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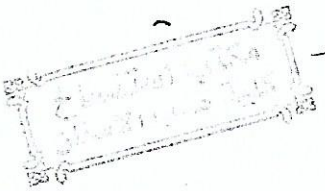
Dr. Wael

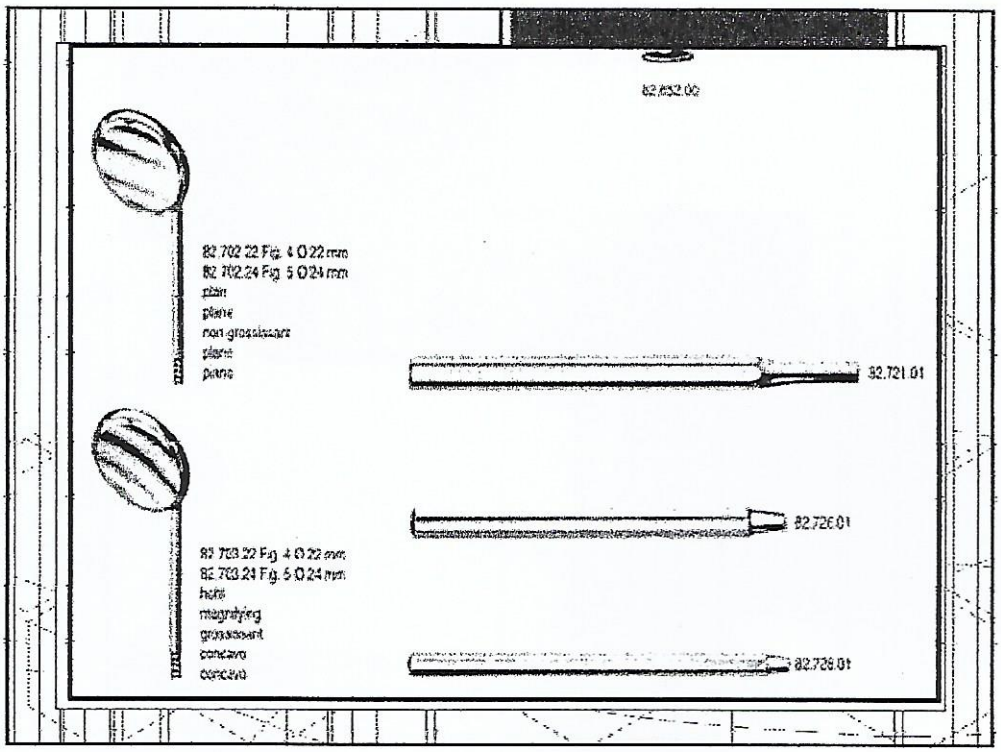
Lec. 3



Instruments used in tooth extraction

Diagnostic instruments

- Dental mirror
  - Tissue reflection
  - Indirect vision of inaccessible areas
  - Light reflection

