

The SPEED Bracket Auxiliary Slot

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The absence of tie wings on the SPEED* bracket allows the addition of an auxiliary slot, lending considerable versatility to a miniaturized bracket system. Orthodontists generally

*Trademark of Strite Industries Ltd., 298 Shepherd Ave., Cambridge, Ontario, N3C 1V1 Canada.

refer to SPEED brackets as having two parallel slots, one for archwires and the other for auxiliaries such as hooks. Close inspection, however, reveals that these are both actually tubes (Fig. 1).

The archwire tube converts to a slot when the spring clip is opened, but the auxiliary tube remains a tube regardless of the spring's posi-

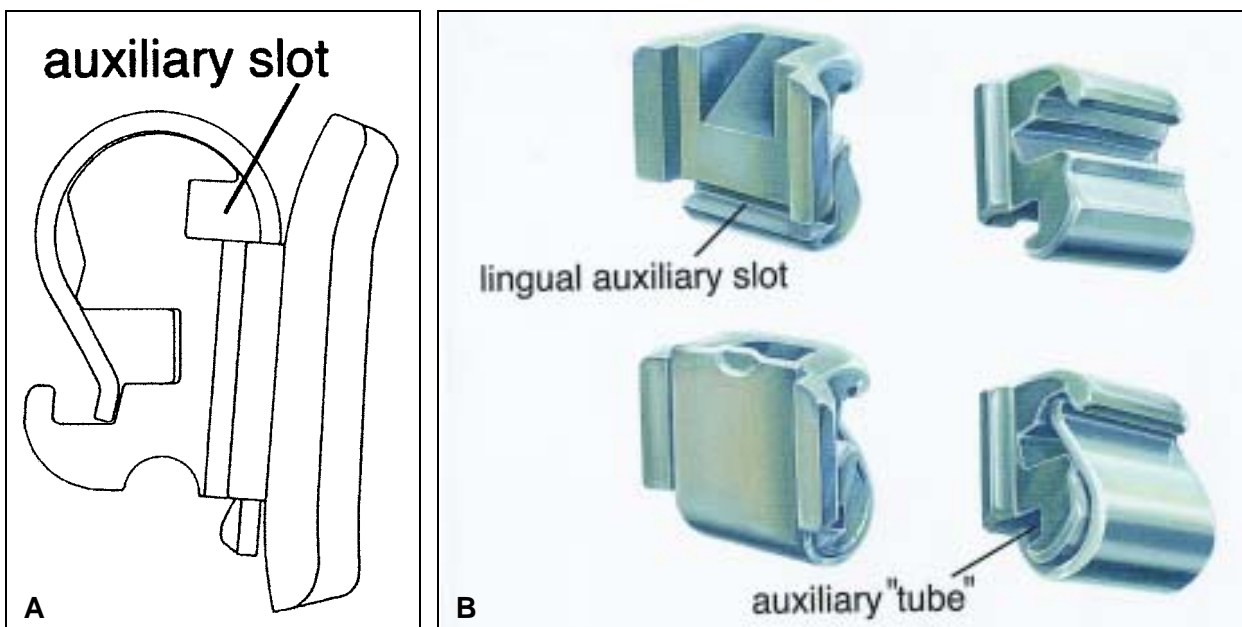


Fig. 1 A. Position of auxiliary slot on SPEED mandibular second bicuspid bracket. B. Spring clip converts archwire and auxiliary slots to tubes.

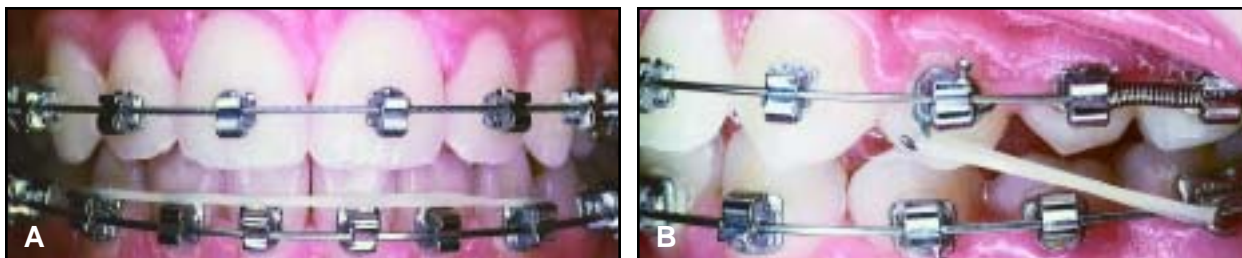


Fig. 2 A. 1/4", 2oz elastic used to eliminate lower midline space. B. In SPEED system, 1/4", 2oz Class II elastics are usually sufficient to prevent mesial movement of anchor units during maxillary molar distalization.



