

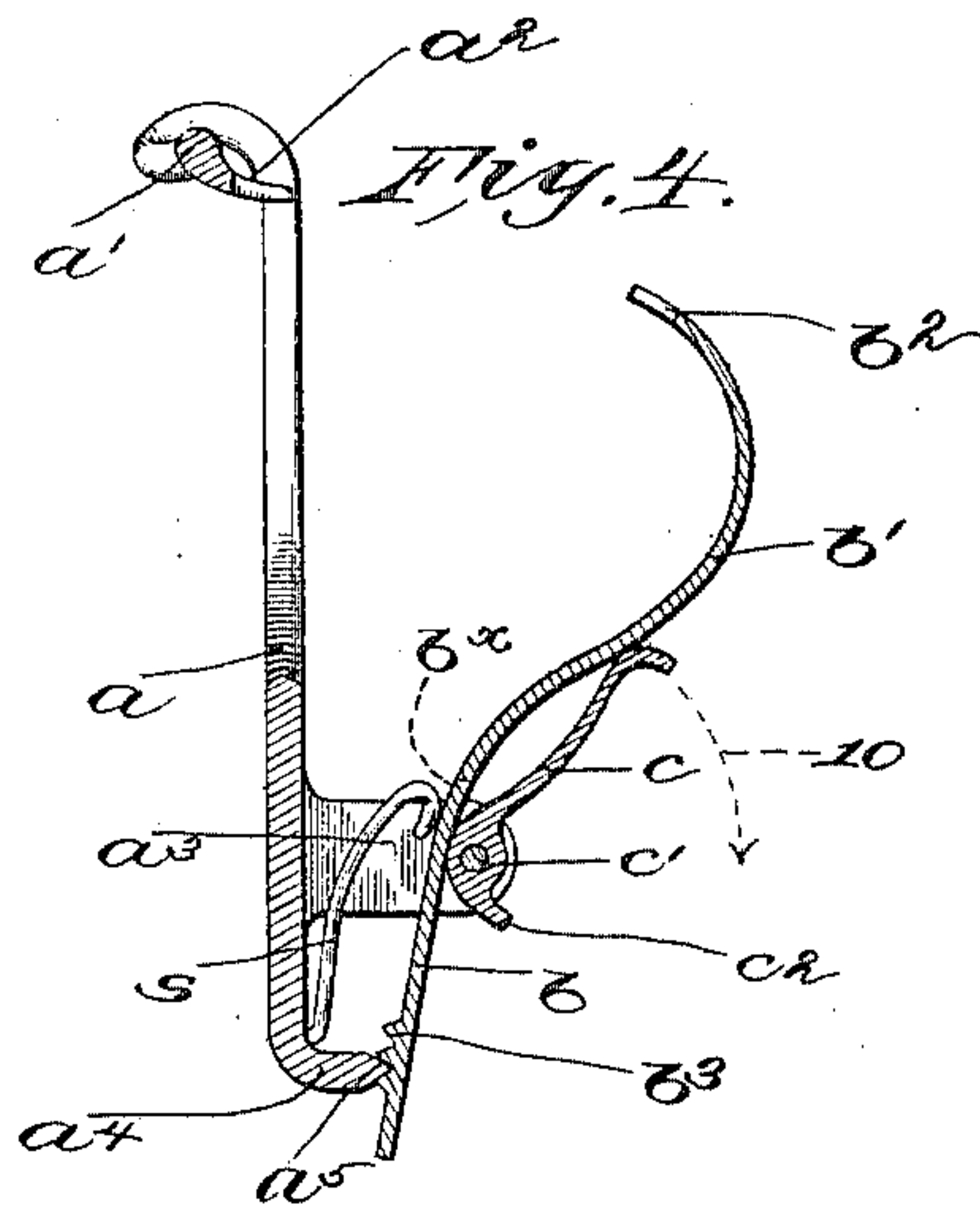