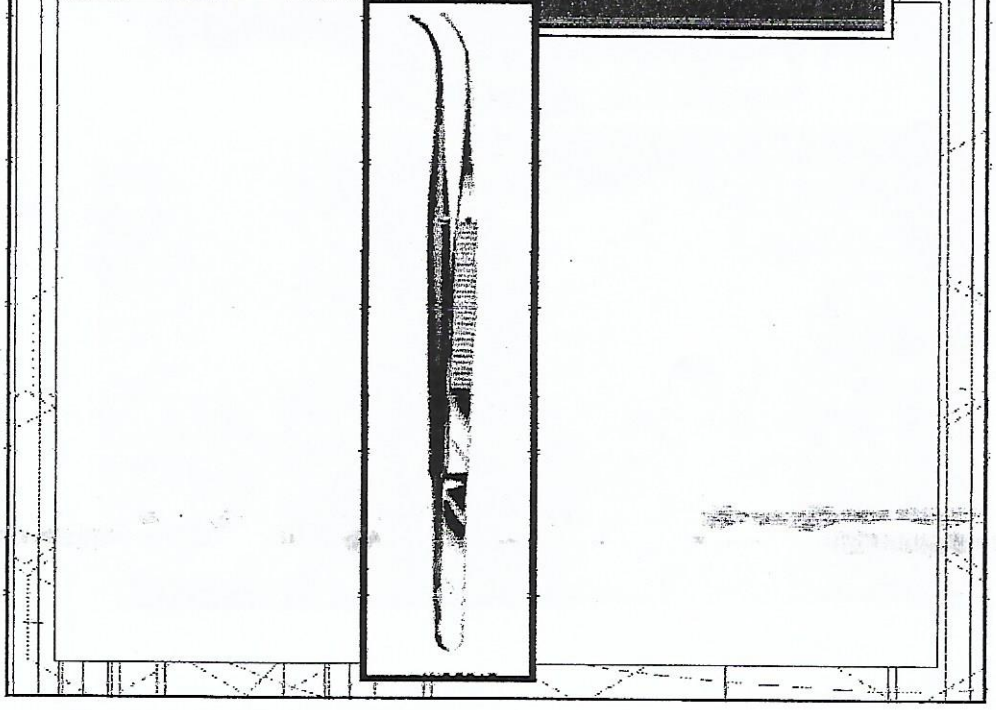


- Dental probe

1) Detection of carious lesion or cavitations especially mesialy or distally
2) Percussion to detect tenderness
3) Checking of anesthesia

- Tweezers:

1) For carrying cotton and gauze to & from oral cavity
2) Periodontal ligament separation and checking of anesthesia before extraction
3) During suture removal
4) Removal of any tooth fragment from site of the surgery



