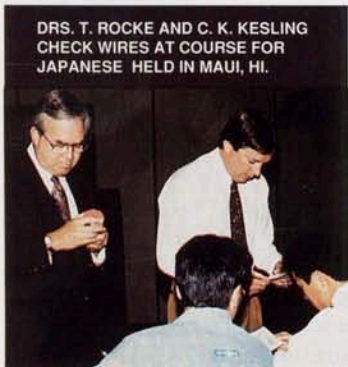


DRS. T. ROCKE AND C. K. KESLING  
CHECK WIRES AT COURSE FOR  
JAPANESE HELD IN MAUI, HI.



WINTER 1992-93  
**EDGELINES**

**ELASTOMERIC ALIGNMENT:** Anterior teeth can easily be aligned with-out loops—space permitting. Page 2.

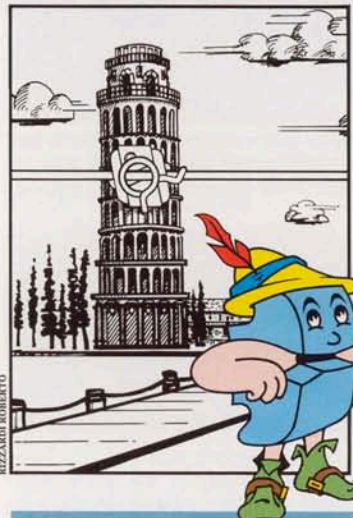
**SHOOTING TIP-EDGE RINGS:**

The Straight Shooter® facilitates the placement of Tip-Edge elastomeric rings. Page 3.

**BRACKET EXCHANGE:** A limited Tip-Edge bracket exchange was recently announced by TP Orthodontics. Page 3.

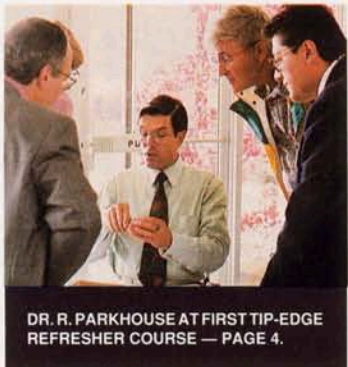
**RAPID TORQUE:** Radiographic evidence of torque bar efficiency. Page 4.

**TIP-EDGE GRAPHIC**



**TIP-EDGE TODAY™**

Published Quarterly by TP Orthodontics • USA



DR. R. PARKHOUSE AT FIRST TIP-EDGE REFRESHER COURSE — PAGE 4.

**E. H. Angle May Have Been The "Best" But His Archwire Slot Is Not The "Latest"**

Dr. E. H. Angle introduced the edgewise bracket in an article entitled, "Latest and Best in Orthodontic Mechanism." It was designed to replace the ribbon arch mechanism he invented ten years before (1915). Except for refinements to further control tooth positions — wider brackets and preangled slots, the edgewise bracket remained the same for over 60 years.



Edward H. Angle, M.D., D.D.S., Sc.D., inventor of the edgewise mechanism.

All this was changed in 1986 with the introduction of the Tip-Edge® bracket and its unique, dynamic archwire slot.

Tip-Edge truly combines the best qualities of its two predecessors, the ribbon arch and edgewise brackets. It simply "lets the teeth move" which is so important for initial anterior bite opening and retraction.

Near the end of treatment, Tip-Edge brackets provide the automatic preangled, three-dimensional finishing demanded by today's sophisticated orthodontists. Because of this it holds great promise as the logical replacement for these two earlier brackets which were designed mainly for dental expansion.

Following are the proven advantages of Tip-Edge brackets — listed sequentially from the start to end of treatment:

A. Ease of manipulation—archwire changes. Elastomeric rings and facially directed archwire slots offer pure simplicity in this, the most common office procedure. Elastomeric ligatures also offer a resilient, renewable power source between the archwire and the bracket.

B. Superior control of and rapid changes in the vertical dimension. Six anterior teeth can be depressed with a force of less than 1 ounce (28.35 grams). All tooth movement is possible from the lightest of intraoral forces.