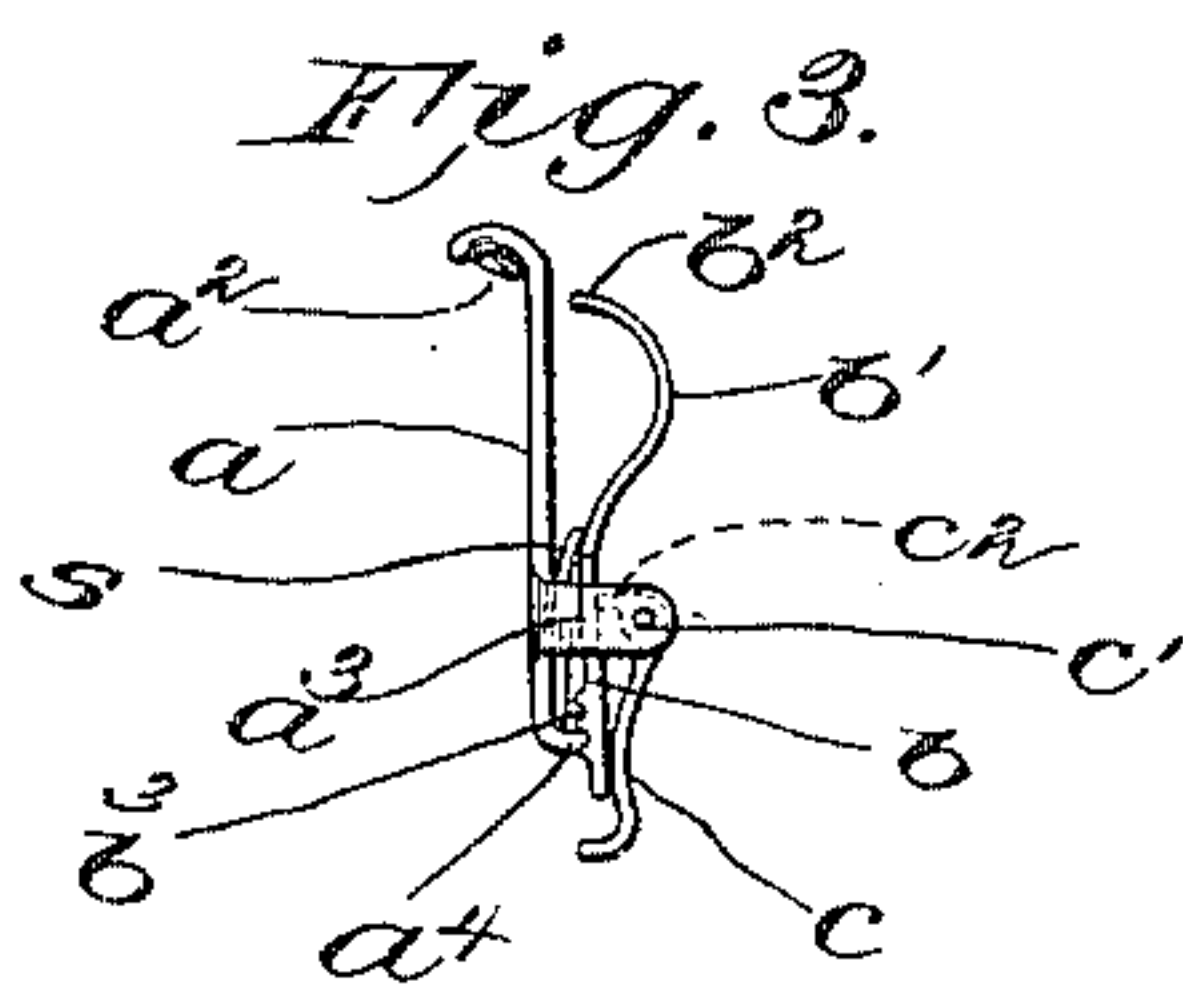
