Jan. 22, 1929. 1,699,801

B. B. MONTGOMERY

TONSILLOTOME

Filed March 17, 1928 2 Sheets-Sheet 1

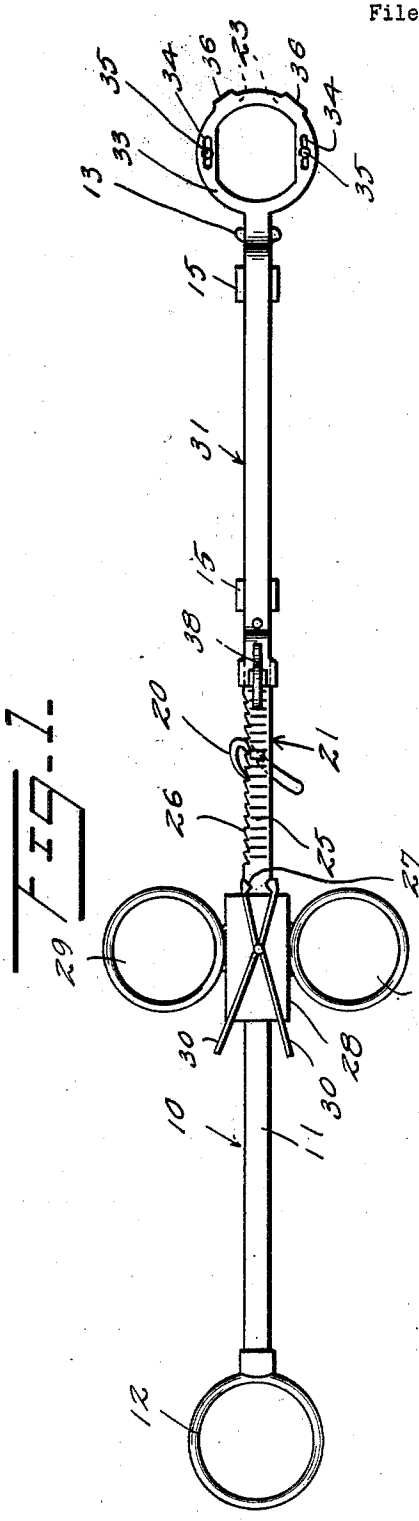


FIG. 1.

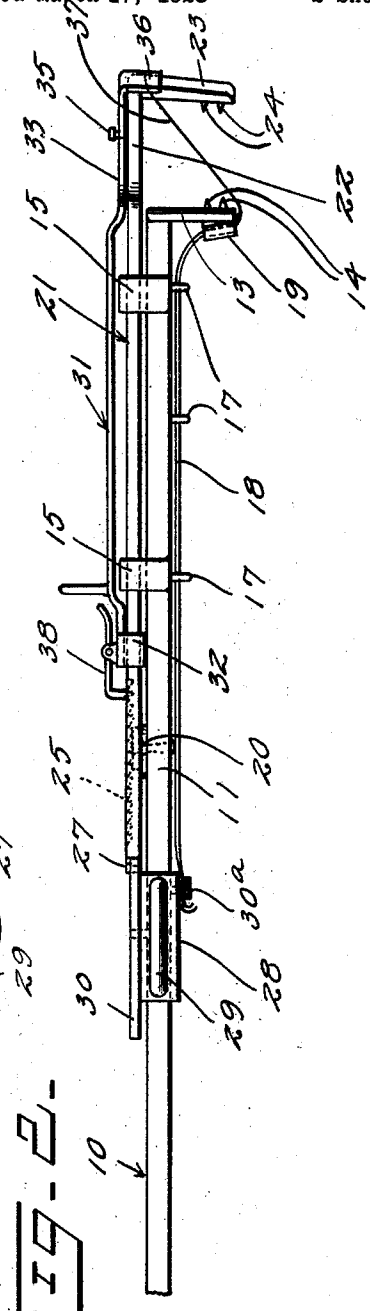


FIG. 2.

