

DL 313

Removable Partial Dentures II

Survey & Design

- Survey – The procedure of studying the relative parallelism or lack of parallelism of the teeth and associated structures so as to select a path of placement for a restoration that will encounter the least tooth or tissue interference and that will provide adequate and balanced retention, as well as achieve the best esthetics possible

Survey & Design

- Design – To plan and/or delineate by drawing the outline of a proposed prosthesis

Surveyors

- An instrument used to determine the relative parallelism of two or more surfaces of teeth or other portions of a cast of the dental arch
- Locates the path of insertion for the partial denture.

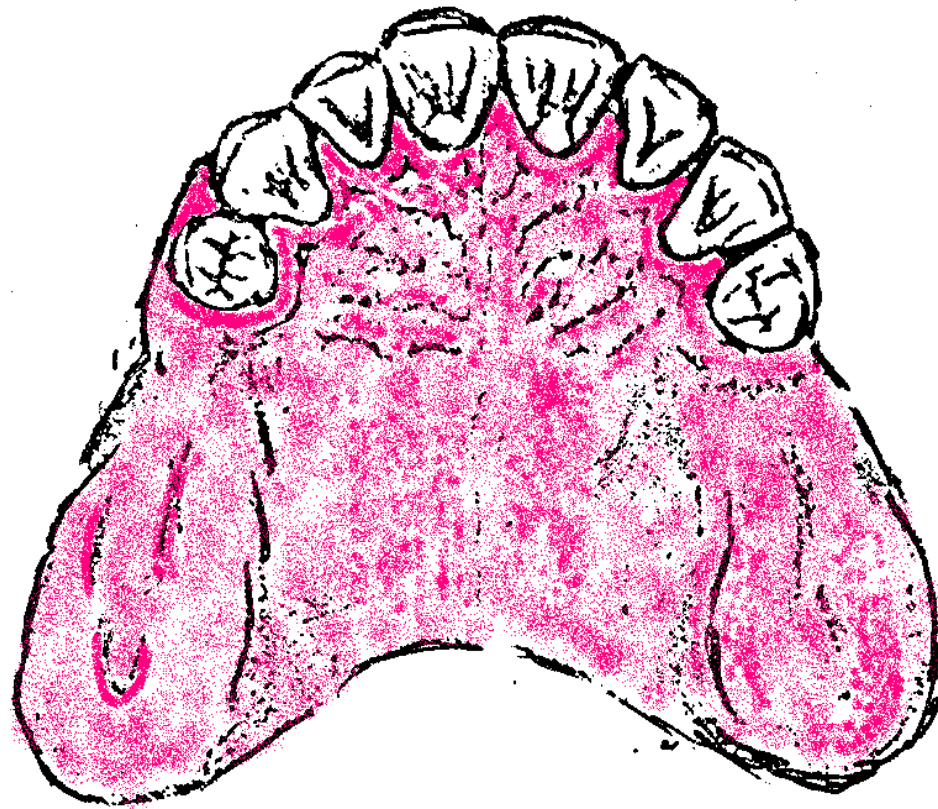
Surveying Tools

- Analyzing rod is used to determine the location of undercuts on the abutment teeth and tissue.
- Undercut gauges – Used to determine the location of desired depth of undercut.
- Block-out tools – used to remove excess wax during blockout procedures.
- Carbon marker- used to mark the survey line, which indicates the height of contour in relation to the vertical path of insertion.

Kennedy Classification

- Class I (bi-lateral distal extensions)–
Receives support from soft tissue and the remaining teeth.
- Class II (uni-lateral distal extension)– Free-end saddle on one side. Receives support from teeth and soft tissue.