Extraction Forceps

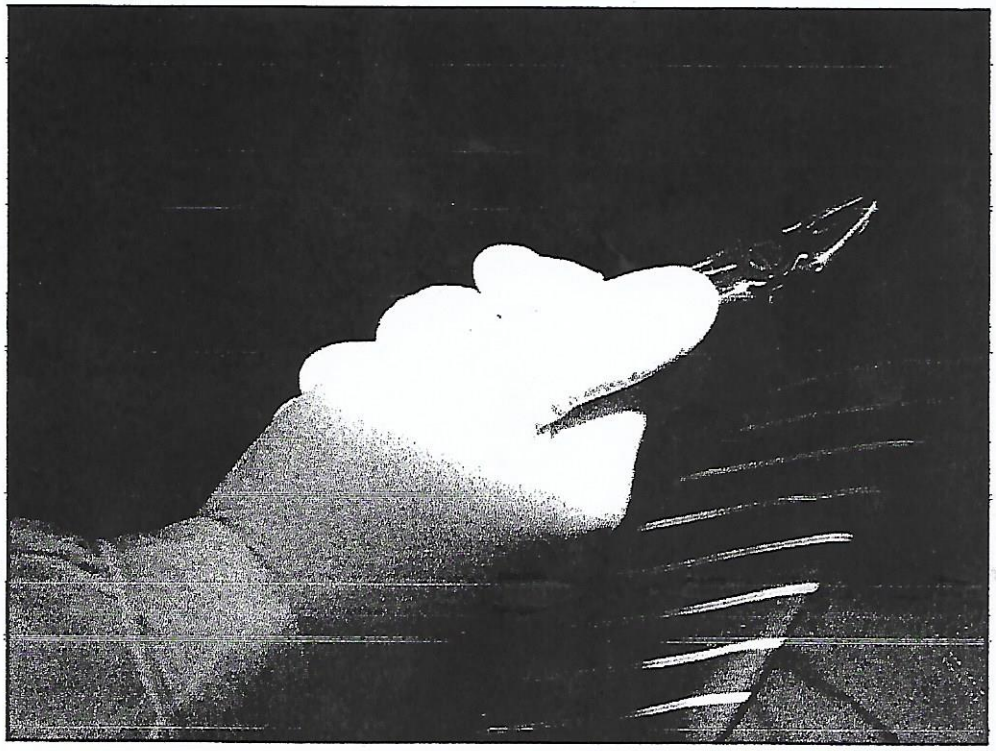
Principles of design

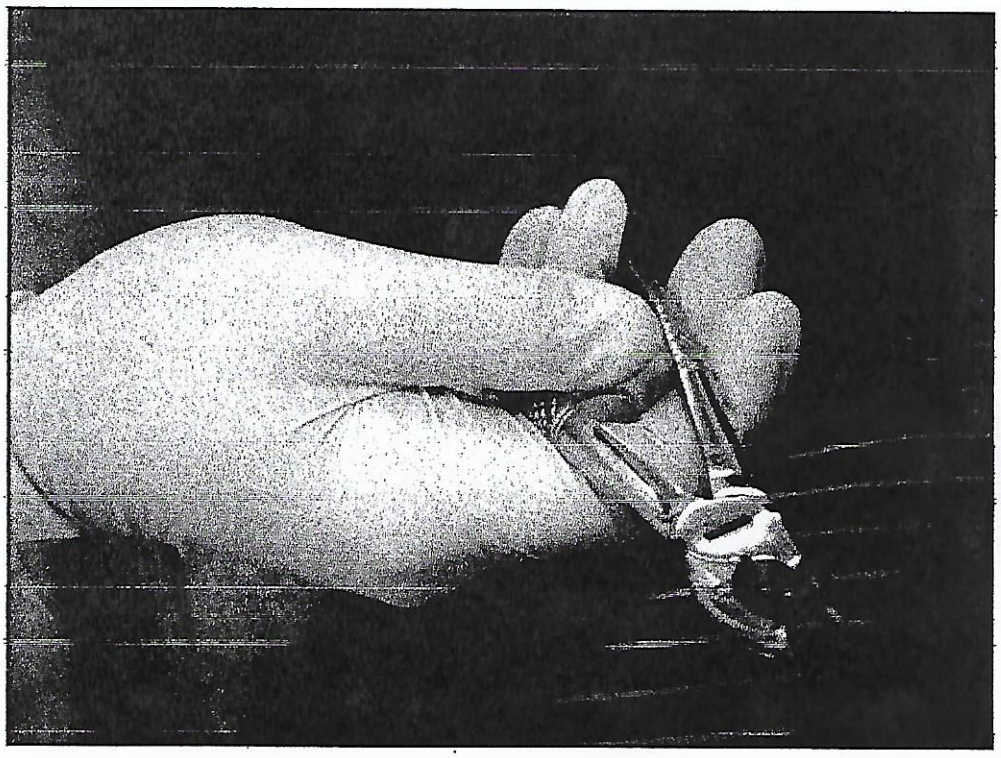
1. The larger the ratio between handle and blades the greater the force or leverage which can be exerted upon the root.
2. The length of the handles must be such that the forceps fit the operator's hand.
3. Dental forceps are designed to grasp the root or root mass of tooth and not to grasp the crown so the anatomy of the root is an important factor affecting the design of the forceps.
4. The forceps blades should be sharp in order to cut the periodontal ligament and easily fitted on the root surface.

5. The inner surface of the blade should be concave. Ideally the whole of the inner surface of the blades should fit the root surface.

6. It should also conform along the crown length.

7. Forceps blades should be aligned with the long axis of the tooth for extraction to give maximum support and to distribute evenly the forces applied to the root. Incorrect alignment of the forceps may allow the instrument to slip off the root while pressure is applied and will concentrate the forces on the points of contact so increasing the likelihood of root fracture.





