

General Information

The Goodman Torquing Spring is a small torquing spring that may be placed anywhere on the archwire to move the roots of tipped teeth into alignment. They are made from .013 stainless steel wire and come in two sizes: short and long. They may be placed on any rectangular or square stainless steel wire from .016x.022 to .019x.025.

Preparation

There is a certain amount of preparation necessary to ensure total success with the GTS spring.

1. When torquing any of the four anterior teeth, you should figure 8 tie with an .010 steel ligature wire from cuspid to cuspid prior to archwire placement. This will prevent the crowns from tipping. When torquing a cuspid or bicuspid, you should figure 8 tie from 2nd bicuspid to 2nd bicuspid. (fig 3)

2. If you are torquing more than one tooth at a time i.e. maxillary laterals and or centrals, you must narrow the archwire slightly for labial crown torque and widen the archwire slightly for lingual crown torque. For labial crown torque, the legs of the wire should lie on the lingual cusps of the posterior teeth. For lingual crown torque, the legs of the wire should lie on the buccal surfaces of the posterior teeth. This will compensate for the torquing spring creating wire expansion or contraction and maintain the proper arch form while roots are moving into position.

Placement

1. Mark the archwire mesial and distal to the tooth or teeth being torqued.

2. Select the GTS spring that will best fit the tooth being torqued. Usually, the short spring is used for maxillary laterals and lower anteriors. The long spring is for maxillary centrals and cuspids. Slide the GTS spring on the wire while making sure the curved portion of the spring touches the tooth crown gingivally if you want lingual root torque or incisally if you want labial root torque. If the full torque is required, place the spring in the same plane as the wire (fig 2). If less torque is required, place the spring at 45 degrees to the wire (fig 7).

3. After placing the spring in the desired position, crimp the last two coils of the spring on each side with the GTS Crimping Plier. If inter-proximal space is a problem, you may cut up to two coils off each side of the springs. NOTE: The springs must have at least three coils on each side in order to function properly; Two to crimp and one to provide the torque.

4. Tie the arch wire in and cinch the wire back. Use an .010 stainless steel ligature wire to tie the tooth or teeth that are being torqued to the arch wire. Dismiss the patient for 4 weeks.

5. In Class II Div II case, the best way to check the angulation of the centrals is with a cephalometric x-ray (fig 8). The maxillary centrals are, most often at 88 degrees to 95 degrees. When you feel the desired torque has been achieved, take your follow up ceph and check the angulation. The norm is 104 degrees to 108 degrees (fig 9). In Div II cases, the maxillary laterals usually need more labial root torque and the centrals usually need lingual root torque. Both can be done simultaneously with the GTS Springs.

Follow Up

At the 4 week appointment, examine the cortical plate for a slight bump to see if you have created lingual crown torque. If no bump exists, dismiss the patient and see them again in 4 weeks. Continue this until you feel the root of the tooth. Once this is felt, see the patient in two weeks and remove the spring, replace the archwire and dismiss the patient. At the next visit, remove the archwire and let everything settle. In two weeks check to see if the torqued tooth has held its position. If it has, do whatever you normally do to finish the case.

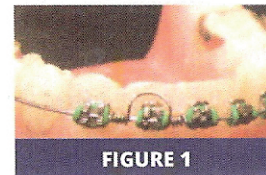
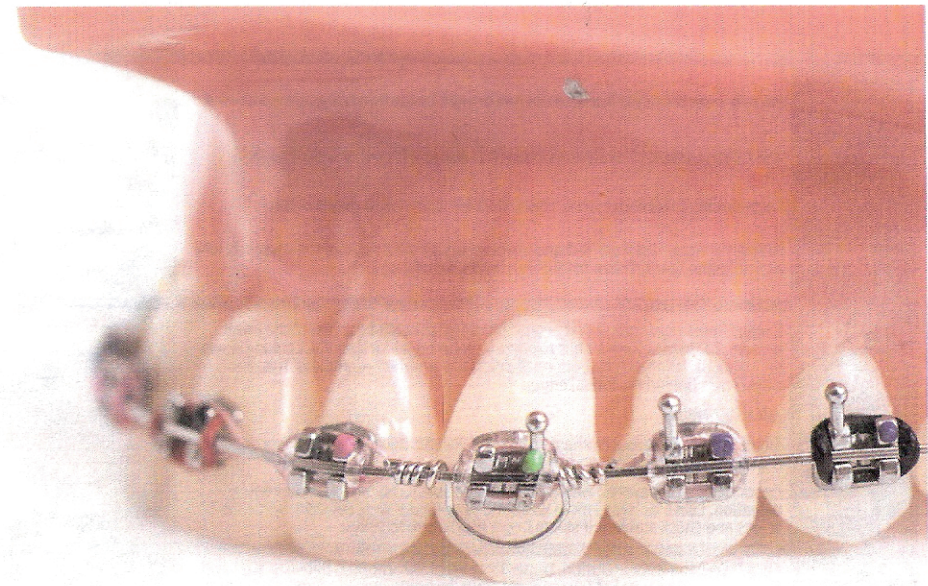


FIGURE 1

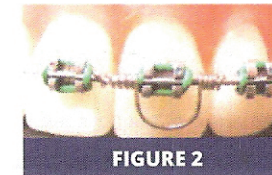


FIGURE 2

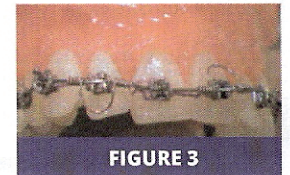


FIGURE 3

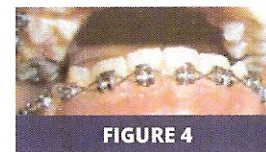


FIGURE 4

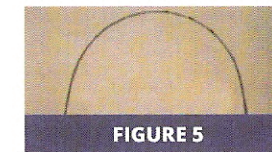


FIGURE 5

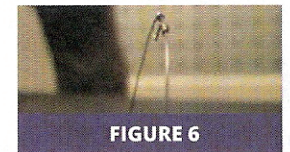


FIGURE 6



FIGURE 7



FIGURE 8



FIGURE 9