

Designing Wire 1 Using Align A
Requirement for final arch

- Arch form selected – square
- Molar position – 2mm increase on each side
- Canine width to match the selected arch form

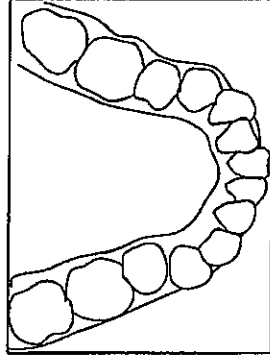


Fig 1

Designing Wire 1 Using Align A Wire Design Considerations

- molar position – 2mm increase on each side
 - Final molar position is identified and marker.
- Other Considerations
 - Canine width not to be exceeded
 - Laterals not to be moved until space is created to prevent proclining anterior teeth.

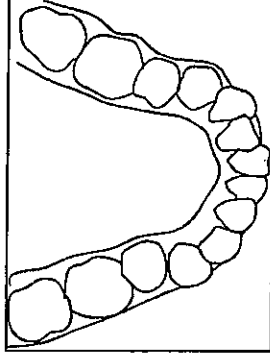


Fig 2

Wire Design

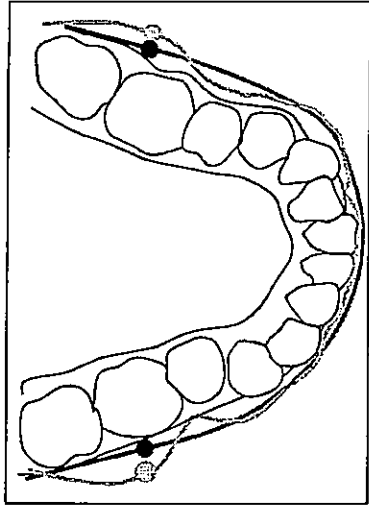


Fig 3

Resultant Forces On Teeth

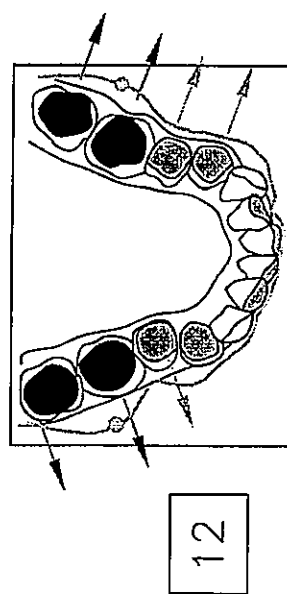
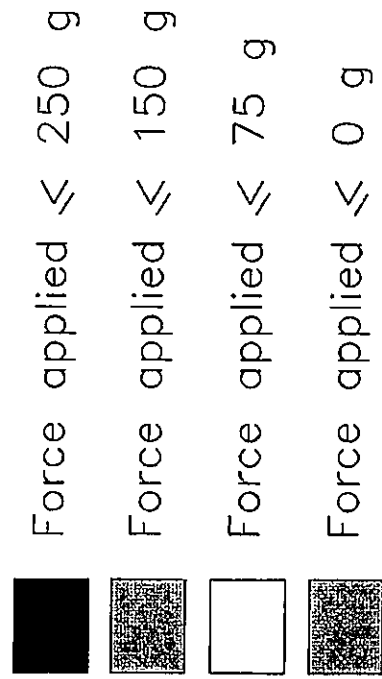


Fig 4



What to look out for ?