Inventor
B. B. Montgomery
By Watson E. Coleman
Attorney

Jan. 22, 1929. 1,699,801

B. B. MONTGOMERY

TONSILLOTOME

Filed March 17, 1928 2 Sheets-Sheet 2

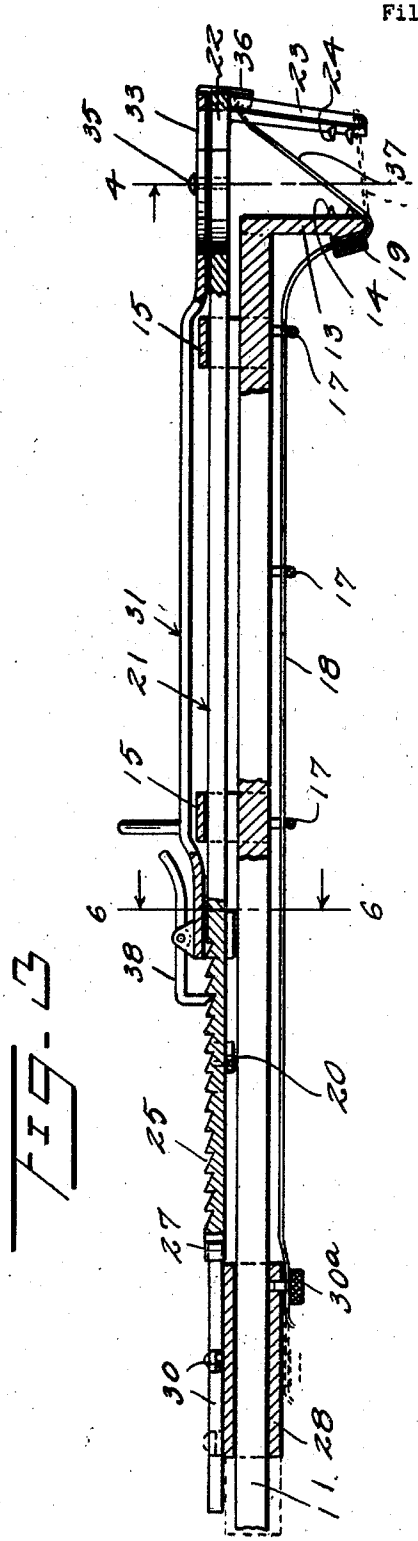


FIG. 3

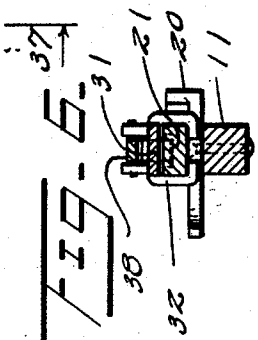


FIG. 5

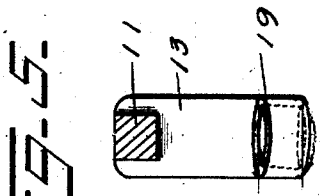


FIG. 5

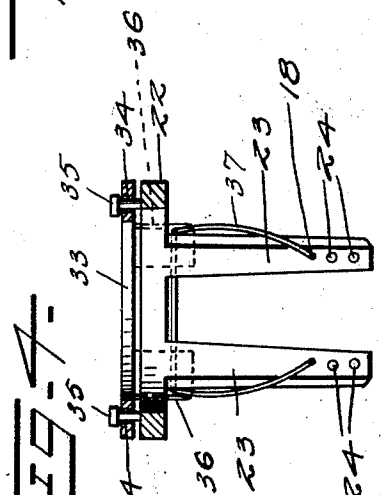


FIG. 4

Inventor
B. B. Montgomery

By Watson E. Coleman
Attorney

Patented Jan. 22, 1929. 1,699,801

UNITED STATES PATENT OFFICE.

BRADLEY B. MONTGOMERY, OF LANCASTER, KENTUCKY.

TONSILLOTOME.

Application filed March 17, 1928. Serial No. 262,413.

This invention relates to tonsillotomes, and more particularly to a combined tonsil clamp and snare for use in tonsil operations.

An important object of the invention is to provide a device of this character which is of such construction that the snare may be accurately guided to the extreme base of the tonsil, thus insuring complete removal thereof.

A further object of the invention is to provide a device of this character so constructed that it may be employed in conjunction with the usual tonsil forceps to be guided thereby, so that accurate engagement of the instrument with the tonsil may be had, even though the vision be obscured by blood or mucus.

A further object of the invention is to provide an instrument of this character which may be controlled with one hand, which will be comparatively simple in its construction and which will be durable and efficient in service.

These and other objects I attain by the construction shown in the accompanying drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention and wherein:—

Figure 1 is a plan view of a tonsillotome constructed in accordance with my invention;

Figure 2 is a side elevation thereof;

Figure 3 is a longitudinal sectional view therethrough, parts being shown in partially operated position, the dotted lines indicating the movement of the snare;

Figure 4 is a section on the line 4—4 of Figure 3;

Figure 5 is a sectional view showing the inner face of the jaw of the stationary bar;

Figure 6 is a section on the line 6—6 of Figure 3.

