

# ENT INSTRUMENTS

*Edited By Waseem Khan*

# *Head mirror*



*Concave mirror  
Focal length is 8"  
Diameter of concave mirror  
is 4"*

*Uses;  
1) It provide reflected  
light for examination  
of cavities like ear,  
nose, throat*

# *Laryngoscope*



# *Electrical otoscope*



## *Uses;*

- 1) To examine minute perforation in tympanic membrane.*
- 2) In otosclerosis, to see honeycombing of tympanic membrane.*

# *Oesophagoscope*

*Uses;*

*Used for diagnostic or therapeutic oesophagoscopy.*



## *Negus knot tyer*



*Uses;*  
*Helps to carry the liagature knot upto the tip of artery forceps the vessel and tie it.*

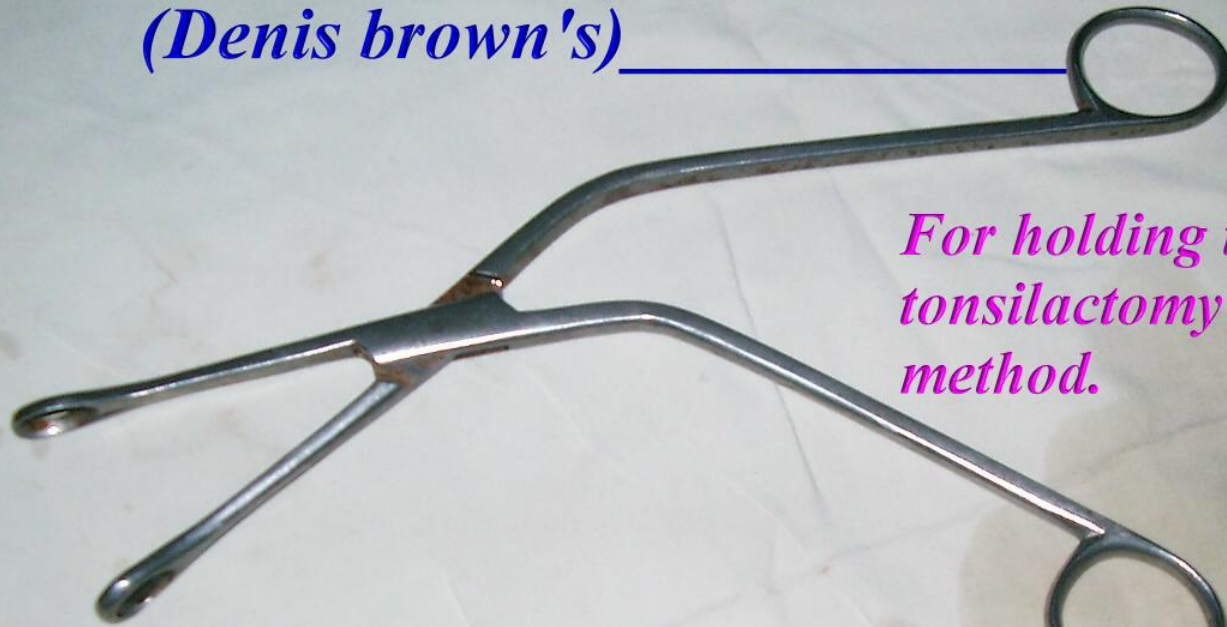
# *Myringotome*



## *Uses;*

*1)Used for incising the tympanic membrane in certain cases of suppurative otitis media*

