

No. 768,697.

PATENTED AUG. 30, 1904.

M. I. SCHAMBERG.
DENTAL APPLIANCE.

APPLICATION FILED APR. 19, 1902.

NO MODEL.



Fig. 1.

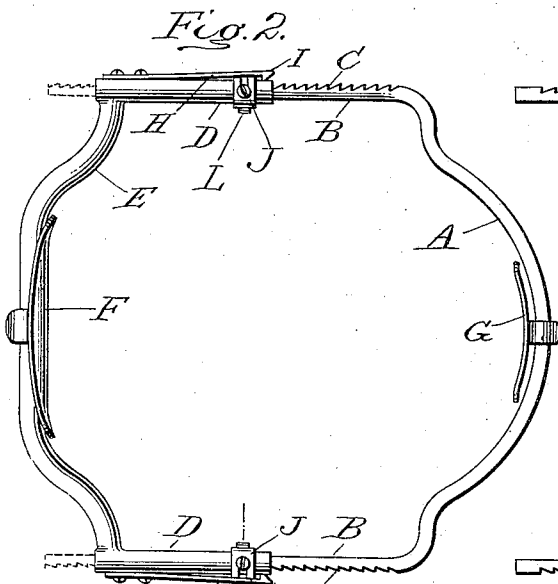


Fig. 2.

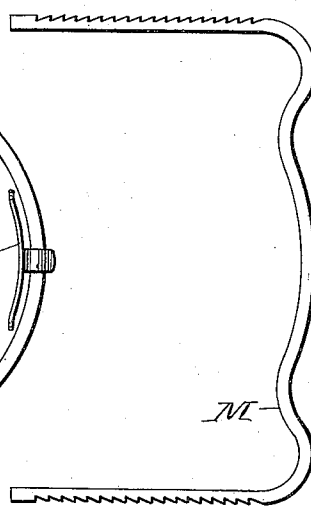


Fig. 3.

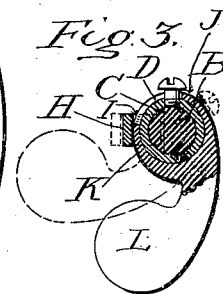


Fig. 4.

Witnesses

D. E. Purdine
Fannie Wase

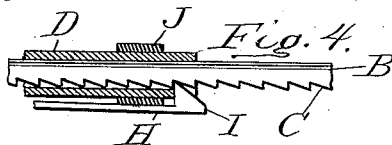


Fig. 5.

Inventor:

Morris J. Schamberg,
by Dodge and Sons,
Attorneys.

UNITED STATES PATENT OFFICE.

MORRIS I. SCHAMBERG, OF PHILADELPHIA, PENNSYLVANIA.

DENTAL APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 768,697, dated August 30, 1904.

Application filed April 19, 1902. Serial No. 103,809. (No model.)

To all whom it may concern:

Be it known that I, MORRIS I. SCHAMBERG, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Dental Appliances, of which the following is a specification.

My present invention pertains to an improved dental appliance, the construction and advantages of which will be hereinafter set forth, reference being had to the annexed drawings, wherein—

Figure 1 is a perspective view of a head, showing the gag in position; Fig. 2, a top plan view of the gag; Fig. 3, a transverse sectional view on the line 2 2 of Fig. 2; Fig. 4, an enlarged longitudinal sectional view of one of the clamping or locking devices, and Fig. 5 a plan view of a modified form of one member of the gag.

The instrument may be termed an "extra-oral mouth-gag," and serves, as said name implies, to hold the mouth open without any portion of the gag being within the mouth. By its use teeth may be extracted upon both sides of the mouth without loss of time, which occurs with the use of interdental gags as they are transferred from one side of the mouth to the other. The gag is also of service when the patient is under the influence of an anesthetic in preventing the swallowing of the tongue by depressing the lower jaw and causing traction upon the geniohyoid and the geniohyoglossus muscles. The mouth being thus held open by the gag while the patient is under the influence of an anesthetic free respiration is insured and the removal of accumulated mucus from the throat is an easy task. The gag permits distention of the mouth by direct force. The points of contact are upon the chin and upon the nape of the neck, which are protected by bearing-pieces shaped to conform to the curvature of these parts.

So far as I am aware all other instruments used for the distention of the mouth are mouth gags or props that are interposed between the teeth or gums. Such instruments are

more or less in the way and frequently obstruct the field of operation. They may become dislodged, thereby permitting closure of the mouth at a critical moment, and if they be of small size there is danger of their slipping back into the throat and being swallowed.

In extracting teeth upon both sides of the mouth it is necessary to transfer most of the gags from one side of the mouth to the other. This causes loss of time, which severely handicaps the operator when employing nitrous oxid as an anesthetic.

Intra-oral mouth-gags are frequently made of rubber, cork, and the like, and such materials cannot be easily sterilized. The present structure may be made entirely of metal and can be perfectly sterilized.

