

Prosthetic IV.

Partial removable dentures

Class I. And II.

Ways of the transfer of masticatory forces

- Teeth
- Teeth and oral mucosa ☐
- Oral mucosa

Teeth and/or oral mucosa



Bone

Removable partial dentures classification

- Class I. Dental arch with gaps (interruptions)
interruptions
- Tooth borne dentures
- Class II. Reduced (shortened) dental arch
Tooth and tissue borne dentures

Removable partial dentures classification

- Class III.

Residual dentition

Tissue born dentures, plate dentures

- Class IV.

Complete denture

Tissue born dentures

Components

- Base (basis)
- Elements of anchorage
- Clasps: casted clasps, wire clasps, combined clasps
- Anchorage supporting bar
- Attachements
- Telescope crowns

Base (basis)

- Replaces missing part of alveol and carry arteficial teeth
- Supports the supplied teeth and effects the transfer of occlusal stresses to the supporting oral structures
- Different materials –
- + (framework) resin attached to the metal framework metal framework or resin only

Base

- Accuracy of adaptation to the tissues with low volume change
- Dense, non irritating surface that is capable of receiving and maintaining a good finish
- Thermal conductivity
- Low specific gravity
- Sufficient strength – resistance to fracture
- Easily kept clean
- Aesthetics acceptability
- Potential for future relining
- Low initial cost

Components

- Teeth
 - acrylic teeth
 - porcelain teeth

Clasps

Surface retainers –they lie on the surface of teeth

Tha parts are called arms:

One, two or three arms

Clasps

- One arm made of wire
- Simple retainer, only in simply temporary
- prothesis
- It can damage the tooth because of no stabilization (bracing)

Clasps

- Two arms clasps
- One arm for retention (wire) wire
- One arm for stabilization against horizontal forces

Clasps

- Three arms clasps

One arm for retention (wire) wire

One arm for stabilization (bracing) against horizontal forces

One arm (the rest) for transmission of occlusal forces

Rests

- Any unit of a partial denture that rests upon
- (premolar, premolar molar) vertical support to the denture is called a rest
- Upon the occlusal surface molar
- Upon the lingual surface (prepared) of anterior teeth

Rests

- Transmitted forces parallel to the long axis of the tooth will prevent movement in a cervical direction.

Components

- Connectors

Connect the parts of denture

- Major
- Minor

Major connector

- Connect the parts of the prosthesis

All of its parts are directly or indirectly connected with it

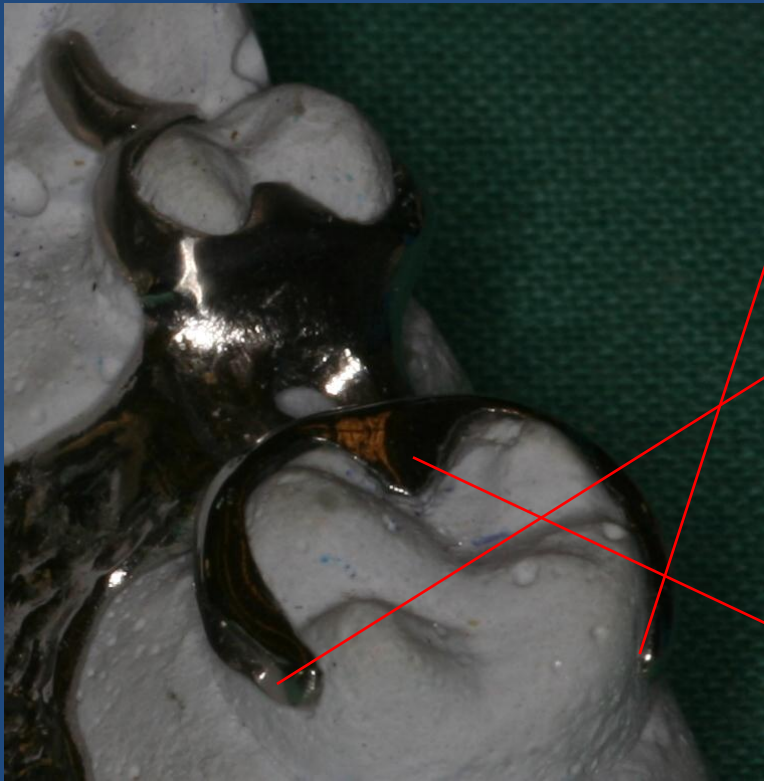
Must be rigid -stresses are effectively distributed

Over the entire area

Mandibular major connector

- Lingual bar
- Lingual plate (continuous bar retainer and lingual bar)