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Fig. 3 A. Patient with maxillary lateral incisor in crossbite and palatally positioned maxillary cuspid. B. After 16 months of treatment, .016" stainless steel coaxial wire in auxiliary slots is used to advance canine root, while .021" x .025" nickel titanium archwire continues to apply labial root torque to lateral incisors. C. Two months later, alignment permits easy insertion of continuous archwire without step-up bends.

tion. The curved portion of the clip, which forms the lingual wall of the tube, is rigid and resistant to deformation, like the anchored end of a diving board.

Clinical Applications

SPEED bracket auxiliary tubes allow secure attachment of elastic hooks from either the mesial or the distal, providing numerous options for force application¹⁻³ (Fig. 2).

In addition, they can be used to design force systems for correction of challenging malrelationships. For example, a light, long-acting couple can be applied to an individual tooth with an .016" coaxial wire while the adjacent teeth are stabilized with a stiffer continuous archwire in the main bracket slots (Fig. 3). If the magnitude of the couple is just enough to achieve the desired movement, undesirable reciprocal movements can be prevented from occurring elsewhere.

It is even possible to accomplish what would ordinarily be mutually exclusive objectives—such as applying labial root torque to the canines while intruding the incisors (Fig. 4).

SPEED bracket auxiliary slots will accept



Fig. 4 Incisors stabilized with main archwire while labial root torque is applied to canines through auxiliary slots.

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any of the following:

- .008"–.012" ligature wires
- .012"–.016" nickel titanium wires
- .016" coaxial wires (Fig. 3)
- .016" Supercable*⁴ (Figs. 5,6)
- .016" × .016" braided wires (Fig. 7)
- .016" × .016" cold-worked martensitic or superelastic nickel titanium wires
- .016" × .016" stainless steel wires (Fig. 8)
- .016" × .016" cobalt chromium wires

Elastomeric thread can be "snapped" into the auxiliary slot after being inserted into the spring gap of an open bracket. A knot in one end of the thread will keep it from pulling through when traction is applied. This is an advantage when light forces are used to tip a severely mal-positioned tooth.

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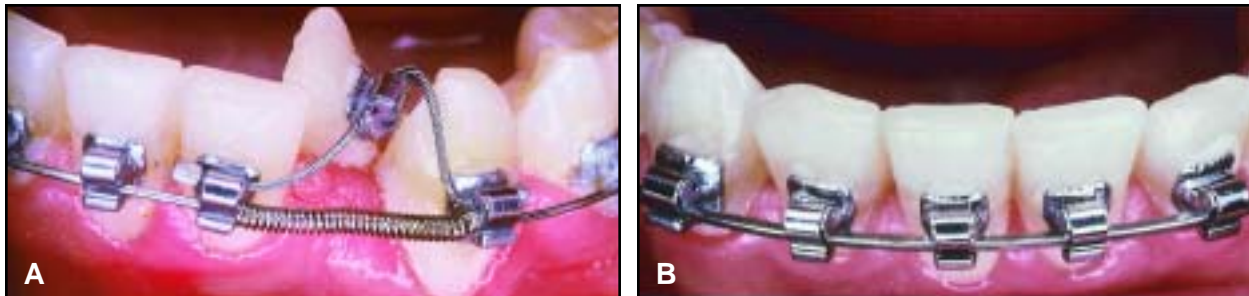


Fig. 5 A. Lateral incisor is rotated into position with .016" tubular Supercable in auxiliary slots while space is created with coil spring on main archwire. B. One year later, lateral incisor root position is much improved. Alignment would have been closer to ideal if central incisor bracket had been centered precisely.