C. Dental midline integrity is protected/preserved because the roots of crowded anterior teeth are not moved off their developmental centers by inadvertent couples generated by initial leveling wires.

D. Improved rotational control is achieved by wings behind the archwire. Such control has been enhanced on maxillary central incisors and all canines by extending their wings further mesiodistally.

E. Automatic change of mechanics from free tipping to bodily movement when the tipping surfaces of the Tip-Edge archwire slot contact the archwire. This prevents the "over-retraction" of teeth which might occur when teeth respond more quickly than anticipated—or patients miss scheduled appointments.

F. Vertical Slot Auxiliaries—rotating springs, power pins and Side-Winders can be inserted through generous vertical slots from either the gingival or the incisal.

G. Predetermined, full power uprighting — rapid uprighting from Side-Winder springs delivering "full power" right up to and through the final degree of change. No chance of over uprighting or driving the crowns into adjacent teeth.

H. Fewer Archwires—the unique Tip-Edge archwire slot permits stepping from .016" directly up to .022" round or even .022" x .028" archwires without archwire deflection or patient discomfort.

**COVER STORY**

**Tip-Edge Goes Collegiate**

Due to the ever-increasing popularity of the Tip-Edge brackets and the Differential Straight-Arch® Technique, many universities in the United States and around the world have included this mechanism in their post graduate programs. The following is a list of universities currently teaching the Tip-Edge technique:

- |   |  |  |   |
|---|--|--|---|
| <b>UNITED STATES</b><br>Boston University<br>Case Western Reserve Univ.<br>Columbia University<br>Albert Einstein Med. Center<br>Harvard School of Dental Med.<br>Montefiore Medical Center | University Of Medicine And Dentistry Of New Jersey<br>New York University<br>University Of Pennsylvania<br>St. Louis University<br>University Of Tennessee<br>Tufts University | <b>AUSTRALIA</b><br>University Of Adelaide | <b>COLUMBIA</b><br>Fundacion Centro De Investigacion Y Estudios |
|---|--|--|---|

See COVER STORY Pg. 2

Cont. on Pg. 2



## COVER STORY

## Collegiate

Cont. from Pg. 1

## FRANCE

De L'Universite Louis Pasteur  
Universite Claude Bernard  
Universite De Bordeaux  
Universite Montpellier

## INDIA

K.L.E.S. Dental College

## ITALY

Universita di Bologna

## JAPAN

Aichi-Gakuin University

## MEXICO

Universidad Nacional  
Autonoma de Mexico

## THAILAND

Chaingmat University  
Mahidol University

## SWEDEN

Eastman Institute

*Tip-Edge Today  
would appreciate  
any additions or  
corrections to this  
collegiate listing.*

## Q's and A's

*My cases are now in their stage of space closure, after having achieved all the objectives of stage I. It is at this juncture, that I would be obliged if you could give suggestions or hints for proper achievements of space closure and finishing with the Tip-Edge mechanism. —*

BOMBAY, INDIA

The mechanics of space closure during stage two are, in general, the same as those when using ribbon arch type brackets. That is, the anterior teeth are free to tip distally and lingually, while the anchor molars are held upright for maximum anchorage. We would suggest you review pages S2-1 to S2-5 of the 2nd Edition of the TIP-EDGE GUIDE.

For maximum vertical and horizontal control, .020" or .022" round archwires are recommended during stage two. Molar control is best when these wires pass through the longer, round gingival tubes. However, if the bicuspid brackets are engaged, this would necessitate a vertical offset in the wire to maintain proper occlusal heights. The space closing forces in each quadrant must be low (2 oz.), otherwise molars may rotate or even begin moving forward.

Also of utmost importance is the removal of strong anchor bends when moving to larger size wire — especially if engaging bicuspid brackets. Otherwise anchor molars will tip distally and roll buccally. The sharp localized bends should be replaced by gentle curves in the buccal segments of the archwires.

## Future Courses and Lectures

In response to ever increasing demands, a series of Tip-Edge courses and lectures has been planned for 1993. Most are 2-3 day basic courses with typodont sessions as well as lectures.