– Expansion cases

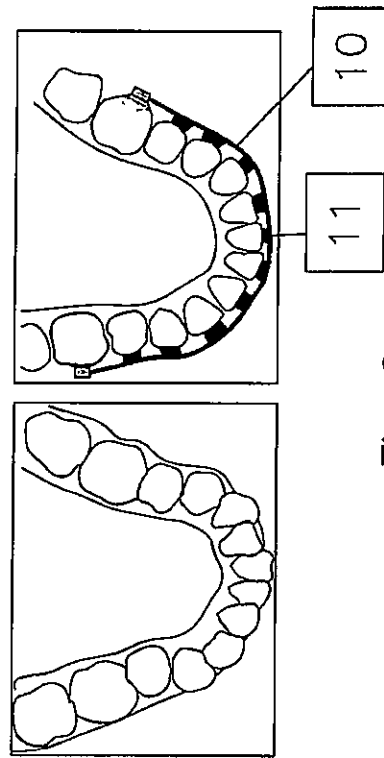


Fig 6

Typical treatment progression – Extraction

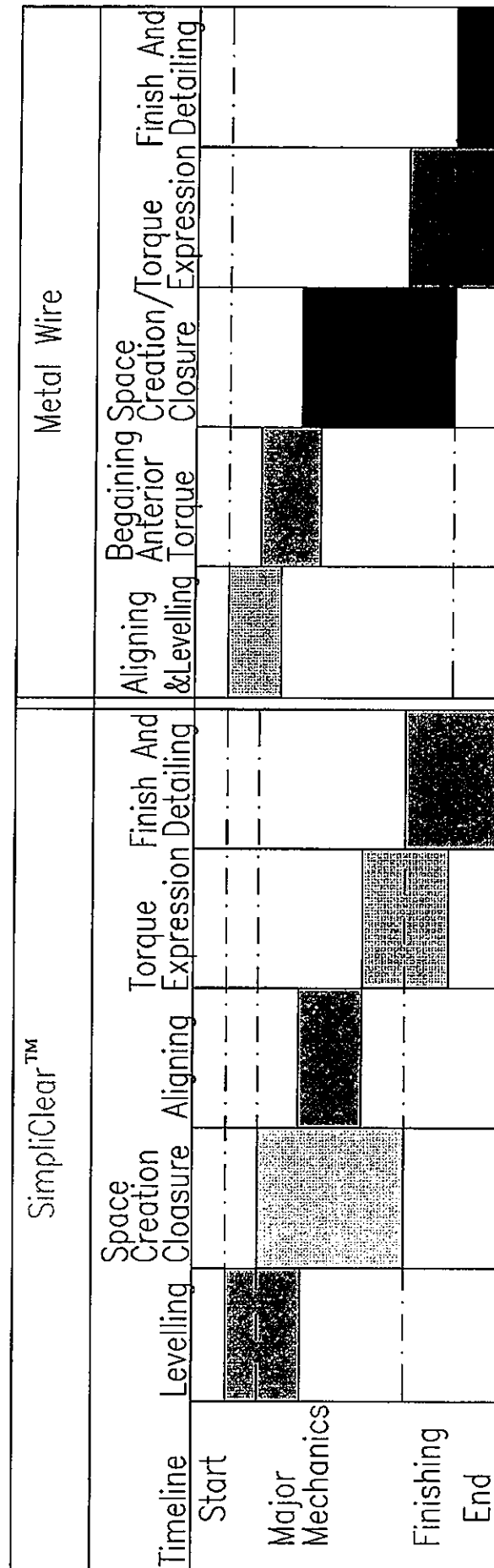


Fig 7

What To Look Out For?
-Extraction cases

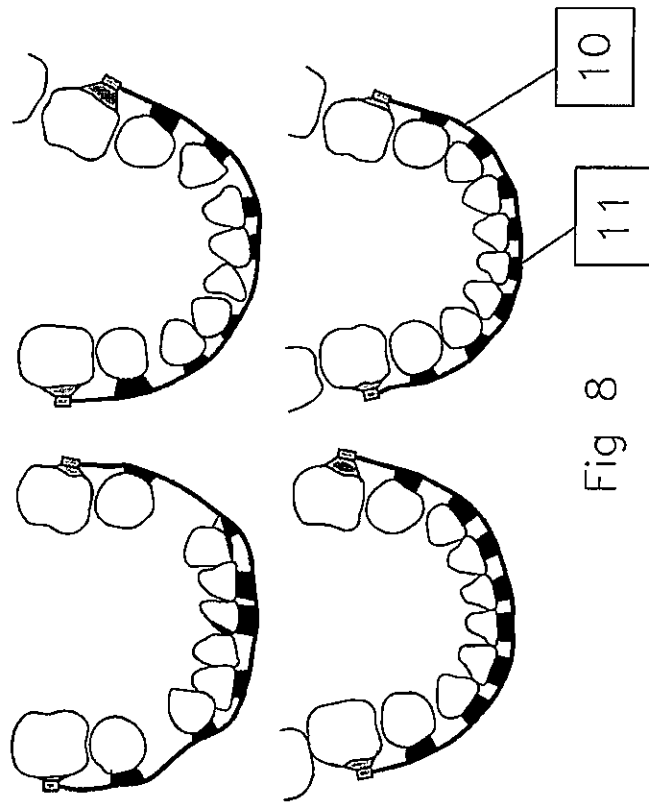


Fig 8

Wire design driven by Force
determination—an illustration

Tooth	Force
Anteriors	
—Incisors	$X_f = \text{dis}_x + f/2 \sigma$
—Canines	
Premolars	
—First premolar	$X_f = \text{dis}_x + f/\sigma$
—Second premolar	
Molars	
—First molar	$X_f = \sqrt{2} \cdot \text{dis}_x + \sqrt{2} \cdot f/\sigma$
—Second molar	