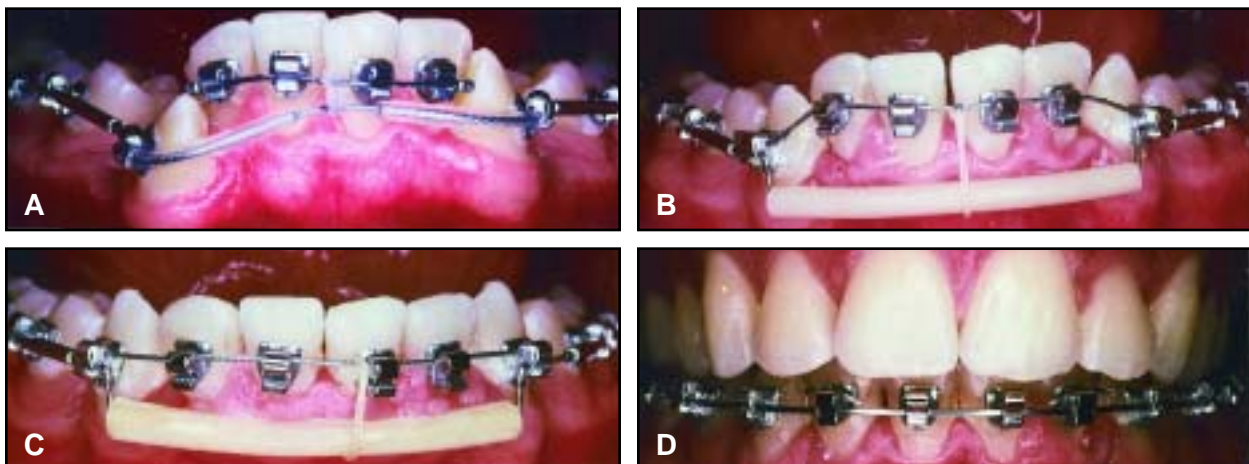


Fig. 6 A. Sectional and continuous .020" Supercables are tied lightly together to produce about 2oz of intrusive force on incisors. B. Four months later, .016" Supercable in auxiliary slots of anterior brackets is tied to stepped-down portion of continuous stainless steel archwire. C. Alignment two months later: left canine has been uprighted as incisors were intruded. D. Mandibular appliance is still in place eight months after removal of maxillary appliance. Low bond failure rate of SPEED brackets makes it possible to keep appliances passively in place, and most patients are willing to comply once advantages have been presented to them.



Fig. 7 Central incisor rotated with .016" × .016" braided stainless steel wire in auxiliary slots. Note hemispherical clasp in buccal embrasure between deciduous molars.

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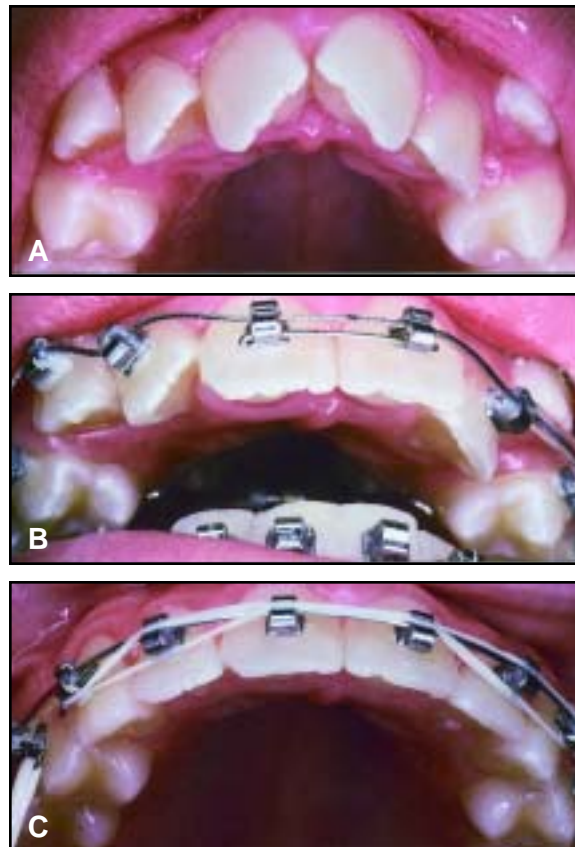


Fig. 8 A. Patient before treatment. B. .016" × .016" stainless steel sectional wire in auxiliary slots is used to stabilize central incisors while continuous .018" Supercable is employed. C. Patient 15 months later.