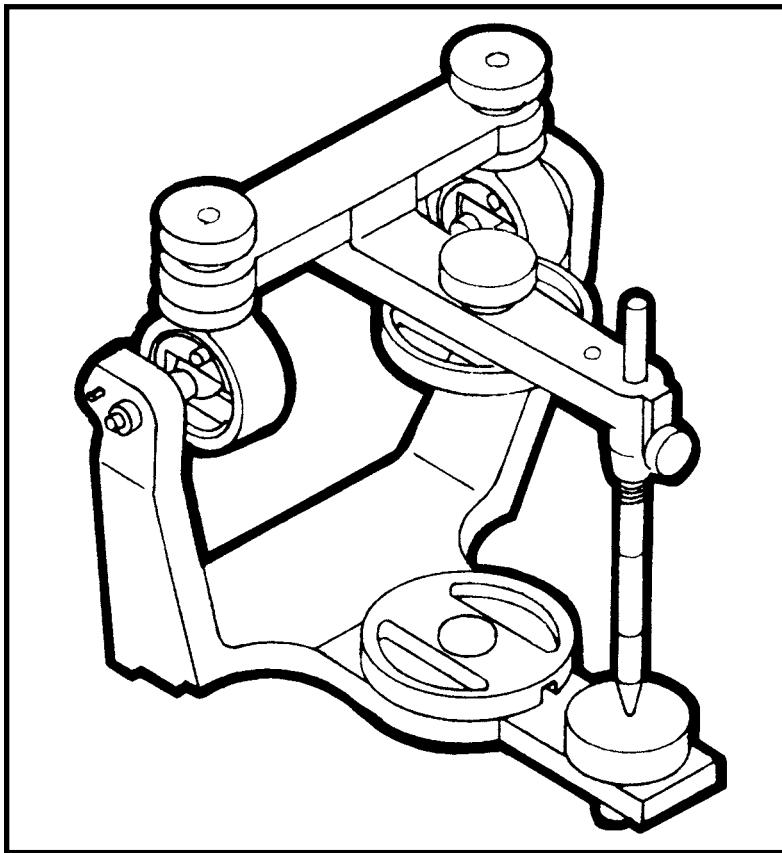


# HANAU™ WIDE-VUE ARCON ARTICULATORS AND WIDE-VUE II ARTICULATORS



## ILLUSTRATED INSTRUCTION MANUAL



RESTORATIVE ORAL HEALTH

# The HANAU™ Wide-Vue Series of Arcon Articulators

## INTRODUCTION

The HANAU™ Wide-Vue Articulators are classified as semi-adjustable. They are of Arcon principle, wherein the Condylar Guidances are associated with the Upper Articulator Member, as the patient's glenoid fossa is a portion of the cranium, Figure 1.

The Condyle of the Articulator is a part of the Lower Member and functions as the condyle of the patient's mandible.

Articulator movements may be directly related to the anatomical function of the patient.

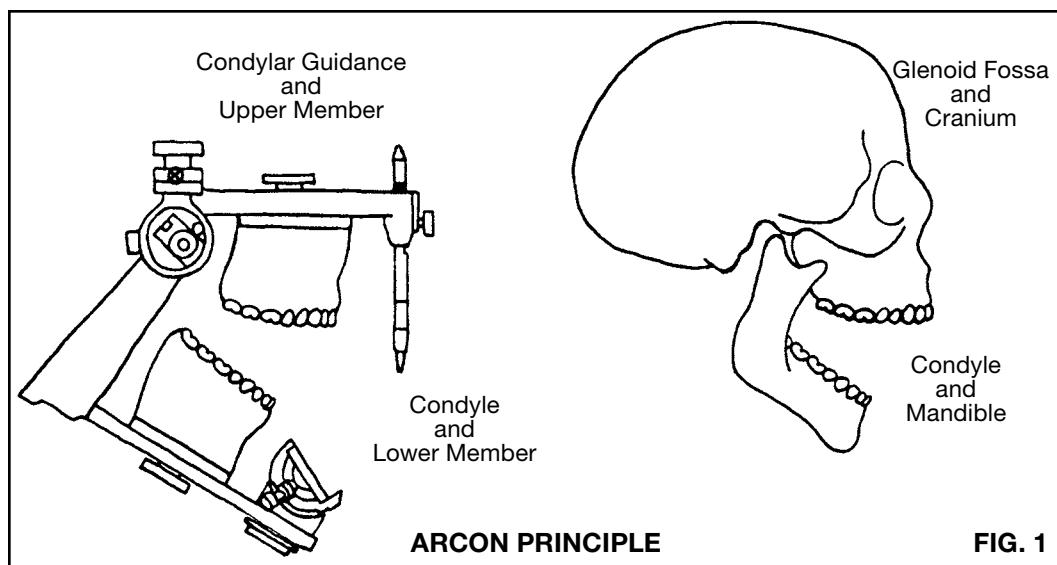
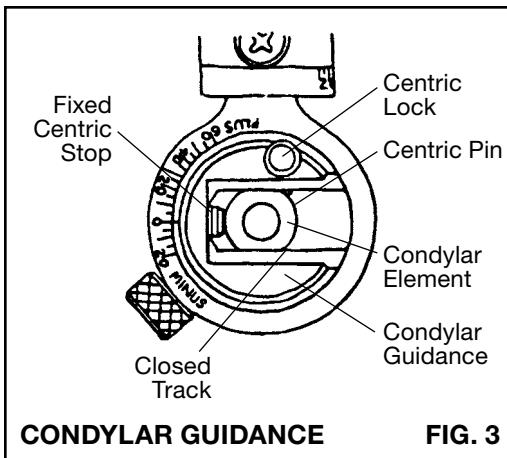
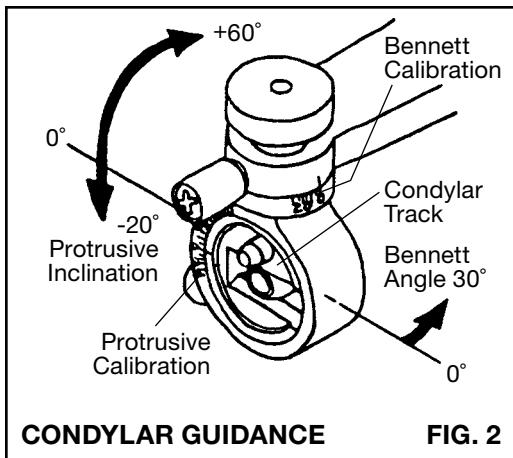


FIG. 1

<b>Kit Number</b>	010882-000	010885-000	010896-000	010889-000
Mounting Plates 2 pair	X			
Orbitale Indicator	X	X	X	X
Dual End Incisal Pin	X	X	X	X
Adjustable Incisal Guide	X	X	X	X
Cond. Guide Protrusive/Retrusive Closed				X
Condylar Guidance Closed Track	X	X	X	
Condylar Guidance Fixed Centric Stop	X	X	X	

Please check online at  
**www.whipmix.com**  
for the most current instructions  
and parts list.



### **CONDYLAR GUIDANCE, Figure 2:**

The Condylar Guidances are the control centers of the Articulator and they adjustably assimilate the multiple function of the glenoid fossa.

The Condylar Track may be adjustably inclined on the horizontal transverse axis from a “zero” to a plus 60 degree or to a minus 20 degree. These inclinations are termed the protrusive inclination and simulate the patient’s superior wall of the fossa.

The Condylar Track may also be adjusted on the vertical axis from a “zero” sagittal to 30°. This angle is termed the progressive Bennett angle and corresponds to the medial wall of the patient’s fossa.

### **CLOSED CONDYLAR TRACK, Figures 3 and 4:**

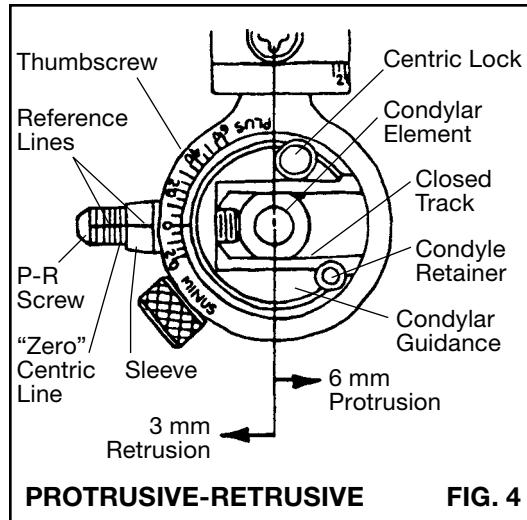
The Condylar Guidance Track rotates in an enclosed housing which stops the Condylar Element, preventing the accidental disengagement of the Upper Member.

### **FIXED CENTRIC STOP, Figure 3:**

Some articulators have a Centric Stop at the posterior end of the Track to limit anterior movement of the Condylar Element. When the Element rests against the Stop it is at centric, the point from which the protrusive or Bennett angles both emanate.

### **ADJUSTABLE PROTRUSIVE-RETRUSIVE, Figures 4 and 6:**

This micrometer adjustment permits the Condylar Element to be protruded 6 mm from centric or to be retruded 3 mm from centric.



An axial reference line transcribes the one mm spaced lines on the P-R Screw and a like line appears on the Sleeve of the Guidance.

Loosen the Thumbscrew at medial side of the Guidance and rotate the P-R Screw to abut the wide “zero” centric line with the Sleeve end. This centric position is then exactingly refined by aligning both axial lines as with a micrometer.

Protrusion or retrusion of the Condylar Element can be fractionally adjusted by selective rotation of this P-R Screw. One full turn of the one millimeter pitch Screw equals 1 mm protrusion or retrusion.  $\frac{1}{2}$  turn equals  $\frac{1}{2}$  mm,  $\frac{1}{4}$  turn equals  $\frac{1}{4}$  mm and  $\frac{1}{8}$  turn equals  $\frac{1}{8}$  mm.

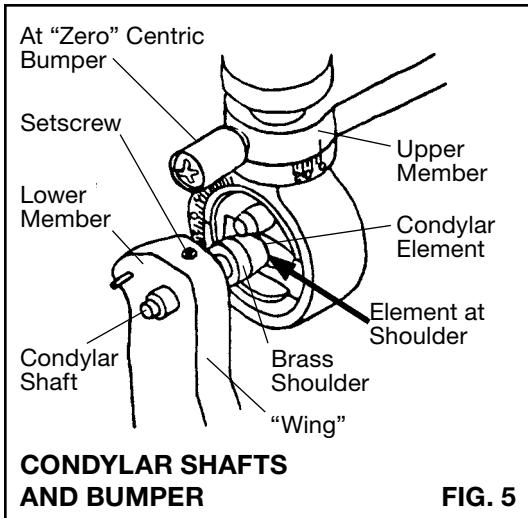
This  $\frac{1}{8}$  turn equals .005 inch and may be equated with a recognized dimension of the .004 inch (.1 mm) thick U.S. dollar bill.

