

W. J. HOPKINS.
DENTAL INSTRUMENT.
APPLICATION FILED APR. 16, 1914.

1,106,815.

Patented Aug. 11, 1914.

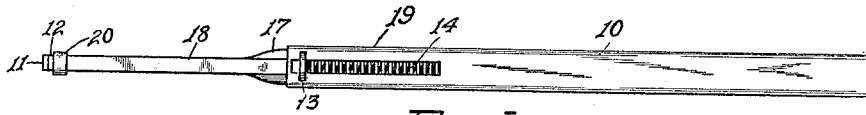


Fig. 1.

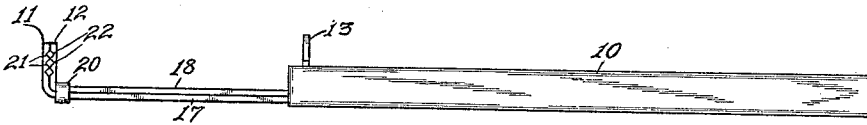


Fig. 2.



Fig. 3.

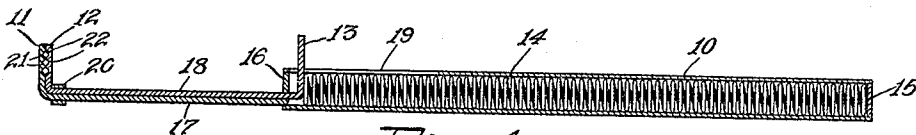


Fig. 4.

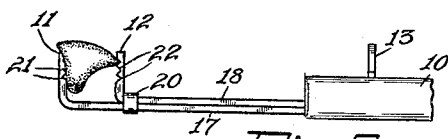


Fig. 5.

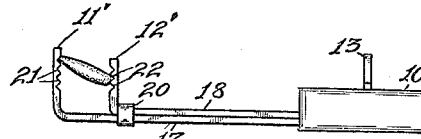


Fig. 7.

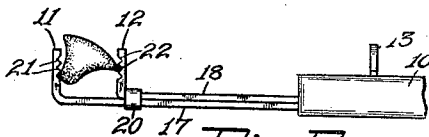


Fig. E.

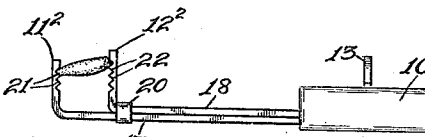


Fig. B.

Witnesses:
Wm. Berghahn.
J. E. Larsen

Inventor:
W. J. Hopkins
By J. Ferguson
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM J. HOPKINS, OF CHICAGO, ILLINOIS.

DENTAL INSTRUMENT.

1,106,815.

Specification of Letters Patent.

Patented Aug. 11, 1914.

Application filed April 16, 1914. Serial No. 832,258.

To all whom it may concern:

Be it known that I, WILLIAM J. HOPKINS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Dental Instruments, of which the following is a specification.

The present invention relates to dental instruments and more particularly to instruments for holding false teeth when being fitted and examined. According to present practice, it is common for the dentist to hold a false tooth between his thumb and finger while positioning it in the mouth of the patient, along side of the natural teeth for the purpose of fit and comparison of shade. This method is clumsy and unsanitary. Because of the difficulty of firmly holding the tooth, it is often dropped to the floor and subjected to other undesirable treatment.

One object of the present invention is to provide an instrument of the class stated, which will firmly grasp the tooth and hold it at any desired angle so that it may be readily positioned in the mouth of the patient for comparison with the other teeth and for determination of its suitability in other respects.

Another object of the invention is to provide an instrument such that when the tooth is held in position in the mouth of the patient, an unobstructed view of the entire labial surface of the tooth may be had, and such that the patient may hold the tooth readily without danger of dropping it, and may then, with the aid of a hand mirror, learn to his or her own satisfaction whether the tooth is of the proper shade or otherwise meets his views.

Another object is to provide an instrument of such length that it will be impossible for the hand to interfere or cast a shadow upon the teeth during the operation of shading.

These several objects are attained by the instrument shown in the accompanying drawing and described in the following detailed description to which reference is particularly invited.

The scope of the invention is set forth in the appended claims.

In the drawing, Figure 1 is a plan view of an instrument constructed in accordance with the present invention; Fig. 2 is a side elevation of the same; Fig. 3 is a bottom

plan view of the same; Fig. 4 is a longitudinal vertical section taken through the center of the instrument; Figs. 5 and 6 illustrate a tooth held in different angular positions between the jaws of the instrument; and Figs. 7 and 8 similarly illustrate a tooth of a different shape also held in different angular positions; Figs. 7 and 8 also illustrate instruments having jaws of different lengths, Fig. 7 showing a longer outer jaw and Fig. 8 a longer inner jaw.

Throughout these views like characters refer to like parts.

