

(No Model.)

C. A. MEISTER.
RUBBER DAM CLAMP.

No. 485,963.

Patented Nov. 8, 1892.

Fig. 1

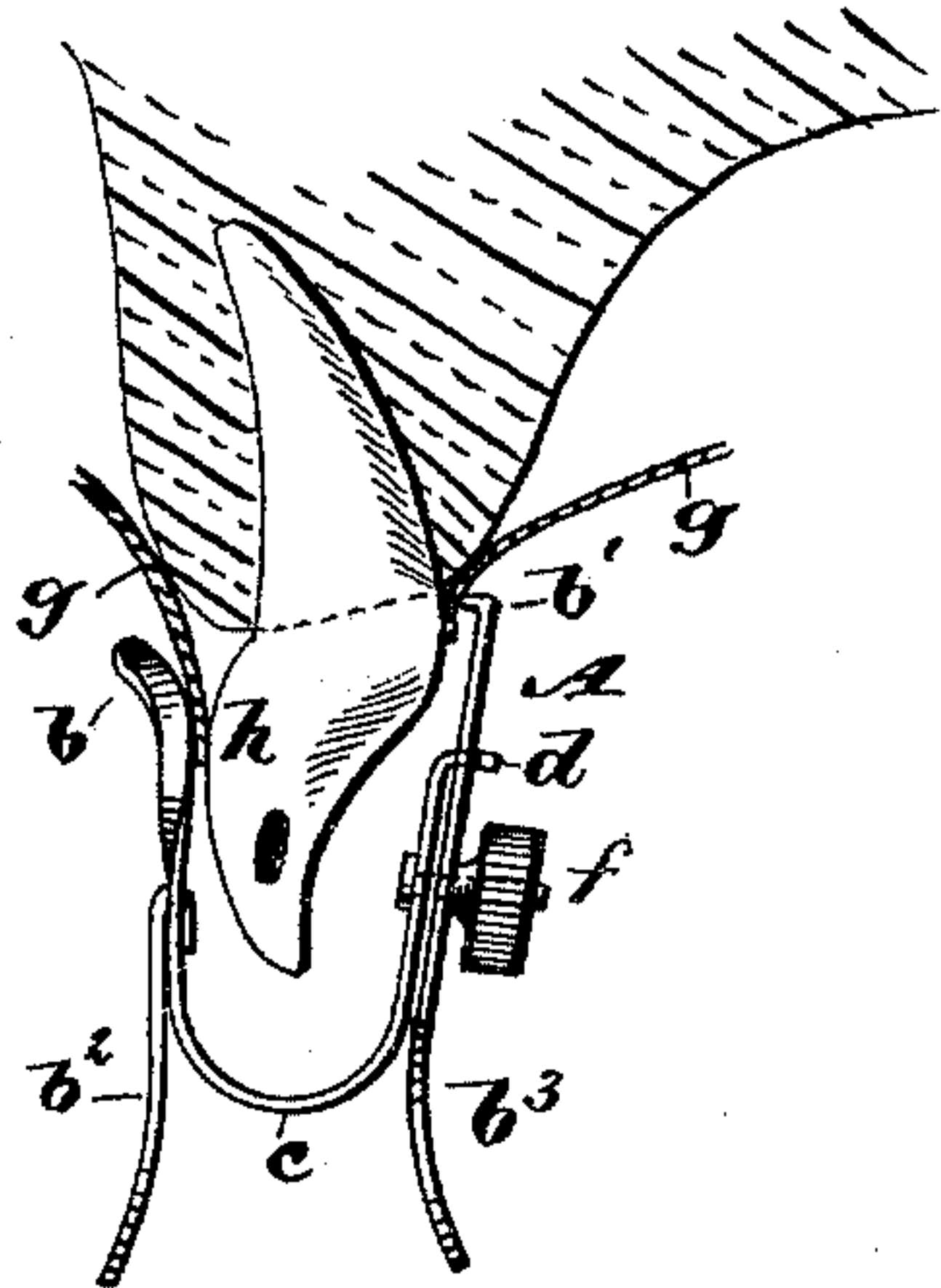


Fig. 3.