Clasp – three armed cast

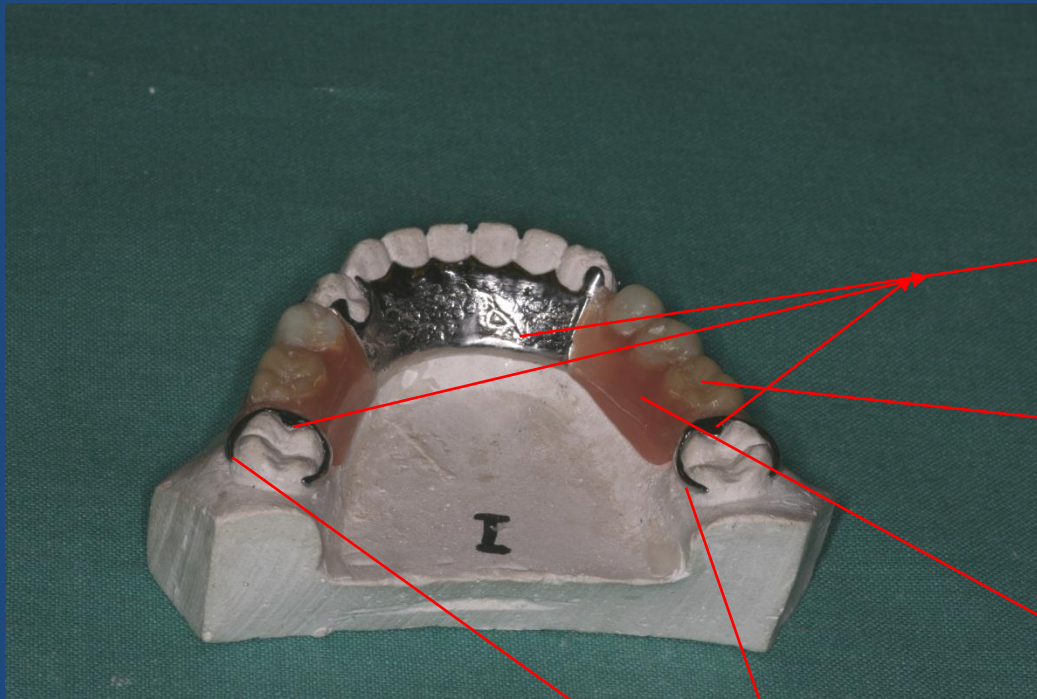


One part for retention (going under the maximal convexity)

One part for stabilization against horizontal forces (upon the maximal convexity)

On arm for transmission of occlusal forces (the rest)

