No. 628,923. Patented July 18, 1899.

J. P. CARMICHAEL.

RUBBER DAM HOLDER.

(Application filed Dec. 13, 1895.)

(No Model.)

FIG. 1.

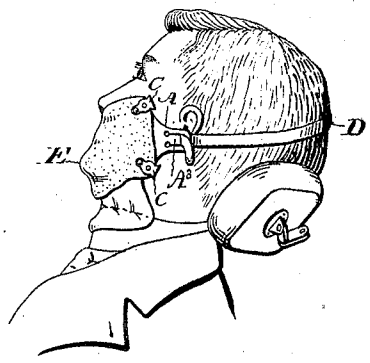


FIG. 2.

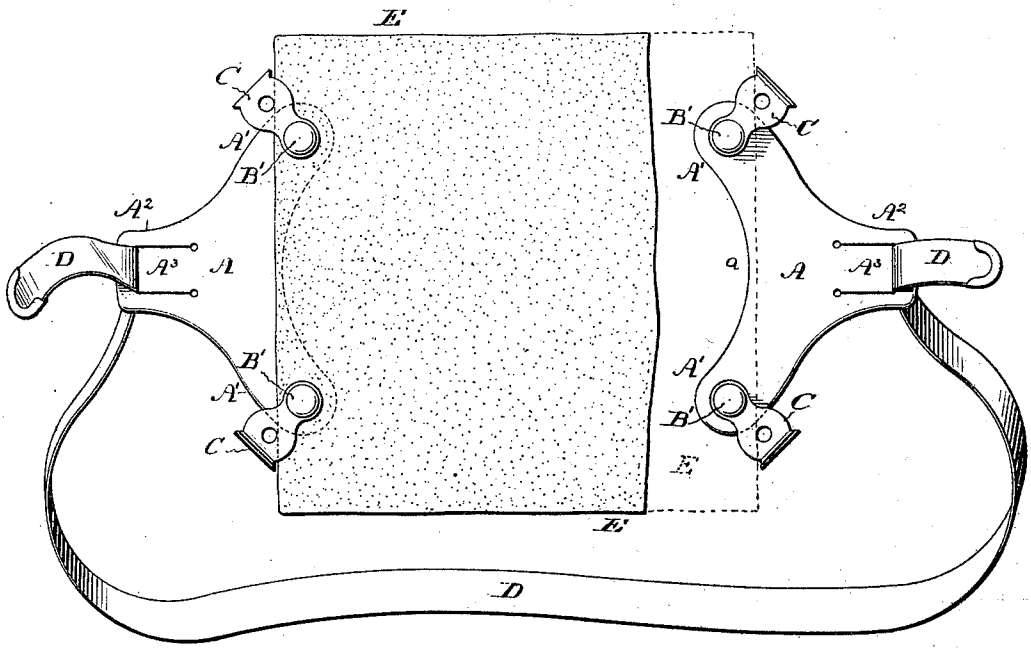
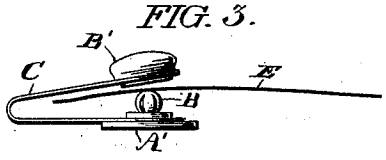


FIG. 3.



WITNESSES:

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RUBBER-DAM HOLDER.

SPECIFICATION forming part of Letters Patent No. 628,923, dated July 18, 1899.

Application filed December 13, 1895. Serial No. 572,070. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. CARMICHAEL, a citizen of the United States, residing at Milwaukee, county of Milwaukee, State of Wisconsin, have invented a certain new and useful Improvement in Rubber-Dam Holders; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to rubber-dam holders for the use of dentists; and my object is to provide an improved holder of this character which is simple in construction and efficient in use.

My invention consists of certain improvements, which will be fully described herein and then specifically pointed out in the claim at the end of the specification.

In the accompanying drawings, Figure 1 represents the head of a patient with a rubber dam adjusted and held in place thereon by means of my improved holder. Fig. 2 is a plan view showing a sheet of rubber dam with my improved holder secured thereto, one end of the rubber dam being broken away to better illustrate the holder. Fig. 3 is a detail view of one of the clasps or clamps used in connection with my improved holder.

The holder consists of two flat and thin plates A A, counterparts of each other and preferably concaved on their inner edges, as shown at *a*. Secured at or near the outer end of each of the two arms or members A′ of each holder-plate is a clasp or clamp for engaging the rubber dam. These clasps or clamps are each shown as consisting of a spring ball member B, secured directly to the holder-plate, as by a rivet, and a socket member B′, the members constituting the clasps being similar to the well-known glove-fastener. The socket member B′ of each clasp is secured to one end of a bent or bowed flexible strip C, which is fastened at its opposite end to the holder-plate by means of the shank or rivet of the ball member B of the clasp.

Each holder-plate is formed with a central rear extension A^2, which is slotted to form a tongue A^3. The opposite ends of an elastic band D are inserted in the slots of the respective holder-plates and are engaged by the tongues A^3.

I prefer that the holder-plates A be made of hard rubber, and I have found that celluloid is a good material for the flexible strips C. The clasps B B′ are of course made of metal, as usual.

In operation a sheet of rubber dam E is adjusted upon a tooth in the mouth of a patient, as will readily be understood by dentists, and the four loose corners of the sheet are placed between and clamped by the engaging members of the respective clasps of the holder. The two clasps on one holder-plate engage one side of the dam, while the clasps of the other holder-plate engage the opposite side of the dam. The elastic band passes around the back of the patient's head and may be drawn tight to properly adjust the holder-plates for supporting the dam in proper position by pulling its opposite ends through the slots of said plates, the tongues A^3 serving to prevent the band from slipping.

It will be seen that a rubber-dam holder constructed according to my invention has four points of attachment to the rubber dam and that the location or disposition of these points of attachment is such as to hold the dam in the most convenient and proper position. The holder may be very readily applied and removed, the particular clasps being easily made to engage and disengage the dam as desired. When the holder is properly adjusted, the dam is securely held without any danger of slipping.

Obviously the members of the clasps or clamps may be reversed, if desired—that is to say, the socket member B′ may be secured directly to the holder-plate and the ball member B secured to the flexible strip C.

I claim as my invention—

A dentist's rubber-dam holder consisting of two flat holder-plates each having two arms or members upon the outer ends of which are

secured clasps, each of said clasps consisting of two engaging members, one of which is secured directly to the holder-plate and the other of which is secured to one end of a bent flexible strip, the other end of said strip being fastened to the holder-plate, each of said holder-plates being provided with a slotted extension through which a connecting elastic band is passed, substantially as and for the purpose described.

In testimony whereof I sign this specification in the presence of two witnesses.

JOHN P. CARMICHAEL.

Witnesses:
E. W. STOUT,
JOHN E. WILES.