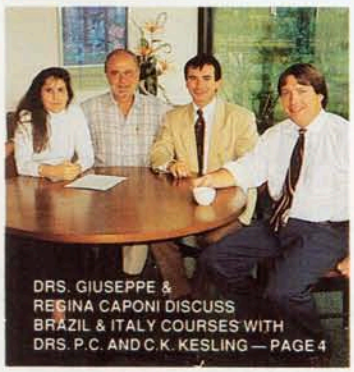
APPLIANCE UPDATES - Q'S & A'S - CASE REPORTS - TECHNIQUE TIPS - REVIEWS


DRS. GIUSEPPE & REGINA CAPONI DISCUSS BRAZIL & ITALY COURSES WITH DRS. P.C. AND C.K. KESLING — PAGE 4

TIP-EDGE TODAY™

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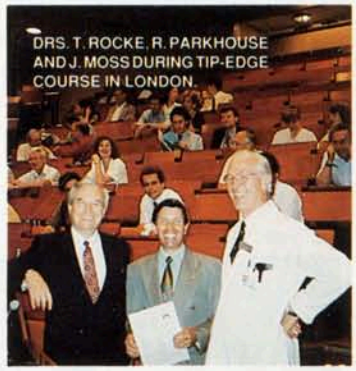

DRS. T. ROCKE, R. PARKHOUSE AND J. MOSS DURING TIP-EDGE COURSE IN LONDON.

FALL 1992

EDGELINES

NITINOL TORQUE BARS: Detailed instructions on the insertion and engagement of nickel titanium torque bars. Page 3.

INTERNATIONAL COURSES: Interest in the DSAT (Differential Straight-Arch® Technique) and Tip-Edge brackets increases across the U.S. and around the world. Lecture and practical courses are held in all corners of the globe. Page 2.

INDIVIDUAL ROOT TORQUE: Six years of clinical experience indicates the Tip-Edge bracket is excellent for torquing teeth. It is actually ***better*** than a conventional edgewise bracket. Page 2.

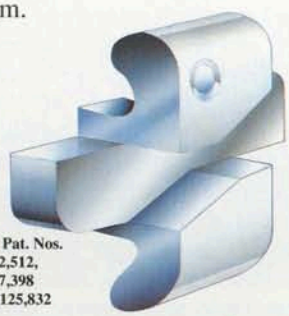
TIP-EDGE GRAPHIC

NO FRICTION

Since the archwire moves distally with the bracket, there is zero friction during canine retraction.

Differential Straight-Arch® Technique . . . What's In A Name?

With the advent of the Tip-Edge bracket, it is suddenly possible to easily take advantage of both differential forces and mechanics with the edgewise mechanism.


U.S. Pat. Nos. 4,842,512, 4,877,398 & 5,125,832

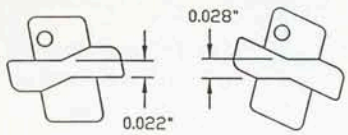
Maxillary right canine Tip-Edge bracket. Archwire slot permits distal tipping yet controls final torque and tip.

Almost overnight, the edgewise appliance has become kinder and gentler. The unique Tip-Edge archwire slot gives each tooth the ability to serve as an anchor unit or move freely to its new position — without any adjustments or intervention from the operator.

The archwire slot also grows in size to facilitate moving up (in giant steps) in archwire size with no binding and no need for torquing keys or sectional wires.

What is a giant step in changing archwire size? How about going directly from .016" round to .022" round or even .022" x .028" rectangular?

As hard as it may seem to experienced edgewise operators, such changes are easily made — and made with straight wires. That is, no need for second order bends to accommodate tipped teeth. This is because as a tooth (bracket) tips, the archwire slot increases in height from .022" to as much as .028" — see below.



The resulting technique is designed to permit teeth to move toward their anatomically correct positions in the jaws under the influence of light, intraoral forces. Distal movement of smaller anterior teeth is easily possible without undue strain on anchorage — one molar in each quadrant.

The Tip-Edge brackets permit canine retraction without flexing of the archwires. This ensures maximum control of the vertical dimension. High-pull extraoral force is therefore not required when the proper combination of archwire and elastic forces is used to open anterior overbites.

The appliance is designed to permit the teeth to move independently of one another — whether tipping freely in the early stages or during detailed root positioning in the final stage.