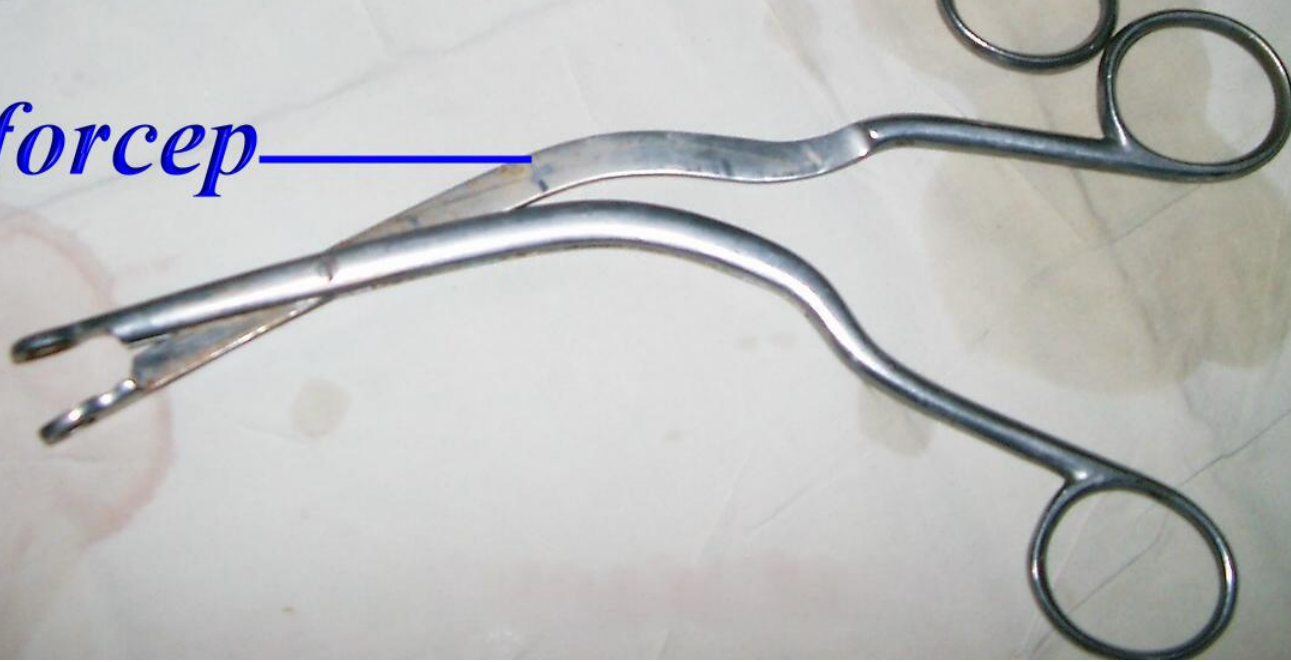
*Tonsill holding forceps  
(Denis brown's)*



