

# Whip Spring for Incisor Rotation

## Abstract

Rotation of incisors without any other problem is a common occurrence. Present article describes a simple semifixed appliance for correction of such minor anterior rotations with no need of complete arch fixed mechanotherapy.

## Introduction

Rotation of maxillary incisors in an otherwise acceptable occlusion is a common occurrence [1]. Such cases are usually associated with one or two supernumerary teeth. Where there is adequate space available, these rotations can be easily and effectively corrected by a 'whip' spring [2].

Appliance components:

### 1. Attachment to the tooth/teeth

An oval molar tube is welded on a band and is adapted to rotated tooth/teeth. A bonded edgewise bracket can also be used, but it can exert unnecessary torque during rotation.

### 2. Removable appliance

This is a simple removable plate with adequate retention using Adams clasp and a labial bow made up of thicker gauge stainless steel wire (19/20 gauge).

### 3. A sectional wire:

A whip spring is fabricated of 0.016" heat-treated Australian wire Figure 1. The recurved end of the whip is inserted into the oval molar tube while the other end is formed into a hook to be engaged onto a labial bow. This design serves well for mesio-labial rotations of incisors. For disto-labial rotations it may be impossible to construct an adequate length of whip. In such cases, site of attachment may be the bridge of clasp on premolar or molar. Since whip itself provides no labio-lingual control, labial bow should be adjusted to touch the labially placed surface of rotated tooth/teeth. Usually only single tooth should be treated in this way Figure 1 Cases where true reciprocal anchorage can be provided eg. Similarly disto-labially rotated central incisors Figure 2, two springs can be used.



Figure 1: Whip spring for single tooth rotation.

## Mini Review

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Figure 2: Whip spring for two teeth rotation.

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