Security of this adjustment is made by tightening the Thumbscrew lock at the medial of the guidance. The micrometer adjustment may be returned to this exacting centric position at any time.

### **CENTRIC LOCK, Figures 3 and 4:**

Engagement of a Centric Lock depresses a Centric Pin, causing it to arrest the Condylar Element at the centric position. When locked, the Upper Member is restricted to an opening and closing movement only.

Releasing the Centric Lock two full turns will disengage the Centric Pin and return the Element's freedom of movement in the Condylar Track.



### **CONDYLAR SHAFTS, Figure 5:**

The Condylar Shafts adjustably slide in the “wings” of the Lower Member. They have been factory fixed by Setscrews when their brass shoulders rest against the flattened sides of the Condylar Elements at the “zero” centric position.

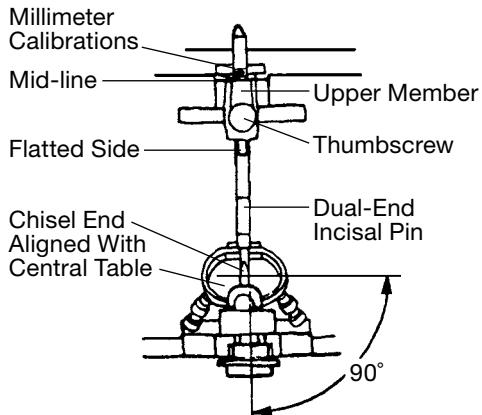
A resilient Bumper will protectively stop the Upper Member and rest against the “Wing” of the Lower Member when fully opening the Articulator.

### **DUAL-END INCISAL PIN, Figures 6 and 7:**

Coinciding with these Condylar Shaft adjustments is an alignment of the chisel edge of the Incisal Pin with the central table of the Incisal Guide, Figure 7.

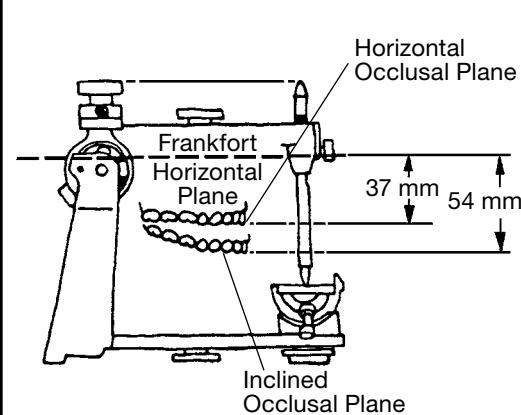
The Incisal Pin serves as the forward control of the Articulator. It cooperatively maintains a vertical stop and provides a stylus contact for the excursive movements of the Articulator against the various inclined guiding surfaces of the Incisal Guide.

A mid-line groove is cut in the Incisal Pin about one inch from the spherical tip. Five additional lines calibrated in millimeters extend on either side thereof. These lines are used for recording or altering the vertical dimension.



**DUAL-END INCISAL PIN**

**FIG. 6**



**FIG. 7**

The Incisal Pin is inserted into, and the wider mid-line of these metric grooves is aligned with, the top edge of the Upper Member. It is secured by the Thumbscrew bearing against the flattened side on the Pin. This adjustment places the chisel end at 90 degrees to and in contact with the central table of the Incisal Guide and provides a parallelism of the Upper Member to the Lower Member.

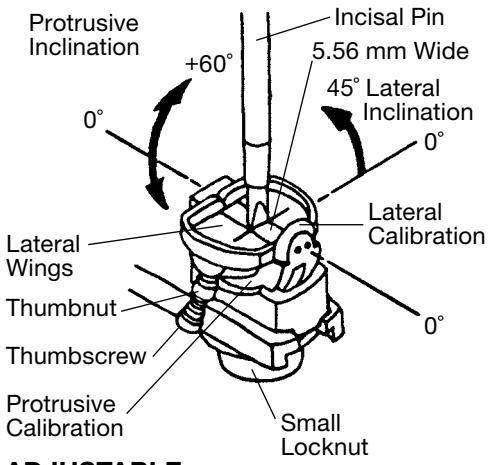
Two annular grooves, Figure 7, appear on the Incisal Pin at 37 and 54 mm below the Frankfort Horizontal Plane. These grooves form arbitrary vertical landmarks for alignment of the incisal edge of the maxillary centrals when making a Facebow transfer.

The 37 mm line is based in part on the Bonwil Triangle and results in a generally horizontal appearing plane of occlusion.

The 54 mm line forms an average landmark for alignment of the incisal edge of the upper centrals when making a Facebow transfer. This reference line is based on the research study by Frank R. Lauciello, D.D.S., and Marc Appelbaum, D.D.S., "Anatomic Comparison to Arbitrary Reference Notch on Hanau™ Articulators," Journal of Prosthetic Dentistry, December 1978, Volume 40, Number 6, Pages 676-681.

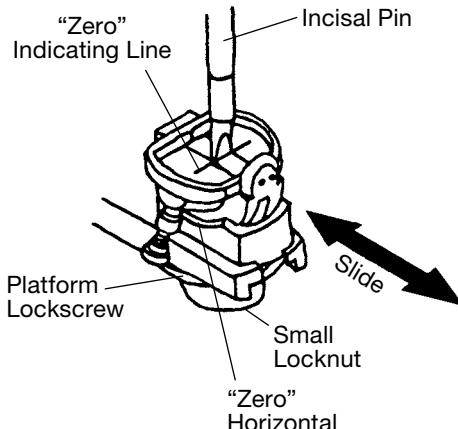
The Incisal Pin extends beyond the top of the Upper Member and provides a third point of stability when inverting the Articulator for mandibular cast mounting.

The spherical tip of this Incisal Pin serves as the Dual-End and is useful for fabricating customized acrylic anterior guide tables. The procedural use of this is outlined on page 27.



**ADJUSTABLE INCISAL GUIDE**

**FIG. 8**



**ANTERIOR SLOT**

**FIG. 9**

### **ADJUSTABLE INCISAL GUIDE, Figures 8 and 9:**

The Adjustable Incisal Guide provides an independent adjustment of anterior guidance. It cooperates with the Incisal Pin and Condylar Guidances to present a stable, three-dimensional programmed guide pattern for the mounted casts.

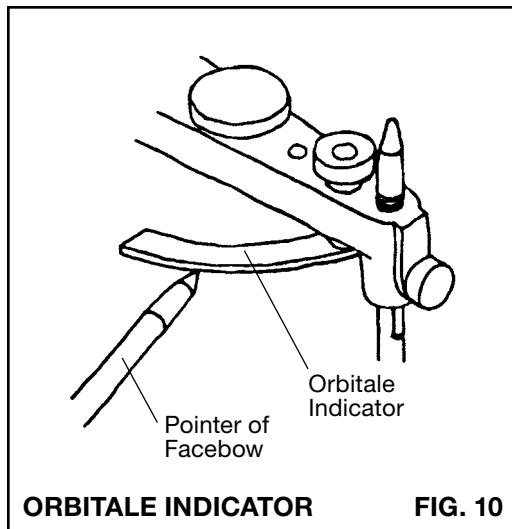
The Incisal Guide rotates antero-posteriorly from a horizontal “zero” degree to a 60 degree positive inclination of protrusion which is then secured by the small Locknut. The central guiding table is 5.56 mm wide and forms the inclined surface for the protrusive guidance of the Incisal Pin.

Separately adjustable Lateral Wings elevate by a Thumbscrew from a “zero” horizontal to a 45 degree incline and are fixed by a Thumbnut. The calibrations are very small and serve only as a reference.

An anterior slot, Figure 9, in the Lower Member, allows repositioning of the Incisal Guide. Adjust and lock the Guide at a “zero” horizontal and slightly loosen the Platform Lockscrew. Slide the Platform antero-posteriorly to align the chisel end of the Incisal Pin with the “zero” indicating line on the Lateral Wings.

This adjustment will place the Incisal Pin contact on the rotational center of the Guide, thereby maintaining the vertical dimension when adjusting the inclination for protrusion.

Loosening the Platform Lockscrew one turn will allow the Incisal Guide Assembly to be withdrawn from or returned to the anterior slot without any disassembly of parts.



Additional anterior guidance tables may be optionally selected and their usage is detailed in latter portions of this book under:

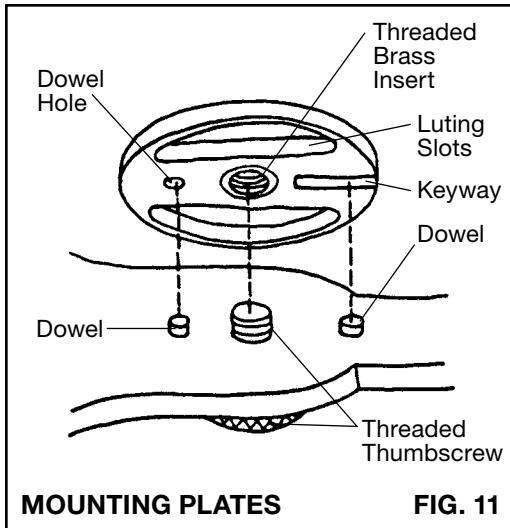
FLAT ANTERIOR GUIDE, Item Number 010741-000, Page 26.

Your selection of Tables shall determine the appropriate instructional reference.

### **ORBITALE INDICATOR, Figure 10:**

Some articulators are equipped with an Orbitale Indicator. This “crescent” represents the patient’s infra-orbitale notch and is the anterior reference landmark of the Frankfort Horizontal Plane.

When used with an Orbitale Pointer on a Facebow it provides an anatomical vertical orientation for the upper arch, obviating the use of any average reference lines on the Incisal Pin.



### **MOUNTING PLATES, Figure 11:**

Mounting plates are used to lute the upper and lower casts to the Upper and Lower Articulator Members by the means of a gypsum material.

These non-warping metal Plates contain two elongated and tapering luting slots for a secure adherence of the gypsum mounting. At their center is a domed brass insert which is internally threaded for attachment to the Upper or Lower Member. Longitudinally disposed to the luting slots and on the center plane of the insert is a keyway and a dowel hole which register over two Dowels in the Upper and Lower Member.

