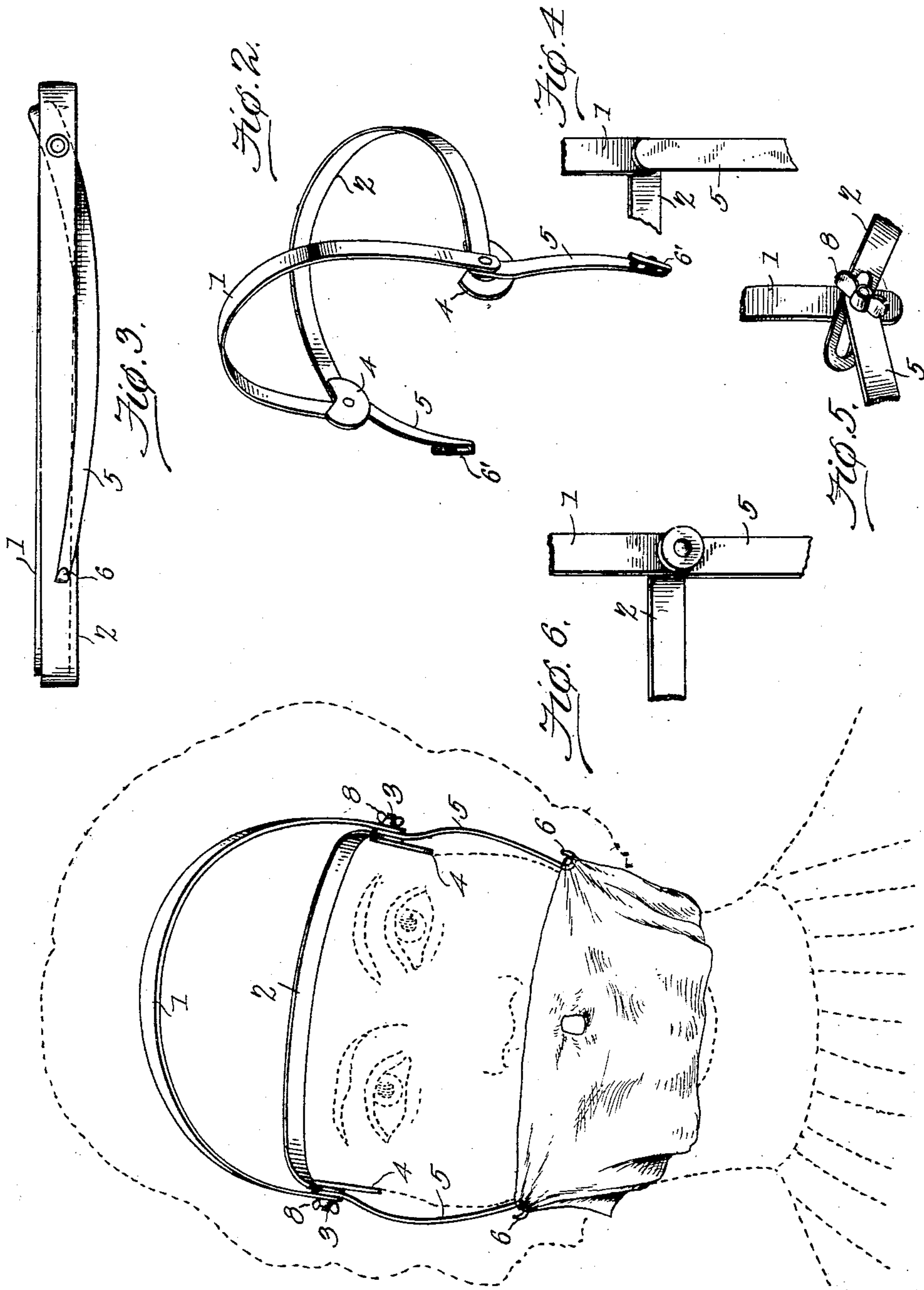


No. 733,410.

PATENTED JULY 14, 1903.

E. B. MARSHALL.
RUBBER DAM HOLDER.
APPLICATION FILED FEB. 26, 1903.

NO MODEL.



Witnesses
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Fig. 1.

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UNITED STATES PATENT OFFICE.

EDMUND B. MARSHALL, OF ROME, GEORGIA.

RUBBER-DAM HOLDER.

SPECIFICATION forming part of Letters Patent No. 733,410, dated July 14, 1903.

Application filed February 26, 1903. Serial No. 145,272. (No model.)

To all whom it may concern:

Be it known that I, EDMUND B. MARSHALL, a citizen of the United States, residing at Rome, in the county of Floyd and State of Georgia, have invented a new and useful Rubber-Dam Holder, of which the following is a specification.

This invention relates to certain improvements in devices of that class employed for supporting the rubber dams or dental bibs used by dentists and surgeons in various operations.

One of the principal objects of the invention is to provide a supporting device which will firmly hold the dam in position without the necessity of employing the usual straps or bandages, which when drawn tightly around or across the face of the patient result in temporary disfigurement, as well as causing considerable pain and annoyance.