- Oklahoma City, OK: Jan. 22, 1993, Dr. C. K. Kesling.
- Bergamo, Italy: June 4-6, 1993, Dr. C. K. Kesling.
- Giessen, Germany: Feb. 13-14, 1993, Dr. R. Thomas Roche.
- Birmingham, England: June 25-26, 1993, Dr. R. C. Parkhouse.
- Munich/Aschheim, Germany: Feb. 19-20, 1993, Dr. R. Thomas Roche.
- Tokyo, Japan: July 22-25, 1993, Dr. R. Thomas Roche.
- Glasgow, Scotland: March 5-6, 1993, Dr. R. C. Parkhouse.
- Adelaide, Australia: September 17-18, 1993, Drs. R. Thomas Roche & R. C. Parkhouse.
- Manila, Philippines: March 31-April 2, 1993, Dr. R. C. Parkhouse.
- Glasgow, Scotland: September 18, 1993, Dr. C. K. Kesling.
- Japan: April 4, 10, & 11, 1993, Osaka, Sapporo and Tokyo respectively, Dr. R. C. Parkhouse.
- Glasgow, Scotland: September 22-25, 1993, Dr. C. K. Kesling.
- Westville, IN: May 10-12, 1993, Tip-Edge Basic Course, Kesling and Roche Orthodontic Group.
- Jakarta, Indonesia: September 26-28, 1993, Dr. R. Thomas Roche.
- Westville, IN: May 20-22, 1993, (Japanese language only) Kesling & Roche Orthodontic Group.
- Belfast, Ireland: October 7-9, 1993, Dr. R. C. Parkhouse.
- Dallas, TX: October 23, 1993, Dr. C. K. Kesling.

## E. H. Angle

Cont. from Pg. 1

I. Increased Torquing Options: 1) .022" round base archwire and conventional 2 or 4 spur torquing auxiliary. 2) Nickel titanium torque bar (0°, 20° or 30°) in Deep Grooves of central and lateral incisors in conjunction with .022" round base archwire. 3) Full size rectangular archwires, (.022" x .028") and Side-Winder springs as the sole source of power for three-dimensional uprighting—tip and torque.

As great as these advantages are from using Tip-Edge brackets—many orthodontists remain unaware.

After nearly sixty years of living in an edgewise slot, practitioners and educators have come to accept its associated limitations to tooth movement as an unreconcilable fact of orthodontics. In reality most are closely related to (some even caused by)

the edgewise slot — an unnecessary complication to tooth movement.

Dr. Angle created the original edgewise bracket and its inevitably restrictive archwire slot in another time (1925) for the purpose of "growing bone" in nonextraction treatment. He was so involved in his fight for the full complement of teeth and his "line of occlusion" that he forgot an important statement he made twenty-five years before:

"Be it remembered that the tube attached to the cuspid band must always stand at right angles to the long axis of the tooth, that a free hinge-like movement of the tooth in retraction may be gained . . ." — E.H. Angle - 1900.

The Tip-Edge bracket does just that—plus a whole lot more.

## Eliminating Crowding With Elastomeric Filament

Elastomeric filament can be used to effectively eliminate anterior crowding in Tip-Edge extraction cases. Because the brackets have vertical slots, .020" Zing® String can easily be threaded through the slots and tied under tension to the main archwire, (Figure 1). The severe crowding was corrected in only two appointments due to free di-

stal crown tipping of left canine permitted by the Tip-Edge archwire slot, (Figure 2).

Anterior alignment auxiliaries such as Co-Ax®, Reflex®, or .010" Australian wire can also be used for anterior alignment in extraction cases. However, elastomeric ties are generally simpler and provide more rapid correction.



Figure 1. A) Elastomeric filament (.020") is threaded through the vertical slot in the bracket on the lingually displaced lateral incisor. B) Filament is tied securely around .016" Australian archwire which is not deflected. Note elastomeric ring engaging right lateral.

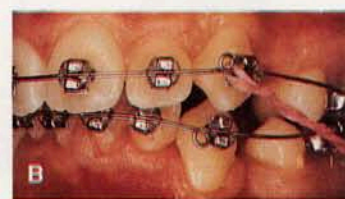


Figure 2. A) Labial view at time elastomeric filament above was tied. B) Two appointments (12 weeks) later lateral incisor is in the line of the arch. Note mandibular canine has been free to tip distally as lateral moved labially. A conventional edgewise bracket on the canine, would have caused the crown to tip mesially making such rapid alignment impossible.