Class I



Kennedy—class I



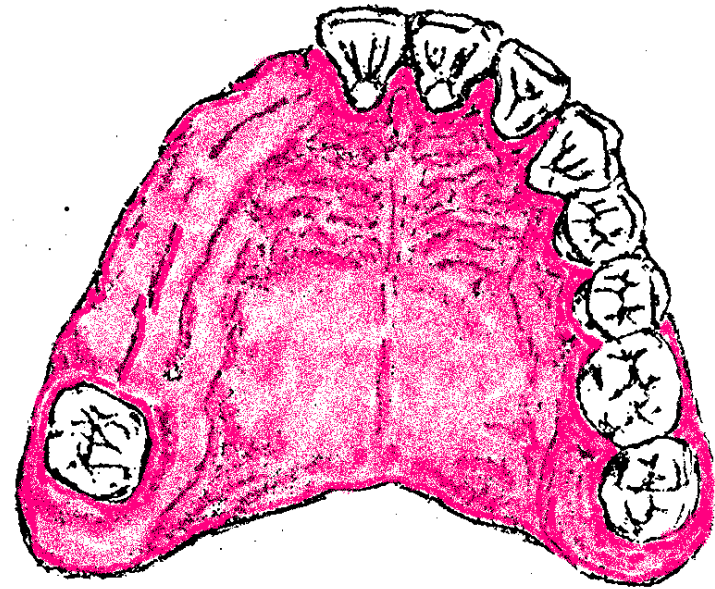
Kennedy Classification

- Class III (Tooth-borne)- Primarily supported by natural teeth.
- Class IV (anterior extension) – Esthetics is prime consideration
- Modifications – edentulous areas remote from the primary classification area.

Class III



Kennedy—class III



Kennedy—class III



Class I (bi-lateral distal extensions)

- The most posterior teeth on each side of the arch should be clasped. The preferred order of clasping is:
 - Distobuccal retention using T bar.
 - Mesio Buccal retention using an 18-gauge wrought wire clasp.
 - Mesio Buccal retention using a reverse circumferential clasp.
 - Lingual retention is seldom indicated and cast circumferential clasps engaging mesio Buccal undercuts are never indicated for Class I situations.

Class II (uni-lateral distal extension)

- .All the rules that apply to clasping for Class I apply to the distal extension side.
- For the dentulous side, if no modification space is present two clasps should be used. One as far anterior as possible and one as posterior as possible.

Class II (uni-lateral distal extension)

- If modification spaces exist on the dentulous side, the adjacent teeth should be clasped with the simplest clasp available, such as simple circumferential (circlet) clasps into a distobuccal undercut for the posterior abutment and mesiobuccal undercut for the anterior abutment tooth

Class III (Tooth-borne)

- If no modifications exist, the teeth adjacent to the edentulous should be clasped as described for the dentulous side of a Class II modification I arch. On the dentulous side clasping should be done with one clasp as far anteriorly as possible and one posteriorly positioned.
- If a modification space does exist on the opposite side of the arch, all four abutment teeth should be clasped with the simplest type of clasp.

Class IV (anterior extension)

- The fulcrum line is reversed from the Class I and II arches therefore the teeth adjacent to the edentulous space should be clasped for retention in the mesiobuccal area.
- It is desirable to place another retentive clasp on each side of the arch as far posteriorly as possible, engaging a distobuccal undercut

Major Connectors

- **Function-** major connector must be rigid for proper function.
 1. Joins one side of the framework to the other
 2. Distributes stresses across the arch
 3. Counteracts tipping forces during mastication

Types of Major connector:

- Maxillary
 1. Palatal strap
 2. Anterior-Posterior palatal bar
 3. Horseshoe
 4. Closed Horseshoe
 5. Full palatal plate

Types of Major connector:

- Mandibular
 1. Linguo plate (Closed Kennedy)
 2. Lingual bar
 3. Lingual bar with Kennedy bar
 4. Labial bar (Sometimes requires a hinge)

Clasps

Functional requirements of a clasp:

1. **Retention.** Resist removal of R.P.D. occlusally.
2. **Reciprocation.** Resist lateral forces exerted on an abutment tooth as the retentive tip flexes in and out of the undercut.
3. **Bracing.** Resist anteroposterior and lateral shifting of the entire R.P.D.
4. **Encirclement.** Surround more than 180 degrees of an abutment's circumference so that the tooth does not drift.