A still further object of the invention is to provide a holding means which may be easily adjusted to the head of the patient and in which provision is made for accommodating the holder to the heads of women having hair dressed in different fashions.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is an elevation of a rubber-dam holder or clamp constructed in accordance with the invention and showing the same as applied to the head of a patient, the head being indicated in dotted lines. Fig. 2 is a detail perspective view of a further form of holder, illustrating the slightly-modified construction. Fig. 3 is a view of the holder, showing the parts folded together in compact form for convenience in storage or transportation. Fig. 4 is a detail view illustrating a slight modification in which the several members are rigidly secured together, as by riveting or brazing. Fig. 5 is a detail view of a portion of the structure

shown in Fig. 1 and illustrating more particularly the adjustability of the members. Fig. 6 is a further detail perspective view showing the contour of one of the plates or pads which bear against the temples or at opposite sides of the head of the patient.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In using rubber dams during various dental operations it is usual to employ a strap or band, of rubber or other elastic material, which is extended around the back of the head, pressing tightly against the cheeks and causing considerable pain and annoyance to the patient, as well as the temporary disfigurement due to the forcing of the blood from the surface where the pressure is exerted, the marks being visible for a considerable period of time. It is one of the principal objects of the present invention to overcome these difficulties by providing a holding device by means of which the rubber dam or bib may be held in place without any annoyance or discomfort whatever to the patient.

Referring to the drawings, 1 and 2 designate, respectively, bands of metal adapted to fit up over the top and to the rear of the head, said bands being approximately semicircular in form and being held together by suitable pivot-pins 3 in order to permit adjustment of the position of the parts and allow the holder to fold into comparatively small compass, as indicated in Fig. 3.

By pivoting the bands to each other in the manner shown said bands may be readily applied to the head of the patient, and this is particularly advantageous where the patient is a woman, the adjustability of the bands permitting their location on opposite sides of any large knot or mass of hair and permitting the application of the holder and its adjustment to proper position without regard to the particular style of hair-dressing and without disarranging the hair.

The pivot-point between the members 1 and 2 is located at the temple, and to the lower ends of the upper band 1 are secured temple plates or pads 4, which may be formed integral with the band or may be formed of a separate piece of the same or of different material, and either a metallic plate or a cushioned

pad may be employed at this point for contact with the opposite sides of the head of the patient.

On the pivot-pins 3 are hung depending arms 5, which are curved outwardly in order to avoid contact with the cheeks and at their lower ends are bent inwardly preferably to an extent sufficient to bring them adjacent to but out of contact with the lower portions of the cheeks, and said arms are preferably formed of metal sufficiently flexible to permit the bending of the same by the operator to conform to any physical characteristics of the patient. The depending arms 5 are provided with terminal hooks 6 or with clamps 6' for engagement with the opposite ends of the rubber dam or dental bib and serve to firmly hold the same in position without causing sufficient pressure on any part of the face to result in disfigurement or pain or annoyance to the patient.

In Fig. 2 is illustrated a slight modification of the invention, on which the ends of the upper band 1 and the pivotal ends of the depending arms 5 are continued past the pivot-point in order to overlap and mutually brace each other, forming, in effect, a continuous band from hook to hook and materially strengthening the depending arms in order that the latter may more effectively hold the dam in place. The overlapping end portions when used in this way will to a measurable degree take the place of the temple-plates 4 in so far as assisting in holding the depending arms 5 in place is concerned.

Fig. 5 illustrates a feature of construction in which the depending arm is shown as provided with an elongated slot for the reception of the pivot-pin, and said pin, as shown in Figs. 1 and 5, is provided with a threaded end for the reception of a thumb-screw 8 to securely hold the several members in any desired position of adjustment.

The construction may be modified to some extent by riveting, brazing, or otherwise rigidly securing the members to each other, as illustrated in Fig. 4, and such a structure may be employed to advantage on male pa-

tients, where the hair is not so likely to interfere with the proper adjustment of the holder to the head.

Having thus described the invention, what is claimed is—

1. A rubber-dam holder comprising pivoted head-bands, and pivotally-mounted depending arms supported by the head-bands and provided with terminal dam-engaging means.

2. A rubber-dam holder comprising connected head-bands, plates arranged at the ends of the bands for engagement with the opposite sides of the head, and depending arms carried by the bands and provided with terminal dam-engaging means.

3. A rubber-dam holder comprising a pair of pivotally-connected bands adapted respectively to pass over the top and around the rear of the head, plates disposed at the ends of one of said bands and adapted to engage the opposite sides of the head, and arms carried by the bands and provided with terminal dam-engaging means.

4. A rubber-dam holder comprising a pair of head-bands, depending arms adjustably secured to said bands, and dam-engaging means at the lower ends of said arms.

5. A rubber-dam holder comprising a pair of head-engaging bands, screws forming the pivotal connection between the ends of the bands, thumb-nuts adapted to the threaded ends of said screws, and depending dam-engaging arms having elongated slots at their upper ends for the passage of said screws.

6. A rubber-dam holder comprising a pair of pivotally-connected bands adapted to fold one within the other, and a pair of dam-engaging arms pivotally connected to the bands and foldable to a position in alignment with said bands when the holder is collapsed for storage or transportation.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDMUND B. MARSHALL.

Witnesses:

J. H. JOCHUM, Jr.,

J. ROSS COLHOUN.