# T-E Exchange

TP Orthodontics will now issue 100% credit for *any* company's brackets against future orders for Tip-Edge brackets. All brackets for credit must be sent at one time.

Exchange credit value is based on the price of the brackets received. If TP brackets are returned, the value is based on the prices originally paid. If other companies' brackets are exchanged, value is based on the current list price for similar TP brackets.

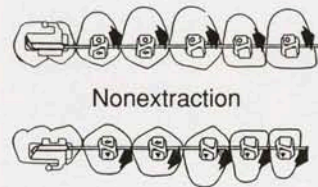
All Tip-Edge brackets will be invoiced at list price with no discounts applying. Half the cost is remitted in payment and half is deducted from the exchange credit balance. Shipping costs not included.

Exchange program effective twelve months after the first shipment of Tip-Edge brackets. Exchange credit not used within twelve months will be forfeited. Credit applied to bracket purchases only.

Offer available only to customers serviced directly in North America, England and Germany.

The crossbar and lugs of a Tip-Edge ring convert the Tip-Edge bracket into a standard straight wire-type bracket. The bar across the ring enhances this wedging force to such an extent that active uprighting may be possible using only these rings.

By creating a "flexible" edgewise bracket slot, Tip-Edge rings also make it easier to progress to larger finishing archwires with fewer bond failures.



When properly placed, the crossbar of each Tip-Edge ring should point towards the labial frenum. The only exception is the crossbar should point away from the frenum on teeth distal to closed extraction sites.

## TECHNIQUE TIP

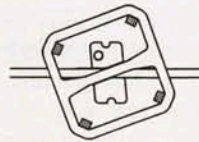
# Straight Shooting Tip-Edge® Rings

Tip-Edge rings can easily be placed with a Straight Shooter® following the four steps below\*.

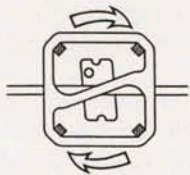
It is advisable to equalize the pressure from the ring on the labial with finger or thumb pressure on the lingual.



1. Pick up Tip-Edge ring with two wire finger tips on each side of crossbar.



2. Stretch to limit and press against bracket so crossbar is at desired angle.



3. Continue pressing and rotate fingers back to normal position and quickly squeeze Straight Shooter handles.



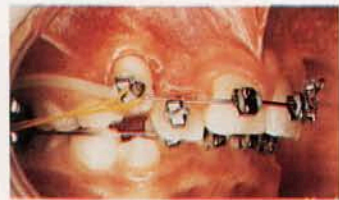
4. Tip-Edge ring will be "shot" to place with crossbar and lugs properly locked into Tip-Edge spaces.

\*Not recommended if both an auxiliary and the main archwire are in the archwire slot.

Courtesy 2-Swan Advertising Agency, TIP-EDGE GUIDE (2nd Ed. Revised 1992)

## CASE REPORT

A 10-year old female exhibited a Class II, Division 1 malocclusion with 8 mm of overjet and 100% overbite. Severe crowding was present in both arches with all four permanent canines blocked out. Anticipated mandibular growth and the mandibular incisors, 2.5 mm behind the A-Po line, led to the decision to treat without the extraction of permanent teeth.



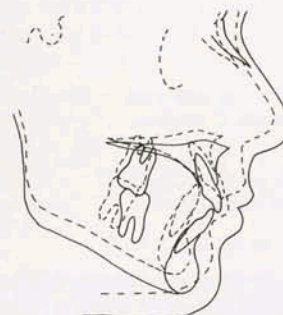
Place appliance appointment. Maxillary and mandibular .016" Wilcock stainless steel archwires with strong bite opening bends just mesial to the molar tubes. Light Class II elastics, 1.5 oz., on each side.



Premolars were not bracketed until after the overjet and overbite were corrected. This concentrated the depressive forces of the archwires on the anterior teeth to speed initial bite opening.