*Uses;*

*For holding the tonsill during  
tonsilactomy by dissecting  
method.*

*Luc's forcep*





# *Frer's septal knife*



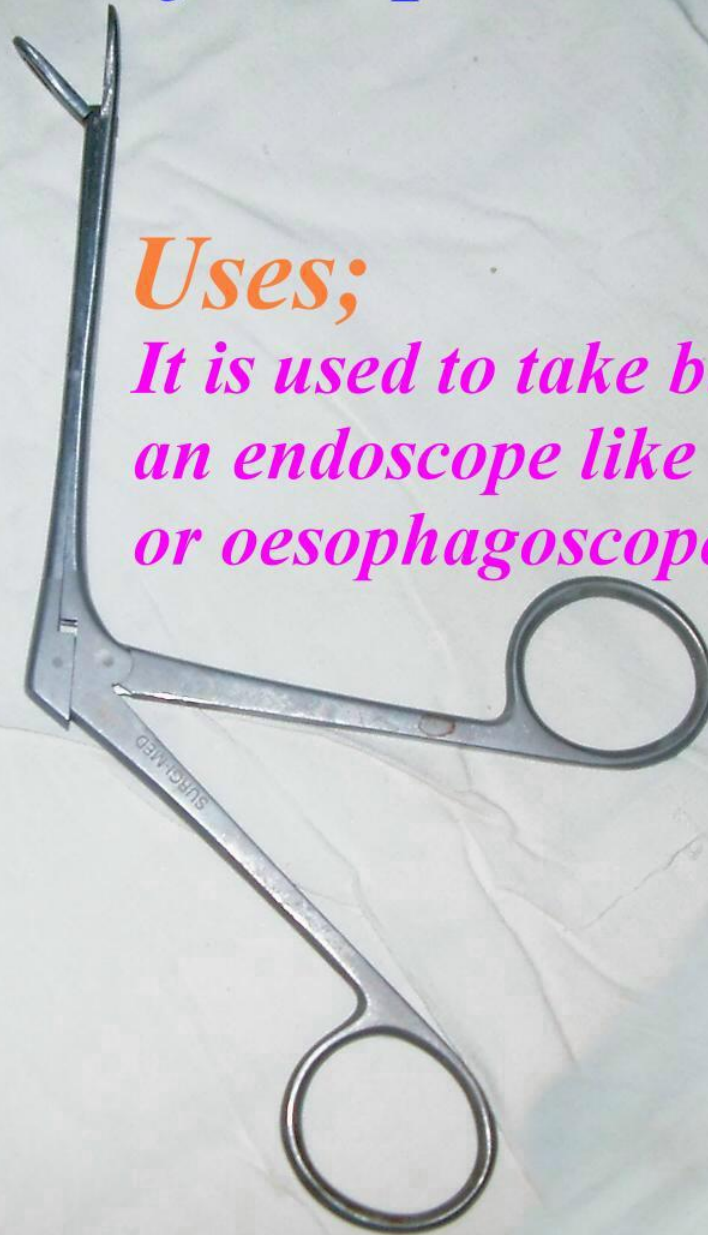
*Uses;*

*It is used to incise the mucosa over the deviated septum.*

# *Crocodile forceps*

## *Uses;*

*It is used to take biopsies through an endoscope like bronchoscope or oesophagoscope*



# *Posterior rhinoscopy mirror*



## *Uses;*

- 1) Posterior free part of nasal septum, and posterior nasal apertures, lower two turbinates and meati*
- 2) The eustachian tube opening and adenoids can be seen*

# *Eve's tonsillar snare*



*Uses;*  
*It is used to crush and cut the lower polar attachment (pedicle) of the tonsil.*

# *Luc's forceps*



## *Uses;*

*1) In SMR.*

*2) For taking biopsy from oral cavity and oropharynx*

*3) For nasal polypectomy*

*4) As a substitute for tonsil holding forceps*

# *Luc's forceps*



## *Uses;*

*1) In SMR.*

*2) For taking biopsy from oral cavity and oropharynx*

*3) For nasal polypectomy*

*4) As a substitute for tonsil holding forceps*

# *Killian's long-bladed nasal speculum*



## *Uses;*

*1)Used in SMR or septoplasty to keep mucoperiosteal flaps away*

## *Jobson's aural probe*



### *Uses;*

- 1) The serrated end is used as a cotton spud for cleaning the ear canal.*
- 2) The ringed end is used to remove loose cerumen from the ear canal.*



# *Indirect laryngoscope*



## *Uses:*

*To see base of tongue,  
vallecula,  
epiglottis,  
vocal cords,  
pyriform fossa  
and other parts of larynx.*

# *Doyen's Mouth gag*



## *Uses;*

- 1) To keep the mouth open for intra oral surgery when re traction of tongue is not required*
- 2) For tongue surgery*

# *Mastoid retractor*



## *Uses;*

*1) It is used in mastoidectomy for retracting skin, subcutaneous tissue and periosteum.*

# *Mallet*

## *Uses;*

- 1) Used for striking on a gouge or a chisel to remove chips of bone*
- 2) It is used during mastoidectomy to open up the mastoid antrum*



# *Magauran's plate*

*Uses;*

*Support the draffin's bipod*



# *Draffin's bipod*

*Uses;*

*Use to vary height of mouth gag*



## *Tilley's harpoon*

### *Uses;*

- 1) For intra nasal antrostomy in the inferior meatus*
- 2) Removal of bones chips*