Class I and II dentures with the metal framework



**Class I. denture
Components:**

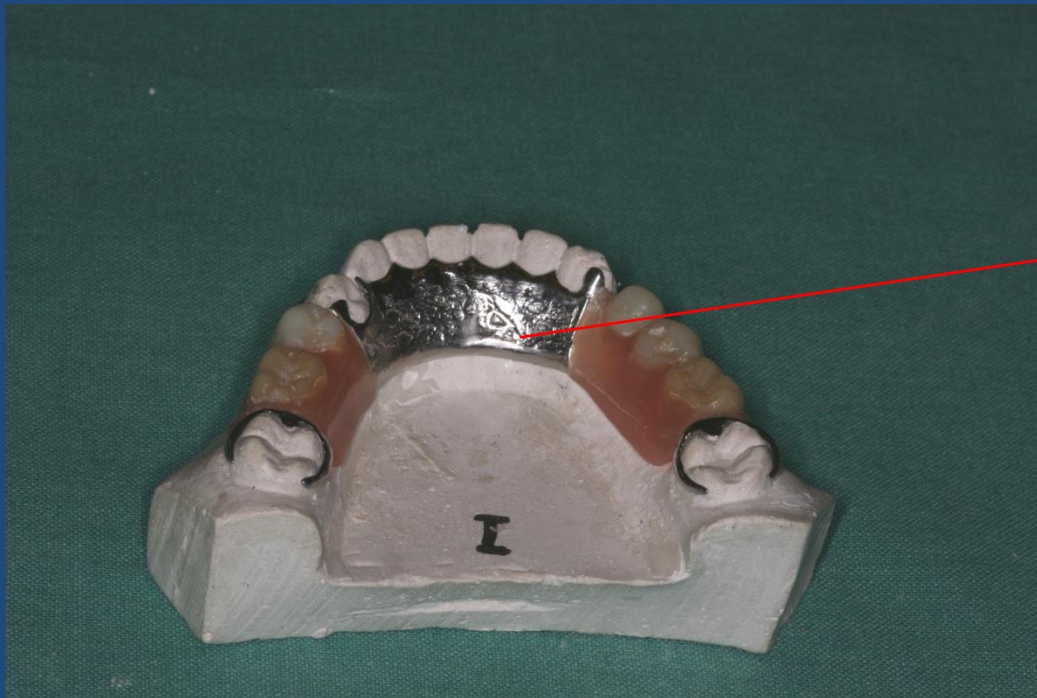
Metal framework

Arteficial teeth

Base

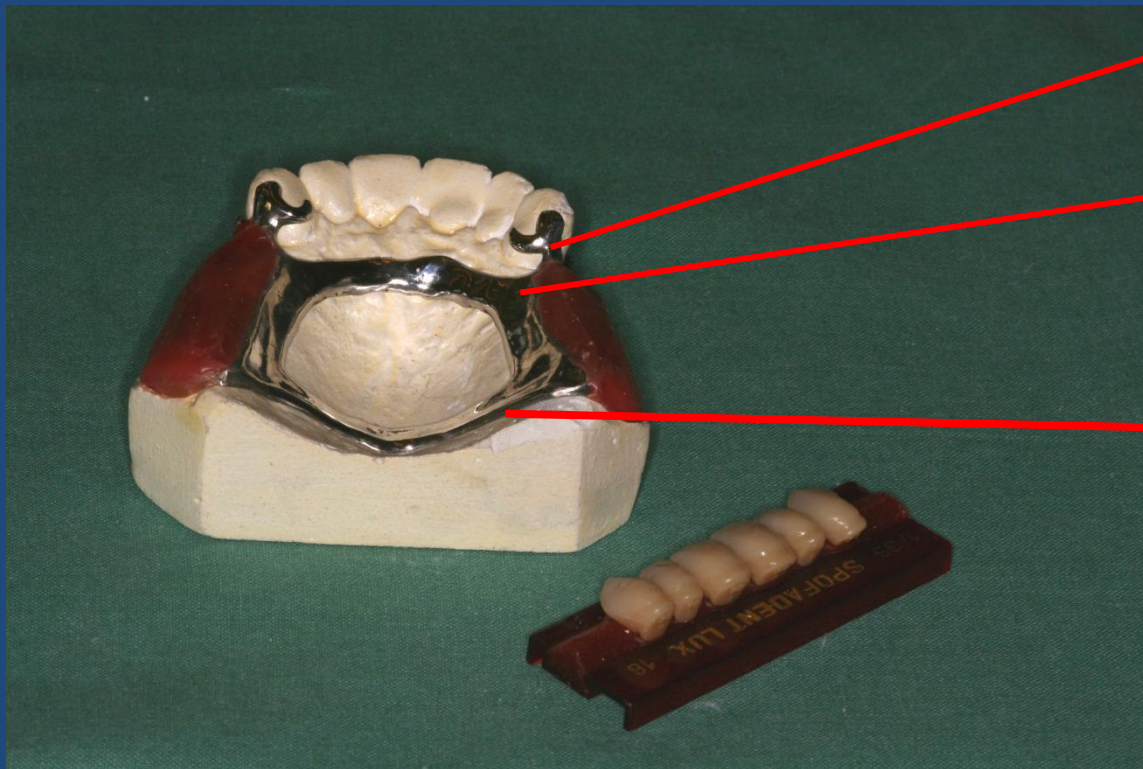
Clasps

Class I and II dentures with the metal framework



Lingual plate

Class I and II dentures with the metal framework



Minor connector

Anterior palatal bar

Posterior palatal bar

Sequences of operations

Taking impressions (alginate.



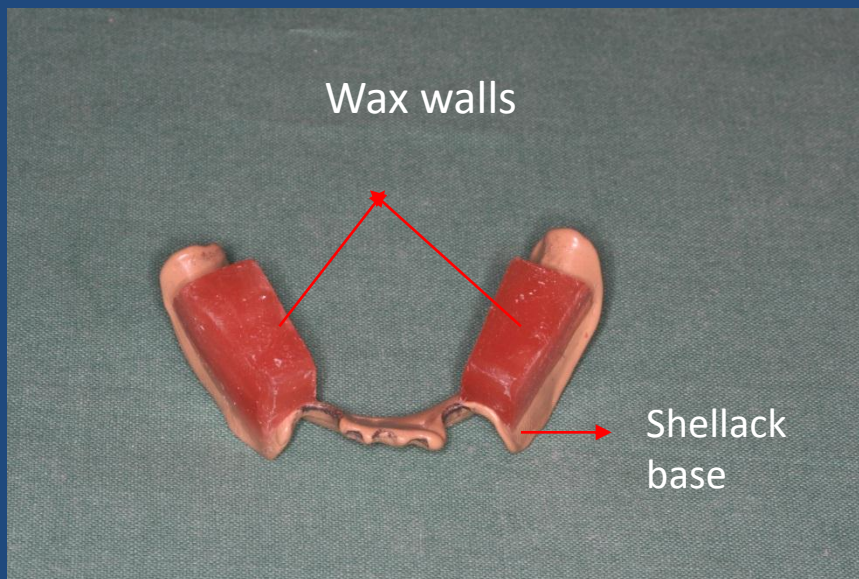
Both jaws always !

