

Title: Miniscrew Implant Supported Bi-Helix Appliance(MISBA)

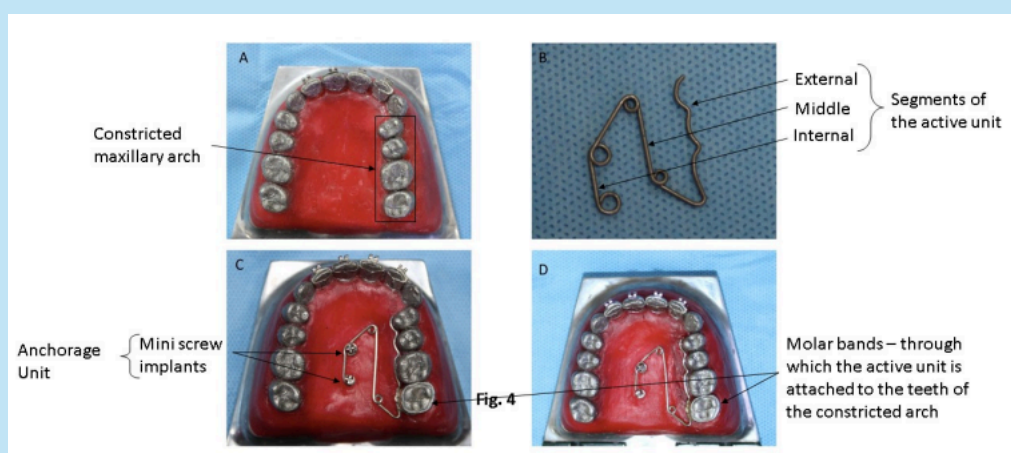
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KEYWORDS: Unilateral, Posterior crossbite, Mini-screw, Maxillary arch, Misalignment teeth

DOMAIN: Medical Instrument

SUMMARY:

MISBA is a cutting-edge dental appliance that facilitates the correction of misaligned teeth, particularly addressing unilateral posterior crossbites. The appliance is designed in a particular shape consisting of active and anchorage units. The active unit of MISBA is a wire component consisting of three wire segments: external, middle, and internal. The external segment is affixed to the molar band of teeth, while the internal or anchorage unit fixates the appliance on the palatal alveolar bone. The anchorage unit consists of mini-screws implanted with light cure composite adhesive. The working mechanism of MISBA depends on the activation of the coils of the middle segment, allowing the active unit to expand outside. It rectifies the constricted maxillary arch by horizontal displacement of molar teeth in the outer direction.



ADVANTAGES:

1. Offers customizable design as per individual needs.
2. Simple implant insertion procedure.
3. Enables unilateral teeth alignment without impacting adjacent teeth.
4. MISBA is made up of an economical material (Stainless Steel)

APPLICATION: Dental Appliance to correct crossbite.

SCALE OF DEVELOPMENT: A Functional Prototype development at lab-scale

TECHNOLOGY READINESS LEVEL: TRL 4

IP STATUS: Indian Patent Application no. 202211024311