

Sectional Ribbon Archwire for Pontic Placement

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When a patient presents with a missing anterior tooth or loses one through trauma or periodontal involvement, the most common solution is to attach a pontic to a removable appliance such as a Hawley-type retainer. Such a technique is impossible, however, in situations where teeth adjacent to the pontic are being shifted to align midlines or control spacing, or during incisor retraction. A more useful method during active orthodontic tooth movement would be to attach the pontic directly to the archwire. If round wires or rectangular wires that do not fill the bracket slots are in place, however, the pontic can rotate around the axis of the archwire—about 6° for each .001" of freedom between the vertical dimension of the slot and the vertical dimension of the archwire.

This rotation can be prevented by using a sectional ribbon arch whose vertical dimension fully engages the vertical aspect of the bracket (Fig. 1).

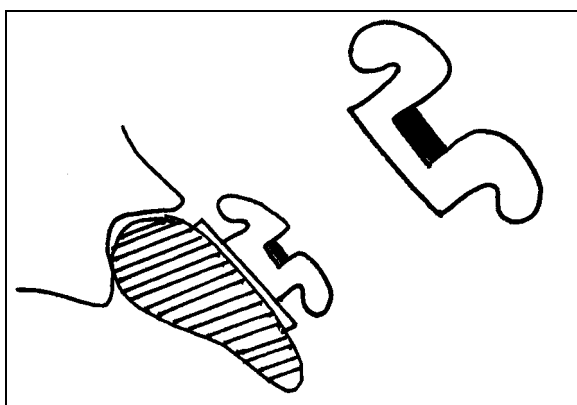


Fig. 1 Rectangular archwire configured as ribbon arch, filling slot of bracket bonded to pontic.

Technique

1. After selecting a bracket of the appropriate size and material, attach it to the facial surface of the pontic, using cyanoacrylate cement or your preferred bonding adhesive, in a position that will align the pontic with the adjacent natural teeth.

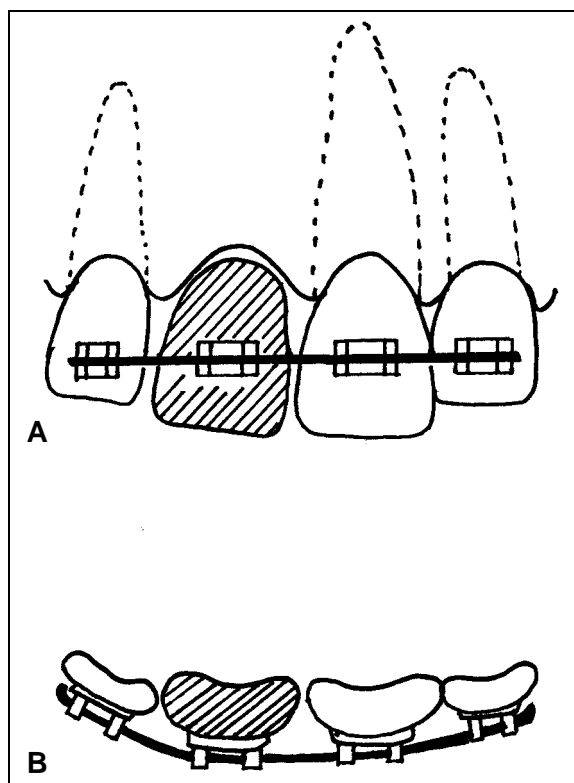


Fig. 2 A. Ribbon arch lying passively in brackets of pontic and adjacent teeth. B. Ends of ribbon arch bent in to prevent slippage and avoid soft-tissue irritation.



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2. Select a length of wire of the appropriate size for a ribbon arch (.016" × .022" or .018" × .022" for .022" x .028" brackets). Adapt the wire so it will lie passively in the brackets adjacent to the edentulous space (Fig. 2A). Bend the ends of the wire lingually to prevent it from slipping and to reduce the possibility of soft-tissue irritation (Fig. 2B).
3. Tie the pontic temporarily to the ribbon arch with an elastomeric ligature for a trial fitting in the mouth. Make any necessary adjustments, including torquing of the ribbon arch to achieve an optimal axial position of the pontic.
4. Tie the pontic to the sectional archwire with a stainless steel ligature, then tie the entire segment to the adjacent natural teeth (Fig. 3). A continuous archwire of any size can be piggybacked over the ribbon arch to produce the required tooth movements. □



Fig. 3 Pontic replacing maxillary left central incisor on .016" × .022" stainless steel ribbon arch in .022" × .028" Roth-prescription Victory Series* brackets. Ribbon arch is temporarily attached to lateral incisor brackets with elastomeric ligatures, prior to overlay of main archwire.

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