# *Thudicam's nasal speculum*



## *Uses;*

*It is used to see*

*1) Floor of nasal cavity*

*2) Nasal septum*

*3) Lateral wall of nasal cavity*

*(middle and inferior turbinates  
and meati)*

# *Towel clips*

## *Uses;*

- 1)To fix the towel so that only operative field is exposed*
- 2)To fix the suction tube*
- 3)To hold and retract the cord during hernial repairs*





# *Lack's spatula(Tongue depressor)*

## *Uses;*

- 1)To examin the palantine tonsil and pillars,posteriour pharyngeal wall,uvula and soft palate.*
- 2)To depress the tongue during peritonsillar abscess drainage.*



# Tooth forceps



Uses;

1) To hold the skin during stitching

# *Tonsillar Dissector*



## *Uses;*

- 1) The sharp dissecting end is used to divide the mucosa close to the anterior pillar in order to expose the capsule while the blunt retracting end is used to follow up the exposed capsule*
- 2) for retracting the anterior pillar, to look for any bleeding or any tag*

# *Tonsil dissector and anterior pillar retractor*

## *Uses;*

*One end is used to dissect the tonsil and the other to retract the anterior pillar to inspect the fossa for any bleeding point.*



# Boyle Davis Mouth Gag



TONY

# Boyle Davis Mouth Gag

- Keeps mouth open
- Puts tongue down
  - Uvulopalatopharyngoplasty
  - Nasopharynx
    - Adenoidectomy
    - Huge antrochoanal polyp
    - Rhinosporidiosis
    - Nasopharyngeal angiofibroma
  - Oropharynx
    - Tonsillectomy
    - Elongated styloid process
    - Glossopharyngeal neurectomy



TONY

# Mollison's tonsil dissector & anterior pillar retractor





# Mollison's tonsil dissector & anterior pillar retractor

- Same as Boyle-Davis mouth gag retractor

# eve's tonsillar snare



TONY

# eve's tonsillar snare

- Cut pedicle of tonsil
- To prevent release of thromboplastin



# Mollison's self-retaining hemostatic mastoid retractor

- Mastoid sx to expose cortex
- Tympanoplasty to expose temporalis fascia
- Lateral rhinoplasty



# Laryngeal mirror

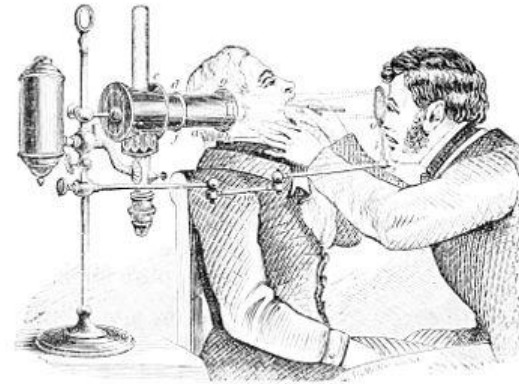


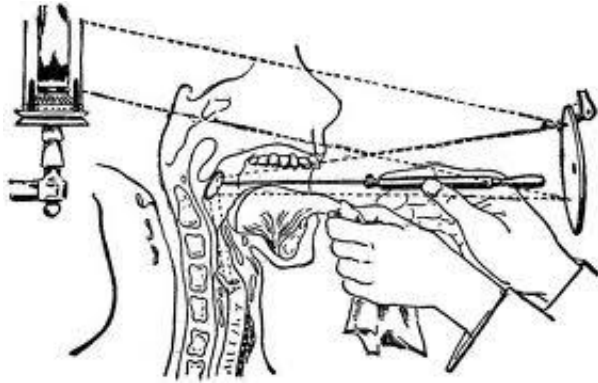
TONY

# Indirect laryngoscopy

In this procedure clinician doesn't see the larynx directly but a mirror image and hence this procedure is known as *Indirect laryngoscopy*.