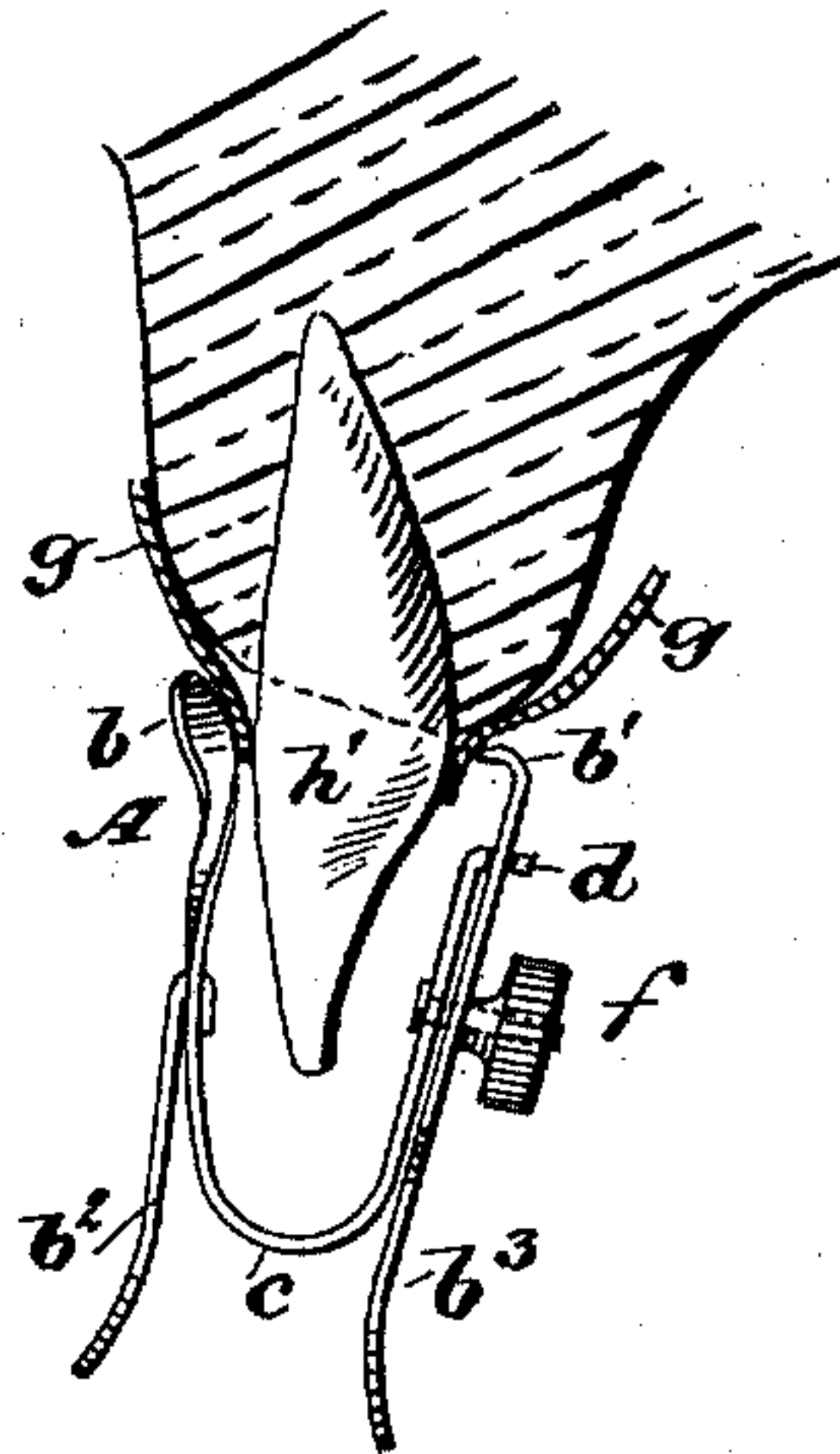


Fig. 2

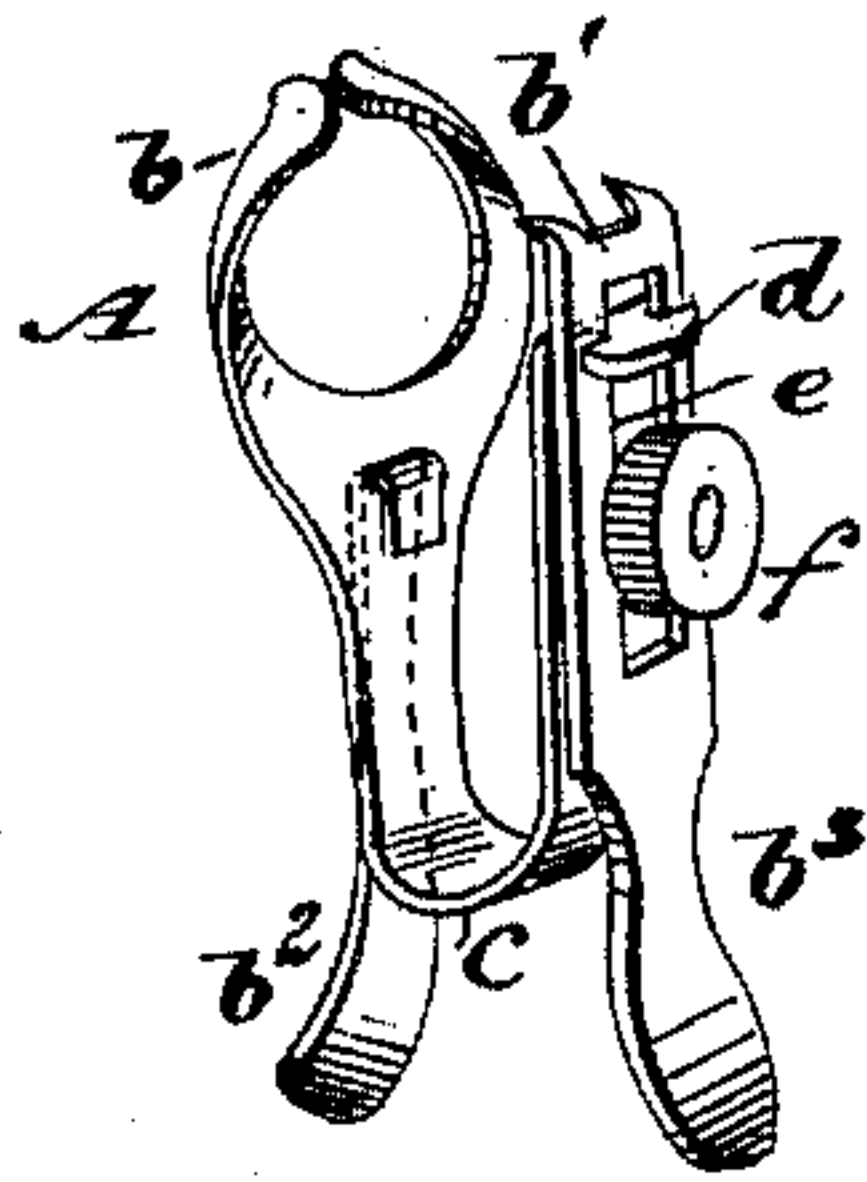


Fig. 4

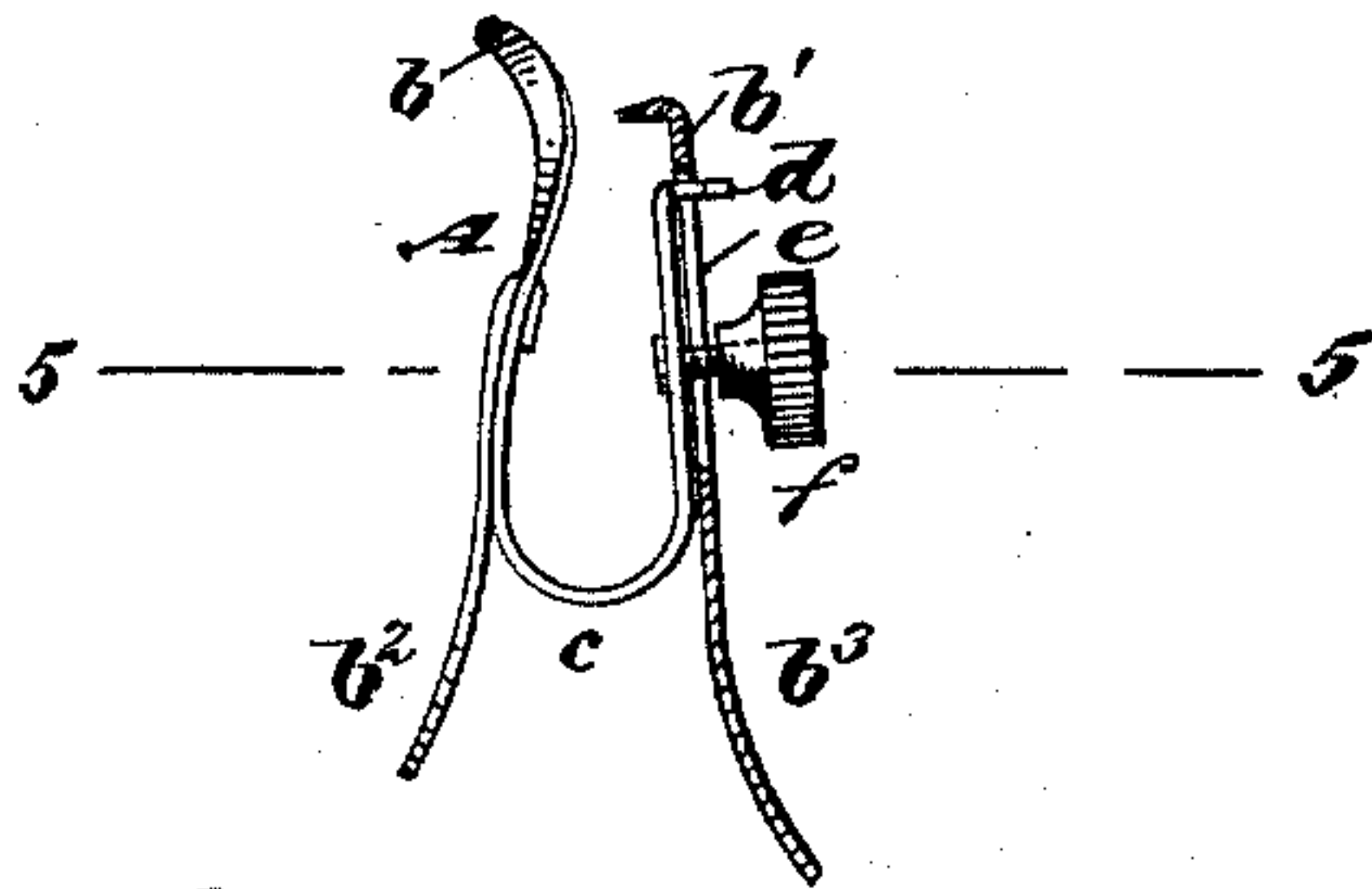
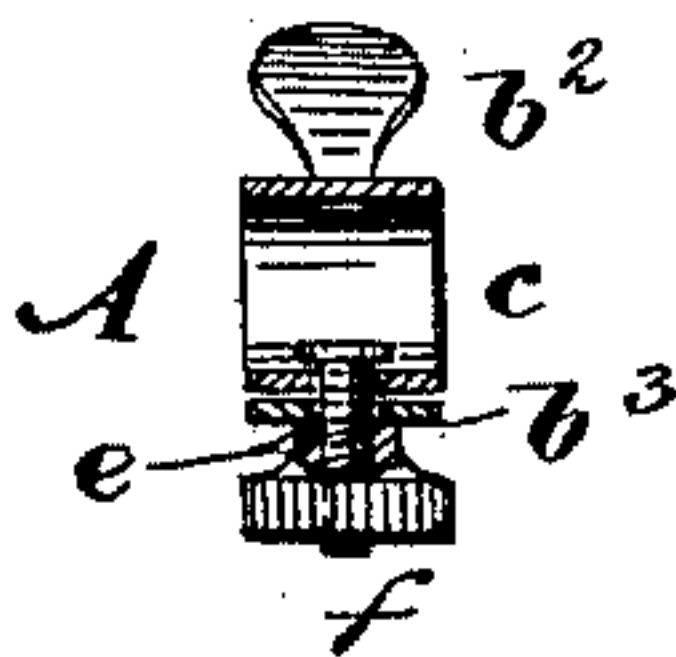


Fig. 5



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHRISTIAN A. MEISTER, OF ALLENTOWN, PENNSYLVANIA.

RUBBER-DAM CLAMP.

SPECIFICATION forming part of Letters Patent No. 485,963, dated November 8, 1892.

Application filed April 28, 1892. Serial No. 431,048. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN A. MEISTER, of Allentown, in the county of Lehigh and State of Pennsylvania, have invented a new and useful Improvement in Rubber-Dam Clamps for Dental Use, of which the following is a full, clear, and exact description.

This invention, which relates to clamps for holding a rubber dam in position around a tooth, is more particularly designed as an improvement upon the clamp of this description for which Letters Patent No. 465,716 were issued to me December 22, 1891, and in which the clamp having gripping-jaws united by a closing spring piece or portion at or near their back ends, as usual in such devices, had its jaws provided with separate fingers, either permanently attached or removable, arranged to extend back of or beyond the closing-spring portion of the clamp for opening the spring-clamp and adapting it to hold and release the rubber dam and to place the latter in position around an incisor and bicuspid, much more conveniently by direct manipulation through said fingers than was attainable through a separate and special forceps-like instrument as previously used.

