Dec. 8, 1925. 1,564,356

I. D. KELLEY, JR

ADENOTOME

Filed June 4, 1923

Fig. 1.

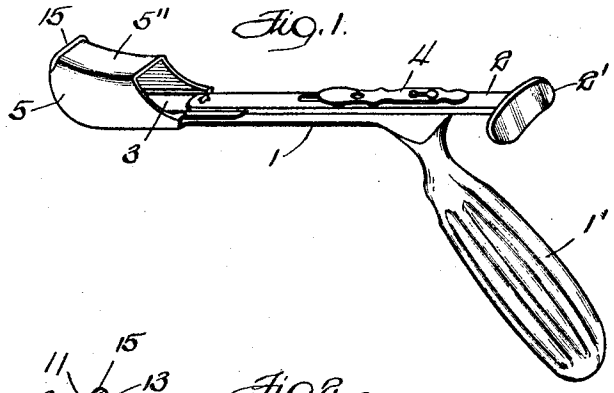


Fig. 2.

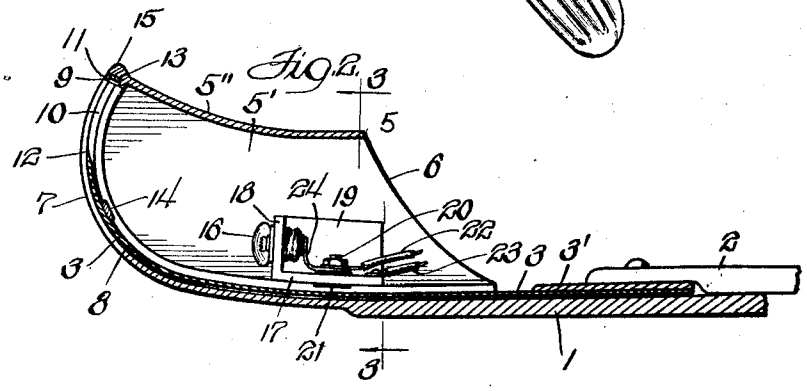


Fig. 3.

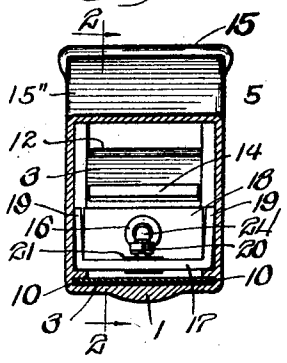
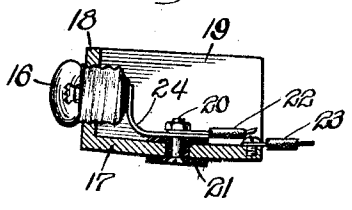


Fig. 4.



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UNITED STATES PATENT OFFICE.

ISAAC DEE KELLEY, JR., OF ST. LOUIS, MISSOURI.

ADENOTOME.

Application filed June 4, 1923. Serial No. 643,264.

To all whom it may concern:

Be it known that I, ISAAC DEE KELLEY, Jr., a citizen of the United States of America, and a resident of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and useful Improvement in Adenotomes, of which the following is a specification.

This invention relates to surgical instruments and especially to adenotomes. The removal of adenoids has admittedly been more or less a "blind" operation, due to the handicap the surgeon has been under in using curettes and forceps without always having the operative field in full view. Heretofore instruments of this general character were subject to certain limitations which this invention overcomes, as will be pointed out. For instance, the operator in using the instrument could not directly observe the adenoid or other part operated upon, nor could the active part of the blade be seen.

The main objects of the invention are to provide an improved form of adenotome; to provide for direct visual observation of the cutting operation as it progresses; to provide against improper bulging of the blade or outward bending transversely of the cutting edge in use; to provide for ready control, lifting and pulling forward of the soft palate or other tissues and parts that may be in the way; and to provide also for illuminating the work and the interior of the instrument, in use.

An illustrative embodiment of this invention is shown by the accompanying drawings, in which:

Figure 1 is a perspective view of the improved adenotome.

Figure 2 is an enlarged longitudinal section of the forward or operating end of the instrument on the line 2—2 of Figure 4.

Figure 3 is a cross section on the line 3—3 of Figure 2.

Figure 4 is a greatly enlarged vertical axial section through the lamp holder, and shows the lamp in place.

In the construction shown in the drawings, the instrument comprises mainly a frame 1 having a handle 1′, an operating push member 2 slidably mounted on said frame, a blade 3 detachably connected to said push member, and a lock lever 4 adapted for ready manipulation to secure the push member 2 in operative position.

The said frame 1 is long and narrow and is provided with an oblong tubular housing 5 at its front end. The chamber 5′ is open for direct visual observation therethrough and extends from the inclined rear opening 6 to the convexly curved front opening 7. The opening 7 extends in a nearly vertical position from the lower edge 8 to the upper edge 9. The sides of this opening 7 are provided with guide grooves 10 for the flexible blade 3. The grooves 10 extend back along the bottom part of frame 1 to retain and guide the full length of said blade, which is ribbon-like in form. The upper edge 9 of aperture 7 is provided with a groove 11 to receive the cutting edge 12 when the blade is pushed forward, and a copper strip 13 is set in said groove 11 against which the edge 12 may seat when thrust forward sufficiently.

