

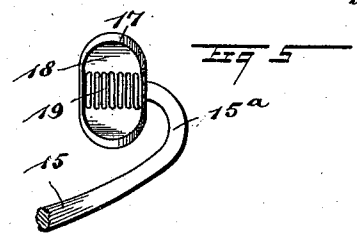
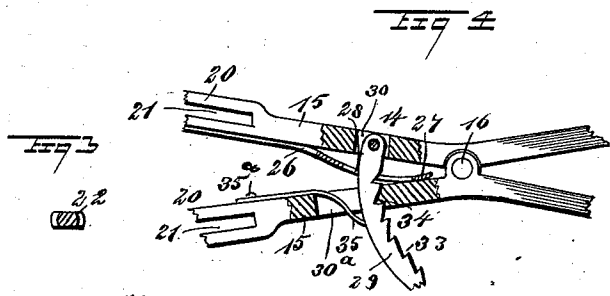
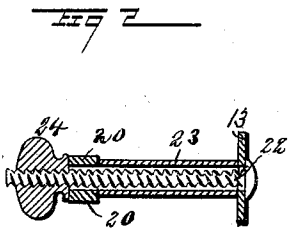
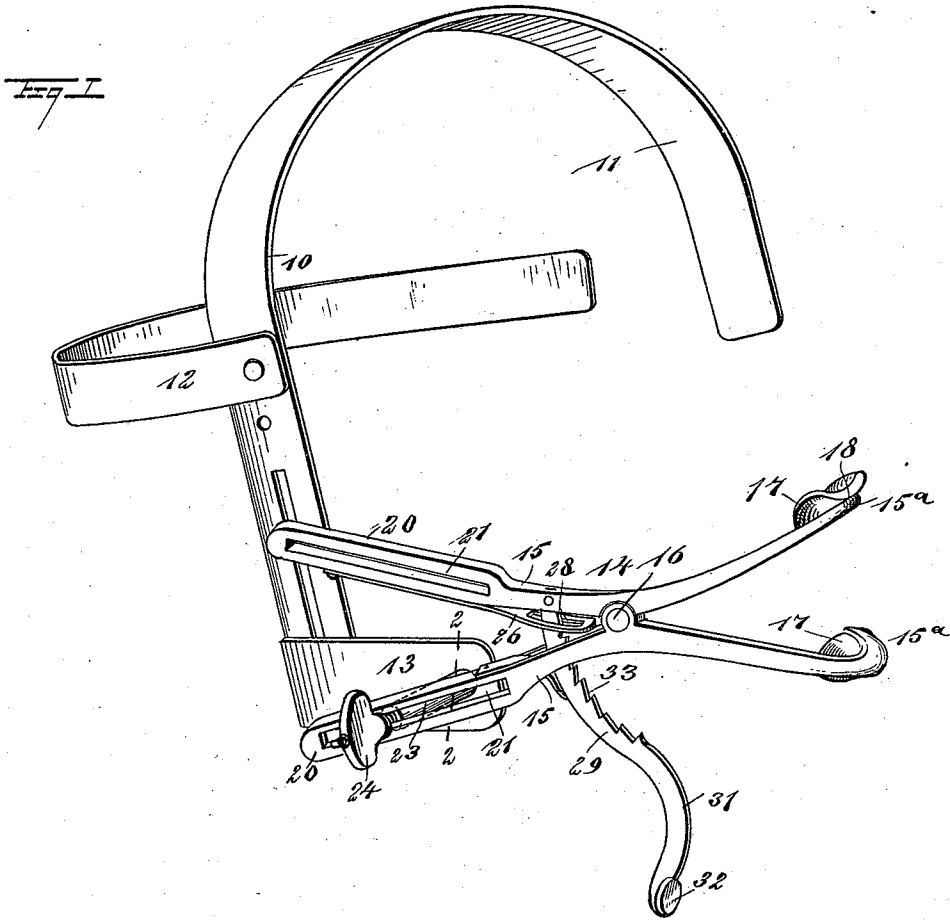
(No Model.)

H. M. CASEBEER.

MOUTH HOLDING APPARATUS FOR DENTISTS AND SURGEONS.

No. 485,609.

Patented Nov. 8, 1892.



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HOWARD M. CASEBEER, OF LINCOLN, NEBRASKA.

MOUTH-HOLDING APPARATUS FOR DENTISTS AND SURGEONS.

SPECIFICATION forming part of Letters Patent No. 485,609, dated November 8, 1892.

Application filed March 18, 1892. Serial No. 425,385. (No model.)

To all whom it may concern:

Be it known that I, HOWARD M. CASEBEER, of Lincoln, in the county of Lancaster and State of Nebraska, have invented a new and Improved Mouth-Holding Apparatus, of which the following is a full, clear, and exact description.

My invention relates to improvements in surgical instruments and appliances for surgical operations on the throat and mouth, and especially to appliances which are adapted for use in dental surgery.

It is well known that while a dentist is operating upon the teeth of a patient it is a difficult matter to get the patient to hold his mouth wide open, and it is also well understood that when anæsthetics are administered in dental operations or other surgical work the patient will sometimes close his mouth tightly and then be choked to death by the tongue, blood, or other matter in the mouth, or at least in such a case the teeth are liable to injury in prying the mouth open.

The object of my invention is to produce a simple and easy apparatus which may be conveniently applied to the head of a patient and which will hold the mouth open to any desired extent, thus providing for easy respiration and also guarding against the accidental closure of the mouth. This, it will be seen, insures the comfort of the patient, facilitates the work of the operator, and avoids any liability of the patient's biting the operator.