Bull's eye lamp,  
Head mirror,  
laryngeal mirror,  
spirit lamp,  
gauze square pads

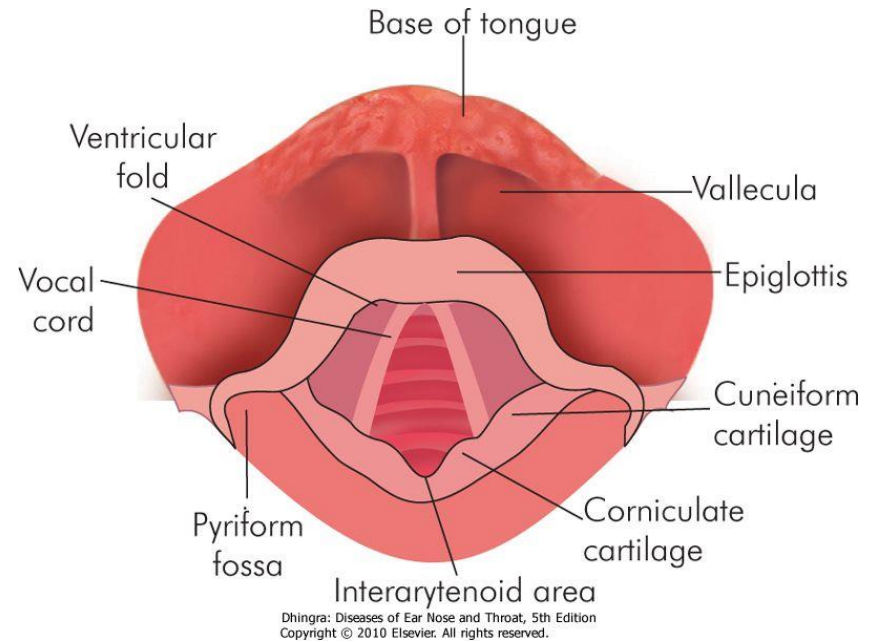




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# Structures seen on indirect laryngoscopy (in order):

- oropharynx
  - Base of the tongue (posterior one-third of the tongue)
  - Vallecula
  - Median and lateral glossoepiglottic folds
- Laryngopharynx
  - Pyriform fossae
  - Post cricoid region
  - Posterior wall
- Larynx
  - Epiglottis
  - Pharyngoepiglottic folds
  - Aryepiglottic folds
  - Arytenoids
  - False vocal cords
  - True vocal cords
  - Tracheal rings





# Structures not visible on indirect laryngoscopy

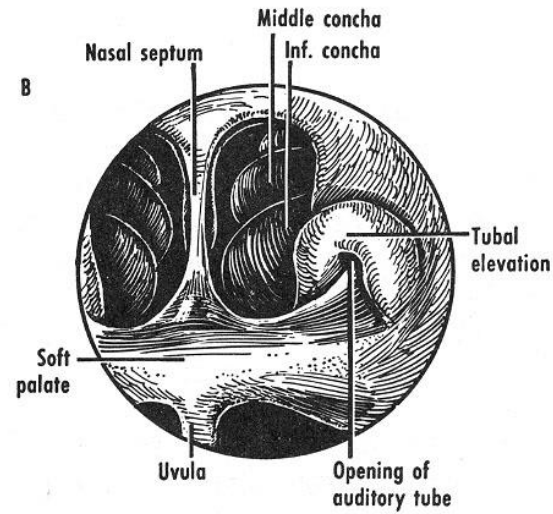
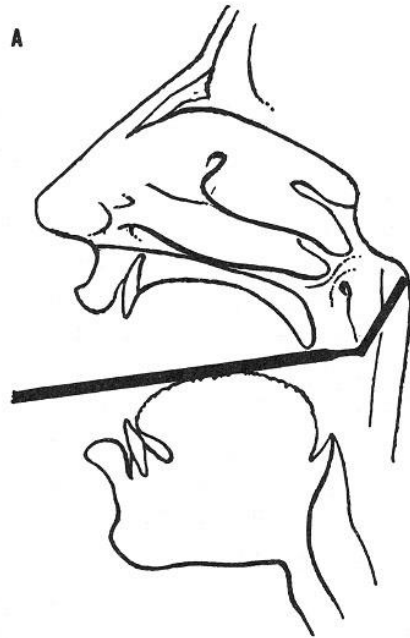
- Laryngeal part of epiglottis
- Apex of piriform fossa
- Vestibule
- Subglottic area
- Posterior cricoid area