Another unique feature is that the movement of all teeth toward their desired, final positions is initiated at the start of treatment. That is to say, the movement of teeth is not segmented into groups, with one group waiting for another.

In order to distinguish the technique associated with this unique bracket from other edgewise techniques a new name or designation was required. The name includes the two most significant characteristics associated with the technique — "Differential" (both forces and mechanics) and "Straight-Arch Wires" (no bends or sectional wires to accommodate tipped teeth).

The result is the "Differential Straight-Arch Technique." However, for those who have practiced it for years and know what makes it possible, it is often referred to simply as "Tip-Edge" ✚

COVER STORY

AAO Video Features Tip-Edge®

The American Association of Orthodontists is offering a patient education video tape entitled "Smile— It's a Change for the Better," which features a time lapse film segment of orthodontic treatment using the Tip-Edge technique. This video illustrates the overall efficiency of this technique and the streamlined mechanics made possible through the use of Side-Winder uprighting springs and nickel titanium torque bars.

See COVER STORY Pg. 2

COVER STORY Continued from Pg. 1

Time Lapse Video

The AAO's use of this film in its patient motivation program confirms the Tip-Edge concept as a state of the art orthodontic technique. The patient, treated by R. Thomas Rocke, took two frames with a 16mm Bolex movie camera each day.


START


4 MONTHS


9 MONTHS


11 MONTHS


14 MONTHS


16 MONTHS


START


18 MONTHS


FINISH

To order a video, contact:
American Association of Orthodontists, Order Department, 401 North Lindbergh Boulevard, St. Louis, Missouri 63141-7816. PHONE: (314) 997-6968 FAX: (314) 997-1745

Q's and A's

When do you band second molars?
Second molars rarely, if ever, need to be banded for anchorage purposes during Tip-Edge treatment. They are only banded to aid their rotation or leveling. Of course, when first molars are lost, the seconds are banded and become the anchor teeth.

How often should you reactivate Side-Winder uprighting springs?
Side-Winder springs rarely require reactivation. If a tooth does not appear to be uprighting, it is usually due to improper bracket positioning rather than an inactive spring.

Tip-Edge . . . Torquing "Par Excellence"

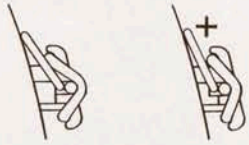
One of the early concerns about the Tip-Edge bracket was its ability to torque teeth. After six years of clinical experience, the results are in. It is equal to a ribbon arch bracket and far superior to any conventional edgewise bracket.

Initial problems during torquing with an auxiliary with spurs and a round base archwire were caused by trying to use preformed torquing auxiliaries designed for 256 brackets. The inter-bracket distances were not correct and the spurs were too short. Two new series of two and four spur auxiliaries have been designed specifically for use with Tip-Edge brackets which solve these problems and produce on an average 2 degrees of change per month.

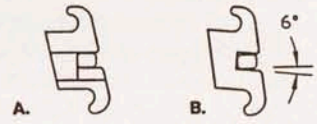
The introduction of Deep Groove brackets has enhanced the delivery of torque force from nickel titanium torque bars which themselves are now available in both 20 degree and 30 degree versions. This has resulted in more rapid and positive torque from this unique and highly esthetic torque system.

The Deep Grooves have also increased the effectiveness of torquing auxiliaries with spurs because the base portion of the auxiliary is closer to the surface of the tooth. This increases the force delivered by the spurs regardless of the activation built into the auxiliary.

More recently (due mainly to the work of Dr. Richard Parkhouse of Wales) it has been shown that the Tip-Edge bracket is more effective for torquing with a rectangular base archwire than conventional edgewise brackets.


Torque force from torque spur is increased if auxiliary is placed in Deep Groove.

As the teeth are uprighted mesiodistally, the sides of the Tip-Edge archwire slot close in on the upper and lower surfaces of the rectangular archwire to produce the torque angle built into the bracket base.



A) Tip-Edge archwire slot closes down to make tight contact with edgewise wire. B) Size discrepancy between archwire and conventional edgewise slot prevents realization of full torque value.

The final degree of torque achieved is actually ***greater*** than with similar conventional edgewise brackets because there is no "play" between the archwire and slot sizes. Such discrepancies (which are .001" or more) will result in 4 to 6 degrees of lost torque that can never be achieved

Tip-Edge Around The Globe

In response to ever increasing demands, a series of Tip-Edge courses have been given or planned for 1992. Most are 2-3 day basic courses with typodont sessions as well as lectures.