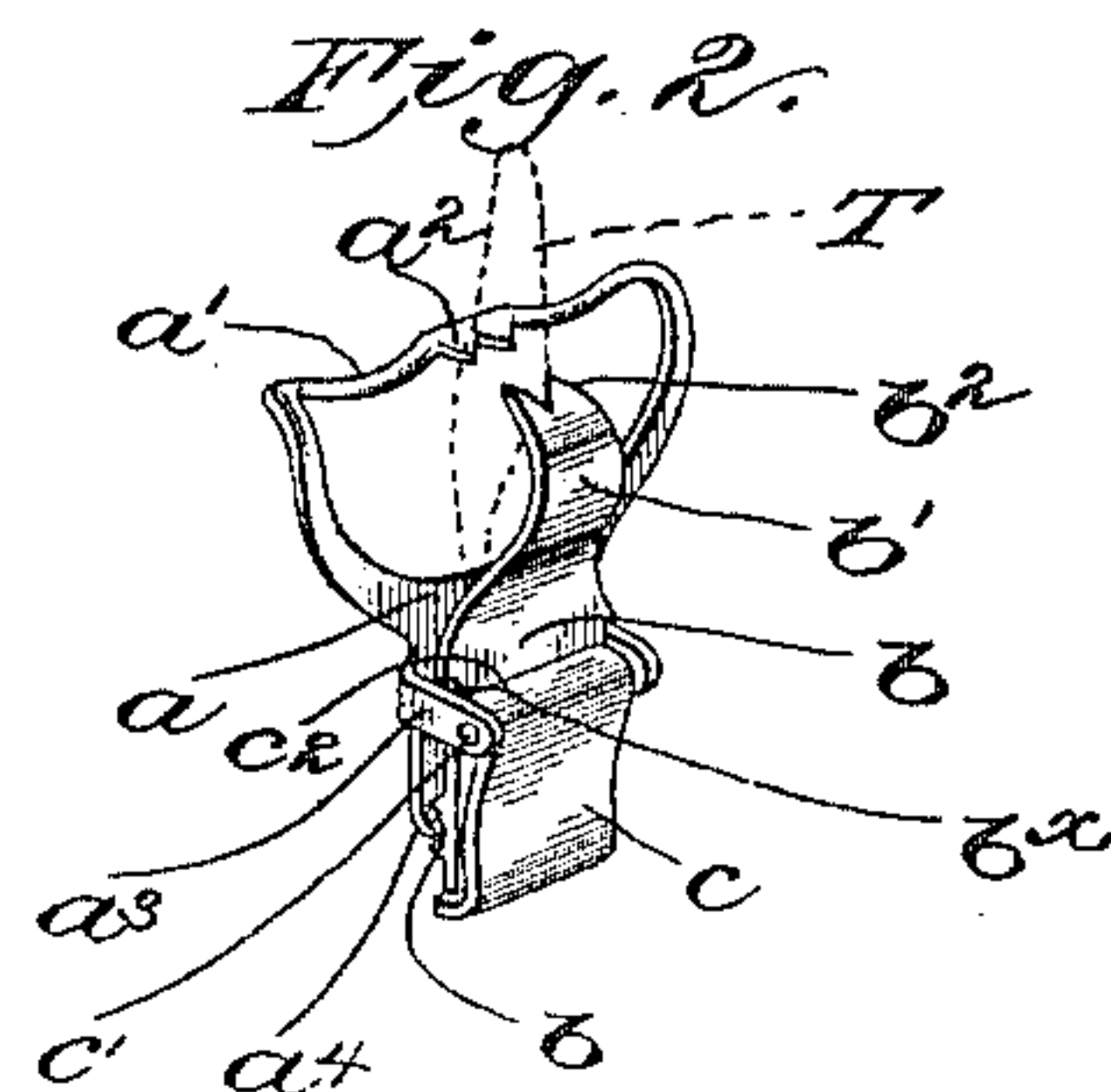
