

Sept. 14, 1926.

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R. S. ROGERS

DENTAL FORCEPS

Filed July 17, 1925

Fig. 1.

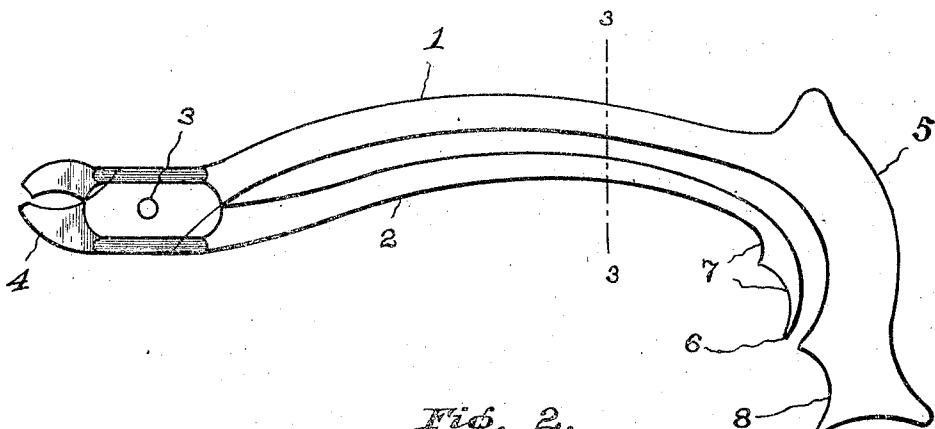


Fig. 2.

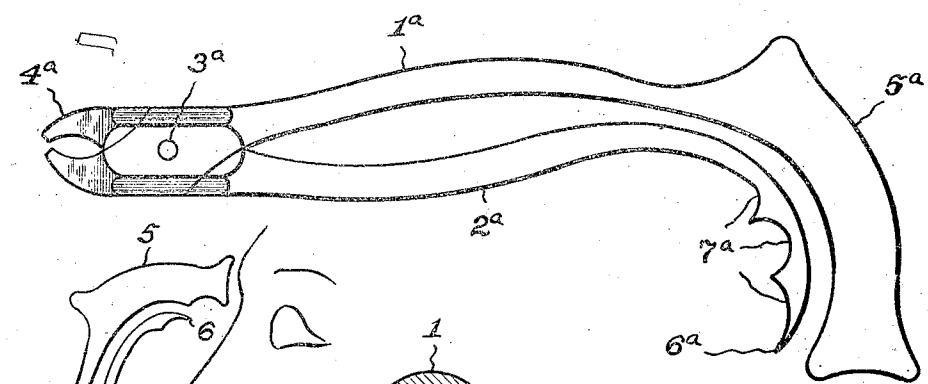


Fig. 3.

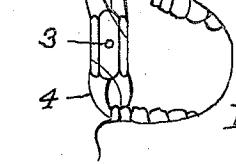


Fig. 4.

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DENTAL FORCEPS.

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The present invention relates to dental tools and more particularly to forceps which embody novel features of construction, whereby they can be used to the best possible advantage for the extraction of teeth.

It has been found that there are certain of the teeth which require a rotary movement for their loosening and removal, and among the objects of the present invention are to provide forceps having handles which are specially constructed to facilitate the obtaining of a grip which will be advantageous for loosening and removing teeth, especially where this rotary motion is desired.

Further objects of the invention are to provide dental forceps which are simple and inexpensive in construction, which can be easily handled, and which provide a balanced tool.

Certain preferred embodiments of the invention are shown on the drawings and described in the specification for illustrative purposes, although it will be understood that many modifications and changes can be made in the details of construction without departing from the spirit of the invention.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a side elevation of a pair of dental forceps which are constructed in accordance with the invention.

Figure 2 is a similar view showing a slight modification, and

Figure 3 is an enlarged transverse sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a diagrammatic view on a reduced scale showing the manner of using the forceps for extracting teeth.

