental side bar 1, 2 is connected with the corresponding side bar 1, 2 at the opposite side of the device by a plurality of transverse tie rods 5, these tie rods being two in number 5—5, near the inner periphery of each segmental side bar, one near the upper end and one near the lower end, and three in number, namely 6, 7 and 8, near the outer periphery, two of them, namely 6 and 8, being respectively near the upper and lower ends and the other one 7 being intermediate the other two. The upper and lower tie rods 6, 8 near the outer periphery perform also a secondary function, namely to serve as a holding means for the upper and lower edges of the reflector, as will be hereinafter described.

Any suitable means for furnishing light and heat for the baker may be employed, the means shown being similar to that shown in the said Patent, No. 775,105, and in itself forms no part of the present invention. Briefly described, the heating and lighting means consists of electric lamps 9, fitted into sockets 10, attached to the side bars 1, 2 of the apparatus, and these lamps are suitably wired up and provided with switch connections to turn on and off the light and heat, the switch being shown at 11.

Each reflector member comprises a curved plate or panel member 12, preferably of metal, which can be bent to the proper shape and having an inner reflecting surface, and is bent to segmental form as shown in Figure 1. Said panel is of sufficient width to bridge the space between the two opposite side members 1, 1 and 2, 2. The upper edge of said reflector member is bent around the upper outside tie rod 6, and the lower edge is bent around the lower outer tie rod 8. The blank of which the reflector is made is of sufficient length so that when it is curled around the said tie rods 6, 8 respectively, it will have an extension portion 13 which laps over onto the inner face of the reflector member, as shown in Figures 1 and 4, and is firmly secured thereto by any suitable means. The preferred method is by rivets 14.

The reflector panel is secured to the said two upper and lower tie rods 6, 8 before the said panel and rods are assembled with the machine, so that the panel and the two tie rods make a complete separate article by itself. It will be seen that by the construction shown and described, there is no exposed sharp or raw edge at either the top or bottom of the reflector panel, but the upper and lower edge will appear rounded.

All of the tie rods are secured in position between the two side bar segmental members 1, 2 of each set by screws 15, which extend through apertures in the said segmental members 1, 2 and are screwed into tapped-out holes in the ends of the tie rods.

Preferably each segmental side bar member 1, 2 is two-ply, the outer ply consisting of a strip of fibre-board 16, and the inner ply consisting of a strip of metal 17 which has a reflecting surface to aid in the reflection. The upper ends of the said metal reflecting portions which comprise the inner ply 17, overlap each other, and one of each set overlaps the joint between the two outer members.

The adjustable supporting means for the two lower ends of the segmental sections are as follows:— The pair of segmental side members 1 and the pair of segmental side members 2 are each provided with similar supporting means. As shown there is provided a U-shaped member comprising two upright leg portions 18—18 and a transverse connecting member 19, preferably formed out of a single bar of metal bent to the proper shape as shown in Figure 3. Each leg member is formed with a vertical slot 20 and an adjustable pivot connection is made with the segmental members 1, 1 or 2, 2, as the case may be, in such manner that the pivot may be adjusted up and down in the vertical elongated slots 20—20 of each leg member, and also so that the legs may be adjusted radially with relation to the pivot so that the legs may be adjusted in or out according to the varying degree of opening or closing of the segmental members. The pivot connection shown between the leg members and the segmental members is as follows:—

Each segmental member has secured thereto a bifurcated bracket arm 21 which extends transversely of the said segmental member and projects out beyond the outer periphery of said segmental member, as shown in Figure 1. Preferably this bracket arm is secured to the segmental member by the same screws which secure the segmental member to the lower tie rods 5, 8. Each bracket arm 21 is vertically bifurcated near its outer end, the bifurcation being produced as shown in Figure 3, where the bracket consists of two strips secured together by the screws which clamp them to the tie rod. The said two members are spread apart near their outer ends so as to receive between them the upright leg member 18. A screw 22 provided with a head 23 passes through the two ears 24, 25 which

embrace the leg 18, and passes through the intermediate elongated slot 20 and the threaded outer end of the screw is provided with a wing nut 26 which may be set up to clamp the two ears 24, 25 against the two opposite faces of the leg 18, thus securely clamping the leg members to the bracket. By loosening the wing nut the leg members may be adjusted vertically by reason of the elongated slot through which the pivot screw passes, and also the leg members may be rocked on the said pivot screw so as to bring them back to a vertical position when the bracket arm is tipped out of a horizontal position by the change in spread of the segmental sections. For instance, as shown in Figure 1, the two segmental members 1, 2 are spread out just a sufficient distance so that the bracket extends horizontally and the leg members are vertical. If the segmental members should be spread farther apart it is obvious that the outer ends of the bracket members 21 will be turned at a backward inclination and unless the leg members are adjusted to compensate for this the leg members would spread outwardly, that is, the lower ends would be outwardly inclined. By loosening the pivot screw the said leg members may be adjusted to bring them back into the vertical position. Correspondingly, if the segmental members should be turned in toward each other from the position shown in Figure 1, it would cause the lower ends of the leg members to incline toward each other, and to compensate for this the said leg members should be turned so as to move the lower ends outwardly to bring the legs into a vertical position.

While I prefer to have each pair of leg members connected together by a bottom tie piece 19, as shown, I do not wish to be limited to having them tied together. The adjustment can be much more accurately and easily made so as to be sure that each pair of leg members will be moved exactly the same by having them tied together as shown. It is obvious, however, that each leg member could be independently adjusted if they were not tied together.

What I claim is:—

1. A surgical baker comprising opposite side sections hinged together at their upper ends and adjustable toward and away from each other to vary the distance between their lower ends, in combination with a bracket secured to each of the two opposite side sections and projecting radially outward from said side sections, a leg member connected with each of said brackets, means for connecting each leg member with one of said brackets in such manner that said leg member may be adjusted to a vertical position when the side members are adjusted to varying degrees of spread, said adjustable connection between the bracket and leg member consisting of a bifurcated form of bracket, the two branches of which embrace the leg, an elongated slot in the leg, a screw which passes through the two branches of the bracket and the said slot in the interposed leg, and means for clamping the leg between the said two branches.

2. A surgical baker, comprising two opposite side sections hinged together at their upper ends and adjustable toward and away from each other to vary the distance between their lower ends, a reflector extending transversely between each pair of opposite side sections and secured thereto, a stay rod extending transversely of the inner face of said reflector at each end thereof, the reflector member having its end portions curled around said rods and secured thereto.

3. A surgical baker comprising two opposite side sections hinged together at their upper ends and adjustable towards and away from each other to vary the distance between the lower ends, a reflector extending transversely between each pair of opposite side sections and secured thereto, a stay rod extending transversely of the inner face of said reflector at each end thereof, the reflector member having its end portions curled around said rods and secured thereto, said rods also serving as tie rods for the two opposite side sections.

In testimony whereof I affix my signature.

WALTER S. EDMANDS.