

(No Model.)

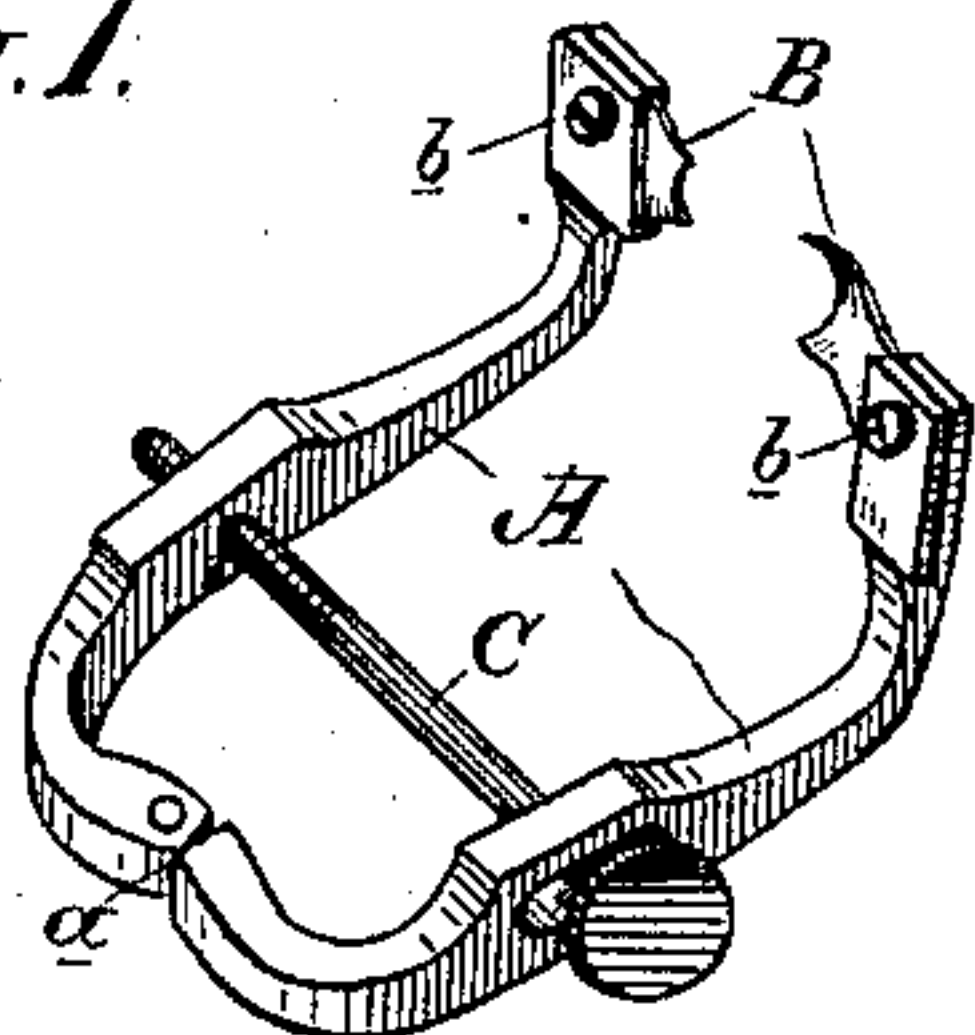
O. CARPENTER.

RUBBER DAM CLAMP.

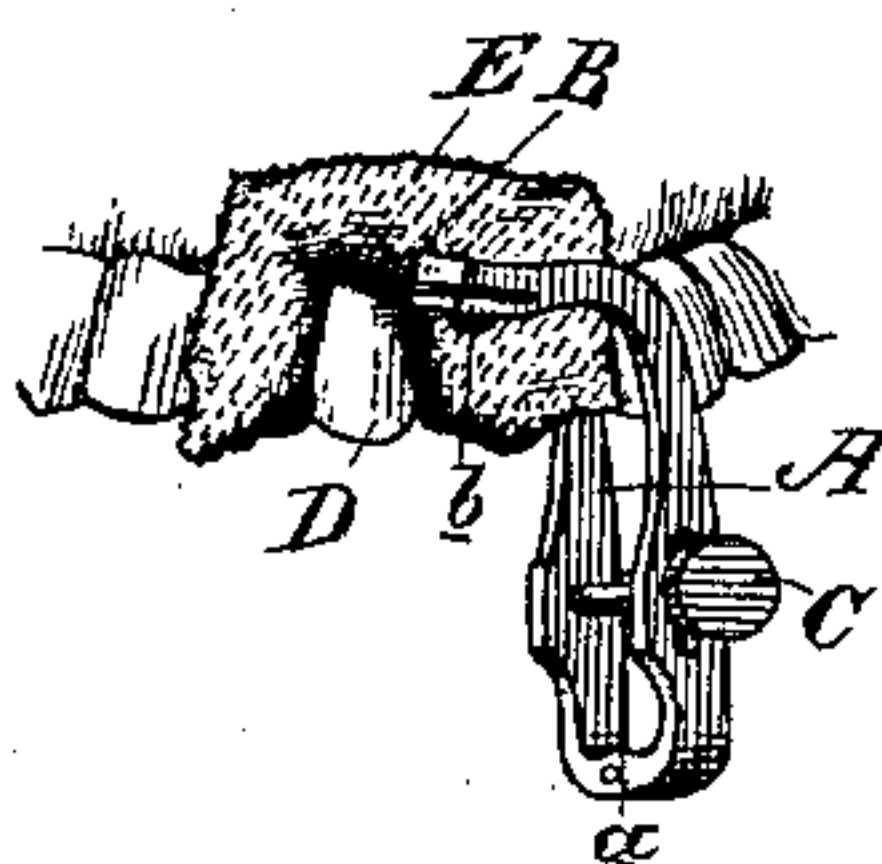
No. 354,391.

