

Principles of Removable Appliances

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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)

Advantages of Removable Appliances

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

Disadvantages of Removable Appliances

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



Appliance Design

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



Laboratory Projects

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

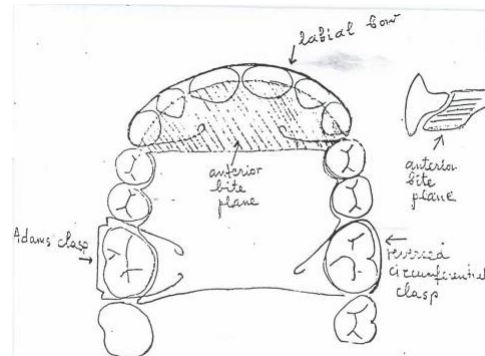
Anterior Bite Plane Appliance

- Indications
 - Deep overbite



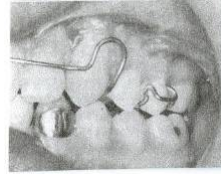
Anterior Bite Plane Appliance

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



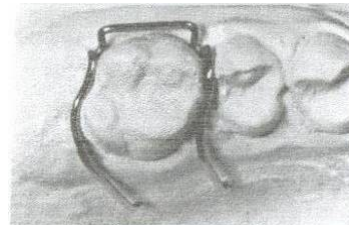
Anterior Bite Plane Appliance

- 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



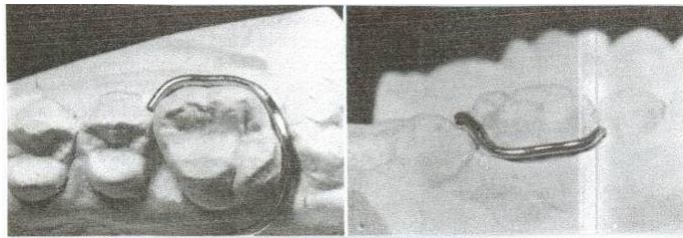
Anterior Bite Plane Appliance

- 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

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



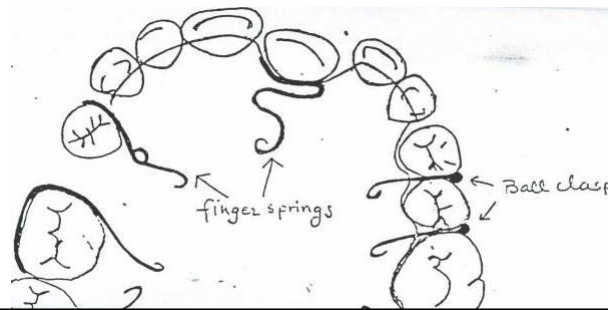
Removable appliance to correct an anterior crossbite

- Indications



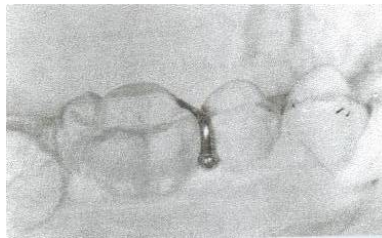
Removable appliance to correct an anterior crossbite

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



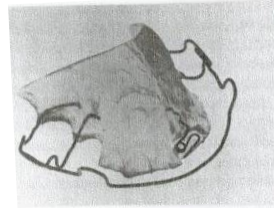
Removable appliance to correct an anterior crossbite

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



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

Laboratory Prescription for Anterior Bite Plane

Address _____
 City _____
 State _____ Zip _____
 Phone No. () _____
 Patient's Name _____
 Date Shipped by Doctor 6 / 4 / 04
 Placement Date 6 / 18 / 04

PERFECT FINISH



ORTHO LAB, INC.

P.O. BOX 352
 ALLAMUCHY, N.J. 07820
 Phone: 1-908-852-3035
 Fax: 1-908-852-1908

101 BILBY ROAD, Bldg. 1, Unit F
 HACKETTSTOWN, NJ 07840
 (For Federal Express
 and UPS deliveries ONLY)

OFFICE USE ONLY

FIXED APPLIANCES

- Rapid Palatal Expander
- Haas Expansion Appliance
- Lingual Arch
- Thumb/Tongue Habit Appliance
- Bonded Expander
- Space Maintainer
- Nance Button


SPRING ALIGNER

- Construct an UPPER Spring Aligner as specified
SEND BOTH UPPER AND LOWER MODELS
- Construct a LOWER Spring Aligner as specified
SEND ONLY LOWER MODEL
- Construct UPPER LOWER modified design
Hawley/Spring Aligner combination

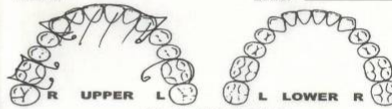
SET-UP

- Do not reset any teeth
- Reset teeth circled: R $\begin{matrix} 2 & 1 \\ 2 & 1 \end{matrix}$ | $\begin{matrix} 1 & 2 \\ 1 & 2 \end{matrix}$ L

STRIPPING

- Do not strip teeth
- Strip contacts as feasible for improved alignment
- Strip contacts slightly as indicated R  L

- RETAINERS**
- Upper Hawley Retainer
 - Lower Hawley Retainer
 - Other _____
- COLOR**
- Upper _____
 Lower _____



INSTRUCTIONS:

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


Thank you.

PLEASE SEND

- Shipping Boxes
- Prescription Sheets
- Mailing Labels

Laboratory Prescription for a removable appliance to correct an anterior crossbite

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

PERFECT FINISH

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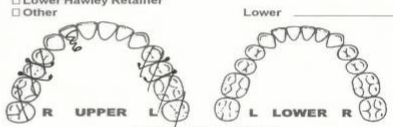
SET-UP Do not reset any teeth Reset teeth circled:

R	2	1	1	2	L
	2	1	1	2	

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

RETAINERS
 Upper Hawley Retainer
 Lower Hawley 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.

Thank you.

PLEASE SEND Shipping Boxes
 Prescription Sheets
 Mailing Labels

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)