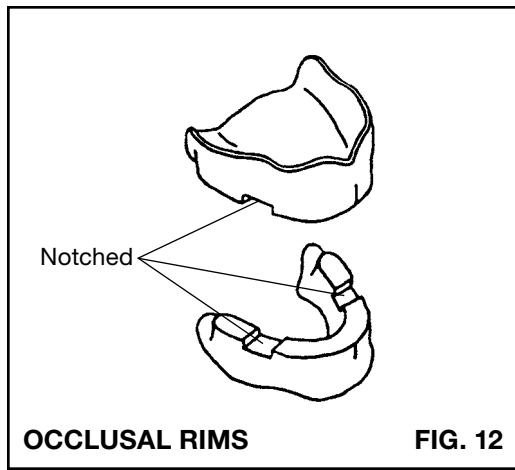
The Dowels cooperatively assist a threaded Thumbscrew which securely and accurately attaches the Mounting Plate. Order additional Plates as Item Number 005057-000, Mounting Plates, Pair (2).

### **FACEBOW TRANSFERS**

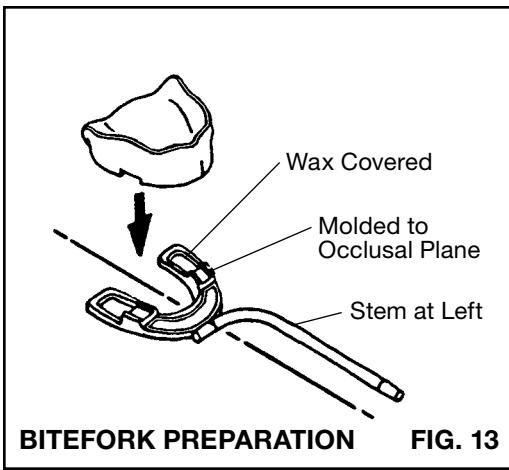
These HANAU™ Wide-Vue Series of Articulators have the capability of accepting Facia (Snow) type or Earpiece type Facebow transfers.

Substitutions of other HANAU™ Facebows may be made at your option:

- A. Facia type transfers using Facebows such as the HANAU™ Item Number 005702-000 or 005705-000 suspended from the ends of Condylar Shafts.
- B. Earpiece type Facebow transfers, particularly the HANAU™ 008824-000 suspend their Nylon Earpieces directly over the Auditory Pins which are 12 mm posterior to the Condyle center.



**FIG. 12**



**FIG. 13**

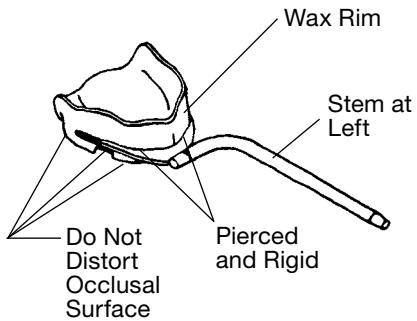
## OPERATORY PROCEDURE

In principle, the outlined procedures in this book apply to all restorative dentistry with the casts and positional records of the natural dentition substituting for the edentulous casts, the denture bases and the occlusal rims.

### INTEROCCLUSAL RELATION RECORDS

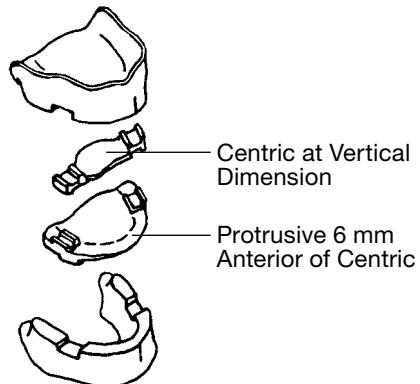
1. The maxillary and mandibular occlusal rims have been prepared and patient adjusted to the correct vertical dimension, the occlusal plane and the desired horizontal overlap, Figure 12.  
The occlusal surfaces of both rims shall be appropriately notched to accept an interocclusal recording material such as softened wax or quick setting plaster.
2. The top of the Bitefork or Biteplane, the stem at the patient's left, is covered with a triple layer of baseplate wax, Figure 13. Heat seal the periphery and soften the wax throughout in a water bath.
3. The softened wax impression material on the Bitefork is seated against the occlusal surface of the upper rim and is hand molded into and around the notches.  
Note that the stem of the Bitefork extends approximately parallel to the sagittal plane and is at the left of the patient.
4. Chill the Bitefork index and check to assure removal and accurate replacement of the bite rim.
5. The Bitefork may alternately be attached directly to the upper occlusal rim by heating the forks and piercing them fully into the wax rim, Figure 14.

The forks shall be parallel to the occlusal plane and shall not distort the occlusal or notched surfaces.



**ALTERNATE  
BITEFORK PREPARATION**

**FIG. 14**



**PATIENT INTEROCCLUSAL  
RECORDS**

**FIG. 15**

- Two interocclusal positional records of a terminal relation are required, Figure 15.

A centric interocclusal relation record is patient recorded at the vertical dimension of occlusion. The material is of choice but must be dead soft when recording and chill rapidly to an unyielding semibrittleness –and–

A protrusive interocclusal relation record is patient recorded at approximately 6 mm anterior of centric. Closure is made to a near anterior, non-piercing occlusal contact, being certain that the bite rims remain securely seated on their ridges.

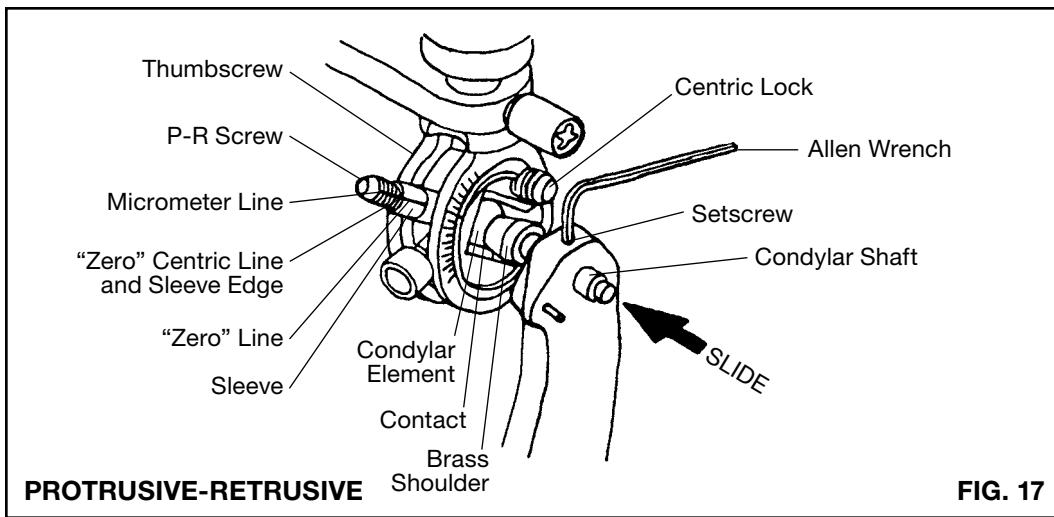
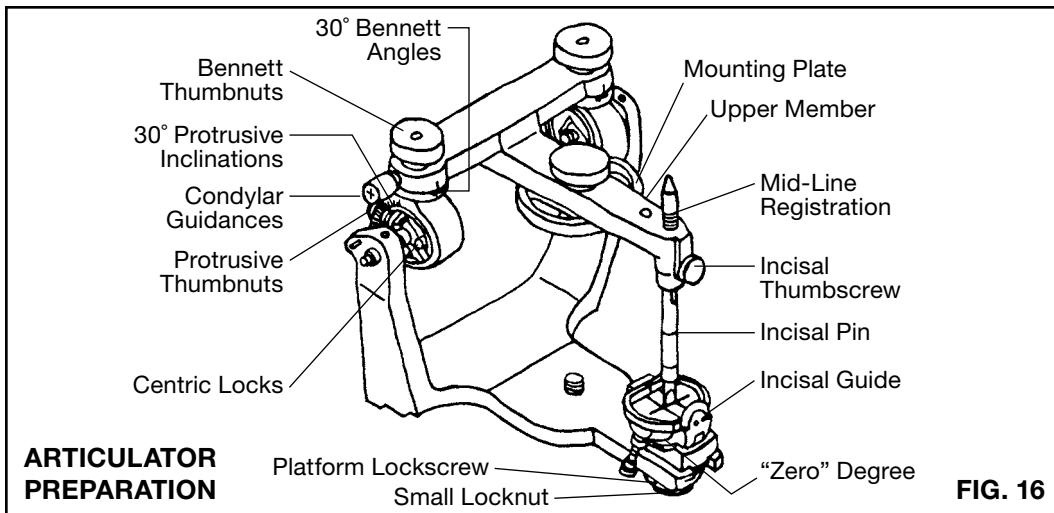
## LABORATORY PROCEDURE

### ARTICULATOR PREPARATION

- Adjust the protrusive inclination of both Condylar Guidances to 30 degrees and tighten the Thumbnuts, Figure 16.

Note that the calibrations for these angles appear on both sides of the Guidance housing and that the Right and Left can be seen and adjusted from the same side of the Articulator.

- Adjust the Bennett Angles of both Condylar Guidances at 30 degrees and tighten their thumb-nuts.
- Adjust the Incisal Pin to align the mid-line calibration to the top edge of the Upper Member.
- Adjust the Incisal Guide to a “zero” degree and tighten the small Locknut.



- E. Slide the Platform to align the Incisal Pin contact over the “zero” indicating line on Guidance and tighten Platform Lockscrew.
- F. Articulators with Protrusive-Retrusive feature ONLY must be adjusted to a “zero” centric, Figure 17.

Release the Centric Locks and the Thumbscrews at the medial site of the Condylar Guidances.

Adjust both P-R Screws to abut the “zero” centric line (widest, most prominent and seventh from end) with the edge of the Sleeve. Refine this “zero” centric position by aligning the micrometer reference line on the P-R Screw with the “zero” line on the Sleeve.