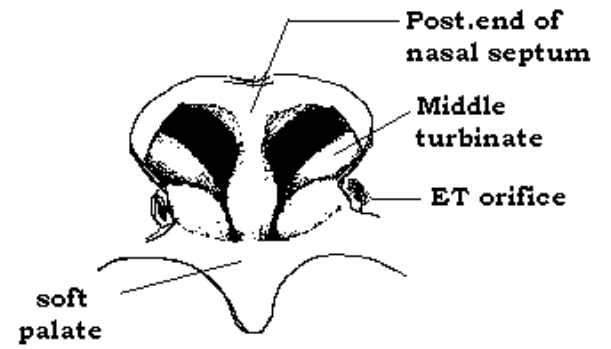
# Post nasal mirror

- St. Clair Thompson post-nasal or posterior rhinoscopy mirror.



# Posterior rhinoscopy





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# Chevalier jacksons direct laryngoscope

## Direct laryngoscopy

- Diagnostic
  - When indirect laryngoscopy is not possible
  - When indirect laryngoscopy is unsuccessful
  - Stridor, cough , hemoptysis
  - biopsy
- Therapeutic
  - Benign lesions (vocal nodules,papilloma)
  - Dilation of strictures
  - Removal of foreign bodies



# Bronchoscope

With vents (openings) for ventilation of opposite lungs & bronchus



# bronchoscope

- Disadvantages
  - Vagal stimulation → cardiac arrest

# Esophagoscope (no vents)

- Diagnostic
  - Fb sensation
  - Hematemesis
  - Dysphagia
  - Biopsy
- Therapeutic
  - Removal of fb
  - Removal of benign lesions
  - Barret esophagus
  - Treat hematemesis
  - Pharyngeal diverticulum
- Disadvantages : esophageal perforation (fever after esophagoscopy, low bp, chest pain , dyspnea)





# Hammer

- Septal sx



# aural speculum



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# Thudicums nasal speculum

Self retaining nasal speculum



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- Diagnostic
  - Anterior rhinoscopy
    - Little's area, lateral wall, nasal cavity
- Therapeutic
  - Removal of fb
  - Antral wash
  - Nasal packing

# On nondominant hand



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# st clair thompson nasal speculum

Self retaining nasal speculum  
Longer blades & concave from  
inside

Deeper view

Nasal surgeries

- septoplasty
- Deep fb
- polypectomy



# Other nasal specula

Killian  
Vienna

# Lack's Tongue Depressor



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# Fullers tracheostomy tube

Outer & inner tube

Outer tube has two blades  
which when pressed together  
can be easily introduced

No lock system as inner tube is  
held in place by compressed  
flanges of outer tube

Adv

- Helps in phonation when inner tube occluded due to hole (help to breath thru nose & phonate)
- Therefore **used in children**

Disadv

- Injury to larynx by flanges
- Chance of corrosion



# Jacksons tracheostomy tube

- Outer tube
  - with a lock to hold inner tube
- Inner tube
  - Inner tube is locked so that it is not coughed out
- Obturator
  - Help in introduction of tube in to trachea
- Disadv
  - Cannot phonate



# cuffed tracheostomy tube

- advantages
  - Prevents aspiration in head injuries
  - Air tight seal → connected to ventilator
  - Anaesthesia
  - Positive pressure ventiln
- Disadvantages
  - Tracheal necrosis stenosis(deflate every 6hrs for 10 mins)



# Posterior nasal packing

## Indications

1. Failure of anterior rhinoscopy
2. Suggestive of posterior epistaxis
  1. Removal of angiofibroma adenoids
  2. Old aged man with bp & arteriosclerosis
3. Bleeding diathesis

