

S. DIAMANT.
ADENOTOME.

APPLICATION FILED OCT. 17, 1919.

1,339,692.

Patented May 11, 1920.

Fig. 1.

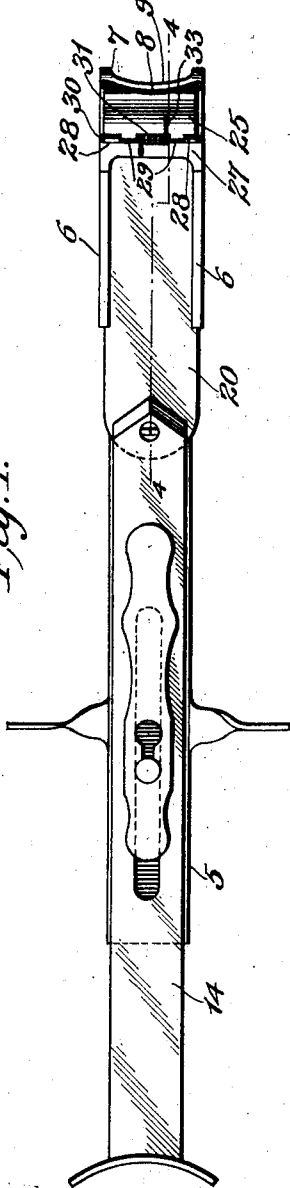


Fig. 4.

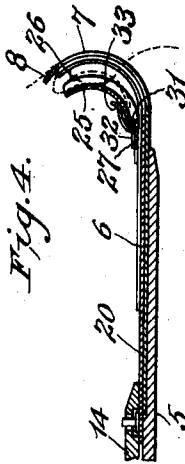


Fig. 2.



Fig. 3.

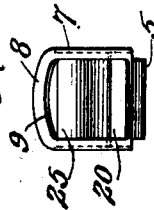


Fig. 6.

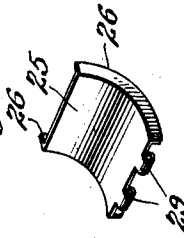
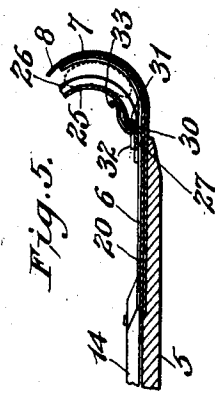


Fig. 5.



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UNITED STATES PATENT OFFICE.

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ADENOTOME.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, SIDNEY DIAMANT, a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Adenotomes, of which the following is a specification.

This invention relates to adenotomes, or instruments for removing adenoids, and has for its object to provide certain improvements in an instrument of the character shown and described in my prior pending application for patent Serial No. 286,726, filed April 1, 1919.

The particular object of the present improvements is to provide means mounted upon the body of the instrument which will effectually prevent the uvula from coming into the path of movement of the slidable cutting blade of the instrument and which is capable of a relative yielding movement to clampingly hold the severed adenoid while the instrument is removed from the mouth.

Briefly considered, the present improvement contemplates the provision of a yieldingly movable guard member hingedly mounted upon the body of the instrument and normally disposed in substantially concentric relation to the operating head thereof, said member having side flanges and operating in conjunction with the movable cutting blade to exert a positive holding pressure upon the severed adenoid entering between the operating head and guard and thereby insure its removal with the instrument.

It is a further general object of my invention to provide an adenotome of the improved character above referred to which consists of relatively few parts of simple form, reliable and efficient in practical operation and capable of manufacture at relatively small cost on a quantity production basis.

With the above and other objects, the invention consists in the improved combination, construction and relative arrangement of the several parts as will be hereinafter more fully described, illustrated in the accompanying drawing, and subsequently incorporated in the subjoined claims.

In the drawing wherein I have illustrated one practical embodiment of the in-

vention and in which similar reference characters designate corresponding parts throughout the several views,

Figure 1 is a plan view of an instrument constructed in accordance with the present improvements;

Fig. 2 is a fragmentary side elevation showing the movable guard member in its normal position;

Fig. 3 is an end elevation of the head of the instrument;

Fig. 4 is a detail longitudinal section taken on the line 4-4 of Fig. 1 and showing the sliding cutting blade in its retracted position;

Fig. 5 is a similar view showing the flexible sliding blade in its projected position after the adenoid tissue has been completely severed from the vault of the mouth; and

Fig. 6 is a detail perspective view of the guard member.