In order to prevent outward buckling or bending of the cutting edge 12 of the flexible steel blade as it is thrust forward forceably along the guide grooves 10, the blade is reinforced at 14, for which purpose a stiffening plate or cleat is attached as by welding or soldering.

The forward end of frame 1 is peculiarly designed and adapted to hold the soft palate in a raised and retracted or forwardly urged position when the instrument is in use. For this purpose, the upper forward corner is provided with a ridge 15 adapted to reach up behind the palate and so pull it forward somewhat. The sides of the part 5, being closed, may serve effectually to push the adjacent body members or tissues laterally where this is necessary or desirable.

In order to better illuminate the work and if desired to supplement a headlight worn by the operator, a lighting unit may be provided, which may well be removable whenever its use is not required. For this purpose, a lamp 16 is mounted in the frame 17. Said frame has an upstanding forward wall 18, which is centrally apertured and threaded to receive the base of said lamp. Frame 17 also has a pair of side walls 19 preferably of resilient character and arranged to spring outward against the side walls of the main frame part 5 to hold the frame 17 in place demountably. In the base of said frame 17 is mounted a terminal screw 20, which is held by the insulator 21 out of electrical contact with the frame 17. Current supply leads 22 and 23 are connected to said screw 20 and frame 17 respectively. A con-

tact member 24 projects upward from screw 20 to receive the central contact member of lamp 16.

As will be seen, this improved instrument makes use of an enclosed container or hood with its distal end open for observation. The upwardly disposed rib 15 and the upper portion 5'' of the hood acts as a palate lifter and pharyngeal retractor, and the flexible blade 3 operated by the thumb plunger 2 cuts from below upward. The adenoid when severed is held in the part 5.

The operation of the instrument is as follows:—

Under local or general anesthesia the mouth is widely opened with a gag, the instrument is inserted in the mouth, the posterior portion of the tongue is depressed with the under surface of the hood until above the upper surface is seen the free margin of the soft palate, the instrument is gently pushed back to the posterior wall and the distal or hood end is raised into the naso-pharynx, the small ridge on the edge of the upper hood surface automatically engaging the soft palate border forcing it forward on the surface of the hood out of harm's way. The distal end of the instrument is then further raised into the nasal vault until the adenoid is seen to be completely surrounded when looking through the hood and in full vision of the operator. The instrument is then pressed firmly against the posterior wall, the razor-sharp blade pushed home by means of the thumb plate and the adenoid is completely severed from its attachment, the operator observing the blade cutting through the adenoid mass. The instrument is removed with adenoid in the receptacle.

Although but one specific embodiment of this invention is herein shown and described, it is to be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of the invention as defined by the following claims.

I claim:

1. An adenotome, the distal end of which on its upper side is provided with an oblong hood rectangular in cross section and adapted to deflect, hold off, and protect tissues which are not to be disturbed, which hood is open at both ends and is adapted to leave the operative field in full view in use.

2. An adenotome comprising an oblong frame, a flexible blade in the form of a steel ribbon mounted slidably thereon, and manual means to forcibly urge said blade endwise for effective use, said frame having a handle and a forwardly extending body, the distal part of which is tubular and open throughout to permit direct vision therethrough, and said frame being formed with lateral guides to direct the sharp front edge of said blade across the outer end of said tubular part when driven forward in use.

3. An adenotome including an oblong frame with a handle on one end and its distal end being formed with a tubular open-ended hood on its upper side, the upper forward tip being curved upwardly somewhat and provided with a terminal ridge to reach behind and elevate the soft palate when the instrument is inserted in the mouth for use, said hood being adapted to provide for ready visual observation of the operative field.

4. An adenotome including an oblong frame with a handle on one end and its distal end being formed with a rectangular tubular open-ended hood on its upper side, the upper forward tip being curved upwardly somewhat to reach behind and elevate the soft palate when the instrument is inserted in the mouth for use, the sides and bottom being adapted to push aside neighboring parts and tissues, and said hood being adapted to provide for visual observation of the operative field as the instrument is set in place and as it is operated.

5. An adenotome having a tubular open-ended hood formed on the upper side of its distal end and an illuminating device mounted in said hood to facilitate visual observation of the operative field when the instrument is in use.

6. An adenotome having on the upper side of its distal end a tubular open-ended hood, which is rectangular in cross section, in combination with a demountable lighting attachment adapted to fit in said hood for illuminating the operative field when the instrument is in use, said attachment having resilient side members to engage frictionally against the walls of said hood.

Signed at St. Louis this 31st day of May 1923.

ISAAC DEE KELLEY, JR.