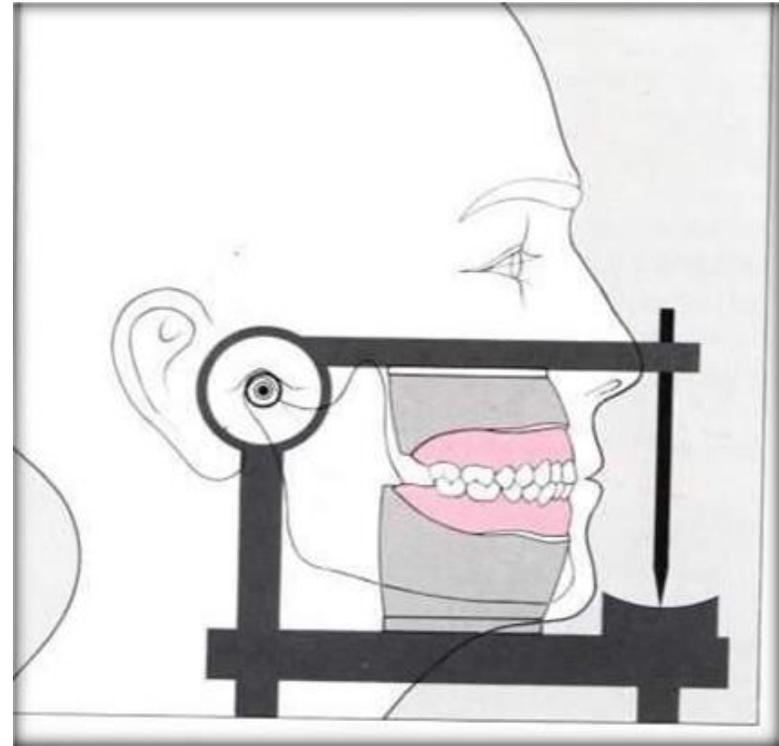

Articulators and mounting lec7

Articulators

It is a mechanical device represents the TMJ, maxillary and mandibular arches.

► It can be used to hold the upper and lower casts according to their relationships to facilitate the purposes of diagnosis and arrangement of artificial teeth outside the patient mouth.

► Articulators can simulate all the possible mandibular movements



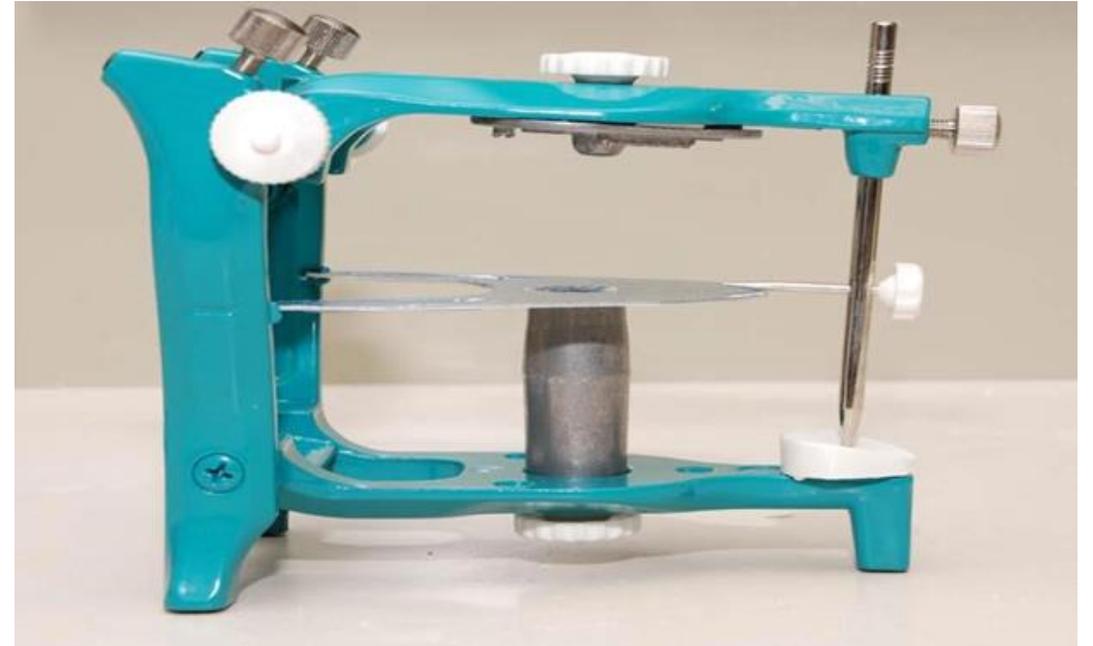
TYPE I SIMPLE HINGE ARTICULATORS

- 1-Single hinge movement only(opening & closing)
- 2-No lateral movement
- 3-Smaller than patient jaws
- 4-Very limited value in restorative dentistry and prosthodontics



