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F. HASLINGER

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AUTOMATICALLY SUPPORTED DEVICE FOR THE DIRECT EXAMINATION OF THE LARYNX

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Fig. 1.

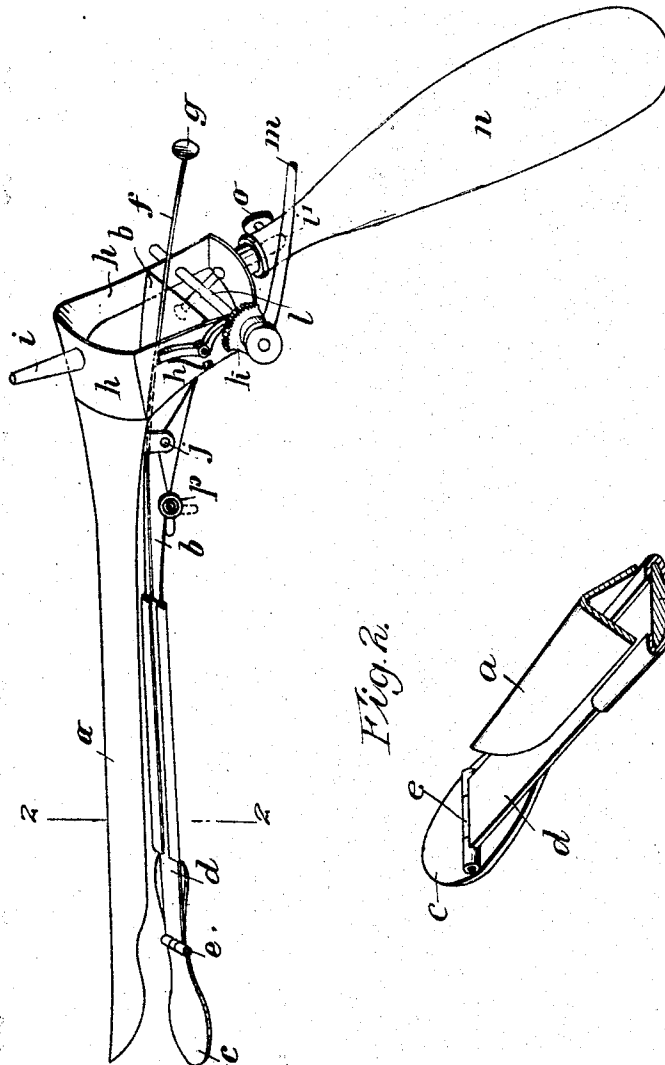
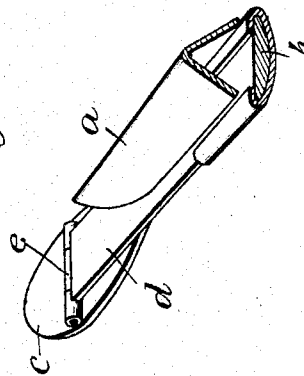


Fig. 2.



Inventor

Franz Haslinger

by *Attorney*

his attorney

UNITED STATES PATENT OFFICE.

FRANZ HASLINGER, OF VIENNA, AUSTRIA.

AUTOMATICALLY-SUPPORTED DEVICE FOR THE DIRECT EXAMINATION OF THE LARYNX.

Application filed August 28, 1923. Serial No. 659,762.

To all whom it may concern:

Be it known that I, FRANZ HASLINGER, a citizen of the Republic of Austria, residing at Vienna, VIII, Lerchenfelderstrasse 120, Austria, have invented certain new and useful Improvements in an Automatically-Supported Device for the Direct Examination of the Larynx, of which the following is a specification.

This invention relates to an automatically supported device for the direct examination of the larynx by means of which the larynx is cleared (laid free) for examination in consequence of the arrangement of scoops introduced into the mouth.

Devices of this kind are already known, which, besides a tongue-scoop, are provided with a rigid support resting upon the operating-table or on the parietes of the chest of the person to be examined. However these known devices have many drawbacks, particularly in view of their complicated construction and difficult handling.

According to the present invention the device essentially comprises two scoops, which are adjustable with respect to each other and are adapted to be fixed at different distances from one another, one of the scoops serving as tongue-scoop and the other scoop being formed as a pharyngeal scoop. The counterpressure required for fixing the pharyngeal scoop is taken up by the posterior wall of the pharynx and by the anterior aspect of the vertebral column.

The pharyngeal scoop is made extensible, and is preferably provided with a longitudinally adjustable member, such as a bar or rail, and at the end of this member is provided an adjustable support adapted to adjust itself to, and rest against, the posterior wall of the pharynx. In a preferred embodiment, this support comprises a shoe pivotally carried at the forward end of the extensible member.

In the accompanying drawings, illustrating by way of example a device embodying the features of the invention,

Fig. 1 is a perspective view of my improved instrument, and

Fig. 2 is a transverse sectional view taken along the line 2—2 of Fig. 1.

The tongue scoop *a* is a trough shaped member, preferably V-shaped in transverse section, and the pharyngeal scoop *b* is a

straight member having its longitudinal edges turned over to form a guide way, the two members being hinged or otherwise pivotally connected to one another by means of pivotal joints *j*. The turned over edges of the scoop *b* receive and guide a sliding bar *d*. An adjustable support, such as a shoe *c*, is movably and adjustably secured to the free end of the bar *d* by means of a hinge *e* disposed substantially midway of the support *c*. A rod *f* is attached to the rear of the bar *d*, and is provided with a knob *g* which may be gripped for the purpose of sliding the bar *d* inwardly and outwardly in the grooves or guideway formed by the edges of the scoop *b*.