Patented Dec. 14, 1886.

*Fig. 1.*



*Fig. 2.*



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# UNITED STATES PATENT OFFICE.

OLIVER CARPENTER, OF OAKLAND, CALIFORNIA.

## RUBBER-DAM CLAMP.

SPECIFICATION forming part of Letters Patent No. 354,391, dated December 14, 1886.

Application filed September 9, 1886. Serial No. 213,180. (No model.)

*To all whom it may concern:*

Be it known that I, OLIVER CARPENTER, of Oakland, Alameda county, State of California, have invented an Improvement in Rubber-Dam Clamps; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to operative dentistry, and particularly to the class of clamps which are used for holding rubber dams in place around the tooth.

My invention consists in a novel jointed frame, carrying in its ends the separate and removable jaws, and a set-screw, by which the jaws are made to clamp tightly on the tooth, all of which I shall hereinafter fully describe.

The object of my invention is to provide a simple and effective rubber-dam clamp which may be applied, by reason of its separate removable jaws, to any of the ten anterior teeth in each jaw, for the purpose of holding the rubber dam back from the labio-cervical cavities in said teeth while filling such cavities, or which may be applied in other suitable positions.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my rubber-dam clamp. Fig. 2 is a view showing its application.

The frame A, which is made somewhat of a horseshoe shape, consists of two parts or sides jointed together at *a*. The ends of these sides are bent, and have secured in them the opposing jaws B. These are separate from the frame, and consist of flat pieces of metal, the free ends of which are filed, so as to fashion them to the exterior surface of the tooth upon which they are intended to fit.

The particular shape of the ends of the jaws depends upon the teeth which they are to fit, and I may therefore have a number of jaws previously fashioned to approximately the curvature of the various teeth, and may then file them down to suit the case, either while in the frame or before being inserted. To readily accomplish this fitting of the jaws to the several positions in which they are used, I provide that their connection with the frame A shall be a removable one, so that such jaws

may be used as any given case requires. In this my invention differs essentially from the ordinary curved clamps at present in use, and which consist of a single piece of spring metal having its ends adapted to fit but a single tooth, and so highly tempered as to render it an impossibility to file them down to fit other teeth. This connection between the jaws and the frame, though it may be of any character adapting them to be readily removed and replaced by others, I prefer to make in the following manner:

The ends of the sides of the frame are provided with slits, into which the jaws are slipped, and are secured in their seats by means of the screws *b*. A set-screw, C, passes through the frame from side to side, being threaded in one side, and playing loosely in a slot in the other side, thus providing for the expansion or contraction of the parts of the frame. As I have heretofore mentioned, the clamp is intended more particularly for use in keeping the rubber dam back from the labio-cervical cavities of the ten anterior teeth in each jaw while filling such cavities. On account of the position of these cavities, it is very difficult to keep the edge of the rubber dam back. It is usually done at present by means of the spring-clamps, to which I have heretofore referred, the use of which, in many cases, is uncertain, because of their tendency to spring from position, as they do not fit the teeth perfectly.

The application of my clamp is shown in Fig. 2, where the clamp is seen in position upon the tooth D, and is holding the rubber dam E back. By reason of the previous preparation of the ends of the opposing jaws they fit accurately the tooth, and when the frame is set up by means of the screw C they bind firmly and accurately upon said tooth, and the clamp has no tendency whatever to spring from place.

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

1. A rubber-dam clamp comprising the curved hinged frame A, the jaws B in the slotted ends of said frame, and the set-screw C, by which said frame is expanded and contracted, substantially as herein described.

2. A rubber - dam clamp comprising the hinged frame A, having slits in its ends, the jaws B, inserted in said slits and secured by the screws *b*, said jaws having their free ends  
5 fashioned to the surface of the tooth to which they are fitted, and the screw C, by which the frame is expanded and contracted, substantially as herein described.

In witness whereof I have hereunto set my hand.

OLIVER CARPENTER.

Witnesses:

S. H. NOURSE,  
H. C. LEE.