

No. 674,650.

Patented May 21, 1901.

J. A. W. LUNDBORG.
DENTAL TONGUE HOLDER AND DRAIN TUBE.

(Application filed Sept. 25, 1900.)

(No Model.)

Fig. 1

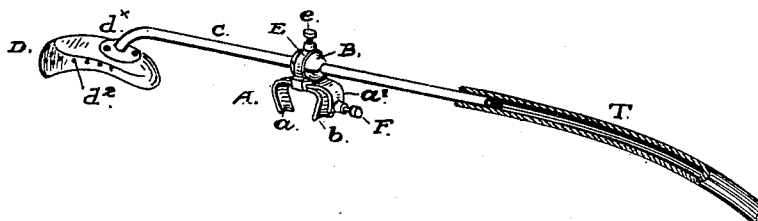


Fig. 2.

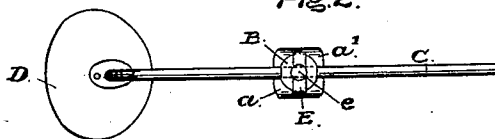


Fig. 3.

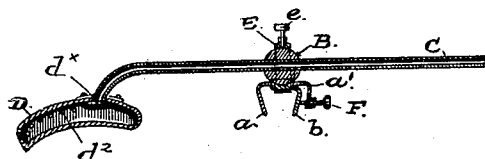


Fig. 5.

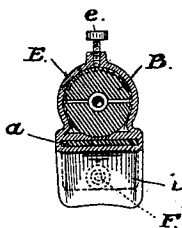


Fig. 4.

Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN A. W. LUNDBORG, OF SAN FRANCISCO, CALIFORNIA.

DENTAL TONGUE-HOLDER AND DRAIN-TUBE.

SPECIFICATION forming part of Letters Patent No. 674,650, dated May 21, 1901.

Application filed September 25, 1900. Serial No. 31,037. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. W. LUNDBORG, a citizen of the United States, and a resident of the city and county of San Francisco, in the State of California, have invented new and useful Improvements in a Combined Dental Tongue-Holder and Drain-Tube, of which the following is a specification.

This invention relates to a device for depressing the patient's tongue away from the teeth during operations and also for carrying away saliva; and the invention has for its object, mainly, to provide a simple and effective tongue-holder having means for supporting it in the patient's mouth directly from the teeth, and also certain features of adjustability that render it capable of being set in any required position of use within the mouth, and in connection therewith a means for carrying away the fluid secretions of the mouth continuously while the work is in progress.

To such end and object my said invention consists in certain novel parts and combination of parts, as hereinafter fully described, and pointed out in the claims at the end of this specification, reference being had therein to the accompanying drawings, forming part thereof.

In the said drawings, Figure 1 is a perspective view of a device embodying my invention. Fig. 2 is a plan or top view of the device. Fig. 3 is a side elevation. Fig. 4 is a vertical cross-section, on an enlarged scale, taken through the clamp and socket that connect the tubular shank of the device with the clamp.

A is a clamp having a fixed jaw *b* and a movable jaw *a*, adjustable by means of a set-screw *F* toward the fixed jaw, so as to fit the clamp to a tooth and then secure it rigidly in position thereon by tightening the screw. A band or strap *E*, surrounding the ball, holds it in place on the top of the clamp and forms a socket in which the ball can be turned. A set-screw *e*, working in a threaded bearing on the socket presses, against the top of the ball and holds it rigidly in any position in which it may be set before the screw is tightened.

D indicates a pad having a closed cavity or chamber within it, and a stem *C*, with a curved end, to which the pad or piece *D* is attached by a swivel-joint *d*^x, so as to be capable of ro-

tation on that end for angular adjustment in the same plane.

B is a split ball divided longitudinally and having a central bore running horizontally through it, the dividing-line cutting diametrically through the bore.

The stem *C* is adjustable both longitudinally and radially in the socket formed by the ball *B*—that is to say, the stem can be drawn through the ball when the screw is loosened, and it can also be turned in the ball, so that the tongue-holder *D* can be set nearer to or farther from the clamp and can be placed also in different angular positions, in which it will be held by tightening the screw *e*. In addition to these two adjustments the stem can be set to stand in a number of different angular positions with respect to the clamp by virtue of the universal adjustment afforded by the ball and socket.

The pad or tongue-holder has a concave bearing-face to lie next the tongue, and the walls of its interior hollow space or chamber are perforated, as shown at *d*², Figs. 1 and 3. One side or part, as *D*, Fig. 3, is attached to the body of the pad by a hinge-joint *g* to permit the same to be opened for the purpose of cleaning out its interior.

For the purpose of connecting the hollow space in the tongue with a siphon-tube the stem *C* is formed of a hollow tube, and to the outer end is attached a flexible tubing *T*, of sufficient length to reach and be immersed in a sink or basin for establishing a siphon.

As thus constructed and arranged the clamp is readily fitted to a convenient tooth in the lower jaw of the patient, and then by tightening the set-screw the two jaws of the clamp are drawn together to grip the front and back of the tooth, whereupon the tongue-holder is adjusted at the proper angle to fit the tongue and hold it away from the posterior side of the tooth, the degree of pressure being regulated by moving the stem longitudinally in or out. After thus being set the adjustment is preserved by tightening the clamp-screw, and the device is ready for operation. When it is required for use as a drain-tube, the rubber tubing *T* is attached to the outer end of the stem of the holder and the end of the tubing is immersed in the sink or basin.

By virtue of the peculiar construction of the parts it will be seen that a single screw is utilized to hold the ball in position in its socket and also to confine the tube rigidly in the ball, so that the adjustment will not be affected by the pressure of the patient's tongue.

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

1. A tongue-holder for dentists' use, having a tongue-pad, a stem to which the pad is attached, a socket in which the stem is adjustable longitudinally and axially, and a clamping device adapted to secure the socket in position on a tooth to support the tongue-holder in the mouth.

2. A tongue-holder for dentists' use, comprising a rigid stem, a tongue-holding device attached to the stem, a clamp adapted to be secured to a tooth, and a ball-and-socket bearing on the clamp adapted to receive and attach the stem to the clamp so as to permit universal adjustment of that part of the clamp.

3. A tongue-holding device for dentists' use, comprising a pad with a concave face, a rigid stem to which the pad is attached by a swiveled joint, a clamp adapted to fit and be temporarily secured to the teeth, a universal bearing on the clamp, consisting of a socket, a split ball movable in the socket, and having an axial hole to admit the stem of the tongue-holder and a set-screw having a threaded bearing

ing in the socket and adapted to give pressure upon the ball to confine the same in its socket and to clamp the stem in the ball.

4. A tongue-holding device comprising a hollow pad having apertures in its walls, a hollow stem, a clamping device provided with a socket for the stem, and a drain-tube attachable to the hollow stem on the end opposite to that on which the pad is carried.

5. The combination, with a tongue-holding device, of the clamping means for supporting the same from the teeth, comprising a stationary jaw, a movable jaw, an adjusting-screw adapted to set the movable jaw toward the stationary jaw, and a bearing for the tongue-holding device on the clamp.

6. In a tooth-clamp for supporting a tongue-holder or other device from the teeth, the combination of the stationary jaw, movable jaw and adjusting-screw, a socket on the top of the clamp, a split ball rotatable within the socket having an aperture to receive the stem of the device and bearing on the ball therein, the said screw serving to confine the stem in the ball and to clamp the ball in its socket.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

JOHN A. W. LUNDBORG. [L. S.]

Witnesses:

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EDWARD E. OSBORN.