To this end my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

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

Figure 1 is a perspective view of the complete apparatus. Fig. 2 is a cross-section through one of the holder-handles on the line 2 2 in Fig. 1. Fig. 3 is a cross-section of the adjusting-screw. Fig. 4 is a broken detail longitudinal view of the holder-handles and the mechanism for holding them at any desired distance apart, and Fig. 5 is a broken detail plan view of one of the mouthpieces.

The apparatus is provided with a main band or support 10, which is preferably of

spring material, one side being adapted to extend vertically along the face and head of a patient and the top portion 11 being curved, so as to rest upon the patient's head. The band 10 has a curved forwardly-extending band 12 pivoted to it near the upper end, and this band is adapted to fit upon the forehead of the patient or upon the back of the head, according as the mouth-holder is to be applied to the right or left side of the face, and thus form a brace for the main support. It is usually applied to the back of the head. At the lower end of the main band 10 is a forwardly-extending arm 13, to which the holder 14 is fixed, and this holder is provided with two similar members 15, which are oppositely curved and which are pivoted together near the center, as shown at 16, the holder being essentially in shape like a pair of pliers or forceps; but it will be seen that the arrangement of the members provides for the moving apart of their forward ends when their rear or handle ends are pressed.

The members 15 are curved apart near their forward or free ends and are bent inward and rearward, as shown at 15^a, so as to come opposite the mouth of the patient, and the free ends of the members terminate in mouthpieces 17, the upper of which opens upward and the lower of which opens downward, the mouthpieces being adapted to fit the teeth and being concaved on their open sides, as shown at 18, so as to fit the mouth, and having corrugations 19 therein to prevent them from slipping on the teeth. These mouthpieces may be made of some comparatively-soft material, if desired, so that there will be no danger of their injuring the teeth.

The rear ends of the members 15 are formed into handles 20, which are provided with slots 21, extending longitudinally through them, and these slots are adapted to receive a screw 22, which carries a sleeve 23 and is provided with a thumb-nut 24, by means of which the sleeve may be bound to the handle. The screw 22 has a rounded head, as shown in Fig. 2, and this is slipped outward through a perforation in the arm 13 and through one of the slots in one of the handles 20, and the sleeve 23 is secured to the handle by means of the nut 24 and by impinging on the handle will hold the latter firmly in place. The

sleeve is placed between the arm 13 and the handle 20 to bring the holder 14 a sufficient distance from the face.

It will be seen that either handle of the holder may be fastened to the arm 13, and the holder may be thus made to fit the face of any patient. The handles 20 of the holder are normally pressed apart by a flat spring 26, which is secured to one handle and presses against the other, the free end 27 of the spring being rounded up, as shown in Fig. 4, to prevent it from catching, and the spring is provided with a slot 28, through which the fastening-blade 29 extends, the fastening-blade being pivoted in a recess 30 of one member and extending through the slot 28 of the spring 26 and through a slot 30^a on the opposite member. The blade 29 is curved, so as to permit the handles to be easily manipulated, and it is bent outward near its free end, as shown at 31, and terminates in a handle 32. The blade is provided with notches 33 on one side, which are adapted to engage a fixed tooth 34 on one member of the handle of the holder, and the blade is normally pressed into engagement with the teeth by a spring 35, one end of which is fixed to one of the handles 20, as shown at 35^a.

The operation of the apparatus is as follows: The band 10, with the holder 14 applied thereto, is secured to the head of a patient with the band 12 around the back of the head and the holder 14 on the left side of the face, or with the band 12 over the forehead and the holder on the right side of the face, as desired. The mouthpieces 17 are inserted between the patient's teeth, and when the patient opens his mouth the handles 20 are compressed, so as to force apart the mouthpieces, and these will hold the mouth open, as the blade 29 and the ratchet mechanism above described serve to lock the holder in position. When the holder is to be released, the operator pushes back the handle 32 of the blade 29 and the spring 26 will immediately force back the handles 20 and close the mouthpieces together, so as to permit the mouth of the patient to be closed. It will be understood that other means may be used for fastening the handles in a fixed position.

It will be seen that the slots in the handles 20 permit the holder to be moved out or in, as desired, so that the device may be made to fit a head of any size.

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

1. An apparatus of the character described,

comprising a support in the form of a spring-clasp adapted to be sprung upon a patient's head and provided with an adjustable holder at one side to extend forwardly along the jaw and provided at the forward ends of its members with mouthpieces to engage the upper and lower teeth, substantially as set forth. 65

2. The combination, with a support adapted to be secured to the patient's head, of a holder formed of members pivoted together between their ends, provided at their forward ends with mouthpieces to engage the upper and lower teeth, and connections for adjustably connecting the rear end of either member with said support. 70

3. An apparatus of the character described, comprising a spring head-band composed of a main curved band adapted to fit a head, a supplemental curved band secured to the main band, a forwardly-extending arm secured to the main band, and a holder carried by the arm and having mouthpieces thereon to fit between the teeth of a patient, substantially as described. 75

4. The combination, with the head-support, of a holder secured thereto, the latter comprising two similar members pivoted centrally together and having curved forward ends carrying concave mouthpieces, substantially as described. 85

5. The combination, with the head-support, of a holder secured thereto, said holder comprising members pivoted centrally together and having curved forward ends terminating in concave corrugated mouthpieces and longitudinally-slotted rear ends, substantially as described. 90

6. The combination, with the head-support, of a holder comprising two similar members having their forward ends terminating in concave mouthpieces and their rear ends in slotted handles and a screw mechanism for fastening the handles to the support, substantially as described. 95

7. In a device of the character described, the holder comprising similar spring-pressed members pivoted together near the center and having their forward ends terminating in concave corrugated mouthpieces and a spring-pressed notched blade pivoted to one member and extending through the other member, the said blade being adapted to engage a tooth on one of the members, substantially as described. 100

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Witnesses:

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