Referring to the drawing in detail, 10 designates the tubular handle of the instrument; 11 and 12, its inner and outer jaws; 13, a thumb or finger piece; and 14, a coiled spring located within the handle. In making up the handle 10, a tube of sheet metal of suitable cross section is employed. The rear end of this tube is closed by a head 15 of metal which may be soldered or otherwise secured in place. The opposite end of the tube is closed by a head 16 which is integral with the jaw-supporting member 17. The head 16 is also secured in position in any suitable way, as by soldering. The thumb piece 13 is formed at one end of the jaw-supporting member 18. A portion of the upper face of the handle 10 is provided with a slot 19, and the thumb piece 13 extends forward through this slot into position to be readily engaged by the thumb or finger. The head 16 is also perforated for the passage of the jaw-supporting member 18. A band of metal 20 surrounds the members 17 and 18 and is soldered to one of these members, but not to the other. This band, therefore, forms a guide for the relatively movable parts. The member 17 with its associated head 16 and jaw 11, consists of a struck up part of metal. Likewise the member 18 with its jaw 12 and thumb piece 13, is composed of a single struck up part.

When the parts are punched out, the jaw 12 is passed through the perforation in the head 16, and when the members 17 and 18 and jaws 11 and 12 are nested together, the band 20 is applied. With the parts thus assembled, the head 16 may be soldered into the end of the tubular handle 10. Spring 14 may then be inserted into the handle, and, finally, the head 15 may be secured in position. Of course this order of assembling may be varied. The head 15 may be first secured in position and then after the spring

14 is put in place the head 16 may be finally positioned.

In operation, a pull upon the thumb piece 13 against the spring 14 will pull the jaws 11 and 12 apart. The position of the thumb piece is such that the instrument may be readily held in one hand while the thumb or first finger are used in pressing the thumb piece to open the jaws. The opening movement is limited by the engagement of the thumb piece 13 with the metal at the end of the slot 19. The closing movement is limited by the engagement of the jaws 11 and 12.

For the purpose of holding the teeth in different angular positions, the opposing faces of the jaws are provided with oppositely disposed notches, those in the jaw 11 being designated 21 and those in the jaw 12 being designated 22. These notches engage angular portions of the teeth and thus securely hold them in position. In any particular instance the position may be varied by shifting the engaging portions of the tooth to different notches. Different positions are illustrated in Figs. 5, 6, 7 and 8. In Figs. 5 and 6 one form of tooth is shown, while in Figs. 7 and 8 a different form is shown. It may also be desirable in some instances where the jaw 11' is slightly longer than the inner. This arrangement is shown in Fig. 7, where the jaw 11' is slightly longer than the jaw 12' and is provided with an additional notch. In other instances the reverse arrangement may be desirable. This reverse arrangement is shown in Fig. 8, where the jaw 11' is shorter than the jaw 12', and where the latter has four notches and the former has but three.

Other variations of the instrument will readily suggest themselves to those skilled in this art.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A dental instrument comprising a tubular handle, a fixed member forming an extension of said handle, a movable member extending along said fixed member through an opening in the end of said handle, co-operating jaws on the outer ends of said

members, a thumb or finger piece rigidly secured to said movable member and extending through a longitudinal slot in said handle, and a coiled spring in said handle for forcing said movable member outward to bring said jaws into engagement.

2. A dental instrument comprising a tubular handle, a coiled spring within said handle, parallel members extending from the end of said handle, one of said members being secured to said handle and the other passing through an opening therein, an abutment for said spring on the end of said latter member located within said handle, co-operating jaws at the outer ends of said members, and a guide band for said members adjacent to said jaws.

3. A dental instrument comprising a tubular handle of sheet metal provided with a longitudinally disposed slot in one side, a narrow struck up part having its outer end upturned to form a jaw and its inner end upturned and perforated to form an end head of the handle, a second similar narrow struck up part extending through the perforation in the upturned end of the first struck up part and itself having its outer end upturned to form a jaw and its inner end upturned to form a thumb or finger piece extending through the slot in the handle, a guide band secured to one of said struck up parts and engaging the other near said jaws, and a coiled spring in said handle abutting against the adjacent upturned end of said second struck up part.

4. A dental instrument comprising a handle, a fixed jaw secured to said handle, a co-operating movable jaw slidably mounted relative to said fixed jaw, and a spring tending to move said jaws toward each other, the opposing faces of said jaws being provided with oppositely disposed notches.

In witness whereof I hereunto subscribe my name this 14th day of April, A. D. 1914.

WILLIAM J. HOPKINS.

Witnesses:

HENRY S. SHEDD,
EDWARD A. DICKER.

It is hereby certified that in Letters Patent No. 1,106,815, granted August 11, 1914, upon the application of William J. Hopkins, of Chicago, Illinois, for an improvement in "Dental Instruments," an error appears in the printed specification requiring correction as follows: Page 2, strike out line 29, and insert the syllables and words *stances to have the outer jaw longer than the*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 1st day of September, A. D., 1914.

[SEAL.]

R. F. WHITEHEAD,
Acting Commissioner of Patents.