Start of Stage III with .022" archwires in place. Mild bite-opening curves are formed in each to maintain bite opening. Two spur auxiliary (canine to canine) torques maxillary central incisors while Side-Winder springs upright selected teeth mesiodistally.



E.P. .... Female, 10 Years  
**Class II, Division 1**  
**Nonextraction**  
**Archwires Used ... 7 (4U, 3L)**  
**Adjustments ..... 17, Time: 26 Months**  
**Retention ..... Tooth Positioner**  
**Cephalometric Changes:**

	Start - Dotted	Finish
1-APo	-2.5 mm	+1.5 mm
FMA	24.0°	24.5°
Wits	+4.0 mm	+1.0 mm
ANB	5.5°	4.0°
1-SN	114.5°	104.0°
SNA	82.0°	81.5°
SNB	76.5°	77.5°



## Nickel Titanium Torque Bar: Clinical Update

Since the introduction of nickel titanium torque bars, they have become the most popular means of torquing during Stage III of Tip-Edge treatment. These auxiliaries are also becoming increasingly popular for use with conventional edgewise techniques whenever additional palatal root torque is required.

Torque bars are much more esthetic and hygienic than conventional looped torquing auxiliaries. They also do not displace teeth lingually should brackets debond or ligatures come off as often occurs with looped auxiliaries.

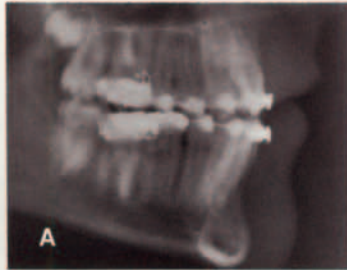
The effectiveness of torque bars is clearly illustrated by lateral cephalograms taken of a patient treated with the Tip-Edge appliance. Deep Groove brackets were used on the maxillary incisors (Figure 1A&B).

Recommendations for torquing efficiency:

1. Normally, 30 degree torque bars should be used. Twenty degree auxiliaries are recom-

mended for situations that require only a small amount of active torque. Zero degree auxiliaries are recommended to stabilize the anterior teeth for finishing or braking mechanics.

2. For maximum torquing force, torque bars should always be used with Deep Groove Tip-Edge brackets on the incisors. The caps of the Deep Groove brackets should not be removed until the Pre-Stage III appointment. (See Tip-Edge Today, Fall 1992.)



3. When used with the recently introduced mandibular incisor Deep Groove brackets, torque bars provide a simple and effective means of actively torquing the mandibular incisor roots either labially or lingually.

Regardless of the technique used, torque bars provide an efficient means of actively torquing teeth without the discomfort of repeated reactivation of rectangular archwires or the esthetic and hygienic drawbacks of conventional looped auxiliaries.

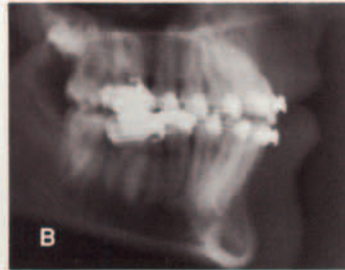


Figure 1. A) Lateral head x-ray taken when a 30 degree torque bar was inserted into the Deep Grooves of the maxillary central and lateral incisor brackets. B) After six months (no adjustments or reactivation) 21 degrees of torque has been achieved — average rate of change 3.5 degrees per month.

## First Tip-Edge Refresher Course

The first Tip-Edge Refresher Course was held at the Orthodontic Center, U.S.A. in November. The two day course was over subscribed at fifty-six participants and included twenty orthodontists from eight foreign countries.

Various refinements and advances in the technique were introduced and discussed in detail including Side-Winder uprighting springs, Deep Groove brackets, nickel titanium torque bars, and .022" wires in Stages II and III.

Selected patients under treatment with the Tip-Edge appliance were available for personal examination by all participants.

Instructors were: Drs. P. C. Kesling, T. Rocke, C. K. Kesling, and Richard Parkhouse of Wales, U.K. who demonstrated the use of full size, rectangular archwires throughout Stage III.

TP Orthodontics, Inc.  
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LaPorte, Indiana 46350

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