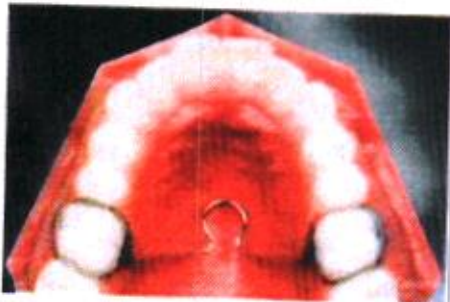


*Smile Frederick*



### The Lower Holding Arch ( LLHA )

The Lower holding arch is a wire that contacts the inside of the lower front teeth at the gum-line and is attached to two bands on the lower first molar teeth. This wire can be fixed (permanent) and soldered to the molar bands or removable and fit into tubes or sheaths on the inside of the bands. The LHA is used to "hold" the space or arch length between the front and back lower teeth. Without this arch, the molars drift could forward and valuable space is lost to straighten crowded front teeth. The LHA is also used to preserve space when baby teeth are prematurely lost due to decay. In many cases, the LHA is used as an anchor to keep molars and front teeth or incisors front moving when force is applied through rubberbands or functional appliances.



### Transpalatal Arch ( TPA Bar )

The Transpalatal Arch is a wire that goes across (trans) the roof of the mouth (palate). It attaches onto bands or rings that are cemented onto the two upper first molar teeth. The removable TPA is held in the bands with small plastic rubberbands. It is adjusted when necessary and is usually left in for at least one year. It is removed when spaces are closed and finishing wires are in place. The TPA can be used passively to anchor the molars where they are. The heavy wire locking them together prevents forward or tipping movement of these teeth. The orthodontist can make the TPA active as well. The loop at the top of the TPA can even be used to teach proper tongue position in patients with a poor tongue posture.

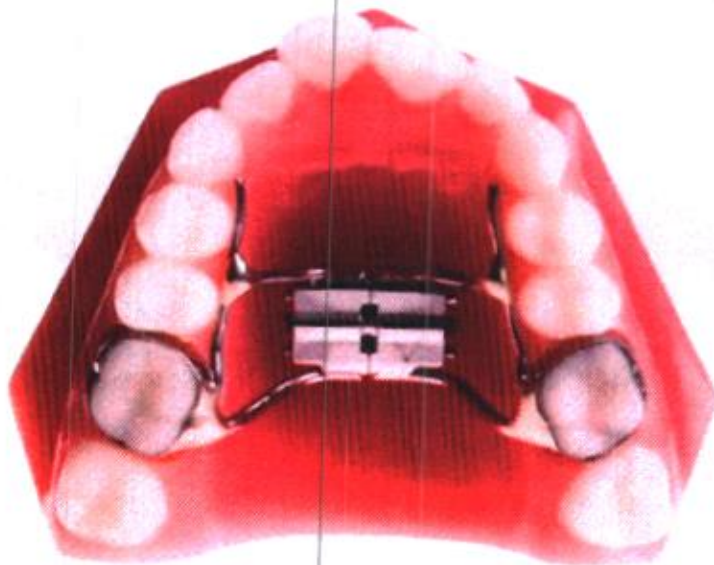
Please contact our office if you may have any questions or concerns with your appliance.

## Upper Expanders

The purpose of an expander is to expand the upper arch to fix a cross bite or make space. This could be important in allowing relief for crowding or to allow adult teeth to erupt into the arch. The expansion is directed towards the suture in the middle of the palate.

What to expect from these appliances:

- Possible gaps in between the upper front teeth
- Possible discomfort or sensitivity
- Limited minimal change in speech



This rapid palatal expander is activated by the use of a special swivel key. Expanders are usually activated once or twice a day as directed until the expansion is satisfactory. These expanders are usually reserved for patients who are older where a partial fusion of the suture is probable. Only turn your expander as directed by the Doctor.