Sequences of operations

Pouring – gypsum models.

Fabrication of the individual impression tray if necessary.

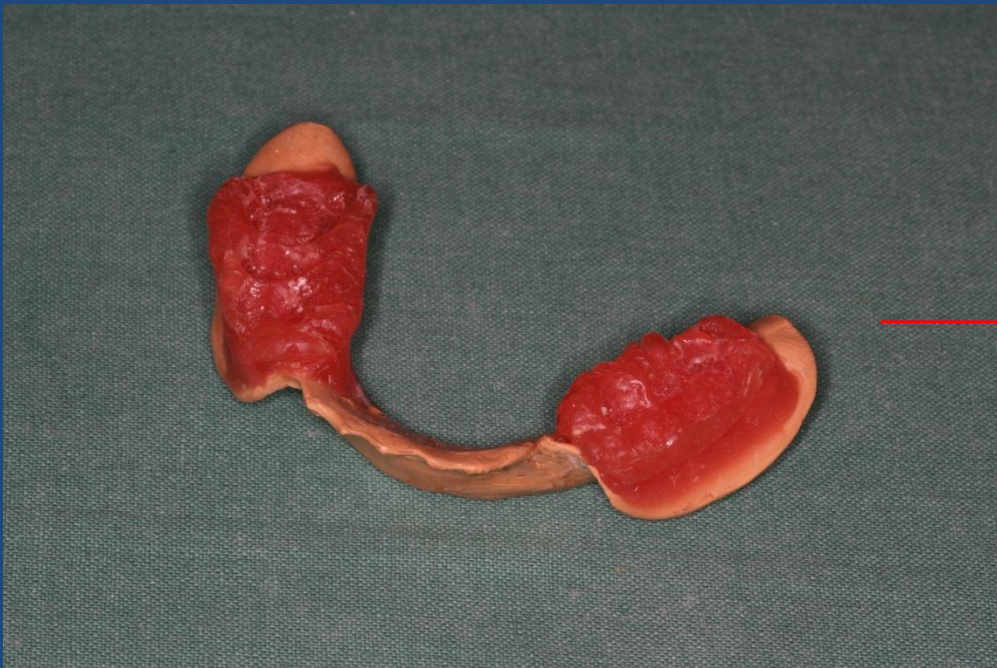
If not, fabrication of the bite template:



The bite template is necessary for the registration of the intermaxillary relationship. It consists of the shellack base and the wax walls.

Sequences of operation

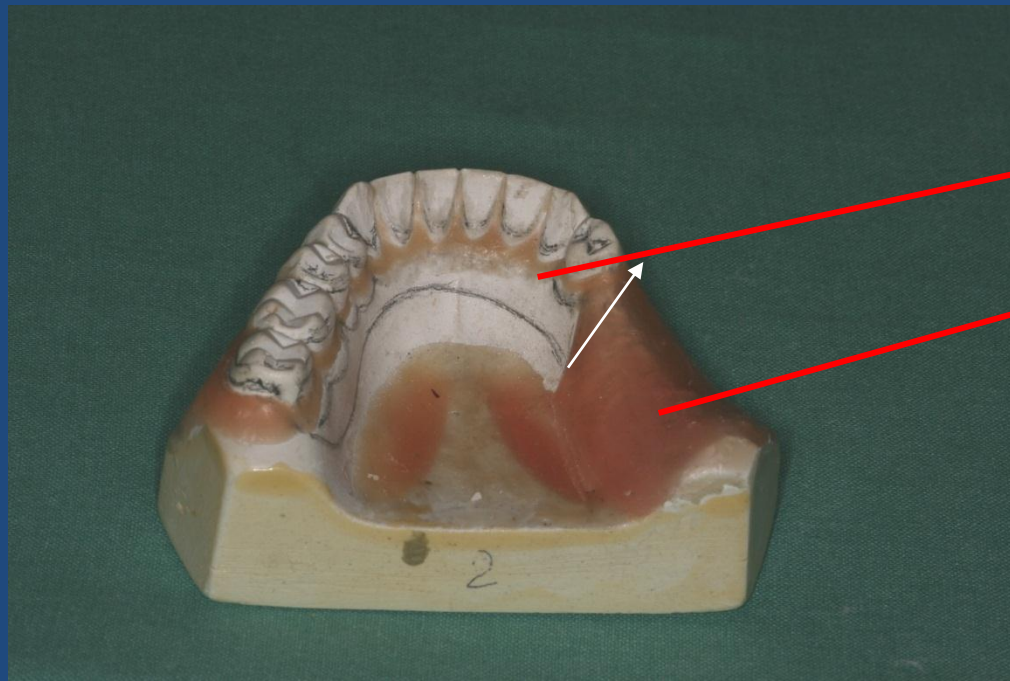
- Registration of the intermaxillary relationship.