The instrument as in the construction disclosed in my prior application, includes a rigid metal body bar 5 upon which a rigid steel bar 14 is mounted for relative sliding movement. To one end of this slidable bar, the flexible steel cutting blade 20 is detachably connected, the edges of said blade being slidably engaged in the guide flanges 6 formed on the opposite lateral sides of the body bar 5. These guides extend upon the edges of the curved head 7 which terminates in a transversely disposed cutting blade 8 connecting the guides to each other and having a lower outwardly facing curved cutting edge 9. The means for connecting the flexible steel blade 20 to the bar 14, and the means for detachably latching this bar in its operative position upon the body bar 5, is fully described in my prior application to which reference may be had for further details.

In the prior construction, the head 7 of the instrument is provided on its inner side with a fixed guard of skeletonized construction. It is desirable in instruments of this character that the operating head shall occupy a minimum of space in the mouth of the patient and to this end, I have eliminated the skeletonized guard, and in the present improvement provide in lieu thereof, a relatively movable guard member 25. This guard member as herein shown, consists of a thin plate of steel curved in substantially concentric relation to the curved

head 7. This plate is provided at its opposite side edges with the longitudinal flanges 26 which, in the normal position of the guard, rest against the concave sides of the guide flanges 6, thereby spacing the guard plate from the slidable cutting blade 20 moving in said guides.

At the inner ends of the curved portions of the guides 6, a transverse bridge plate 27 is welded at its ends upon said guides. This bridge plate on one edge is provided with spaced hinge knuckles 28. Similar spaced hinge knuckles 29 are formed upon one end of the guard plate 25 and are adapted to be positioned between the spaced knuckles 28 on the bridge plate. A pintle 30 is inserted through these aligned hinge knuckles, the ends of said pintle being preferably swaged whereby the same is permanently retained in place. Upon the medial portion of this pintle, a coil spring 31 is arranged, one end of the spring 32 extending from one side of the pintle and bearing upon the bridge plate 27, while the other end 33 of this spring extends in a relatively opposite direction and is engaged against the concave face of the guard plate 25. Thus, it will be seen that the spring 31 normally acts to urge the guard plate toward the inner side of the curved operating head until the side flanges 26 thereof are engaged with the guides 6.

In the operation of the instrument as above described, it is first used in the manner of the ordinary curette, the vault of the naso-pharynx being tightly hugged by the head of the instrument to permit the blade 8 during the curetting operation, to make a close cut. The adenoid tissue is not always completely severed by this curetting operation. In such case, complete severance of the tissue is effected by the operation of the slidable cutting blade 20. During the action of the curetting blade 8 or of the sliding blade 20, the tissue protruding through the head of the instrument exerts a pressure against the convex face of the guard plate 25 and forces said guard plate away from the instrument head against the forwardly urging action of the spring 31 as shown in Fig. 4 of the drawing. The spring-pressed guard plate will therefore exert a clamping action against the tissue which forces itself through the instrument head so that the tissue will be securely clamped and held by the flanges 26 of the guard plate against the opposite side portions of the instrument head. However, when the severed part is relatively small, the blade 20 may be operated so as to extend partially upon the curved head of the instrument and afford a bearing wall against which the tissue is urged by the clamping pressure of the guard plate thereupon. The tissue will also be effectively held against lateral displacement