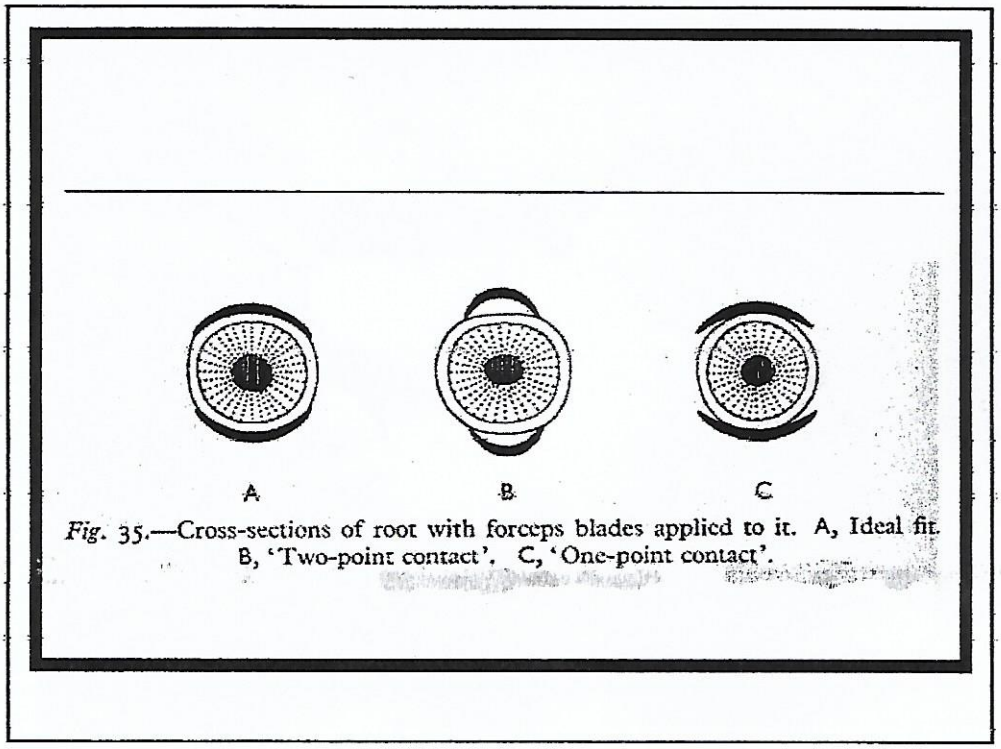


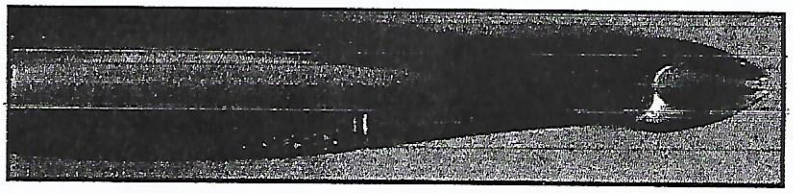
Fig. 35.—Cross-sections of root with forceps blades applied to it. A, Ideal fit. B, 'Two-point contact'. C, 'One-point contact'.

forceps

(1) Upper straight forceps

Used for extraction of upper anterior teeth

The handle of this forceps is parallel to the blade

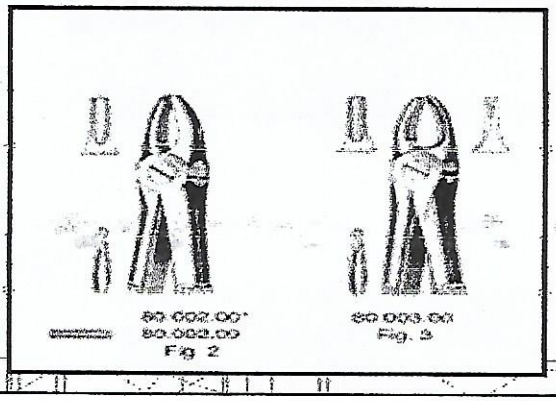


Upper straight forceps

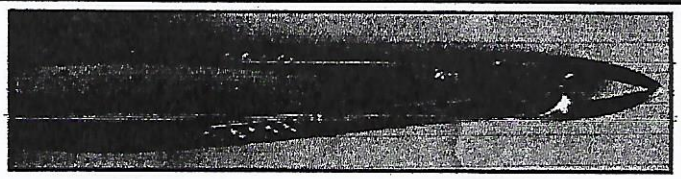
There are two types:

A/ fine(narrow) B/ heavy (broad)

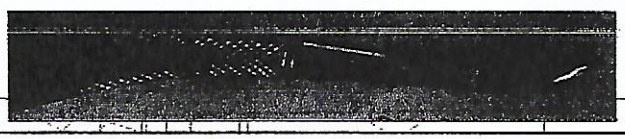
The forceps is applied parallel with the long axis of the tooth causing no trauma to the lower lip



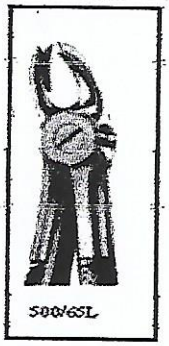
(2) Upper premolar forceps :Two bends are introduced into forceps for extraction of upper premolars. The instrument can used to extract both right and left upper premolar (the blades similar). The concavity of the handle fits on the operators hand with the concavity of the blades towards the occlusal surface of teeth

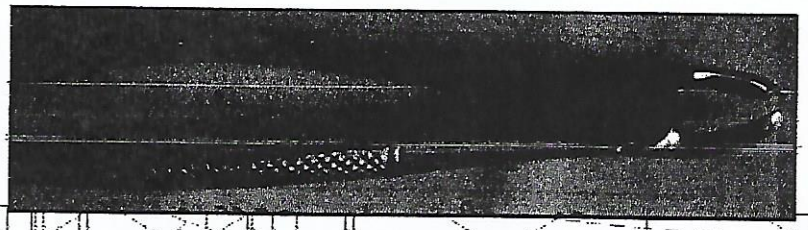


(3) Full upper molar forceps: As the maxillary molar has a single palatal root and two buccal roots, the two blades of its forceps are different or dissimilar. The palatal blades are designed to grasp one root while the buccal blades are designed to grip the mesiobuccal and distobuccal root above the bifurcation . The buccal blade contains a projection that lies in the bifurcation on the buccal surface.