Fig 9

LEVELLING:

The movement of an individual tooth or a group of teeth responding to orthodontic forces where an intrusive movement in the gingival direction or an extrusive movement in the occlusal direction occurs.

The result of complete leveling is for all teeth in an arch have their desired biting or chewing surfaces in the same level as desired.

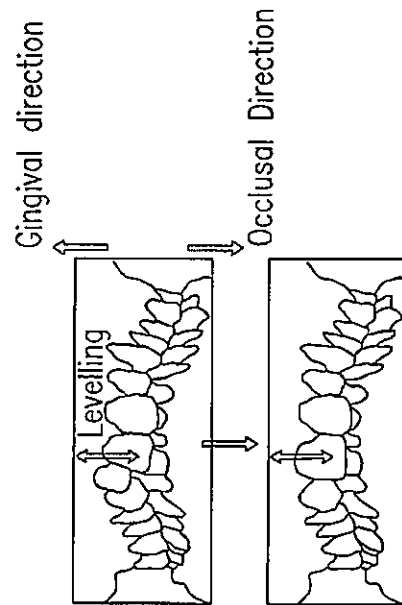


Fig 10

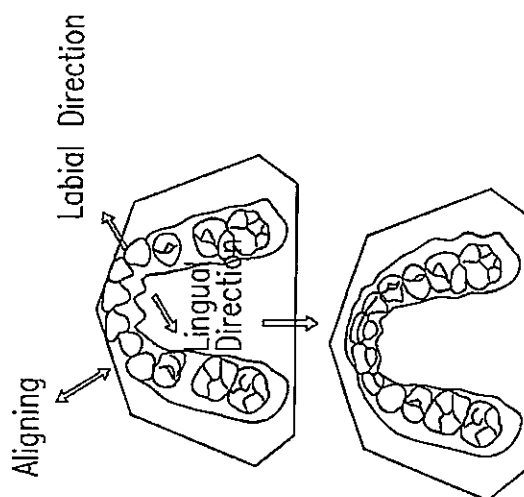


Fig 11

Aligning:

The movement of the teeth in response to an application of force where the resultant movement is a bodily movement of the teeth in the lingual or Labial direction of the arch is called as Aligning.

at the completion of aligning, in orthodontic treatment, an individual teeth or groups of teeth move experience movement in the labio—lingual direction resulting in the arch form that was desired at the end of treatment where the surface of the teeth form a smooth surface in the labial side.

Space Closure:

The movement of the tooth in response to an application of force where the tooth or group of teeth move in the mesial or distal direction resulting in closing of any available space is called as space closure.

Space closure results in creating space for adjacent teeth to be moved into alignment in an arch or it can also be used to close all excess spaces available in the arch to provide edge to edge contact of teeth.

Space creation in extraction cases comes from extracting a tooth from each quadrant and moving the teeth adjacent to the extraction space into the available space.

In expansion cases, the arch is widened creating spaced between teeth. this space is later closed to create space for crowded teeth.

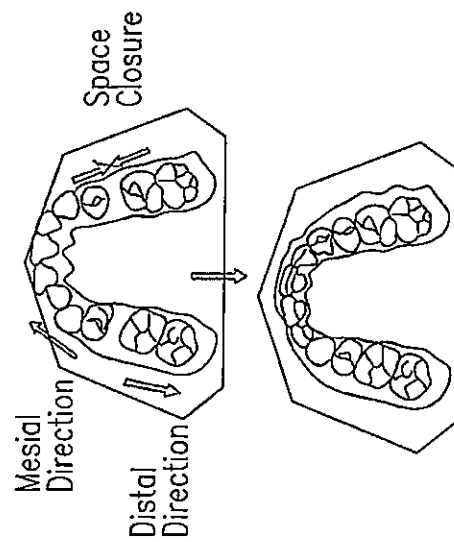


Fig 12