In the manufacture of artificial teeth the correct occlusion between the upper and lower jaws must be definitely recorded in wax or other impressionable material before a satisfactory set of teeth can be obtained. The taking of the bite to secure the impression is facilitated by the use of the present invention, which carries the lower jaw as far back as possible. The tendency of the lower jaw to project and bite beyond the upper jaw is thus obviated and the normal occlusion is assured. In using the instrument for this purpose it should be applied with the jaws tightly closed and with sufficient pressure to force the lower jaw back as far as it will go. The patient should then be instructed to open the mouth, so as to permit of the introduction of the bite-taking material. When the mouth is again closed, the instrument guides the jaw into its normal position and the correct occlusion is recorded.

The construction presented is simple, readily applied, and as readily detached.

Referring to the drawings, A designates the bow, the ends B of which are provided with a series of teeth C. These end members B are adapted to enter tubular members D, connected to the ends of a cross-bar or member E. The member E is preferably formed as shown in Fig. 2—that is to say, the central portion thereof is curved outwardly from the ends, which connect the tubular members D,

and said central portion forms the support for a detachable bearing plate or member F, which is curved to conform with the nape of the neck. The bow A is likewise curved outwardly at its central portion and also carries a detachable bearing plate or member G. This bearing plate or member G is curved in a reverse direction to that of member F to conform to the contour of the chin. When the gag is in position, the member or bearing-plate F bears directly against the back or nape of the neck, while the opposite member G rests fairly against the chin of the patient. To secure the parts in position, a locking device is employed. The form illustrated has been found very efficient in use as well as simple of operation.

The tubular members D are slotted at their outer ends upon the outer face. A spring-arm H is secured to each of said members D, the forward end of said arm being provided with a beveled nose I, which passes down through the slot and engages with the teeth C, formed on the bow. Normally the nose is in engagement with the teeth; but as the parts are moved together the beveled nose rides over the teeth and engages them successively, so that the parts cannot be separated after having been once pushed together. In order to release the locking member from engagement with the bow, each tubular member D is provided with a rotatable sleeve or collar J, which has formed upon it a cam-surface or eccentric K, so that when the sleeve is turned by manipulation of the projecting handle or arm L, formed integral therewith, the cam-surface K is brought under the end of spring arm or lever H and withdraws the nose I from engagement with the teeth, thereby permitting the parts to be readily separated.

It is manifest, of course, that other forms of locking device may be employed in connection with the gag, and I do not desire to limit myself to the particular form shown and described. It is also manifest that by making the bearing plates or members F and G removable various forms of bearing-plates to suit the requirements of any particular case may be used. If found necessary, the bearing-plates may be covered with some soft yielding material, though the smooth metallic face, curved as shown, has been found very satisfactory in practice.

In Fig. 5 a slightly-modified form of bow is shown. It is to be noted that instead of curving outwardly away from the arms B to quite a distance the central portion of the bow (designated by M) stands closer to the arms, thereby shortening the device to that extent. This bow may be used in place of bow A when the other bow is too long and leaves too much of the arm projecting beyond the tubes D when the parts are brought to position.

From the foregoing description the use and operation of the gag are manifest. As noted at the outset, it leaves the field of operation entirely free from obstruction. It can do no injury to the teeth or to the gums, and there is no danger whatsoever of its being swallowed. It is easily adjusted and disengaged, cannot slip out of place, and with the two forms of bow, as above set forth, can be made to fit any patient.

It is to be noted that with the appliance as herein shown and described there are only two points of bearing—to wit, on the nape of the neck and the chin. This is important in that there is no pressure brought to bear upon the muscles and veins at the side of the neck, a matter of serious moment.

Having thus described my invention, what I claim is—

1. An instrument of the character described, comprising two members adjustably secured to each other; means for securing said members in their adjusted position; and bearing-plates carried by said members, substantially as and for the purpose described.

2. An instrument of the character described, comprising a bow having outwardly-extending arms; teeth formed thereon; a second member comprising a cross-bar carrying tubular extensions in line with said toothed arms; and means for securing the toothed arms in position within said tubular extensions.

3. An instrument of the character described, comprising a bow having outwardly-extending arms; teeth formed thereon; a second member comprising a cross-bar carrying tubular extensions in line with said toothed arms; means for securing the toothed arms in position within said tubular extensions; and bearing-plates carried by said bow and the cross connection.

4. In an instrument of the character described, the combination of a bow having outwardly-extending arms provided with teeth; a cross bar or member; tubular extensions carried by said cross-bar in line with the arms of the bow; a spring-arm attached to each of said tubular extensions and carrying at its outer end a nose engaging with the teeth upon the arms; and a rotary eccentric sleeve carried by each of said tubular extensions, said sleeve serving when rotated to elevate the spring-arm and release the nose from the teeth, substantially as and for the purpose described.

5. In an instrument of the character described, the combination of a bow having outwardly-extending arms provided with teeth; a cross bar or member; tubular extensions carried by said cross-bar in line with the arms of the bow; a spring-arm attached to each of said tubular extensions and carrying at its outer end a nose engaging with the teeth upon the arms; a rotary eccentric sleeve carried by each of said tubular extensions, said sleeve serving when rotated to elevate the arm and release

the nose from the teeth; and bearing-plates carried by the bow and the cross-bar.

6. An instrument of the character described, comprising a non-yielding structure adjustable about the lower portion of the head of the patient, the effective points of bearing thereof being upon the chin and the nape of the neck.

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

MORRIS I. SCHAMBERG.

Witnesses:

GEORGE F. DEISER,
ALLEN M. STEARNE.