The registrate

Sequences of operation

- Preparation of the model for backup.



All undercuts are blocked out

Also the space
under the future framework

Using heated wax

Sequences of operations

- Backup using the reversible impression agar based material in a special flask
- Pouring of this impression with -the investing material – casting model



Sequences of operations

- Fabrication of the wax pattern of the metal framework.



Influx system

Sequences of operations

- Investment with the same investing material – a special flask.



The wax is burnt out and the form is heated in a special oven.

After that the casting process is performed using a special casting machine.

Sequences of operation

- After casting and cooling the framework is taken out, the inflow system must be cut off.



Sequences of operation

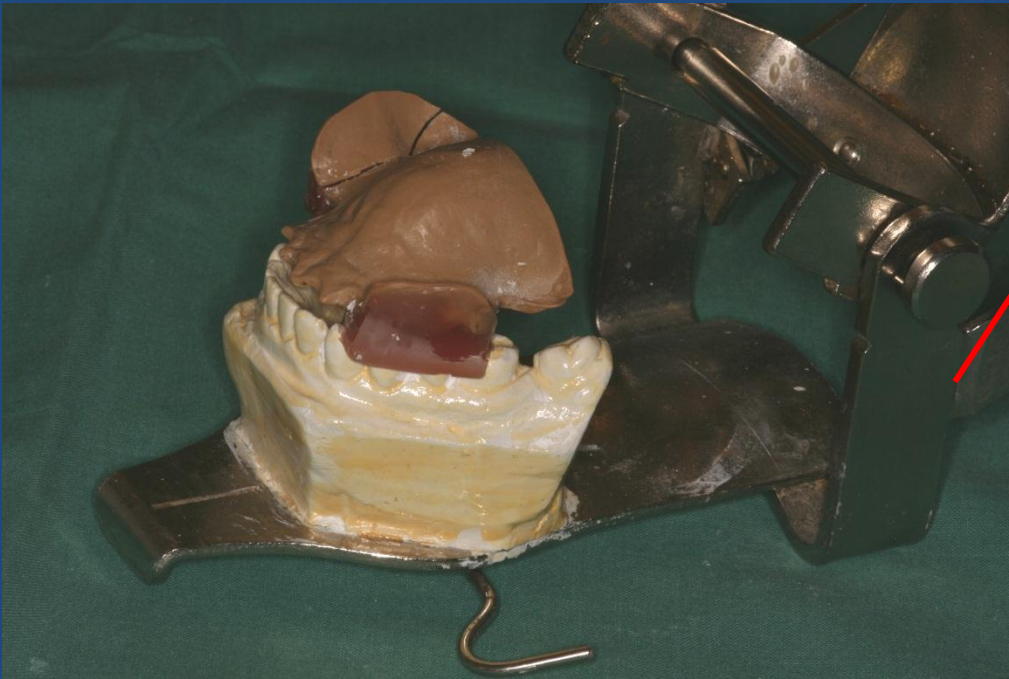
- The cast is grinded, polished and adapted on the former gypsum model



The final framework is tried out

Sequences of operation

- The artificial teeth will be applied acc. to intermaxillary registrate in articulator.





Artificial teeth
- acrylic

Sequences of operation

- After trying out of the denture with wax base and teeth the denture is completed



The framework with the wax pattern of the base and teeth has been put into a flask, the wax has removed and replaced with a resin dough. The resin base is polymerized using heating.

Sequences of operation

- The denture is finished, polished and tried in.



Feedback

- For which classes of removable dentures is necessary to fabricate the metal framework?
- On which model is the wax pattern of the framework made?
- What is the method of „lost wax“ ?

Feedback

- Which parts does the partial removable denture consist of?
- Describe the sequences of operations of these dentures. Explain the main difference between class I. and II. removable dentures.
- What is the purpose of the bite template? Which part does it consist of?
- Explain the term „investment“ .