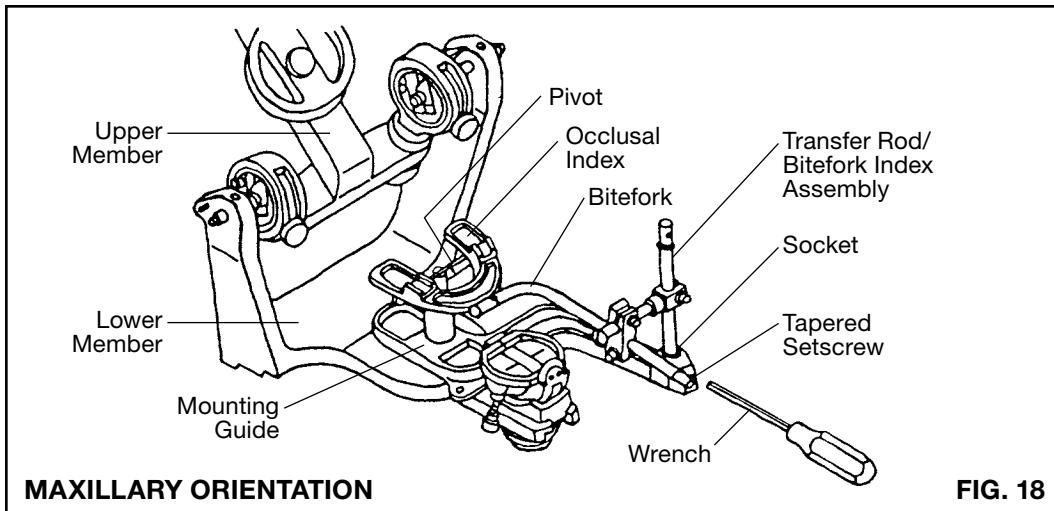
Secure the “zero” centric adjustment by tightening the Thumbscrews at the medial side.

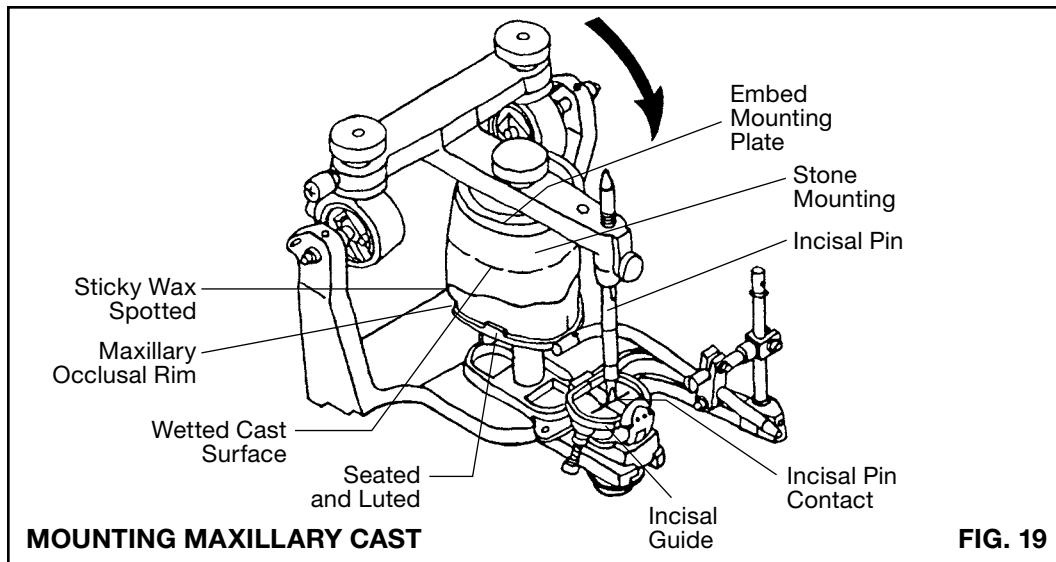
If the Articulator Condylar Shafts were adjusted on a previous case, they must be realigned to their original position.

Loosen the two Setscrews with the Allen Wrench. Slide the Condylar Shafts to contact their brass shoulders with the flatted sides of the “zero” centric positioned Condylar Elements – without binding or perceptible side-shift.

The chisel end of the Incisal Pin must exactly coincide with the central table of the Incisal Guide (reference Figure 6). Tighten the Setscrews to secure the Condylar Shafts in this position.

- G. Tighten the Centric Locks, Figure 16, to restrict the Articulator to opening and closing movements only.
- H. Apply a thin coating of petroleum jelly to all surfaces of the Articulator that will be exposed to the stone mounting media.
- I. Firmly attach a Mounting Plate to the Upper Member.

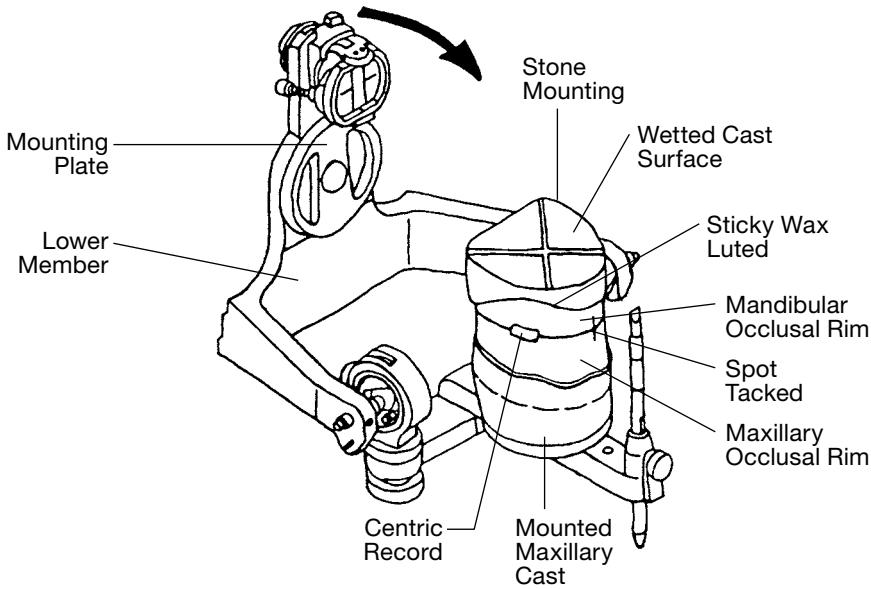




**FIG. 19**

## MOUNTING MAXILLARY CAST

8. Swing the Upper Member of the Articulator OPEN to the Centric Bumper. Securely attach the Mounting Guide (furnished with the Twirl-Bow) to the Lower Member, Figure 18.
  9. Insert the lower end of the Transfer Rod/Bitefork Index assembly into the Socket of the Mounting Guide, aligning the Tapered Hole to accept the Tapered Setscrew in Socket. Tighten the Tapered Setscrew to enter and align the Transfer Rod.
  10. Raise the Pivot (cast support) to contact the underside of the Bitefork Index and lock in position by the Thumbscrew to stabilize and carry the weight of the maxillary cast and the stone mounting media.
  11. Securely seat and accurately lute the upper occlusal rim into the occlusal wax index on the Bitefork, Figure 19. The upper cast is then seated into and sticky wax spotted to the denture base.
  12. A mixture of stone is placed on the wetted mounting surface of the cast. The Upper Member is then swung forward to embed the Mounting Plate and to bring the Incisal Pin into contact with the Incisal Guide.
- The mounting is completed with a wet finger and spatula to expose the top surface of the Mounting Plate. This permits convenient removal and accurate reattachment of the cast to the Articulator.
13. Upon complete set of the mounting, the sticky wax luting is carefully broken from the occlusal rim. The Mounting Guide and Transfer Rod/Bitefork Index assembly are removed from the Lower Member. Check that the occlusal rim is intact and that all of the sticky wax has been removed.



**MOUNTING MANDIBULAR CAST**

**FIG. 20**

### **MOUNTING MANDIBULAR CAST, Figure 20:**

14. Invert the Articulator and swing the Lower Member back to the bench.

Apply a thin coating of petroleum jelly to all surfaces of the Lower Member that may be contacted by the gypsum material.

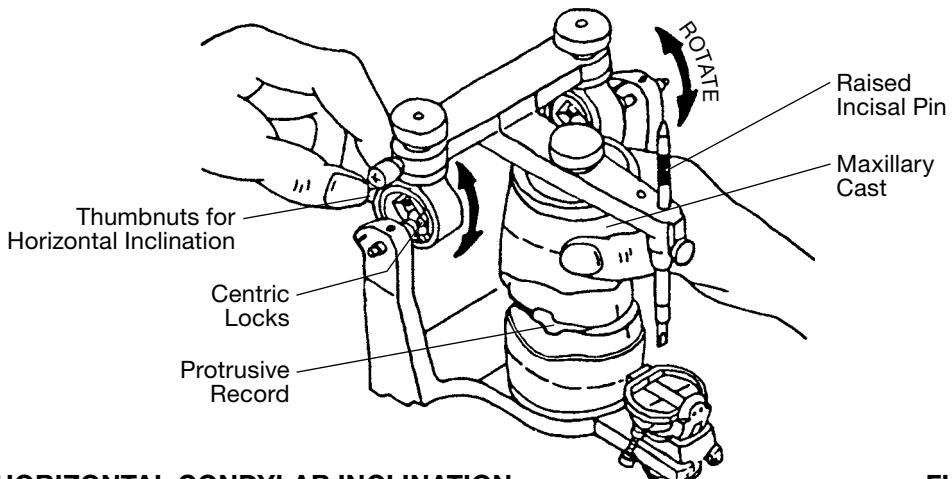
Firmly attach a Mounting Plate to the Lower Member.

15. Securely seat the mandibular cast in the bite rim and lute together with sticky wax.

The centric interocclusal relation record is then carefully seated between the indexed occlusal surfaces of the upper and lower occlusal rims. Temporarily spot tack the occlusal rims in this centric position.

16. A mix of stone is placed on the wetted mounting surface of the lower cast. The Lower Member is then swung over to embed the Mounting Plate into the stone and to bring the Incisal Pin into contact with the Incisal Guide.

Complete the mounting with a spatula and finger, making certain that the Centric Locks have been secured.