The tongue scoop *a* is provided at its rear end with a framelike bracket or bifurcated portion *h* which carries two pins *i* and *i'* at opposite ends thereof for the reception of a removable handle *n*. In the illustrated embodiment, the instrument is in a position for use with a patient reclining on his back. For the purpose of allowing examination of the throat of a patient in sitting position, the handle *n* may be removed from the pin *i'* by unscrewing the nut *o* and it may then be screwed on to the pin *i*, provided at the opposite side of the bracket so that the instrument will be used in an inverted position with the tongue scoop on the bottom. Further, the frame-like bracket *h* is provided with a shaft or spindle *l*, furnished at its free end with a locking device *k*, adapted to be actuated by means of a lever *m*. The locking device may comprise a toothed segment carried by the spindle *l* and a spring-pressed pawl engaging said teeth, the lever *m* being removably attached to the spindle whereby pressure on the lever will rotate the segment, and the pawl will then hold it in the new position.

The spindle *l* is provided near its center with at least one transverse projection, so that when turning the lever *m* and the segment the shaft *l* and the projections secured thereto are also rotated. Thereby the latter will act on the rear end of the pharyngeal scoop *b* and swing the same round the pivots *j*. Thus the pharyngeal scoop can be secured by the locking device in any desired angular position with respect to the tongue-scoop. In order to comfortably operate the locking device from the other side,

e. g. when securing the handle *n* to the pin *i*, the lever *m* may be removed from the shaft *l* and secured to the other end thereof.

Further a screw-nut *p*, provided with a pin or the like, is adjustably mounted on the edge of the pharyngeal scoop *b*. As shown, the pin may be set either parallel or vertical to the pharyngeal scoop by means of the screw-nut. In the dotted (vertical) position the pin serves for supporting the pharyngeal scoop on the upper jaw of a patient in a reclining position.

In operation the device is introduced into the mouth of the person to be examined and the extensible pharyngeal member *d* is extended by pushing on rod *f* until the shoe *c* rests against the posterior wall of the pharynx. Then, a pivotal movement of the tongue-scoop accomplished by means of the locking device and by causing the patient's head to be bent backwardly, will make the larynx directly visible and the larynx will remain so until the locking device is released.

I claim—

1. An instrument for direct examination of the larynx comprising two pivotally connected members adapted to be inserted into a patient's mouth, one thereof being adapted to overlie the tongue, the other thereof being extensible to the posterior wall of the pharynx, whereby separation of the members will make the larynx visible through the mouth, and an adjustable support carried at the end of said extensible member and adapted to rest against said posterior wall.

2. An instrument for direct examination of the larynx, comprising two pivotally connected members adapted to be inserted into a patient's mouth, one of said members constituting a tongue scoop, the other of said members being longitudinally extensible to the posterior wall of the pharynx, whereby relative pivotal movement of the members will make the larynx visible through the mouth, and a shoe pivotally carried by said extensible member and adapted to rest against said posterior wall.

3. An instrument for direct examination of the larynx, comprising two normally parallel and overlying members adapted to be inserted into a patient's mouth and pivotally connected at a point near one of their adjacent ends, one of said members being longitudinally extensible to the posterior wall of the pharynx, an adjustable support carried by said extensible member and adapted to rest against said wall, and means carried by one of said members for pivotally moving the other with respect thereto whereby

the larynx will be made visible through the mouth.

4. An instrument for direct examination of the larynx, comprising two pivotally connected members adapted to be inserted into a patient's mouth, one thereof constituting a tongue scoop and having a bifurcated portion adjacent the pivot point and embracing the rear end of the other member, and means carried by said first named member for pivotally moving the second member whereby the larynx will be made visible through the mouth, said means comprising a spindle carried by and extending across the bifurcated portion and having at least one transverse projection adapted to bear against the rear end of the second member when the spindle is rotated.

5. An instrument for direct examination of the larynx, comprising two pivotally connected members adapted to be inserted into a patient's mouth, one thereof constituting a tongue scoop, the other thereof being extensible to the posterior wall of the pharynx, an adjustable support carried by the extensible member and adapted to rest against said wall, means carried by one of said members and cooperating with the other member for pivotally moving the latter, and means for locking said last named member in any desired position relative to the first.

6. An instrument for direct examination of the larynx, comprising two pivotally connected members adapted to be inserted into a patient's mouth, one thereof constituting a tongue scoop, the other thereof being extensible to the posterior wall of the pharynx, whereby separation of the members will make the larynx visible through the mouth, said extensible member comprising a strip pivotally connected to said tongue scoop and having doubled over edges to form grooves, a longitudinally slidable member in said grooves and having a rearwardly extending control rod, and a shoe pivotally connected to the forward end of the slidable member and adapted to adjust itself to and rest against a point on said posterior wall.

7. In an instrument for direct examination of the larynx, in combination, two pivotally connected members adapted to be inserted into a patient's mouth, one thereof constituting a tongue scoop, the other thereof being extensible to the posterior wall of the pharynx, and an adjustable pin pivotally connected to one edge of the extensible member and adapted to rest against the upper jaw of a patient to steady said member.

In testimony whereof I affix my signature.
DR. FRANZ HASLINGER.