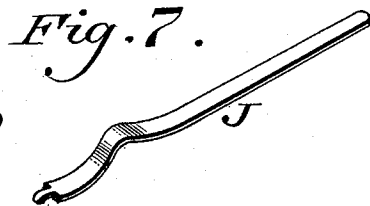
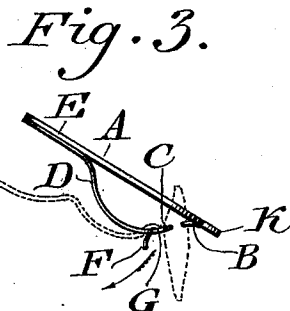
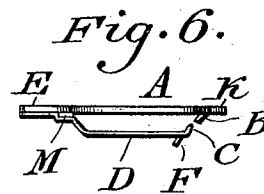
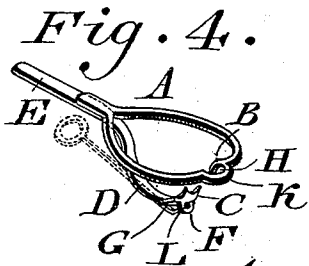
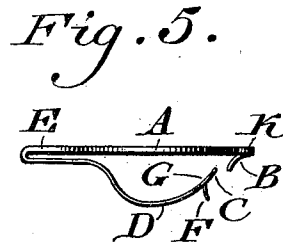
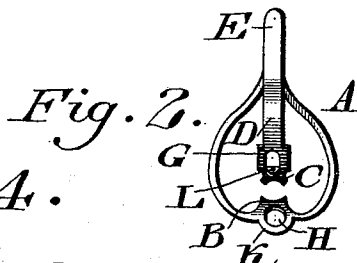
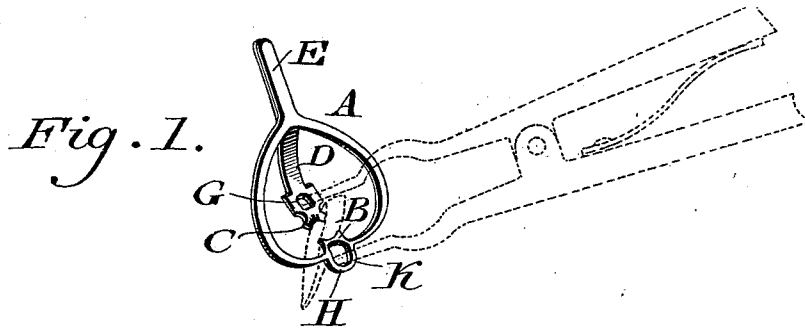


(No Model.)

J. W. IVORY.
RUBBER DAM CLAMP.

No. 499,550.

Patented June 13, 1893.



WITNESSES:

O. H. Chagles.
L. Douville.

INVENTOR
James W. Ivory
BY *[Signature]*
ATTORNEY.

UNITED STATES PATENT OFFICE.

JAMES W. IVORY, OF PHILADELPHIA, PENNSYLVANIA.

RUBBER-DAM CLAMP.

SPECIFICATION forming part of Letters Patent No. 499,550, dated June 13, 1893.

Application filed March 5, 1892. Serial No. 423,872. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. IVORY, a subject of the Queen of Great Britain, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Dental Cervix Rubber-Dam Clamps, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in dental cervix rubber dam clamps embodying a novel construction of the lingual and labial jaws, the provision of lips for the attachment of a rubber dam, the construction of jaws to admit of the attachment of forceps or another instrument, and other features as will be hereinafter set forth.

Figures 1 and 4 represent perspective views of a dental cervix rubber dam clamp embodying my invention. Fig. 2 represents a plan view thereof. Fig. 3 represents a side elevation thereof. Figs. 5 and 6 represent side elevations of modifications thereof. Fig. 7 represents a perspective view of a lever that may be employed for opening the jaws of the clamp.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings: A designates a loop-shaped frame at the forward end of which is the labial jaw B, which projects inwardly and outwardly therefrom at somewhat of an acute angle.

C designates the lingual jaw which is opposite to the jaw B and connected with an elastic bow D which is attached to the handle E of the device and extends in a curve transversely under the frame toward the jaw B, the frame A being also attached to said handle.

In Figs. 1, 2 and 3, the handle is formed of two separated pieces, one of which extends from the frame A, and the other from the bow D, said pieces being secured together in any suitable manner.

In Fig. 5, the pieces constituting the handle are continuous of each other and of the frame and bow. Projecting from the jaw C, is a lip F, which is preferably punched-out of said jaw, and in said jaw adjacent to the lip is an opening G.

In the jaw B, is an opening H, the openings G and H being adapted to receive the points

or bills of a pair of forceps, shown in dotted lines Fig. 1, whereby the jaws may be separated, and the clamp carried to and adjusted upon a tooth, or the opening G may receive the point of a lever J, as in Figs. 3 and 4, whereby the jaw C may be separated from the jaw B.

A portion of the wall of the opening in the jaw B, is extended outwardly, forming a lip K which with the lip F, is adapted to primarily hold a rubber dam thereon. It will be seen that when the dam is located on said lips F, K, the clamp is fitted on a tooth to be operated upon, after which the dam is disconnected and properly adjusted on the tooth. The jaws take firm hold of the tooth so that displacement of the same is prevented, and the jaw B serves to hold the gum from the portion of the tooth where the cavity exists or operation is to be performed, so that the return of the gum is prevented during such operation.

As the frame A has an elongated or loop-formed opening and the jaws are set back from the same, operations may be performed with the greatest freedom and convenience, owing to the ability to apply the instrument to any given part of a tooth, and the opening H in the jaw B also permits the insertion therethrough of an instrument when it may be desired to reach a portion of a tooth through said opening.

The frame A is made rigid, and the bow D made of metal thinner than that of the frame A, so that it is rendered elastic and curves transversely toward the jaw B. The jaw C consequently presses with greater force against a tooth than the jaw B, it being evident that this is a matter of considerable importance, inasmuch that the jaw B is in contact with the labial side of a tooth adjacent to a cavity, which renders said side tender, while the lingual side being unaffected is better adapted to receive the greater pressure which in the present case is exerted by the jaw C, due to the elastic or spring bow D. In the lip F is an opening L, through which a wire or point on a hooked instrument may be passed, and the bow spring D, by force in the right direction may be drawn backward and consequently away from the jaw B, so that an opening

or space is made between the jaws B, C, sufficient to admit the application to a desired tooth, and when the force is relaxed, the jaws B, C, engage on the labial and lingual sides of the tooth. The clamp may be removed in the same manner.

In the modification Fig. 6, the part D is shown in somewhat angular form instead of the bow as in the other figures, without however, producing different results.

A block or filling piece M may be interposed between the end of the part D, and the adjacent part of the handle, so as to set-out said part when so required.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A dental cervix clamp consisting of a rigid frame having a handle and a labial jaw with an opening therein, a lingual jaw with an opening, and an elastic bow connecting said lingual jaw to said handle, said jaws

being opposite each other, substantially as described.

2. A dental cervix clamp consisting of a rigid frame having a handle, and a labial jaw with an opening therein, and a lip projecting therefrom, an elastic bow connected to said handle, a lingual jaw connected with said bow and having an opening therein, a portion of which extends outward forming a lip, substantially as described.

3. A dental cervix clamp having a rigid loop shaped frame with a labial jaw having a projecting lip, a lingual jaw with an elastic bow connecting it with a handle on the frame, and a filling piece between the handle and bow, said parts being combined substantially as described.

JAMES W. IVORY.

Witnesses:

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R. H. GRAESER.