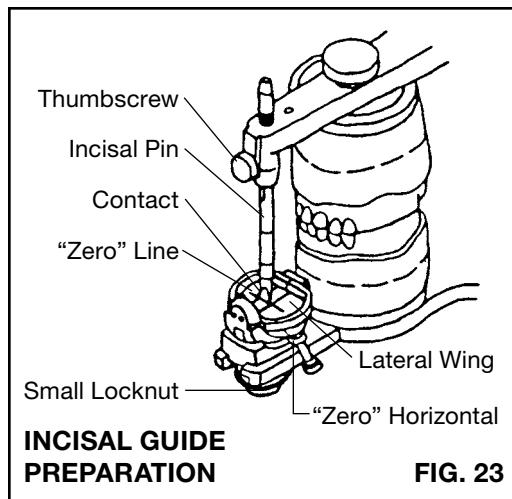
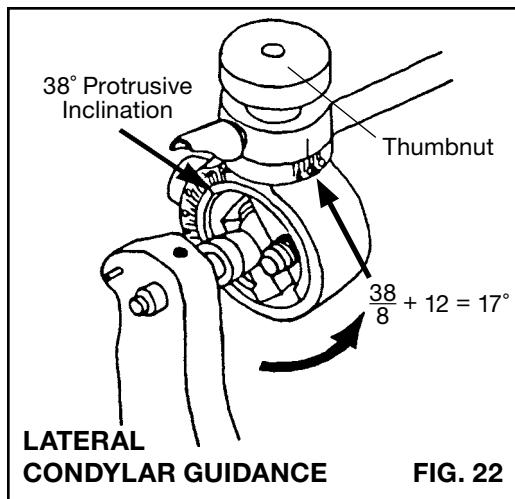
**HORIZONTAL CONDYLAR INCLINATION**

**FIG. 21**

#### **ADJUSTMENT OF HORIZONTAL CONDYLAR GUIDANCE, Figure 21:**

17. Upon complete set of the mount, the Articulator is placed into an upright position. Carefully cut the tacking at the occlusal surface and remove the centric interocclusal relation record.
18. Loosen the Centric Locks and the Thumbnuts for horizontal inclination of the Condylar Guidances. Raise the Incisal Pin to remove the possibility of mechanical interference with the Incisal Guide. Whenever Centric Locks are loosened, the Condyle Retainers MUST be pushed outward to block the Track, barring accidental removal of the Upper Member.  
As a matter of habit, leave the Condyle Retainer closed except as necessary for required removal of Upper Member.
19. Seat the protrusive interocclusal relation record onto the lower occlusal rim. Carefully guide the Upper Member into protrusion, lightly engaging the upper rim into the imprint of the protrusive relation record.  
Grasp the upper cast to maintain a tactile feel of the casts at the protrusive record and –
20. Rotate the Right and Left Guidances back and forth to accurately seat the upper and lower rims into the protrusive relation record.

Observe that the rims seat without rocking in or deforming the record and tighten the Thumbnuts for horizontal inclination. The protrusive relation record is then removed.



#### **ADJUSTMENT OF LATERAL CONDYLAR GUIDANCE (BENNETT ANGLE), HANAU™ FORMULA, Figure 22:**

21. The classic HANAU™ Formula,  $L = H/8 + 12$  may be used for adjusting the lateral condylar guidance. In this formula, "H" is the Horizontal Condylar (Protrusive) Inclination and "L" is the calculated lateral Condylar Guidance (Bennett Angle).

EXAMPLE: The right protrusive inclination of 38 degrees is divided by 8 and is accepted as 5, to which 12 is added, totaling 17. The right Condylar Guidance is then adjusted to a 17 degree lateral indication at the calibration on the Upper Member and is locked by the Thumbnut.

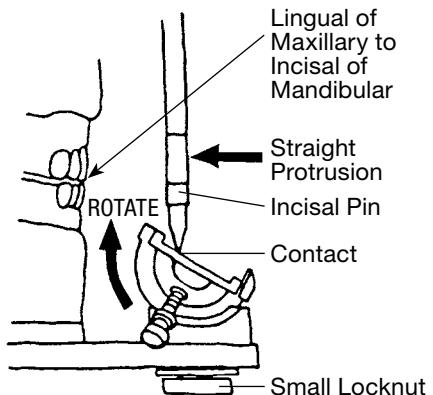
The same method is used for adjustment of the left lateral – dividing the protrusive inclination by 8 and adding 12 – then setting the left Condylar Guidance to the computed angle.

NOTE: An alternate method of Condylar Guidance adjustment utilizing lateral interocclusal relation records is described in a latter portion of this instruction, Steps 37 thru 44.

Additional aids for establishing centric and lateral border movements are described under the "Optional Accessories" at the end of this instruction.

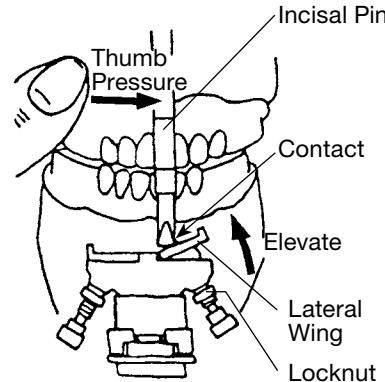
#### **ARRANGEMENT OF ANTERIOR TEETH**

22. The six upper and six lower teeth are set up in the arrangement dictated by the patient's esthetic and phonetic requirements.



**PROTRUSIVE**

**FIG. 24**



**RIGHT LATERAL**

**FIG. 25**

### **INCISAL GUIDE PREPARATION, Figure 23:**

23. Lock the Articulator into centric. The occlusal rims are then seated onto their casts at the established vertical and centric relation.
24. Lower the Incisal Pin into contact with the “zero” horizontal Incisal Guide, the chisel end of the Pin resting crosswise on the center table and lock in position by the Thumbscrew.

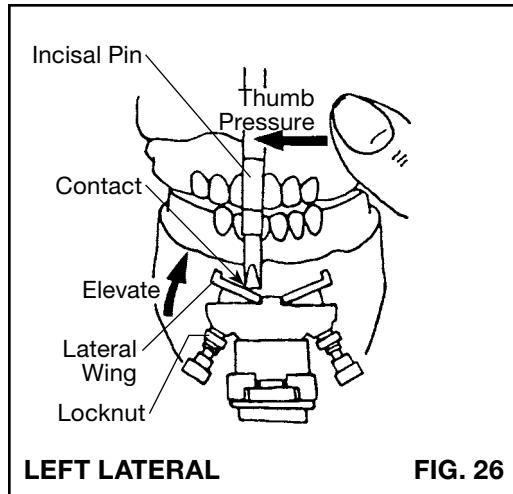
Verify or correct at this time, the alignment of the Incisal Pin chisel end with the “zero” indicating line on the Lateral Wings.

Slightly loosen the small Locknut for protrusion and disengage the Centric Locks.

### **ADJUSTMENT OF INCISAL GUIDE, Figures 24 thru 26:**

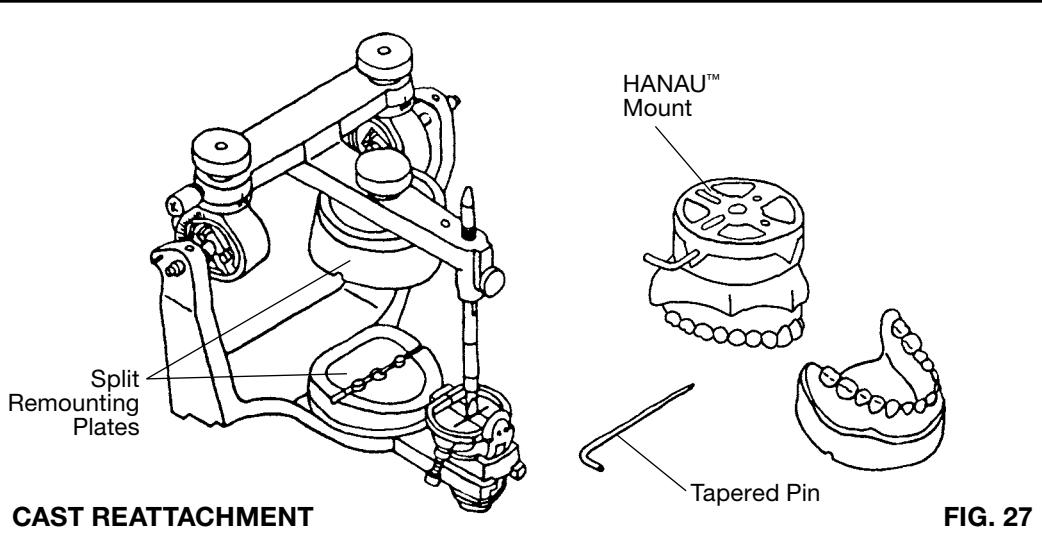
25. Gently guide the upper cast into a straight protrusion. The lingual edges of the upper central incisors are brought into contact with the incisal edges of the lower incisors, Figure 24.

The Incisal Guide is then rotated antero posteriorly to make contact with the Incisal Pin, tightening the small Locknut to maintain the angulation.



26. The upper cast is then guided into a right lateral cupid to cupid guidance relation by thumb pressure at the right side of the upper cast to assure the Bennett Shift, Figure 25. The Lateral Wing is then elevated to contact the corner of the Incisal Pin and the Locknut is tightened to maintain this adjustment.
27. Apply thumb pressure at the left side of the upper cast and guide it into a left lateral cupid to cupid excursion, Figure 26. Adjust the remaining Lateral Wing to contact the Incisal Pin and secure the adjustment by tightening the Locknut.

NOTE: Incisal Guide adjustment for natural dentition as in periodontic or orthodontic studies, occlusal correction, diagnosis, etc., are made in the same manner.



## ARRANGEMENT OF POSTERIOR TEETH

28. The remaining teeth are set into centric occlusion and checked in working, balancing and protrusive excursions.

The Incisal Pin acts as the vertical stop and must remain in contact with the Incisal Guide surfaces from centric throughout all excursive movements.

29. The waxed occlusal rims may then be tried in the patient for esthetics, occlusal function and perhaps correction.

The articulation is completed and the gingival and palatal is waxed.

Reseat the completed occlusal rims onto their master casts. Seal the rims to the casts to preserve the tissue surface from plaster or stone seepage during the flasking procedure.

## PROCESSING

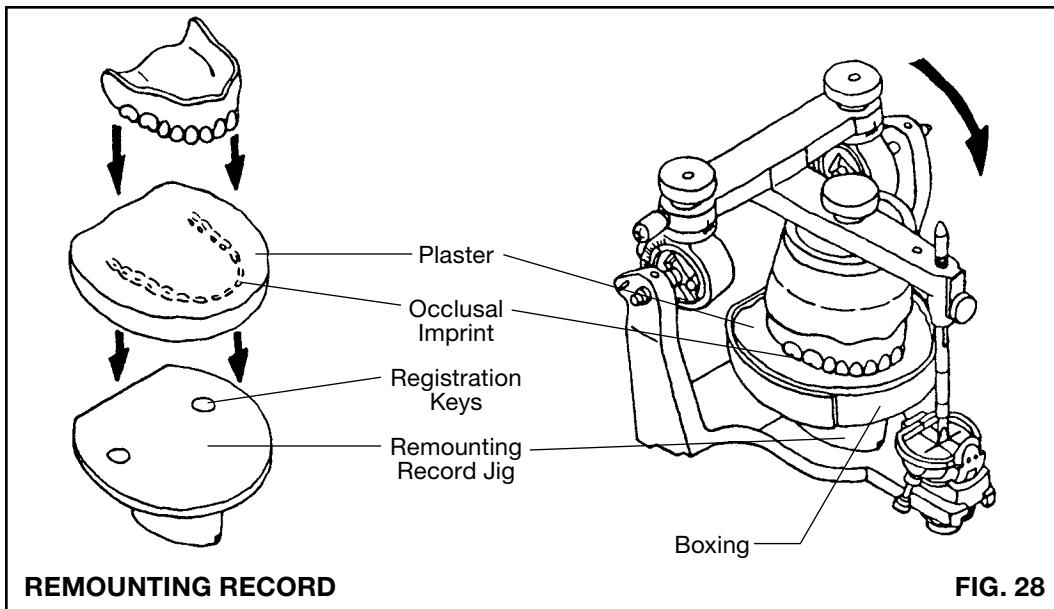
30. Before removing the master casts/waxed dentures, record the Articulator calibrations for later use.