Referring now more particularly to the drawings, the numeral 10 generally designates the stationary member of the forceps comprising a bar 11 having at one end thereof a ring 12 and at the opposite end thereof an angularly projecting jaw 13, the outer face of which is provided with teeth 14. The bar 11 is provided with guides 15 upon its upper surface for the guidance of the movable members 16 of the clamp and upon its under surface is formed with guides 17 for a snare wire 18. The jaw 13 upon its inner face at its lower or free end is likewise provided with a guide 19 for the passage of the snare wire. Upon the bar is mounted a lever pawl 20.

The movable member of the clamp comprises a bar 21 formed at one end as a ring 22, the under surface of which, at a point remote from the bar, has a pair of jaws 23, the inner faces of which are provided with teeth 24, opposing the toothed surfaces of the jaw 13. The bar 21 is reciprocatable in the guides 15 and at its inner end is formed upon its outer face with a series of ratchet teeth 25, upon a side face with a second series of ratchet teeth 26 adapted to coact with the dog 20 and at its inner end with a pair of notches 27.

Slidable upon the bar 10 is a yoke 28 having finger rings 29. This yoke has pivoted spring-pressed dogs 30 for engagement in the notches 27 of the bar 21, so that this bar may shift with the yoke. This yoke has further mounted thereon at its under surface a clamping screw 30ª by which the ends of the snare wire may be clamped to the yoke.

I additionally provide a snare clamp comprising a bar 31 having at one end a yoke 32 embracing the bar 21 and at its opposite end a ring structure 33 similar to the ring 22 and imposed thereon. The ring 33 is slotted, as at 34, for the passage of guide elements 35 carried by the ring 22 to permit a limited shifting movement of these rings. The ring 33 has jaws 36 opposing the outer end of the ring 22 and adapted to coact therewith to clampingly hold the loop 37 of the snare. The inner end of the bar 31 has a dog 38 for selective engagement in the notches 25.

In preparing the instrument for use, the yoke is connected to the movable bar 21 by engaging the dogs 30 in the notches 27. The movable bars are then shifted to open the jaws to their fullest extent and the snare wire placed in position through the guides 17 and 19. The loop of this snare is passed about the jaws 23 and placed against the outer face of the ring when the clamping bar 31 is adjusted to bring the jaws 36 against the loop and hold it in its adjusted positions. The inner end of the loop is fastened upon the clamping screw 30 of the yoke. With these preparations, the instrument is ready for use. In performing the operation, ordinary tonsil forceps are employed to hold the tonsil while dissection is made around it in the usual manner. The ring 22 is then

placed over the outer end of this forceps and passed thereover until it is engaged with the tonsil.

The jaws 13 and 23 are forced well down around the tonsil after which the tonsil is pulled up gently by the tonsil forceps to pass the tonsil through the ring 22. At this time, the thumb is engaged in the ring 12 while the first and second fingers of the hand are engaged in the rings 29 of the yoke. This yoke is then pulled back, shifting the bar 21 and the ring therewith and causing the jaws 13 and 23 to clamp upon the tonsil. The bar 21 is retained in its retracted position by the lever pawl 20 and in event a satisfactory hold is not obtained at the first attempt, this ratchet may be released to permit the jaws to be opened for a second engagement. After a satisfactory engagement has been obtained, the tonsil will be securely engaged in the clamping jaws. The dogs 30 are then released, permitting independent movement on the part of the yoke 28. The dog 38 is released and the bar 31 shifted forwardly to release the snare wire at the loop. The yoke 28 is then drawn toward the ring 12, moving with it the snare 18. The loop 37 of this snare is guided by the jaws 23 to the base of the tonsil and because of the fact that the guide 19 is arranged at the lower end of the jaw 13, this snare will pass squarely across this base, severing the tonsil which remains secured in the clamp to permit its removal.

It will be obvious from the foregoing that a device of this character is readily manipulatable and provides efficient means for both clamping the tonsil to hold it in the proper position to permit removal thereof and for guiding the snare in its cutting operation.

It will also be obvious that the construction hereinbefore set forth is capable of a certain range of change and modification without materially departing from the spirit of the invention and I accordingly do not limit myself to such specific structure except as hereinafter claimed.