2-typell mean value articulators

- 1-Condylar angle fixed at 30angle
- 2-No lateral movement
- 3-permit horizontal and vertical but not orient motions to TMJ
- 4-Face bow record in some designs of these articulators
- 5-used to design & prepare complete dentures and simple restorations



3-type3 semi adjustable

- 1-Recommended for most dental restorations
- 2-More accurate than mean value
- 3.It allows centric movement
- 4.It allows protrusive movement



4-fully adjustable

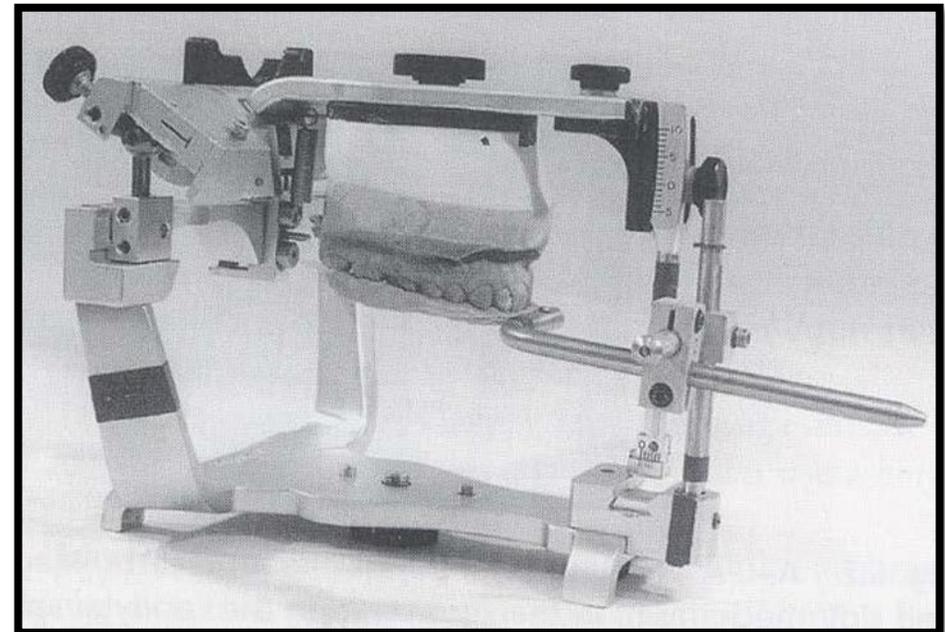
An articulator that allows accurate replication of three dimensional movement of recorded mandibular motion

Face-bow record

Interocclusal record

Protrusive record

Lateral records



Mounting

The laboratory procedure of attaching the maxillary or mandibular cast to an articulator .

The significant of mounting are:

1. To maintain of the vertical dimension of occlusion
2. To keep horizontal centric jaw relation.
3. To ease arrangement of artificial teeth

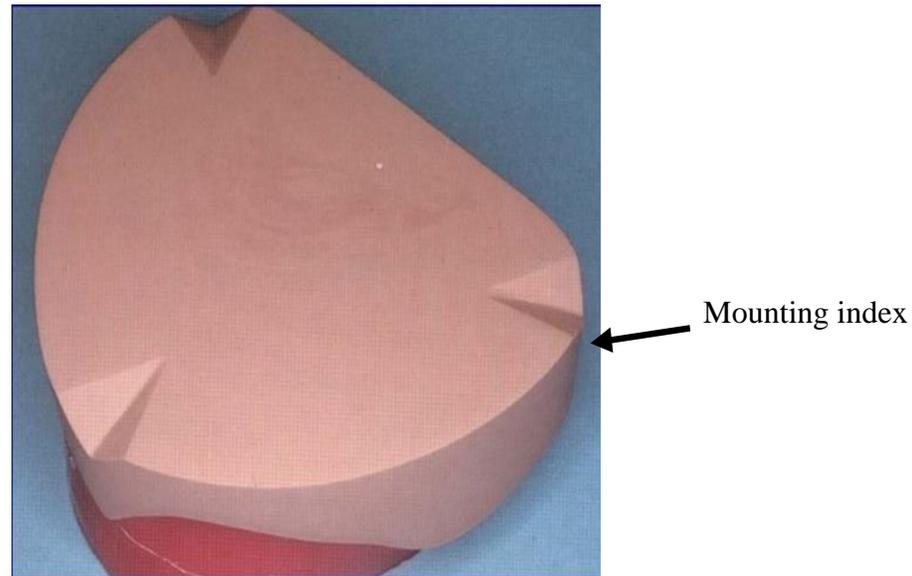


Preparation of the casts to mounting on the articulator

1. Determine the midline of the cast through the middle of incisive papillae and mid-palatal raphe to continue posteriorly to the end of cast.