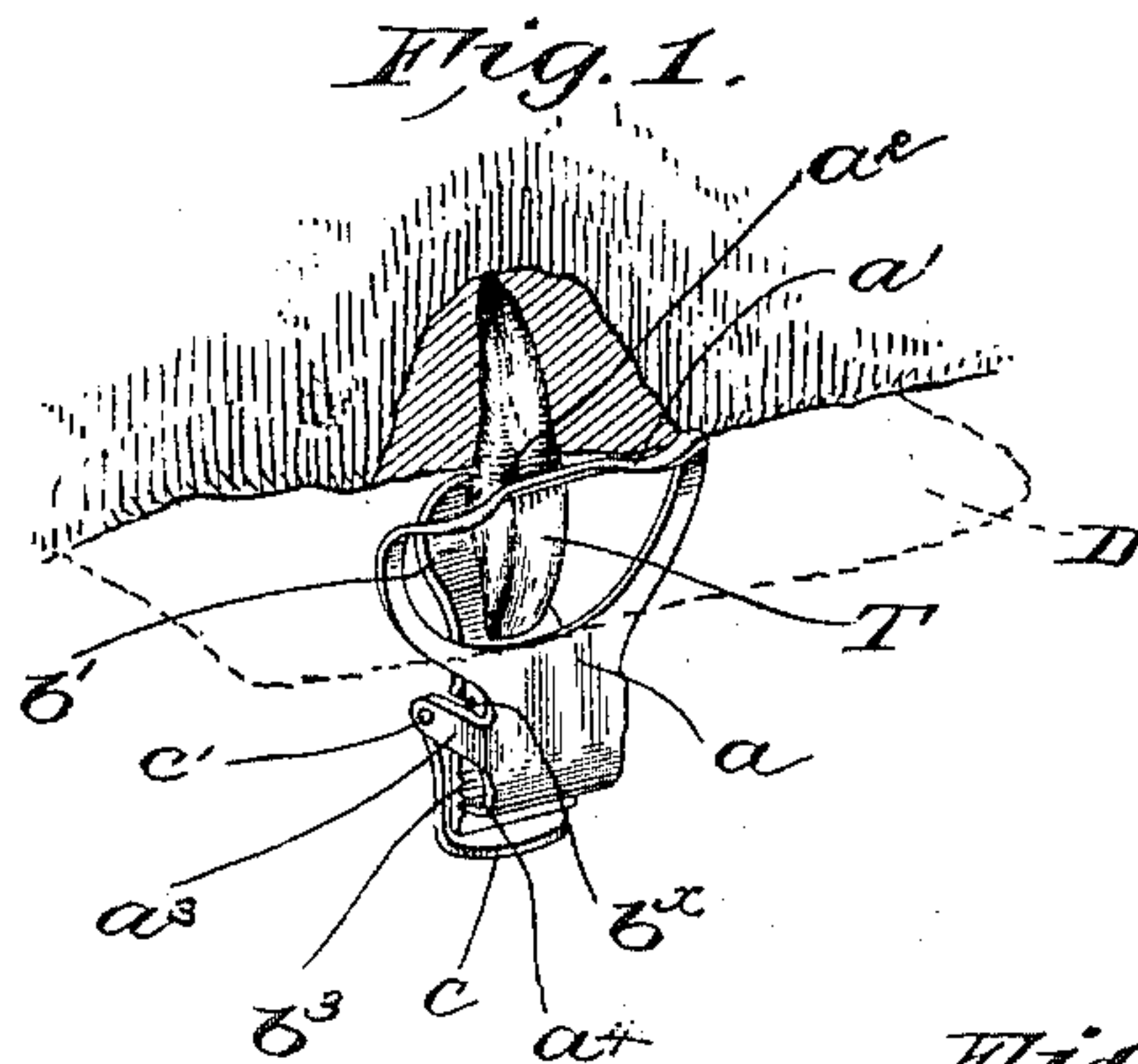
No. 659,886.