I claim:—

1. In a tonsillotome, a stationary bar, a movable bar carried by the stationary bar, coacting tonsil engaging jaws carried by the inner ends of the stationary and movable bars, a snare guide carried by the lower end of the jaw of the stationary bar, the jaw of the movable bar being constructed to guide a snare loop from the upper to the lower end thereof when traction is applied to the snare.

2. In a tonsillotome, a stationary bar, a movable bar carried by the stationary bar, coacting tonsil engaging jaws carried by the inner ends of the stationary and movable bars, a snare guide carried by the lower end of the jaw of the stationary bar, the jaw of the movable bar being constructed to guide a snare loop from the upper to the lower end thereof when traction is applied to the snare, means shiftable upon the stationary bar for shifting the movable bar, and means for holding the movable bar in adjusted positions.

3. In a tonsillotome, a stationary bar, a movable bar carried by the stationary bar, coacting tonsil engaging jaws carried by the inner ends of the stationary and movable bars, a snare guide carried by the lower end of the jaw of the stationary bar, the jaw of the movable bar being constructed to guide a snare loop from the upper to the lower end thereof when traction is applied to the snare, means shiftable upon the stationary bar for shifting the movable bar, and means for holding the movable bar in adjusted positions, the first named means being disengageable from the movable bar and having means for attaching the outer end of a snare thereto.

4. In a tonsillotome, a stationary bar, a movable bar carried by the stationary bar, coacting tonsil engaging jaws carried by the inner ends of the stationary and movable bars, a snare guide carried by the lower end of the jaw of the stationary bar, the jaw of the movable bar being constructed to guide a snare loop from the upper to the lower end thereof when traction is applied to the snare, one of said bars having an opening for the passage of a tonsil forceps, said opening being disposed between the jaws when the jaws are in the open position.

5. In a tonsillotome, a stationary bar, a movable bar carried by the stationary bar, coacting tonsil engaging jaws carried by the inner ends of the stationary and movable bars, a snare guide carried by the lower end of the jaw of the stationary bar, the jaw of the movable bar being constructed to guide a snare loop from the upper to the lower end thereof when traction is applied to the snare, a yoke shiftable upon the stationary bar and having engagement with the movable bar permitting shifting of the movable bar thereby, means for rendering the last named means inoperative, and means for attaching a snare to said yoke.

6. In a tonsillotome, a stationary bar, a movable bar carried by the stationary bar, coacting tonsil engaging jaws carried by the inner ends of the stationary and movable bars, a snare guide carried by the lower end of the jaw of the stationary bar, the jaw of the movable bar being constructed to guide a snare loop from the upper to the lower end thereof when traction is applied to the snare, and means carried by the movable bar and shiftable thereon for clamping a snare loop to the upper end of the jaw of the movable bar.

7. In a tonsillotome, a stationary bar, a movable bar carried by the stationary bar, coacting tonsil engaging jaws carried by the inner ends of the stationary and movable

bars, a snare guide carried by the lower end of the jaw of the stationary bar, the jaw of the movable bar being constructed to guide a snare loop from the upper to the lower end thereof when traction is applied to the snare, and means carried by the movable bar and shiftable thereon for clamping a snare loop to the upper end of the jaw of the movable bar, the movable bar and said means having aligned openings for the passage of a tonsil forceps, said openings being disposed between the jaws when the jaws are in open position.

8. In a tonsillotome, a stationary bar, a movable bar carried by the stationary bar, coacting tonsil engaging jaws carried by the inner ends of the stationary and movable bars, a snare guide carried by the lower end of the jaw of the stationary bar, the jaw of the movable bar being constructed to guide a snare loop from the upper to the lower end thereof when traction is applied to the snare, and means releasable from the outer end of the movable bar for holding said snare loop against the upper end of the jaw of the movable bar

9. In a tonsillotome, a stationary bar, a movable bar carried by the stationary bar, coacting tonsil engaging jaws carried by the inner ends of the stationary and movable bars, a snare guide carried by the lower end of the jaw of the stationary bar, the jaw of the movable bar being constructed to guide a snare loop from the upper to the lower end thereof when traction is applied to the snare, means carried by the movable bar and shiftable thereon for clamping a snare loop to the upper end of the jaw of the movable bar, means slidable upon the stationary bar and engageable with the movable bar for shifting the movable bar, and means for attaching the outer end of a snare to the last named means

In testimony whereof I hereunto affix my signature.

BRADLEY B. MONTGOMERY.