No. 861,356. PATENTED JULY 30, 1907.

R. BUCHFELD.

MOUTH WEDGE.

APPLICATION FILED MAY 18, 1906.

Fig. 1

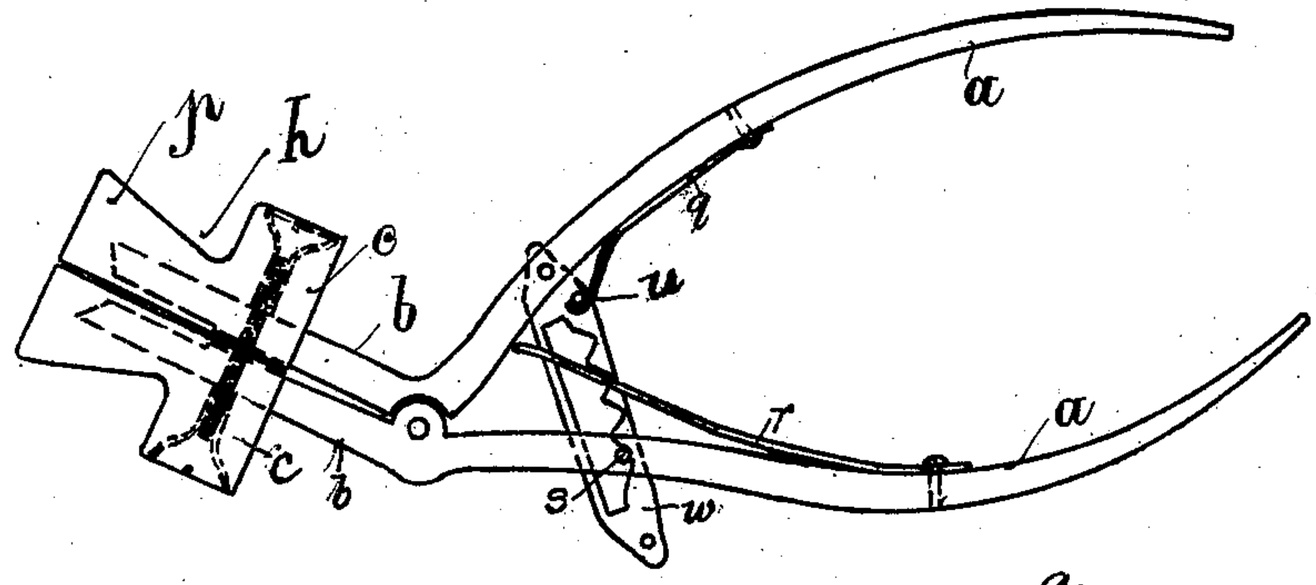


Fig. 2

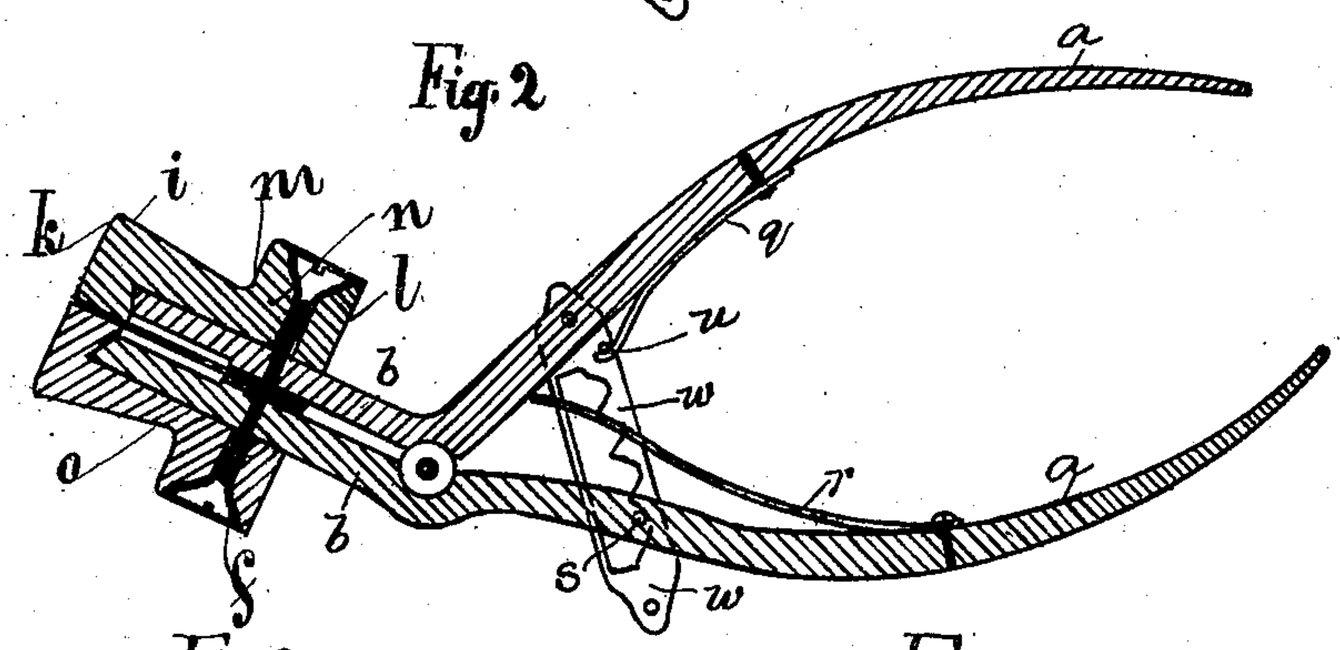


Fig. 3

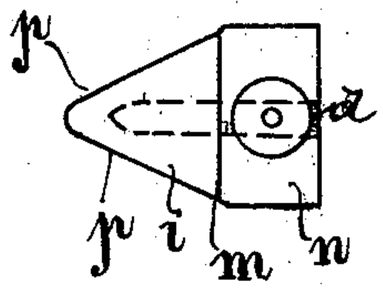


Fig. 4

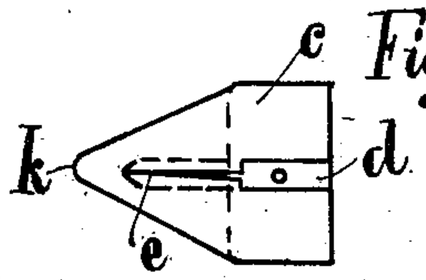
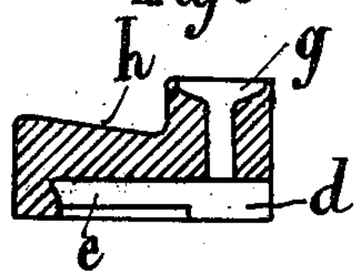


Fig. 5



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MOUTH-WEDGE.

No. 861,356. Specification of Letters Patent. Patented July 30, 1907.

Application filed May 18, 1906. Serial No. 317,623.

To all whom it may concern:

Be it known that I, ROBERT BUCHFELD, a subject of the King of Prussia, German Emperor, and a resident of Elberfeld, Province of the Rhine, Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Mouth-Wedges, of which the following is a specification.

This invention has reference to improvements in mouth-wedges adapted to be gently forced between the teeth of a patient while under the influence of anaesthetics when a dental or surgical operation is to be performed in the mouth.

The novel device consists of a pair of adjustable forceps and two peculiar shaped pieces of rubber or other suitable material. These are to be secured one to each front part of the forceps. The wedge shaped front portion of the device is gently forced between the teeth and the device turned up about 90°. whereby the teeth are separated to a certain extent. To further open the mouth the handles in the rear of the device are operated.

By use of this novel device for opening the mouth no injury can possibly occur to the teeth and a firm and reliable hold is afforded them, part of the device extending over the front surface of the teeth resting on the gum.

The device is illustrated in the accompanying drawing in which:

Figure 1 represents in side elevation a device for opening the mouth which embodies in desirable form the present improvements, Fig. 2 shows a vertical longitudinal section of same, Fig. 3 is a top plan view of the jaws inserted between the teeth, Fig. 4 is a bottom plan view of same, and Fig. 5 shows a jaw in vertical section.

Similar characters of reference denote like parts in all the figures.

In the drawings *a* represents the handles whose front ends *b* are flat shaped. From the point where the handles are hinged or connected they are preferably turned upward so as to be out of the way when the operation is performed. The front pieces *c* made of rubber or other suitable material are provided with channels *d* adapted to receive the flat ends *b* of the handles *a*. The channels or grooves *d* are tubular in the front as