Patented Oct. 16, 1900.

C. G. CAPWELL.
DENTAL CERVICAL CLAMP.

(Application filed Aug. 13, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

COURTLAND G. CAPWELL, OF BOSTON, MASSACHUSETTS.

DENTAL CERVICAL CLAMP.

SPECIFICATION forming part of Letters Patent No. 659,886, dated October 16, 1900.

Application filed August 13, 1900. Serial No. 26,676. (No model.)

To all whom it may concern:

Be it known that I, COURTLAND G. CAPWELL, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Cervical Clamps, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a simple and efficient cervical clamp which will preferably hold the rubber dam in place back under the cervical margin of the tooth while the latter is being treated, the construction of the clamp being such that it can be applied or removed with one hand, obviating the use of set-screws, setting-forceps, or similar slow-motion devices requiring the use of both hands.

Figure 1 is a perspective view of a cervical clamp embodying my invention, shown in operative position clamped on a tooth and holding the dam in place. Fig. 2 is a similar view of the clamp, taken from the rear or inner side. Fig. 3 is a side elevation thereof; and Fig. 4 is a greatly-enlarged view, in longitudinal section, of the clamp, the jaws being open.

I have herein shown the clamp as composed of a substantially rigid jaw a , shaped somewhat like the letter Y, a cross-bar a' connecting the divergent arms and having suitable prongs a^2 to engage the front of the tooth T, Fig. 1, close to the cervical margin thereof. The body portion of the jaw has upturned ears a^3 , and its end is bent to form a transverse projection a^4 , the edge of which is preferably beveled or sharpened at a^5 . The other jaw is preferably made slightly yielding or resilient and comprises a straight body portion b and curved end b' , the extremity of the latter being provided with inturned prongs b^2 to engage the inner face of the tooth. The sides of the body b are notched, as at b^x , to receive the ears a^3 , the notches being longer than the width of the ears to permit relative longitudinal movement of the jaws to accommodate different sizes of teeth and also to provide for cases where the gum has receded somewhat at the outer face of the tooth. The projection a^4 serves as the fulcrum for the jaw b , and to hold the latter in adjusted lon-

gitudinal position the inner face of the body is provided with a plurality of transverse grooves b^3 , into one of which the sharp edge a^5 of the projection enters, holding the jaw in longitudinal adjustment. A suitable spring s , interposed between the jaws, serves to separate them in the position shown in Fig. 4. A locking-lever c has outwardly-extended lugs or pintles c' to enter holes in the ears a^3 , the lever being mounted between them, with the jaw $b b'$ between the lever and the other jaw a , and a cam portion c^2 is made on the lever adjacent its fulcrum.

In Fig. 4 the clamp is shown with the jaws open, but after it is applied to the tooth, as in Figs. 1 and 2, the operator with his finger swings the lever c in the direction of the arrow 10, Fig. 4, into position shown in the other figures. This movement causes the cam c^2 to press against the outer face of the jaw $b b'$, forcing it toward the other jaw, and when the lever is fully thrown over the cam is past dead-center and the locking-lever is thereby retained in locking position. The spring or resiliency of the inner jaw permits the clamp to adapt itself to the thickness of the tooth when the jaws are closed by the locking-lever.

In Fig. 1 the rubber dam is shown at D, the clamp being in position on the tooth at the cervical margin.

It will be manifest that the construction is very simple, and the longitudinal adjustment of the jaws relative to each other and the locking of the clamp on the tooth can be effected by the use of one hand and instantaneously, so that the use of a set-screw to close the jaws, requiring both hands to manipulate the device, is entirely obviated. The unlocking of the clamp is accomplished as readily as the locking by a reverse movement of the locking-lever from the position shown in Figs. 1, 2, and 3 to that illustrated in Fig. 4.

My invention is not restricted to the precise construction and arrangement shown and described, as the same may be varied or modified without departing from the spirit and scope of my invention.

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

1. A cervical clamp comprising separable clamping-jaws, and a locking-lever pivotally mounted on one jaw, to engage the other jaw and hold the jaws closed.
- 5 2. A cervical clamp comprising separable clamping-jaws, one of which has an upturned inner end, and a locking-lever pivotally mounted on the said jaw and adapted to bear against the other jaw between its ends and
10 the upturned end of the one jaw serving as a fulcrum for the other jaw.
3. A cervical clamp comprising separable jaws having inturned projections to engage the front and back of the tooth, a spring to
15 separate the jaws, one of which is fulcrumed on the other, and a locking-lever pivotally mounted on one jaw and adapted to bear against and hold the other in clamped position, the lever being automatically retained
20 in locked or unlocked position.
4. A cervical clamp comprising two separable clamping-jaws one of which is movable longitudinally relatively to the other, means to hold the jaws in adjusted position, and a
25 locking-lever to press the jaws together and hold them closed.
5. A cervical clamp comprising two separable clamping-jaws, one of which has a plurality of notches at its inner end, a support-

ing projection on the other jaw, to enter a 30 notch, whereby the jaws can be adjusted longitudinally to teeth of different sizes, and a locking device to maintain the jaws in closed position.

6. A cervical clamp comprising a jaw hav- 35 ing engaging prongs at one end, a projection at its other end, and intermediate ears, a co-operating jaw having side recesses to receive the ears and adapted to fulcrum on the projection of the other jaw, and a spring to sepa- 40 rate the jaws, combined with a locking-lever pivoted in said ears and adapted to engage the outer side of the other jaw and draw the jaws together upon the tooth.

7. A cervical clamp comprising a rigid jaw, 45 a spring-jaw fulcrumed thereupon and having a limited longitudinal movement relative thereto, and a locking-lever pivoted on the rigid jaw and having a cam to engage the outer side of the spring-jaw, to press the jaws 50 together and hold them in closed position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

COURTLAND G. CAPWELL.

Witnesses:

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AUGUSTA E. DEAN.