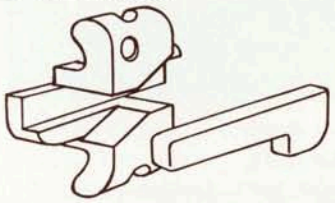
- Bombay, India: March 12-13, 1992, Dr. R. C. Parkhouse.
- San Francisco, CA: May 1, 1992, Drs. P. C. Kesling and R. C. Parkhouse.
- Los Angeles, CA: May 4, 1992, Drs. P. C. Kesling and R. C. Parkhouse.
- Westville, IN: May 14-16, 1992, Tip-Edge Basic Course, Kesling and Rocke Orthodontic Group.
- Manchester, England: June 19-20, 1992, Drs. R. Thomas Rocke and R. C. Parkhouse.
- London, England: June 26-27, 1992, Drs. R. Thomas Rocke and R. C. Parkhouse.
- Innsbruck, Austria: July 17-18, 1992, (English/German) Dr. P. C. Kesling.
- Singapore: September 18, 1992, Dr. R. Thomas Rocke.
- Jakarta, Indonesia: September 21-23, 1992, Dr. R. Thomas Rocke.
- Maui, HI: September 28-30, 1992, (Japanese language only) Drs. R. Thomas Rocke and C. K. Kesling.
- Kiamisha Lake, NY: September, 1992, Dr. R. T. Williams.
- Jerusalem, Israel: October 21-22, Dr. R. C. Parkhouse.
- Sao Paulo, Brazil: October, 1992, Dr. G. Caponi.
- Westville, IN: November 2-3, 1992, Tip-Edge Refresher Course, Kesling and Rocke Orthodontic Group.
- Dallas, TX: November 6-7, 1992, Dr. R. C. Parkhouse.
- Acapulco, Mexico: November 9, 1992, Dr. R. Thomas Rocke.

TECHNIQUE TIP

Placing Nickel Titanium Torque Bars

With the introduction of Deep Groove Tip-Edge brackets for the maxillary incisors the ability of the nickel titanium torque bars to adequately torque the incisors has improved to the point where they are now the most frequently used torquing auxiliaries with this technique. The following technique is recommended for proper placement and maximum torquing action:

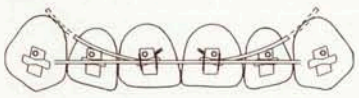
1. If Deep Groove brackets are being used on the incisors the caps should be removed from the Deep Grooves at the Pre-Stage III appointment.



Cap is removed.

This allows the .016" archwire to begin uprighting the maxillary incisors which makes it easier to insert the torque bars into the Deep Grooves at the next appointment (Stage III).

2. When assembling Stage III, initial insertion of torque bars is much easier if they are first engaged into the central incisor brackets only. They should always be engaged ahead of the



Torque bar tied in Deep Grooves behind main .022" round archwire.

main archwire and both the auxiliary and main archwire should then be tied tightly with steel ligatures into the central incisor brackets to ensure positive seating. At this point, the ends of the auxiliary will tend to lay gingival to the lateral incisor brackets if the auxiliary has been properly placed.

3. The ends of the auxiliary are then brought down and rotated behind the main archwire using a light wire or bird beak plier until they drop into the archwire slots on the lateral incisors.

Auxiliary ligated in place in Deep Groove behind main .022" archwire.

4. The auxiliary and main archwire are then ligated into the archwire slots in the same manner as was used on the central incisors.

With conventional edgewise brackets the auxiliary should extend through the lateral incisor brackets. With Tip-Edge appliances the auxiliary can be extended through the canine brackets if desired. This simplifies mesio-distal uprighting of the laterals but adds an extra wire in the canine archwire slots ♣

APPLIANCE UPDATE

Short Side-Winders

Side-Winder uprighting springs are now available with short tails. Since these springs are self retaining, there is rarely any need to bend the tail of the spring to aid in retention.

This refinement makes it much easier to assemble Stage III as well as remove and replace archwires if further adjustments

Short tail requires no bending or cutting.

are required. The use of short springs also eliminates the tendency for the coils to "lift" away from the face of the bracket if the longer spring tail is bent too tightly.

