

(No Model.)

F. L. PLATT.
DENTAL MOUTH MIRROR.

No. 548,817.

Patented Oct. 29, 1895.

Fig. 1.

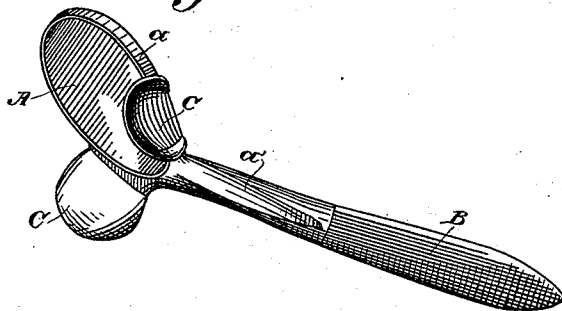


Fig. 2.

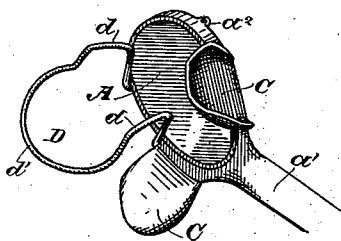


Fig. 3.

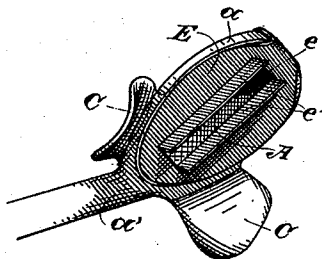
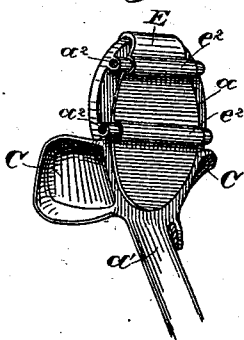


Fig. 4.



Witnesses,
J. H. Brown
H. F. Aschbeck

Inventor,
Frank L. Platt
By Denny & Co
attys

UNITED STATES PATENT OFFICE.

FRANK L. PLATT, OF SAN FRANCISCO, CALIFORNIA.

DENTAL MOUTH-MIRROR.

SPECIFICATION forming part of Letters Patent No. 548,817, dated October 29, 1895.

Application filed December 11, 1894. Serial No. 531,503. (No model.)

To all whom it may concern:

Be it known that I, FRANK L. PLATT, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Dental Mouth-Mirrors; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of mirrors used by dentists for examining the teeth and affording convenient observation in operating, said mirrors being commonly known as "dental mouth-mirrors."

My invention consists in a handled mirror provided on each side with a wing or flange adapted to hold the lips apart and to retract or hold the cheek away from the molar teeth. The shape of the mirror and handle, the relative positions of the two, the shape and location of the wings or flanges, a readily adjustable and removable guard for protecting the face of mirror from the stone in grinding crowns, and an easily-applicable guard for the tongue are additional features of my invention and will all be hereinafter fully described.

The object of my invention is to provide a dental mouth-mirror capable of holding the lips apart, holding the cheek away from the molar teeth, retaining a napkin in the cheek and on the tongue to assist in keeping the teeth dry, acting as a shield to the lips and cheek to prevent their being wounded by the use of other instruments, and keeping the tongue away, said mirror being so bent with respect to its handle as to avoid any interference by the hand with the full and free transmission to and reflection of light from its surface when in use, and being also provided with a guard for its protection against injury from the corundum-wheel.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my dental mouth-mirror. Fig. 2 is a view showing the application of the tongue-guard D. Fig. 3 is a view showing the application of the shield E. Fig. 4 is a view of the reverse side of Fig. 3.

The mirror A is preferably, though not necessarily, an oval or oblong one, either plain or concave, and mounted in a suitable frame α ,

the shank α' of which is preferably broad and flat and is fitted with a handle B.

The mirror-frame is so bent with relation to its shank and handle that the surface of the mirror meets the plane of the shank and handle if extended at an acute angle, therein differing from the ordinary mouth-mirror, in which the surface of the glass meets the handle at an obtuse angle. This difference, it will be well at this point to state, results in the advantage in favor of an instrument bent as my mirror is to the plane of the handle of so completely throwing the hand of the operator over to one side of the mouth when the instrument is inserted between the cheek and the molars as to avoid any interference with the full and free passage of light to and from the mirror, whereas with the ordinary mouth-mirror the hand of the operator is necessarily thrown over in line with and directly in front of the mouth, so that the light in the oral cavity is obstructed and diminished.