between the guard and the head of the instrument by means of the side flanges 26 upon the guard plate. In case the tissue is not completely severed by the curetting operation but remains connected to the vault wall of the mouth by a pedicle of tissue, the flexible cutting blade is projected forwardly to the limit of its movement so as to thereby cut through this pedicle of tissue and completely sever the adenoid or other part, while it is positively clamped against shifting movement by means of the guard plate in the manner above explained. The completely severed adenoid is thus securely held or retained between the guard 25 and the end of the cutting blade 20 owing to the action of the spring 31 tending to urge the guard to its normal position upon the instrument head. Therefore, when the instrument is removed from the mouth, the adenoid will also be removed therewith. By then manually moving the guard 25, the adenoid may be removed from the head of the instrument and disposed of. It will thus be appreciated that I have made a very material improvement in the former instrument construction in that I have provided a very efficient and serviceable guard which will obviate the danger of cutting or injuring the uvula in the operation of the instrument, while at the same time, this guard means will effectually clamp and hold the severed adenoid tissue. It is to be noted that as the guard member in its normal position is disposed substantially in concentric relation to the head of the instrument and is at all times positioned in close relation thereto, it will occupy a minimum of space in the mouth of the patient.

From the foregoing description, the manner of operation and several advantages of my present invention will be clearly understood. By means of a very simple change in the former construction, I have succeeded in materially increasing the utility and serviceability of the instrument and without an appreciable increase in the manufacturing cost thereof. It will be understood that in the improved instrument, I retain all the advantages referred to in my prior application, and likewise secure the additional advantage herein disclosed. I have described and illustrated one embodiment of the improved guard and mounting therefor which has been found very satisfactory in practical use. Nevertheless, it is to be understood that the present improvement may also be exemplified in various other forms and constructions, and I accordingly reserve the privilege of adopting all such legitimate changes as may be fairly embodied within the spirit and scope of the invention as claimed.

I claim:

1. In an instrument of the character de- 130

scribed, a body bar having a curved head provided with a cutting edge, a blade slidably mounted upon said body bar and having a cutting edge opposed to the cutting edge on said head, and a guard member mounted upon said body bar and yieldingly movable with relation thereto by the pressure of the severed tissue against said member.

2. In an instrument of the character described, a body bar having a curved head provided with a cutting edge, a blade slidably mounted upon said body bar and having a cutting edge opposed to the cutting edge on said head, and guard means movably mounted upon said body bar and subject to relative displacement by pressure of the severed tissue, said guard means cooperating with said cutting blade to hold the severed tissue.

3. In an instrument of the character described, a body bar having a curved head provided with a cutting edge, a blade slidably mounted upon said body bar and having a cutting edge opposed to the cutting edge on said head, and a guard member hinged upon said body bar and movable with relation thereto under pressure of the severed tissue.

4. In an instrument of the character described, a body bar having a curved head provided with a cutting edge, a blade slidably mounted upon said body bar and having a cutting edge opposed to the cutting edge on said head, and a guard member hinged upon said body bar and normally disposed in substantially concentric relation to the curved head, said guard member being moved relative to the instrument head by pressure of the severed tissue.

5. In an instrument of the character described, a body bar having a curved head provided with a cutting edge, a blade slidably mounted upon said body bar and having a cutting edge opposed to the cutting

edge on said head, a guard member hinged upon said body bar and normally disposed in substantially concentric relation to the curved head, said guard member being moved relative to the instrument head by pressure of the severed tissue, and a spring acting to urge said guard member to its normal position and thereby clampingly hold the severed tissue between the guard and the cutting blade.

6. In an instrument of the character described, a body bar having a curved head provided with a cutting edge, a blade slidably mounted upon said body bar and having a cutting edge opposed to the cutting edge on said head, a guard member hingedly mounted upon said body bar in opposed relation to the inner side of the instrument head and having side flanges projecting toward the instrument head, said guard member being moved by pressure of the severed tissue, and a spring resisting such relative movement of the guard member to thereby clampingly hold the severed tissue between the guard member and the cutting blade.

7. In an instrument of the character described, a body bar having a curved head provided with a cutting edge, a blade slidably mounted upon said body bar and having a cutting edge opposed to the cutting edge on said head, spaced hinge knuckles on the body bar, a curved guard plate having hinge knuckles on one end positioned between the knuckles on the body bar, a pintle connecting the hinge knuckles to each other, and a spring on said pintle acting to yieldingly hold the guard plate in a normal position, said plate being moved by pressure of the severed tissue whereby said plate exerts a clamping action upon the tissue to hold the same against displacement.

In testimony that I claim the foregoing as my invention, I have signed my name hereunder.

SIDNEY DIAMANT.