

Principles of Removable Appliances

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June 4, 2004

Disadvantages of Removable Appliances

- Heavily dependent upon patient **compliance**
- Affect speech
- Unable to perform complex tooth movements



Indications

- Growth modification during mixed dentition stage (functional appliances)
- **Limited tooth movement** (tipping)
 - Correction of individual tooth malposition
 - Arch expansion
- Retention after comprehensive orthodontic treatment (braces)

Appliance Design

- Considerations
 - What movement is desired
 - Acceptability of the appliance to the patient
 - Cost
 - KISS rule



Advantages of Removable Appliances

- Removable for socially sensitive occasions
- Uncompromised oral hygiene
- Short chair time

Laboratory Projects

- 1) Anterior Bite Plane Appliance
- 2) Removable appliance to correct an anterior crossbite

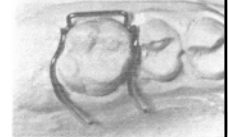
Anterior Bite Plane Appliance

- Indications
 - Deep overbite



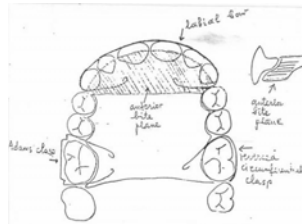
Anterior Bite Plane Appliance

- Adams clasp
 - .028 stainless steel round wire
 - Most useful clasp
 - Provides excellent retention
 - Engages in the mesiobuccal and distobuccal undercuts of individual posterior teeth



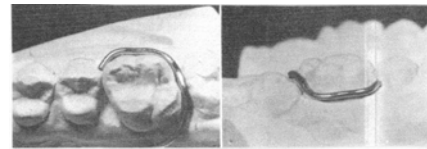
Anterior Bite Plane Appliance

- Components
 - Hawley type labial bow
 - Clasps on maxillary first molars
 - Adams clasp
 - Reverse circumferential clasp (C-clasp)
 - Palatal coverage and anterior bite plane
 - Triad



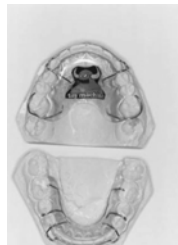
Anterior Bite Plane Appliance

- Circumferential clasp
 - .030 stainless steel round wire
 - More of a supporting role than a retentive role
 - Keeps clear of occlusal contact



Anterior Bite Plane Appliance

- Hawley labial bow
 - .030 stainless steel round wire
 - Canine to canine with adjustment loops
 - Purpose
 - Retract flared incisors
 - Provide anterior stabilization
 - Control position of incisor teeth



Removable appliance to correct an anterior crossbite

- Indications



Removable appliance to correct an anterior crossbite

- Components
 - 4 ball clasps
 - Mesial and distal to the primary second molars
 - Lingual finger spring
 - Posterior bite planes
 - Palatal plate



Laboratory Prescription for Anterior Bite Plane

Address _____
 City _____ Zip _____
 State _____
 Phone No. () _____
 Patient's Name _____
 Date Shipped by Doctor 6/19/04
 Placement Date 6/19/04

PERFECT FINISH ORTHO LAB, INC.
 P.O. BOX 352 ALLAMUCHY, N.J. 07820 Phone: 1-908-852-3033
 101 BELBY ROAD, Bldg. 1, Unit F HACKENSACK, NJ 07640 (For Inland Express and UPS delivery (DIX)) Fax: 1-908-852-1908

OFFICE USE ONLY

FIXED APPLIANCES
 Rapid Palatal Expander
 Head Expansion Appliance
 Lingual Arch
 Thumb/Tongue Habit Appliance
 Bonded Expander
 Space Maintainer
 Nance Button

SPRING ALIGNER
 Construct an UPPER Spring Aligner as specified
 Construct a LOWER Spring Aligner as specified
 Construct an UPPER or LOWER modified design
 Handwritten Spring Aligner combination

SET-UP
 Do not reset any teeth
 Reset teeth circled: R 2 1 1 2 L

STRIPPING
 Do not strip teeth
 Strip contacts as feasible for improved alignment
 Strip contacts slightly as indicated on diagram

RETAINERS
 Upper Heavy Retainer
 Lower Heavy Retainer
 Other _____

COLOR
 Upper _____
 Lower _____

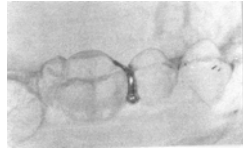
INSTRUCTIONS:
 Please fabricate a maxillary anterior bite plane appliance with a labial bow and an Adams clasp on #3 & a C-clasp on #14

PLEASE SEND Shipping Boxes
 Prescription Sheets
 Molding Labels

Thank you.

Removable appliance to correct an anterior crossbite

- Ball Clasp
 - Extends over the embrasure between adjacent teeth and uses undercuts on the buccal surface



Laboratory Prescription for a removable appliance to correct an anterior crossbite

Address _____
 City _____ Zip _____
 State _____
 Phone No. () _____
 Patient's Name _____
 Date Shipped by Doctor _____
 Placement Date _____ 2 WFS

PERFECT FINISH ORTHO LAB, INC.
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 Do not strip teeth
 Strip contacts as feasible for improved alignment
 Strip contacts slightly as indicated on diagram

RETAINERS
 Upper Heavy Retainer
 Lower Heavy Retainer
 Other _____

COLOR
 Upper _____
 Lower _____

INSTRUCTIONS:
 Please fabricate a maxillary posterior bite plane appliance with a finger spring on tooth #7 and ball clasps for retention.

PLEASE SEND Shipping Boxes
 Prescription Sheets
 Molding Labels

Thank you.

Removable appliance to correct an anterior crossbite

- Finger spring
 - .020 stainless steel wire
- Posterior bite plane
 - To raise the bite so that the maxillary incisor that is in crossbite can move labially without occlusal interferences and trauma



Clinical Adjustments

- Patients should be seen every 4 to 6 weeks for adjustments
- Tighten clasps (for better retention)
- Activate springs
 - Activate to produce approx. 1 mm of movement
- Remove/clear material from the baseplate (when a tooth is being moved lingually, not labially)