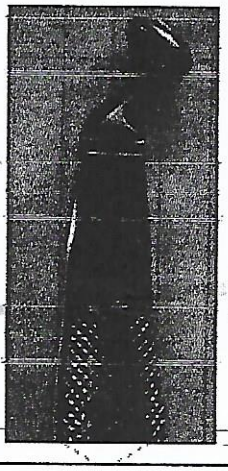
It is necessary to have one forceps for the right side and another for the left side



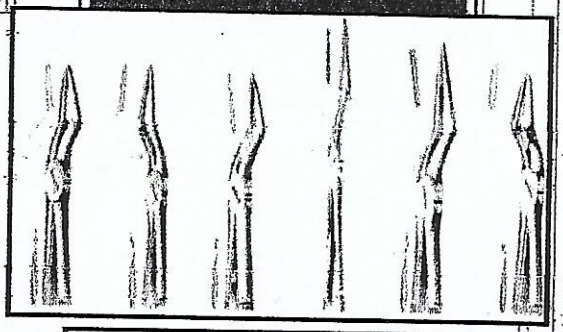


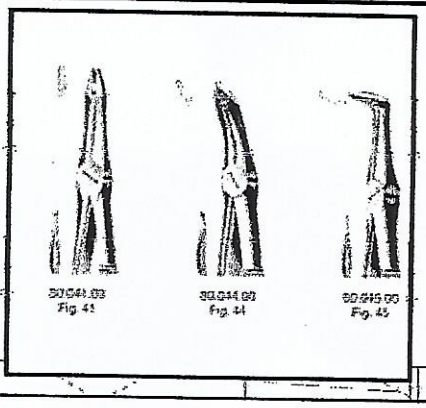
(4) Bayonet forceps

More bending or curvature is introduced to the blades , so as to create an additional offset that allows the handle to escape the lower lip during use.



5- Upper root forceps





Lower root forceps or lower incisor forceps

Forceps with fine blades are used to extract the lower incisors and roots. Forceps with heavy or broad blades are used to extract lower canines, premolars and large roots.

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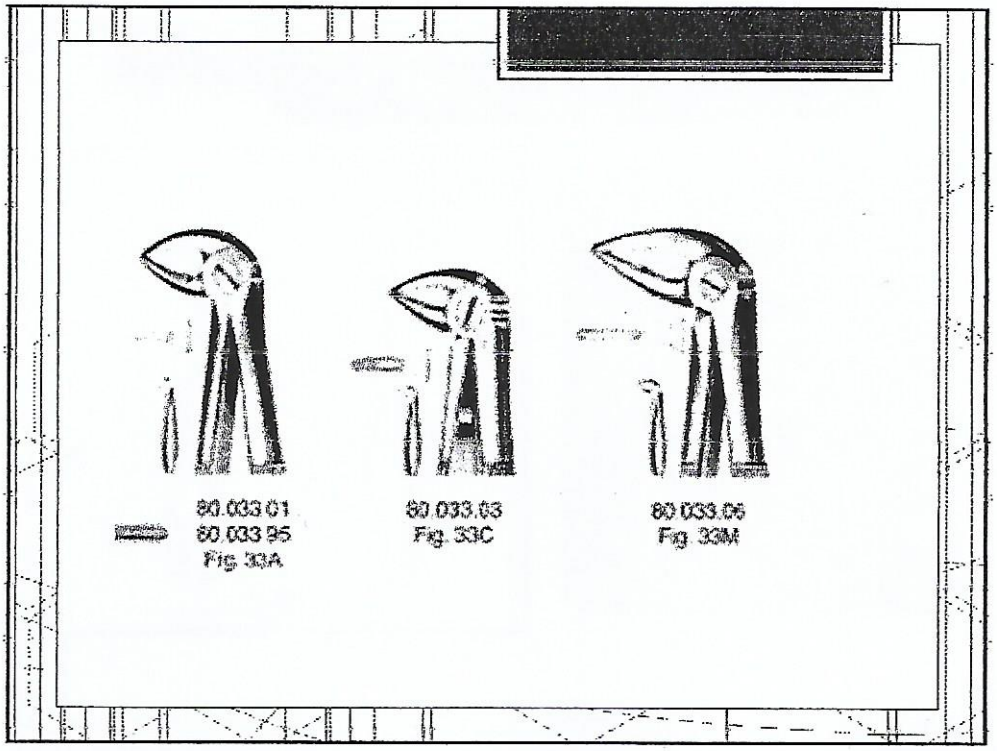

Full lower molar forceps

Buccal and lingual blades fit in the lingual and buccal bifurcation and are similar in design so the same forceps used for extractions of lower molars in both sides. The blades are also vertical to the handles.

Forceps of lower wisdom teeth

As well as the vertical angulations of the handles with the blades, another bend is created in the handles in order to prevent trauma to the angle of the mouth. As the angle is created so that its inner surface adapts the lip and so cannot be used on the other side. Left and right forceps are therefore available.