Record the – Serial Number,

R & L Horizontal Inclination,

R & L Bennett Angle, and

Vertical of Incisal Pin



31. If accessory HANAU™ Mount, Item Number 009750-000 or other methods of precise cast reattachment to the Articulator have been employed, the waxed dentures on their master casts are removed from their mountings and processed, Figure 27.

### ALTERNATE REMOUNTING RECORD

32. Should no means have been provided for reattachment of the casts to the Articulator after denture processing, a "Remounting Record" is suggested. In lieu of this alternative is another Facebow transfer to effectively remount the processed upper denture and cast. It shall also be necessary to remount the lower into a centric occlusion.

Remove the lower cast and attach the accessory HANAU™ Remounting Record Jig, Item No. 009544-000, to the Lower Member as illustrated in Figure 30.

Lubricate the index surface with petroleum jelly. Wrap boxing wax or masking tape around the periphery to form a dam in which to pour plaster sufficiently thick to register the upper occlusal imprint.

Lock the Articulator in centric and lower the Upper Member to bring the Incisal Pin into contact with the Incisal Guide, and penetrating the upper occlusal cusps in the plaster.

The waxed dentures on their master casts are then removed from their stone or plaster mountings and processed.

## **REMOUNTING**

33. The completed dentures must remain seated on their master casts after processing and de-flasking. If dislodged, they must be reseated properly and precisely.

The master casts with their attached dentures are then accurately replaced on the original Articulator mountings using the Tapered Pin attachment of the HANAU™ Mount or by whatever means otherwise elected.

34. If a "Remounting Record" has been made, Figure 28, the upper denture must be seated in the plaster occlusal imprint and the master cast remounted to the centric locked Upper Member of the Articulator.

The lower complete denture must then be remounted to the Lower Member at a centric relation.

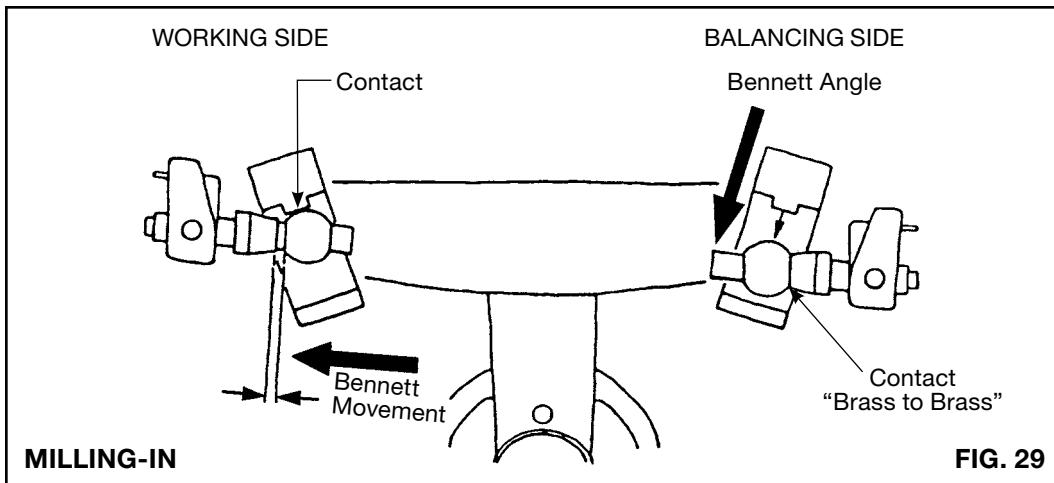
## **CENTRIC OCCLUSION**

35. Verify or adjust the Articulator to the recorded calibrations for this denture case.

With the dentures in place on their original Articulator mountings and the Articulator at centric, the Incisal Pin should be in an exact contact with the Incisal Guide.

A space between the Incisal Pin and the Incisal Guide indicates that the vertical dimension has opened. The centric occlusion must be restored through the use of articulating paper and selective grinding. The vertical will be restored when the Incisal Pin again rests upon the Incisal Guide at a centric relation.

Do not discount the possibility that the Incisal Pin may contact the Incisal Guide, but the teeth are not in occlusion. This would indicate a decrease in the vertical due to a processing error and the extent of closure and acceptability can only be determined by you. Release the Incisal Pin to occlude the dentures and retighten the Incisal Pin when it rests on the Incisal Guide.



**FIG. 29**

### **MILLING-IN**

36. When executing lateral excursions during the milling-in phase, it is essential that constant “toward the operator” pressure be exerted by the hand lightly holding the Incisal Pin or upper cast. This will insure that the shoulder of the Condylar Shaft, Figure 29, remains in contact with the flat of the balancing Condylar Element while the working Condylar Element rests against its centric stop and slides laterally, thereby simulating the Bennett movement.

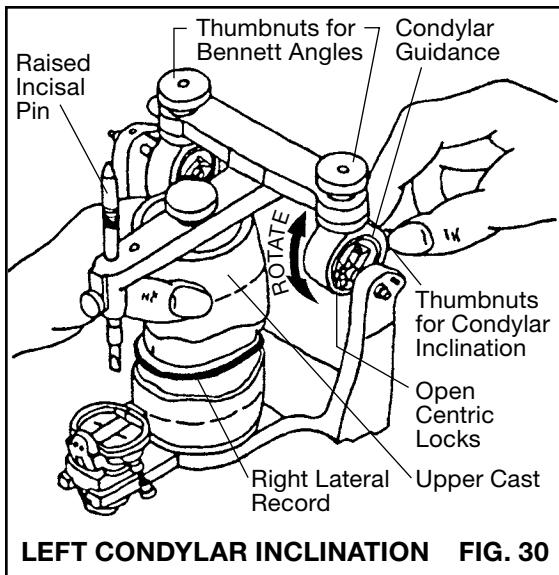
## **ALTERNATE “CHECKBITE” TECHNIQUE**

### **ADJUSTMENT OF CONDYLAR GUIDANCES**

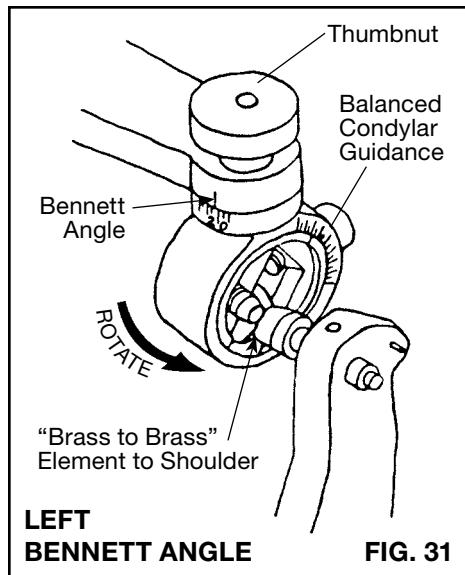
37. RIGHT and LEFT lateral interocclusal relation records may be elected to adjust the Condylar Guidances in lieu of a protrusive record and use of the HANAU™ Formula, Steps 18 thru 21. Concurrent with the patient recording of centric in Step 6 shall be a RIGHT and LEFT lateral interocclusal relation record in a material of your choice.

Guide the patient into the softened recording material at approximately 4 to 5 mm lateral of the midline. Assure that the lateral relation is devoid of any protrusion on the working side and that the bite rims remain securely seated on their ridges, without piercing the recording material.

Chill the record, remove, trim and check the RIGHT and LEFT interocclusal records against the occlusal rims for an accurate and distortion free seating.



**LEFT CONDYLAR INCLINATION FIG. 30**



**FIG. 31**

### **ADJUSTMENT OF LEFT CONDYLAR GUIDANCE, Figures 30 and 31**

38. Loosen the Centric Locks, the Thumbnuts for condylar inclination and Bennett Angles of both Condylar Guidances.  
Raise the Incisal Pin to eliminate possible interference with the Incisal Guide.
39. Seat the RIGHT lateral interocclusal record onto the lower occlusal rim, Figure 30. Carefully guide the Upper Member into a right lateral, lightly engaging the upper rim onto the imprint in the seated RIGHT record.  
Grasp the upper cast to maintain an unstrained and tactile feel of the casts at this RIGHT lateral relation and –  
Slowly rotate the Left Condylar Guidance back and forth until the upper and lower rims seat into the lateral record.  
Observe that the rims seat without rocking in or deforming the record and tighten the Thumbnut for this condylar inclination.
40. The lateral of this balancing Condylar Guidance is then slowly rotated from 30 degrees inward until the flat side of the Condylar Element contacts the shoulder on the Condylar Shaft, “brass to brass,” Figure 31. Tighten the Thumbnut to secure this left Bennett Angle.

