CHAIR SIDE TEMPLATE FOR ORTHODONTIC PRACTICE

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Abstract
Extraction space closure is an integral part of orthodontic treatment which demands a thorough understanding of the biomechanics. In the pre-adjusted edgewise technique, retraction is achieved either with friction (sliding) or frictionless mechanics. In day to day orthodontic practice we will be using different types of loop mechanics in orthodontic treatment eg. T- Loop, Opus-Loop, PG-Spring, Rickets utility arches, K-SIR Loop etc.
But every day it is very difficult for clinician to refer various journals and books for fabrication of different loops, therefore the aim of this article is to provide chair side template for various types of loop commonly used in orthodontic practice.
Key words T- Loop, Opus-Loop, PG-Spring, Rickets utility arches, K-SIR Loop.

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Introduction
Frictionless mechanics have evolved from simple vertical loops to present more complex loop design to achieve better moment/ force ratio and constant delivery of force. Materials used for frictionless retraction have also evolved from stiff stainless steel (SS) wires to the more flexible beta titanium wires. One of the major advantages of frictionless mechanics is that a known force system is delivered to teeth because there is no dissipation of force due to friction.[1, 2,3,4]
But every day it is very difficult for clinician to refer various journals and books for fabrication of different loops, therefore the aim of this article is to provide chair side template for various types of loop commonly used in orthodontic practice**.**

Steps for activation of different loops
K-SIR Arch *(VarunKalra)*[1]

1. K-SIR archwire: .019"x.025" TMA archwire with closed U-loops 7 mm long & 2 mm wide. (Fig: 1.1)
2. 90° bends placed in archwire at level of U- loops. (Fig: 1.2)
3. Archwire with off -center 60o V- bend placed about 2mm distal to U-loop. (Fig: 1.3)
4. 20° anti-rotation bends placed in archwire just distal to U loops. (Fig: 1.4)

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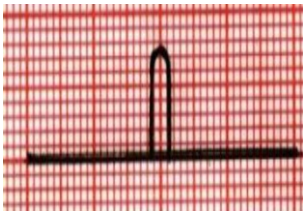

Figure1.1

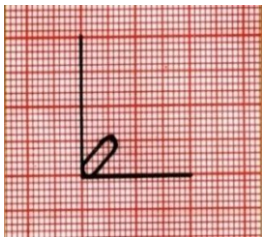

Figure 1.2

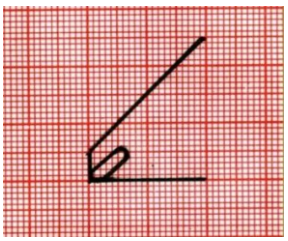

Figure 1.3

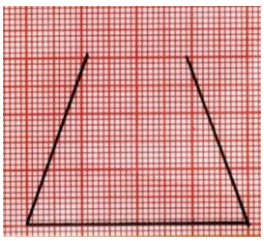

Figure 1.4

T – Loop (Burstone)[2,3]

1. Spring design of .017 x .025" TMA segmented T-loops, Standard form, without pre-activation bends. (Fig: 2.1)
2. Pre-activation form of spring. (Fig: 2.2, 2.3, 2.4, 2.5)

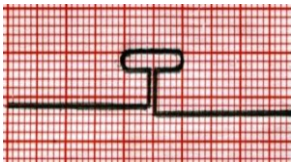

Figure 2.1

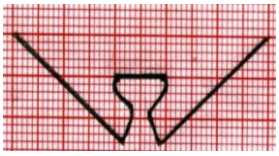

Figure 2.2

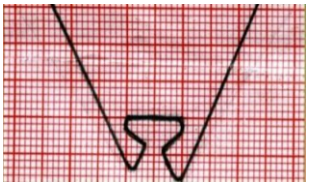

Figure 2.3

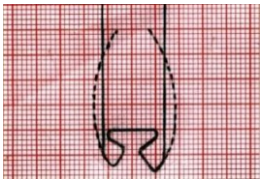

Figure 2.4

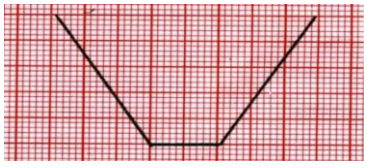

Figure 2.5

PG- Spring *(PoulGjessing)*[4]

A canine retraction spring was constructed from 0.016 x 0.022 inch stainless steel wire. (Fig: 3). It was given by Poul Gjessing.

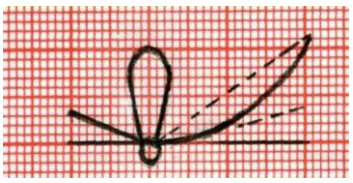

Figure 3

Opus Loop *(Siatkowski)*[5]

Opus loop was given by Raymond E Siatkowski (Fig: 4). It is constructed from 0.016 x 0.022 SS or 0.017 x 0.025 TMA.

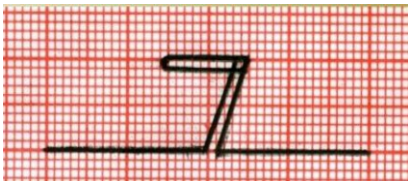

Figure 4

Utility Arches *(Mc Namara)*[6]

Constructed from 0.016 x 0.016, or 0.016 x 0.022 Blue Elgiloy for Mandiblar arch (0.018 slot), and for maxillary arch 0.016 x 0.022 Blue Elgiloy. Utility arches are of different types:
Passive, intrusion, retraction, protraction. (Figure 5.1-5.5)

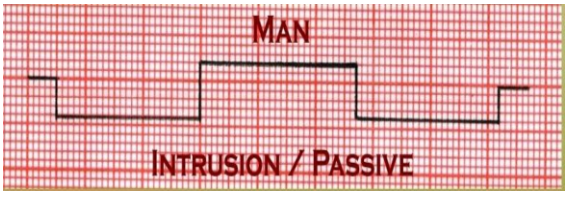

Figure 5.1

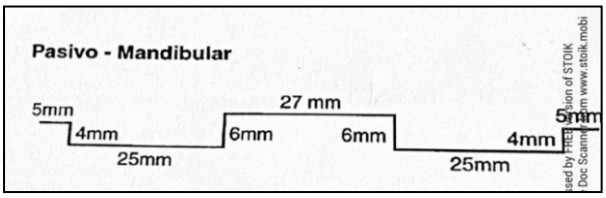

Figure 5.2

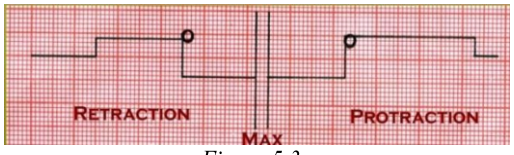

Figure 5.3

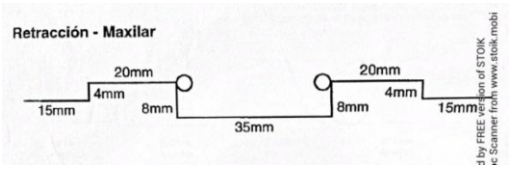

Figure 5.4

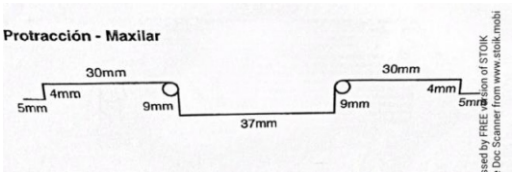

Figure 5.5

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