shown at *e* in Figs. 4 and 5 so that the flat ends *b* of the handles rest completely within the grooves *d* of the front pieces *c*. In this manner the pieces *c* cannot be bitten through. The firm attachment of the front pieces *c* to the flat ends *b* of the handles is effected by means of screw *f* which are countersunk in the indents or notches *g*. The front pieces *c* have wedge shaped portions *p* which are formed therewith and are inserted between the closed teeth of the patient. Rectangular to the slanting surfaces *i* of these wedge shaped portions *p* the latter are somewhat reduced forming surfaces *h*. The portions *l* of the front pieces *c* extend beyond the wedge shaped portions *p* and form a surface *m* and where the surfaces *h* and *m* meet a slight groove is formed wherein the teeth securely rest and are supported by the portion *n* near same. The surface *m* of the part *l* rests against the front of the teeth and extends somewhat beyond same so that said part *l* forms a substantially lateral support.

In order to permanently set the device when applied, a catch *w* is movably secured to one handle as shown in Figs. 1 and 2. The catch has teeth which engage a pin *s* located on the opposite handle. A small pin *u* is secured to the catch near the handle to which said catch is attached and a spring *q* bears against said pin. A second spring *r* is attached to the opposite handle, it bears against the first named handle shown on top in Figs. 1 and 2.

The device is operated in substantially the following manner: The wedge shaped front portions are gently forced between the closed teeth of the patient, then the device is turned up 90° so that the teeth rest against the surfaces *h* and *m*. Now the handles are pressed together and the pin *s* enters between two teeth of the catch whereby same is permanently set.

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

A mouth-wedge for opening the mouth of patients comprising, a pair of forceps having handles turned upward and flat front parts, a front piece secured to each flat front part of the handle having a wedge shaped front portion somewhat reduced inwardly from the point of the wedge on which the teeth rest, a second portion integral with the wedge shaped portion extending beyond same and forming an inner surface adapted to act as a support for the front of the teeth when the device is turned up, and means for permanently setting the device when applied.

Signed at Barmen, this 7th day of May 1906.

ROBERT BUCHFELD.

Witnesses:

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J. A. RITTERSHAUS.