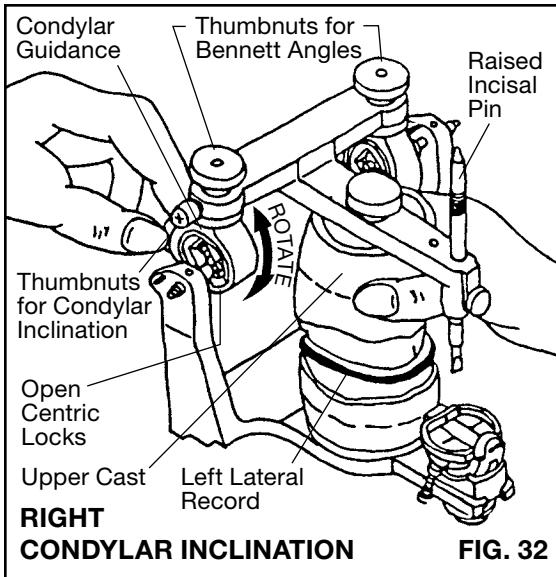


FIG. 32

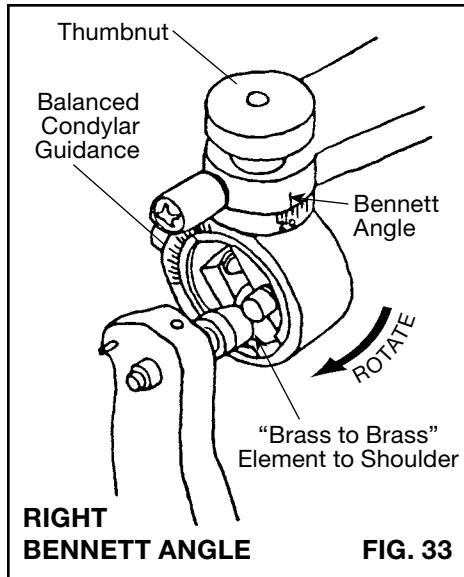


FIG. 33

41. While still maintaining this lateral position in the record, slightly loosen the Thumbnut for condylar inclination, Figure 32, and reaffirm the record seating by slightly rotating back and forth, then retightening the Thumbnut.

Remove the RIGHT lateral relation record.

#### **ADJUSTMENT OF RIGHT CONDYLAR GUIDANCE, Figures 32 and 33:**

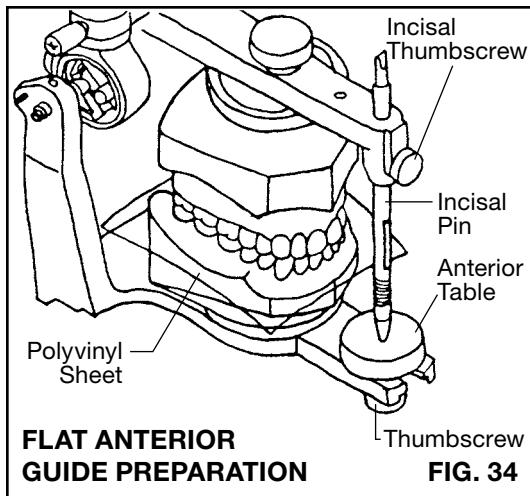
42. Seat the LEFT lateral record on the lower occlusal rim, Figure 32. Guide the Upper Member into a left lateral, engaging the upper rim onto the record imprint.

Grasp the upper cast lightly and then slowly rotate the Right Condylar Guidance to seat the rims into the lateral record. The rims must seat without rocking or deforming the record. Secure the Thumbnut for this Right Condylar Guidance inclination.

43. The lateral of this non-working Condylar Guidance is then rotated inward from the 30 degree setting to contact the shoulder of the Condylar Shaft with the flat of the Condylar Element, again – “brass to brass,” Figure 35. Tighten the Thumbnut for this right Bennett Angle.

44. While maintaining this left lateral cast position, slightly loosen the Thumbnut for condylar inclination, Figure 34. Check and perhaps refine the seating of the rims in the record and retighten the Thumbnut.

Remove the LEFT lateral relation record.



## ADDITIONAL OPTIONS

### FLAT ANTERIOR GUIDE

The Flat Anterior Guide, Item Number 010741-000, is used as a flat, horizontal guidance table or as a disposable base for fabricating customized acrylic anterior guide tables.

The Item Number 010741-000 consists of (1) Flat Plastic Anterior Table, Number 010294-000, and (1) Thumbscrew, Number 010717-000.

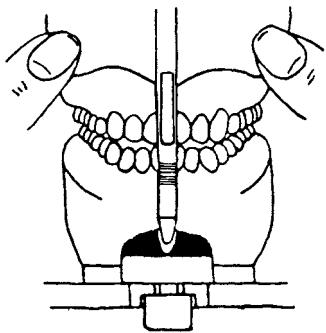
The secondary purpose of the Dual-End Incisal Pin is for use with these Flat Anterior Guides. The Pin is reversed in the Upper Member with the spherical end in contact with the Flat Table.

A fine grade of cold cure acrylic is suggested for customizing the Anterior Table, Item Number 3760.

This is the final step of Articulator adjustment and no modification should be made to the Condylar Guidance settings or to the vertical dimension without also remaking the customized anterior incisal guidance.

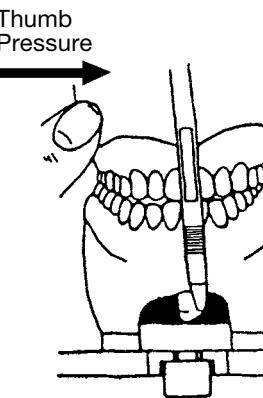
### FLAT ANTERIOR GUIDE PREPARATION, Figure 34:

- Enter the two keys on the Anterior Table into the keyholes adjacent to the anterior slot and secure by the Thumbscrew.
- Carefully engage the Upper Member, bringing the casts into centric occlusion.



**STRAIGHT  
PROTRUSIVE**

**FIG. 35**



**RIGHT LATERAL**

**FIG. 36**

- C. Lower the spherical end of the Dual-End Incisal Pin into contact with the Anterior Table and tighten the Incisal Thumbscrew.
- D. Lubricate the spherical end of Pin with petroleum jelly.
- E. Place a 4" x 4" x approx. .0015" thick polyvinyl sheet between the upper and lower casts to resist abrasion of the stone cusps in natural dentition during the fabrication of the acrylic anterior guide.

## **FABRICATION OF A CUSTOMIZED ACRYLIC ANTERIOR GUIDE**

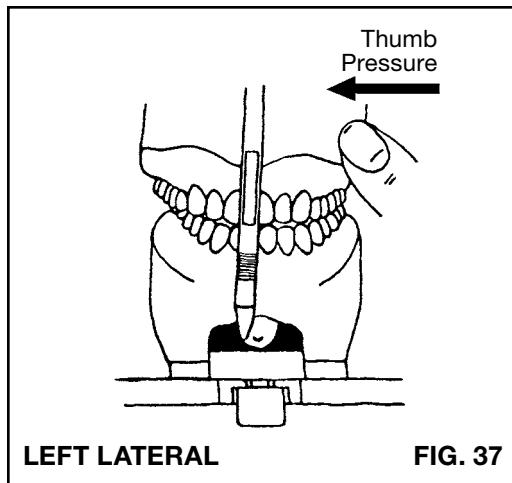
HANAU™ Pantacrylic is mixed to a proportion of 2 ml. liquid and 6 gm. powder. Spatulate thoroughly to an almost putty consistency.

Swing back the Upper Member and lay the putty-like Pantacrylic onto the DRY Anterior Table. Mound the acrylic about  $\frac{3}{8}$ " high at the center and do not overflow the edge.

Five minutes after the start of mixing, the Upper Member is lowered to enter the Incisal Pin into the Pantacrylic. Immediately make excursions as described in A, B, and C below;

The Incisal Pin must never be used to make lateral excursions from centric as to do so will negate the Bennett Shift and Bennett Angle, causing the working side Condyle to rotate only.

- A. Gently guide the upper cast into a full and straight protrusive by applying thumb pressure at the anterior of the upper cast and then promptly return to centric, Figure 35.
- B. From this centric relation, gently guide the upper cast into a full right lateral by thumb pressure at the right side of the cast to insure the Bennett Shift and then return to centric, Figure 36. The Bennett Angle on the nonworking side will be followed automatically.



- C. The upper cast is then guided through a full left lateral excursion with its return then to centric, Figure 37. Thumb pressure at the left of the cast will allow full utilization of the Condylar Guidance settings.

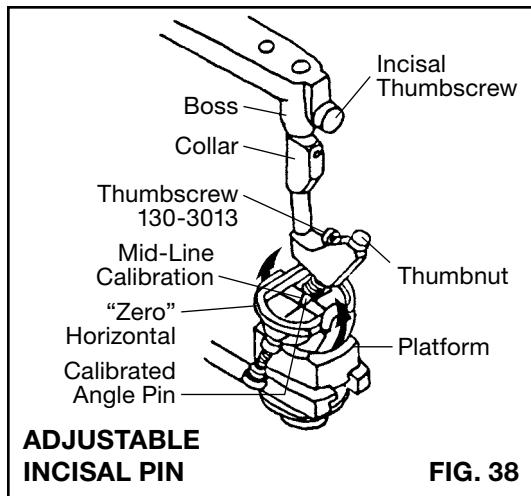
The Incisal Pin will be observed to displace the Pantacrylic and the three excursions from centric must be repeated as often as necessary until the material has set. Expected working time from mixing to a full set is approximately eight to ten minutes.

Upon complete set of the Pantacrylic Incisal Guidance, the frontal area of the acrylic may be relieved with a carbide bur to permit free opening and closing of the Upper Member at a centric relation.

Always apply thumb pressure at the side of the upper cast during laterals to insure the Bennett Shift on the working side and the Bennett Angle on the nonworking. Pressure at the front of the cast will assure protrusion.

Upon completion of the case, the Thumbscrew is removed and the customized Anterior Table filed with the patient's casts and recordings – or it is discarded.

A new disposable Flat Plastic Anterior Table is then attached for the next usage. Replacements are available as Item Number 009489-000, package of 12 disposable Flat Plastic Anterior Tables.



## ADJUSTABLE INCISAL PIN

This accessory Adjustable Incisal Pin (A.I.P.), Item Number 010670-000, allows the vertical dimension on the Articulator to be altered within a range of plus or minus 5 millimeter. It is the suggested companion to the Long Centric Adjustable Incisal Guide, Item Number 010740-000, described on page 29.

The A.I.P., Figure 38, has been factory adjusted for this Wide-Vue Series of Articulators, the Collar having been fixed and shall not be disturbed.

The Calibrated Angle Pin is adjusted by the Thumbnut to the mid-line calibration and then locked by the small Thumbscrew.

Insert the A.I.P. into the Upper Member to contact the Collar with the Boss and tighten the Incisal Thumbscrew.

This then is the ideal starting position for all usage and the Thumbnut is the only adjustable means – opening or closing the vertical 5 mm in either direction.

The Platform of a “zero” horizontally adjusted Incisal Guide is repositioned to align the “zero” indicating line on the Lateral Wings with the contact point of the Calibrated Angle Pln.

Always secure the Calibrated Angle Pin by the small Thumbscrew after any vertical adjustment.

## **ARTICULATOR CARE AND MAINTENANCE**

Your Whip Mix articulator is a precision instrument and requires care and maintenance. Periodic cleaning and lubricating as described below will assure prolonged life and dependable service from the instrument. Failure to follow these instructions will void your warranty.

