

To the Editor of the Angle Orthodontist

DEAR SIR:

I have read with interest and profit the excellent paper of Dr. Chester F. Wright entitled "A Consideration of the Anchorage Problem," which appears in the October number of the ANGLE ORTHODONTIST. However, there is one detail appearing in the illustration of the mechanics of the vertical spring loop that I believe is an error in force analysis and is of sufficient importance to warrant discussion.

In Fig. 3, page 156, Dr. Wright has visualized the action of the loop on the premolar teeth as the same as that of distal crown tipping bends. (Compare the arrows with those of Fig. 4, page 157.) If this were a true picture it would be perfectly practical and advantageous to combine the vertical spring loop auxiliary with the tip-back or second order bends. This, of course, should never be done because the *preliminary* action of the vertical spring loop is a *distal* movement of the *root apices* and a *forward movement* of the *tooth crowns* while that of the second order bends is a primary distal movement of the tooth crowns and a forward movement of the root apices. Consequently a combination of these two modifications would be absolutely antagonistic. The essayist's illustration of the action of the vertical spring loop should place the arrows in just the reversed positions indicating an initial forward movement of the premolar crowns and a distal movement of their roots.

Being responsible for the introduction of this auxiliary in Edgewise Archwire manipulation and realizing the necessity of thoroughly understanding the mechanics associated with its action, if one is to use it successfully, I have taken the liberty of offering this constructive criticism. This comment in no way detracts from the value of the presentation on anchorage but does clarify the mechanical action of this particular auxiliary and also differentiates, quite clearly, the fundamental difference in the forces emanating from the loop auxiliary and those associated with the "second order bend" modifications so that it should forestall any tendency to combine the two in universal action, which, I know, has been attempted in the past with considerable disappointment, as far as tooth movement is concerned.

February 7, 1940

Respectfully submitted,

ROBERT H. W. STRANG