Springing from the sides of the mirror-frame and projecting forwardly therefrom, preferably, though not necessarily, in divergent planes, are the wings or flanges C C, one on each side. The back surfaces of these are preferably, though not necessarily, hollowed out slightly or fashioned to better fit the lip-surfaces with which they come in contact. These wings or flanges are best located near the base of the mirror-frame about at its junction with the shank, so that the main portion of the somewhat elongated mirror may project sufficiently to enter the mouth far enough while the wings or flanges still engage and hold apart the lips.

When the instrument is inserted in the patient's mouth, the wings or flanges hold the lips separated, and this, together with the side pressure of the operator's hand, causes a retraction of the cheek, so that the outer surfaces of the molars are fully exposed in the reflecting-surface, and both lips and cheek can be so held away from the teeth for any desired length of time, even though the operator release his hold on the instrument, which will remain in place by the pressure of the lips, and thus the teeth may be kept dry for a proper time, especially when, as is intended, the napkin is used behind the mirror against the cheek. This wide separation of the lips

and cheek from the teeth avoids the liability of injury to either from other instruments.

When it is desired to hold the tongue down, I attach the tongue-guard D. This consists of a frame, preferably a wire one, shaped as shown at d , to bend or arch over the teeth and to have its inner end at d' press down upon the tongue. This guard may be secured to the mirror in any suitable manner, preferably by a removable connection, so that it may be used or not, as desired. Such a connection, and the one I deem the best, consists of the small sockets or tubes a^2 on the back of the mirror-frame, into which slip the ends of the guard D. A napkin placed upon the tongue will be securely held down by the guard.

When the mouth-mirror is used in certain positions during the operation of grinding crowns, it is frequently a difficult matter to avoid injuring it by contact with the corundum-wheel. To avoid this danger, I provide the shield E. This consists of a plate adapted to lie over the mirror and provided with a central aperture e , bounded by side flanges e' , which latter will receive the accidental contact of the grinding-wheel, while the aperture, which is sufficiently large for the purpose, will permit a proper view of the tooth in the reflecting-surface exposed through it. This shield may be attached to the instrument in any suitable manner, preferably by a removable connection, and for this purpose I make it a double leaf, of springy material, of approximately the shape of the mirror. The back leaf lies on the back of the mirror-frame, and to insure its retention in place, in addition to the holding power of its springy nature, I make transverse grooves e^2 in the back leaf, which spring over the socket-tubes a^2 on the back of the mirror-frame.

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

1. A dental mouth mirror having wings or flanges adapted to hold the lips apart, said wings or flanges being distinct from each other and projecting, one from each side, of the mirror frame.

2. In combination with a dental mouth mirror, a guard extending therefrom and adapted to lie upon the tongue to hold the latter away, said guard being bent in its length, whereby

it arches over the teeth, to permit the mirror to be inserted between the cheek and the buccal surfaces of the teeth.

3. In combination with a dental mouth mirror, a guard extending therefrom over the teeth and adapted to lie upon the tongue, and a connection between said guard and the mirror adapting the former to be secured to either side edge of the latter.

4. In combination with a dental mouth mirror, a guard secured thereto, consisting of an open frame, arching over the teeth, and lying upon the tongue, to hold the latter away.

5. In combination with a dental mouth mirror having the tubes or sockets on its back, the tongue guard frame having its end removably fitted in the tubes or sockets, and its body passing over the teeth and lying on the tongue to hold the latter away.

6. In combination with a dental mouth mirror, a shield plate fitted to its face and having an aperture exposing a portion of said face, said aperture being bounded by raised flanges, to guard against contact with the mirror face.

7. In combination with a dental mouth mirror, the shield therefor, consisting of a folded or doubled spring plate, adapted to be removably fitted over the mirror, the front leaf of said plate having an aperture bounded by raised flanges.

8. In combination with a dental mouth mirror having on the back of its mirror frame ribs or elevations, such as are formed by the tubes a^2 , the shield consisting of a folded or doubled spring plate, having on the inner surface of its back leaf, grooves to fit over and engage the ribs a^2 , and in its front leaf an aperture bounded by raised flanges.

9. In combination with a dental mouth mirror, having projecting from each side of its frame a wing or flange, adapted to hold the lips apart, a guard secured to said mirror frame and extending therefrom to and upon the tongue to hold the latter away, said guard being bent in its length whereby it arches over the teeth.

In witness whereof I have hereunto set my hand.

FRANK L. PLATT.

Witnesses:

S. H. NOURSE,
H. F. ASCHECK.