### **CLEANING**

Use a mild soap and water solution with the aid of a brush to dissolve accumulations of wax and to wash away carborundum grit. Then air dry and lubricate. DO NOT use strong detergents, alkalies, gasoline or naphtha as cleaning agents.

### **LUBRICATION**

Lubricate the working and bearing components with a thin film of sewing machine or high speed handpiece type oil. Wipe off excess oil to prevent accumulations of dust or grit.

A thin coating of petroleum jelly must be applied to all Articulator surfaces that will be contacted by the gypsum mounting material.

### **STORAGE**

Store the articulator in a clean, dry atmosphere free of plaster and carborundum dust; away from acids, alkalies or corrosive medicaments. Wait a full day after mounting casts before storing the articulator in a carrying case or corrugated carton. Moisture dissipation from the stone in an enclosed area causes alkalinity of the stone mixture which can damage the articulator surface.

### **WARRANTY**

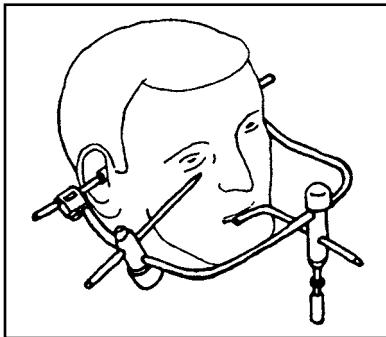
Whip Mix Corporation warrants the articulator system to be free from defects in material and/or workmanship for a period of one year. In the event of a defect, please notify the factory in writing of the defect prior to returning the instrument. Whip Mix Corporation will, at its option, either repair, replace or issue a credit for such defects.

Because Whip Mix Corporation is continually advancing the design of its products and manufacturing methods, it reserves the right to improve, modify or discontinue products at any time, or to change specifications or prices without notice and without incurring obligations.

## **FACEBOWS**

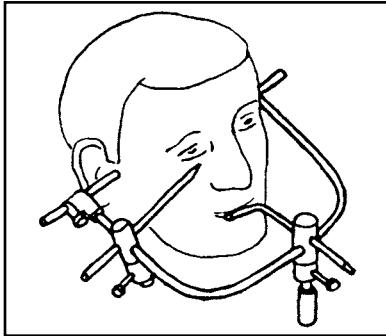
Besides the HANAU™ Spring-Bow, these Facebows may be preferred and are described fully in the Whip Mix catalog:

### **EARPIECE FACEBOWS:**



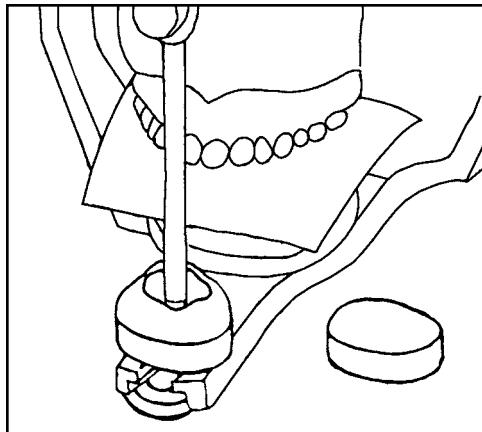
Item Number 008824-000 Earpiece Facebow with Orbitale Pointer and Bitefork; for use with 010824-000, 010885-000, 010889-000.

### **FACIA (SNOW TYPE) FACEBOWS:**



Item Number 005705-000 Facia Facebow with Orbitale Pointer and Bitefork; for use with 010824-000, 010885-000, 010889-000.

These Facebows include a Bitefork. To substitute a Biteplane for dentulous, specify "with Biteplane, Item Number 005727-000."

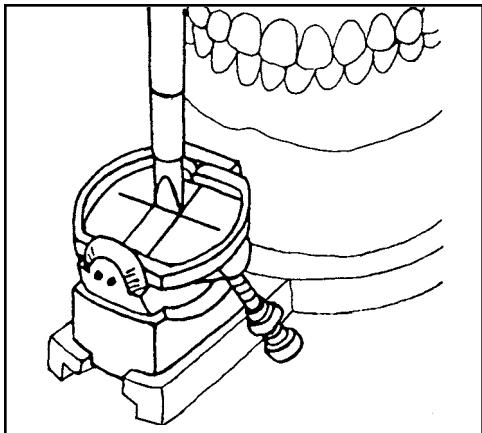


### **FLAT ANTERIOR GUIDE, Item Number 010741-000**

Includes a quick indexing flat plastic Anterior Table and Thumbscrew for accurate repositioning on the Articulator.

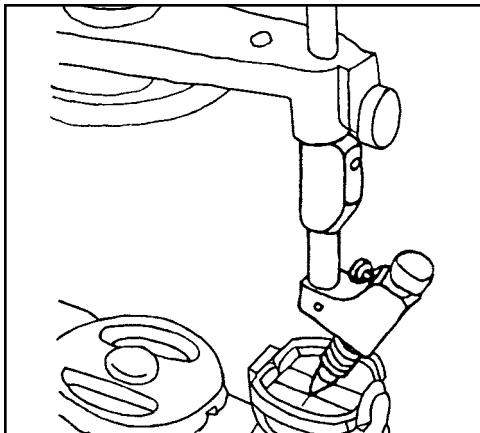
This flat plastic Anterior Table may also be used as a disposable carrier for fabricating a customized acrylic anterior guidance in an acrylic material.

Replacement disposable Anterior Tables are available in packages of 12 as Item Number 009489-000.



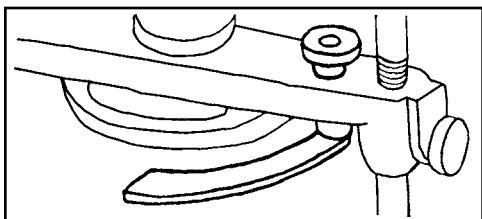
**ADJUSTABLE INCISAL GUIDE,  
Item Number 010731-000**

This mechanical anterior guidance may be adjusted to the terminal inclines of protrusion and right and left lateral relations. It is used with the "chisel" end of the Dual-End Incisal Pin furnished with the Wide-Vue.



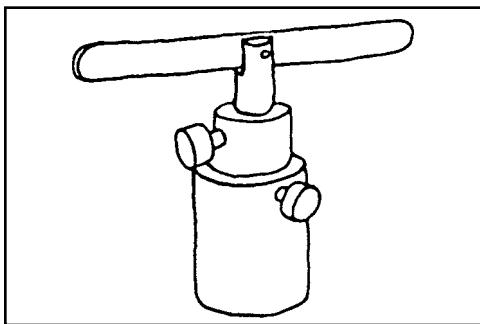
**ADJUSTABLE INCISAL PIN,  
Item Number 010670-000**

The vertical dimension may be altered within a range of plus or minus 5 millimeter while its Calibrated Angle Pin remains on the exact arc of Articulator closure.



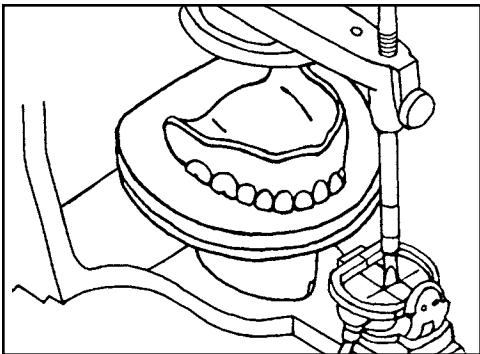
**ORBITALE INDICATOR,  
Item Number 005052-000**

Represents the patient's infra-orbitale notch as an anatomical third reference point during a Facebow transfer to the Articulator.



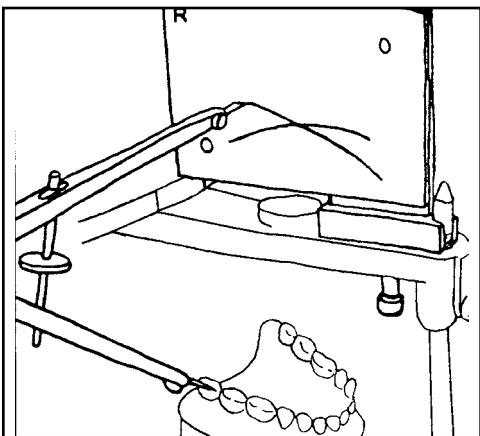
**CAST SUPPORT,  
Item Number 003401-000**

Supports the Bitefork or Biteplane index during a Facebow transfer to the Articulator – preventing vertical displacement by cast weight and gypsum mounting.



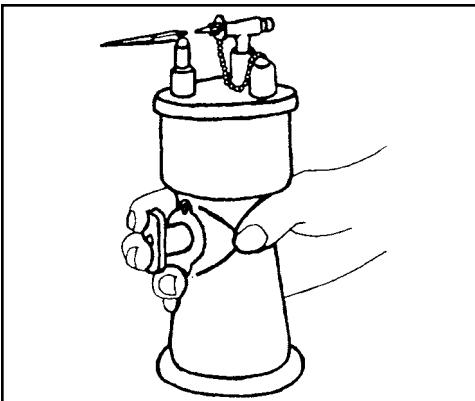
### **REMOUNTING RECORD JIG, Item Number 009544-000**

Is used for the preparation of a permanent plaster record – accurately relocates the occlusal index for remounting the upper after processing. This precludes taking a second Facebow record and transfer to the Articulator.



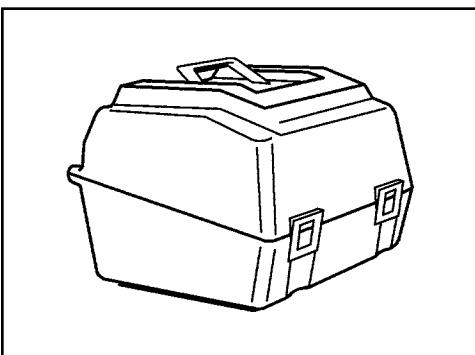
### **BROADRICK OCCLUSAL PLANE ANALYZER, Item Number 006901-000**

Is used for analyzing the Curve of Spee and the Curve of Wilson in developing an acceptable curve of occlusion.



### **ALCOHOL TORCH Item Number 000301-000**

Is ideal for setting-up teeth, for waxing and for numerous other utility uses.



### **INSTRUMENT CASE, SMALL Item Number 015601-000**

This attractive and durable case has been constructed to contain the Articulator and Facebow.

It provides protective storage and transfer to or from the laboratory. Specify for Wide-Vue.





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