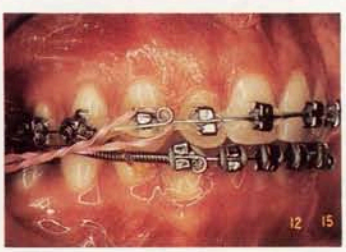
A few conventional, longer springs should be kept for those patients who tend to experience excessive appliance damage.

CASE REPORT

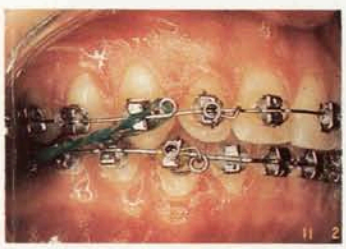
A 24-year-old female exhibited a Class II, Division 2 malocclusion with 100% overbite.

The treatment plan was to extract the devitalized roots of the maxillary right first molar and close the space. An effort would also be made to move the mandibular incisors forward for profile considerations.

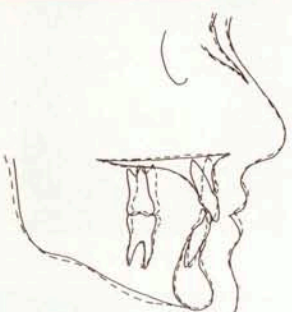
Place appliance appointment. Maxillary right first molar roots extracted. Archwires are of .016" E.S.P. Australian wire.



Nine months later. Bite is opening — extraction space is closing. Side-Winder spring on canine to prevent further distal tipping.



Near the end of Stage III. Side-Winder springs on selected teeth. Original .016" archwire replaced in maxillary arch for finishing. Mandibular archwire is .022".



S.K. ..... Female, 24 Years
Class II, Division 2
Extractions UR6
Archwires Used ... 6 (2U, 4L)
Adjustments ..... 14, **Time**: 19 Months
Retention ..... Upper & Lower Retainers
Cephalometric Changes:

	Start - Dotted	Finish
1-APo	-4.0 mm	-1.5 mm
FMA	26.5°	30.0°
Wits	+3.0 mm	+2.5 mm
ANB	4.0°	2.5°
1-SN	81.5°	102.0°
SNA	82.5°	79.5°
SNB	78.5°	77.0°

Tip-Edge In Brazil

The first Tip-Edge course in Brazil was given last December by Professor Giuseppe Caponi of Italy.

The course was given in Rio de Janeiro (RJ) and Fortaleza (CE) with 32 participants. The course was organized by Dr. Regina Caponi. Together, the Caponi's have translated the TIP-EDGE GUIDE into Portuguese.

Professor Giuseppe Caponi has been invited to present the Tip-Edge technique before the VIII Brazilian Congress Of Orthodontics, Sao Paulo, Brazil in October 1992.

Doctors Giuseppe and Regina Caponi are also teaching the Tip-Edge technique to small groups of orthodontists in Italy. The first Italian course took place last July. Two more courses are scheduled for 1992 — one in September, the other in November.

Left to Right: Dr. Jairo Correa, President of the SPO*, Professor Giuseppe Caponi, Dr. Regina Caponi and Professor Cyro Moura. Professors Moura and Caponi are pictured with their medalions — the highest honor of orthodontics in Brazil.
*Sociedade Paulista de Ortodontia

"Limitations . . ." Sets Records

The two most popular issues of TP Orthodontics' newsletter, "Straight-Talk," in over twenty years were those dealing with the limitations of the edgewise slot. Both issues were written by Dr. P. C. Kesling and originally published in January and February of 1991 (in quantities of 20,000 each). Stocks that normally last 5-10 years were depleted within three months.

The first issue considers the problems created by the conventional edgewise slot as invented by Dr. E. H. Angle nearly 70 years ago. It also shows graphically the measures taken since 1929 by nine different orthodontists (including Angle himself) to compensate for these limitations of the archwire slot.

The second issue discusses a simple, though revolutionary, solution to the problem—the Tip-Edge archwire slot. The concept behind the design and function of the new slot are covered in detail. Brief reports of three treated cases are included to show the effectiveness of the treatment with the DSAT, Differential Straight-Arch Technique.

Interest has been so great that these "Limitation" articles have been translated into both German and Japanese. Reprints are still available through TP Orthodontics or one of their distributors worldwide ✚

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