The object of the present improvement is to provide for the raising and lowering of the one jaw relatively to the other in such spring clamps mostly used on bicuspids and incisors; and the invention consists in a novel construction of parts whereby this may be accomplished, substantially as hereinafter described and more particularly pointed out in the claims. The invention, however, is not restricted to any particular size or shape of the jaws on the rubber-dam clamps, as these ordinarily greatly vary.

Prior to describing my invention as illustrated in the drawings and the better to explain its use, or why I provide for raising or lowering the one jaw of the clamp relatively to the other, I would observe that in my previously-patented clamp hereinbefore referred to both the jaws provided with rearwardly-extended fingers have been fixed ones—that is, neither gripping-jaw has been made capable of being adjusted up or down relatively to the other, whereby much pain is often produced in applying the clamp. Thus, supposing the tooth to be operated upon has its la-

bial or outside lower than its inside, then to hold such a tooth with ease the inside jaw of the clamp should be higher than the outside one; but, supposing the tooth to be operated on be higher on its labial side, to fit the clamp to the tooth its inside jaw should be considerably lower, and this my invention provides for by the adjustment or lowering of the inside jaw of the clamp, whereas if a dentist having such a tooth to fill uses a rubber-dam clamp not having a movable or raising and lowering jaw he pushes the clamp up above the cavity to be filled, regardless of the patient's suffering, and pushes against the gum with the inside jaw of the clamp. This torture or suffering my invention avoids.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a view in elevation of a rubber-dam clamp having one form of gripping-jaw applied to a tooth which has its labial side or outside lower than its inside. Figure 2 is a perspective view of said clamp. Figure 3 is a view in elevation of a similar rubber-dam clamp having a different form of gripping-jaw applied to a tooth which has its labial side or outside higher than its inside. Figure 4 is a perspective view of such clamp, and Figure 5 is a transverse section upon the line 5 5 in Fig. 4.

A indicates a rubber-dam clamp; b b' , the jaws thereof, having their gripping end portions of any suitable construction and shape and united at their back ends by a spring portion c , which operates to force the jaws toward each other. Separate fingers b^2 b^3 are applied to the jaws of the clamp and extend backwardly beyond the spring portion or base c of the clamp any required distance or length to facilitate the opening and manipulation of the clamp. These fingers may either be permanent or removable attachments; but the one b^2 is shown as a permanent attachment to the one jaw b by having its forward end passed through a perforation in the shank of said jaw and bent backward or clinched on the inside of the jaw b , while the other finger b^3 is a downward or backward extension of the other jaw b' and is passed in a longitudinally-sliding manner through a bent lip d ,

formed by a forward extension of the one side of the spring portion *c*, and is longitudinally slotted, as at *e*, to provide for the adjustment of the jaw *b'* up or down upon loosening a binding thumb-screw *f* that, when tightened up, firmly holds the jaw *b'* at any required elevation, said thumb-screw through means of the slot *e*, serving to adjustably unite the jaw *b'* and its extension-finger *b³* to the one side upward extension of the spring portion *c*.

When this clamp is applied to hold a rubber dam *g* about or around a tooth *h*, which has its labial side or outside lower than its inside, as shown in Fig. 1, then the inside jaw *b'* is raised by the means already described, above the outside jaw *b*; but when said clamp is applied to hold the rubber dam *g* about or around a tooth *h'*, which is higher on its labial side or outside than on its inside, then the inside jaw *b'* is lowered, as shown in Fig. 3, and the thumb-screw *f* tightened up. In this way or by these means, the clamp may be conveniently used without producing much or any pain on teeth of different kinds or of different heights on their labial sides or out- sides, as compared with their insides.

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

1. In a rubber-dam clamp having gripping-jaws united by a closing-spring piece or portion in their rear, the jaws provided with separate and attached fingers arranged to extend back of or beyond the closing-spring portion of the clamp, and the one of which with its attached jaw is made adjustable in direction of its length up or down, essentially as specified.

2. In a dental spring dam-clamp of the character herein described, the combination, with the fixed jaw *b*, having a rearwardly-extending finger *b²*, and with the attached closing-spring *c*, of the longitudinally-adjustable opposite jaw *b'*, and its attached finger *b³*, in slotted and sliding connection with said closing-spring, and a binding-screw *f*, adapted to hold said sliding jaw when adjusted, substantially as herein set forth.

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Witnesses:

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