Corresponding and like parts are referred to in the following description and indicated on all of the views of the drawings by like reference characters.

Referring to Figure 1 of the drawings, the numerals 1 and 2 designate a pair of handles which are pivotally connected at 3 and provided with jaws 4 which are suitably shaped to obtain a firm grip on a tooth. These jaws may be of any suitable or usual configuration and no claim to novelty is based thereon. The handle 1 terminates at the rear or free end thereof in a laterally extending hand hold 5, which is curved and shaped to fit the palm of the hand, being similar to the grip

of a pistol. The handle 2 has a substantially spaced and parallel relation to the handle 1, and terminates in a laterally extending finger piece 6 which has the same general direction as the hand hold 2 but is spaced therefrom.

The finger piece 6 may have one or more finger receiving notches or depressions 7, depending upon the number of fingers which are intended to be used for engaging the finger piece. As shown on Figure 1, the finger piece 6 has two of the notches 7 and a portion of the handle 5 which extends beyond the finger piece is provided upon the inner side thereof with a notch 8.

The handle 1 constitutes what may be termed a master handle, and the force applied for loosening and extracting the tooth is applied to this handle, the other handle having merely a sufficient amount of force applied thereto to maintain the proper grip upon the tooth. In using the tool the hand hold 5 is received within the palm of the hand and gripped in much the same manner as the handle of a pistol. The forefinger extends around the hand hold and along the handle 1, being received within a seat or depression 9 in the lower side thereof. In a similar manner the thumb of the hand extends around the hand hold on the opposite side thereof and along the handle 2, being received within a depression 10 formed in the top of the handle. The depressions 9 and 10 are shown quite clearly by Figure 3, and the handles 1 and 2 are symmetrically shaped, having corresponding depressions 9 and 10 on opposite sides thereof so that they can be used interchangeably with either the right hand or the left hand. The respective handles are thus engaged by the thumb and forefinger, so that pressure can be applied to the handles by the thumb and forefinger for moving the handles apart to open the jaws. One or more of the fingers engage the finger piece 6 and pull the finger piece toward the hand hold with a sufficient force to cause the jaws 4 to grip the tooth to be extracted.

The curvature of the handles facilitates the use of the tool. On Figure 4 the forceps are shown in the position assumed when pulling one of the front lower teeth, and it will be observed that the curvature of the handles provides a clearance space for the nose and features. In a similar manner when the forceps are used for pulling one of the upper front teeth the curvature of

the handles will provide a clearance space for the chin. The handle 5 is firmly grasped and the force used for rotating and pulling the tooth is applied thereto; and it will be obvious that owing to the lateral projection of the hand-hold from the handle 1, the rotary motion can be very readily imparted to the tooth. The handles can be used with various forms of jaws and the needs of a dentist can be taken care of with a few variations. The construction of this instrument with handles whose forward portions have an upper bulge or curve makes it possible to remove roots and on single rooted teeth from either jaw without interference with the features of the face. When operating on the upper jaw the curved handles nicely clear the lower teeth, lip and chin, and when operating on the lower jaw the curved handles nicely clear the upper teeth, lip and chin. This construction of the handles is a great improvement on the old style forceps. Usually the handles are of the same size and configuration so that the pressure of the grip falls equally upon them, with the result that in applying a sufficient amount of force to obtain the rotary motion the pressure of the jaws frequently became so great as to crush the root of the tooth. In these old style forceps it is difficult to obtain the rotary motion and a firm grip is necessary for that purpose. With the present construction one handle or the master handle is used for applying the force necessary for loosening and extracting the tooth, while the other or supplemental handle receives the pressure for gripping the tooth and just a sufficient amount of pressure to firmly grip the tooth without crushing the same can be readily maintained. At the same time the necessary rotary and longitudinal force in a direct line with the longitudinal axis of the tooth or root can be readily applied to the tooth or root for extracting the same.