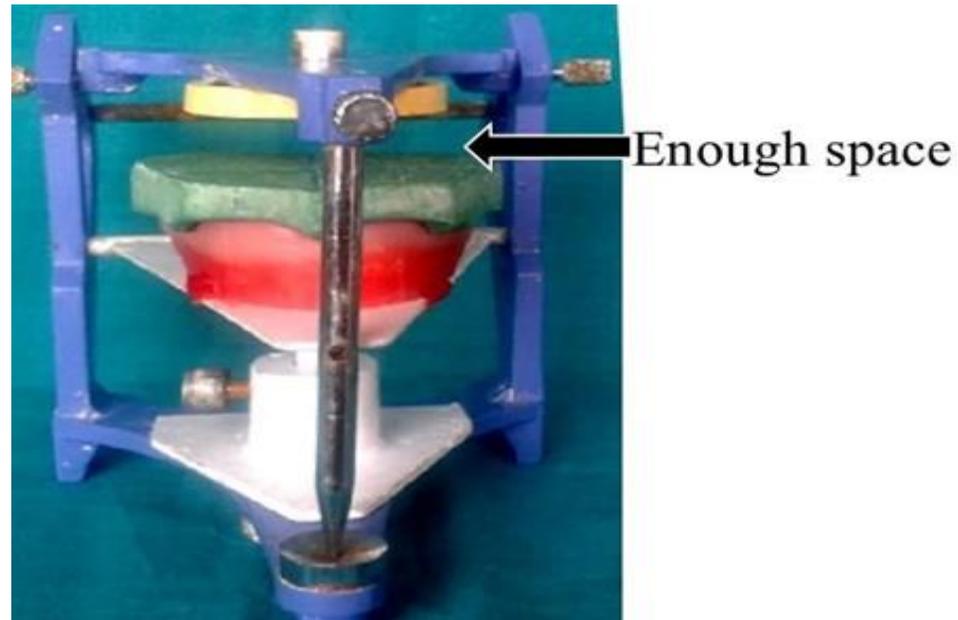
2. By using the plaster knife or by laboratory hand piece with metal round bur to make 3-4 (V) shape cuts on the base of upper and lower casts that used as mounting index to facilitate the remounting after construction final denture. Then coated by separating medium



3. Alignment of the midline of the upper occlusion rim to the center of the cross midline which found on the mounting table anteriorly and posteriorly, so that the cast will be centralized to the mounting table and the occlusal rim fixed to the mounting table by wax.



4. Enough space should be present between the base of the cast and the upper member of the articulator to accommodate for the plaster material over the cast. If there is no enough space, trimming should be done to the cast base.



5. Plaster is mixed according to the correct w/p ratio and mixed following the manufacturer instruction. Then the plaster is poured over the base of the cast and the upper member is closed until the incisal pin touch the incisal table.



Mounting the mandibular cast

1. The mandibular occlusion rim should be well secured to the mandibular cast with its record base by using wax, also sealing should be done between the maxillary and mandibular rims after making tentative centric jaw relation.
2. Care should be taken that there is no posterior interference between the maxillary and mandibular casts.



3. The articulator with the mounted maxillary cast is inverted to aid in the mounting the mandibular cast.

4. The maxillary occlusal rim with mandibular occlusal rim (centric record) placed on the maxillary cast.

5. The plaster is mixed and poured over the base of the mandibular cast and the articulator is closed until the incisal table touch the incisal pin



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Errors occurred during mounting: -

- 1.The record base is not properly secured to the cast.
- 2.Interference of the casts posteriorly.
- 3.The incisal pin is not properly screwed.
- 4.The incisal pin not touching the incisal table.
- 5.Wrong transference of the midline of the articulator with that of the casts (shifting of the midline).
- 6.Movement of the casts during mounting.
- 7.Upper and lower occlusal rims are not properly fixed for orientation.
- 8.Dimensional changes in the plaster.
- 9.Face-bow record defected.



THANK YOU!