A slight modification is shown by Figure 2, in which the handles 1^a and 2^a are pivoted at 3^a and provided with jaws 4^a as previously described. The handles themselves however, are curved in a different manner, so that the complete device has a different contour. The handle 1^a terminates in a laterally disposed hand-hold 5^a and the handle 2^a terminates in a complementary finger piece 6^a. The hand-hold and finger piece have the same relation to the handles as in the previous construction, although in this modified form of the invention the finger piece is provided with three finger receiving notches 7^a and extends substantially the full length of the hand-hold. The handles are grasped exactly as previously described, although the finger piece is engaged by a larger number of the fingers.

The two forms of the invention are substantially the same, although one operator

may prefer one form of the tool, whereas another operator would prefer the other or even a different form of the tool. Many other modifications can be made in the details of construction and the configuration can be modified to conform to the ideas of any particular operator.

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

1. Dental pliers comprising pivoted handles provided with opposed jaws, a pistol grip projecting laterally from the free end of one handle, and a complementary finger piece projecting laterally from the free end of the other handle in the same direction as the hand hold and having a spaced relation to the inner side thereof.

2. Dental pliers comprising pivoted handles provided with opposed tooth gripping jaws, a pistol grip projecting laterally from the free end of one of the handles, and a complementary finger piece rigid with the free end of the other handle, said handles being provided in the sides thereof with longitudinally extending finger receiving depressions which provide means for opening the jaws.

3. Dental pliers comprising pivoted handles provided with opposed tooth gripping jaws, a pistol grip projecting laterally from the free end of one handle, and a complementary finger piece rigid with the other handle and projecting laterally from the free end thereof in a spaced relation to the hand hold, and provided with finger receiving notches.

4. Dental pliers comprising pivoted handles provided with opposed tooth gripping jaws, a pistol grip projecting laterally from the free end of one handle, and a complementary finger piece rigid with the other handle and projecting laterally from the free end thereof in a spaced relation to the hand hold, said finger piece being provided with finger receiving notches and the handles being provided in the sides thereof with longitudinally extending finger receiving depressions which provide means for opening the jaws.

5. Dental pliers comprising pivoted handles provided with opposed tooth gripping jaws, a pistol grip projecting laterally from the free end of one handle, and a complementary finger piece at the free end of the other handle and rigid therewith, the handles being provided upon the inner faces thereof with opposed finger receiving depressions for receiving pressure to open the jaws while pressure upon the finger piece tends to close the jaws.

6. Dental pliers comprising elongated handles, a pivotal connection at the forward end of the handles, opposed tooth gripping jaws carried by the pivoted ends of the

handles, said elongated handles being both curved longitudinally in the same direction, a pistol grip projecting laterally from the free end of one of the handles in the direction of the concave side of the handles, whereby a clearance space is provided for the nose or chin, and a finger piece projecting from the free end of the other handle in a complementary relation to the finger grip.

7. Dental pliers comprising elongated handles, a pivotal connection between the forward ends of the handles, opposed tooth gripping jaws carried by the pivoted ends of the handles, a pistol grip projecting laterally from the free end of one of the handles, and a finger piece projecting laterally from the free end of the other handle in a complementary relation to the pistol grip, the elongated handles being formed in the sides thereof with longitudinally extending finger receiving grooves, whereby pressure

can be readily applied to the handles for opening the jaws, pressure on the finger piece serving to close the jaws.

8. Dental pliers comprising elongated handles, a pivotal connection between the handles at the forward end thereof, opposed tooth gripping jaws carried by the pivoted ends of the handles, said handles being both curved longitudinally in the same direction, a pistol grip projecting laterally from the free end of one of the handles in the direction of the concave side of the curve thereof, whereby a clearance space is provided for the nose or chin when the pliers are in operation, and a finger piece projecting from the other handle in a complementary relation to the pistol grip, the handles being provided on the inner faces thereof with longitudinally extending fingers receiving depressions.

In testimony whereof I affix my signature.
ROY STEELE ROGERS.