

Judicious use of an empty plastic bottle as an orthodontic wire stand

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ABSTRACT

Orthodontic wire stand is an integral part of the armamentarium of an orthodontist. Different orthodontic wire stands are available commercially to store and dispense preformed arch wires. A simplified method has been presented to make a customized orthodontic wire stand by the judicious use of a disposable empty plastic bottle.

Keywords: Preformed arch wires, Orthodontic wire stand, Plastic bottle.

INTRODUCTION

Orthodontic wire stand is used for storing and easy dispensing of preformed orthodontic arch wires. Several orthodontic wire stands are commercially available. A cheaper alternative orthodontic wire stand has been developed by using a clear disposable plastic bottle for in office placement of preformed orthodontic arch wires.

METHOD OF FABRICATION

A clear disposable plastic empty plastic bottle was taken and cut at both the ends in such a manner that the central circular portion comes out (Fig 1 and 2).



Figure 1: Bottle hood end being cut

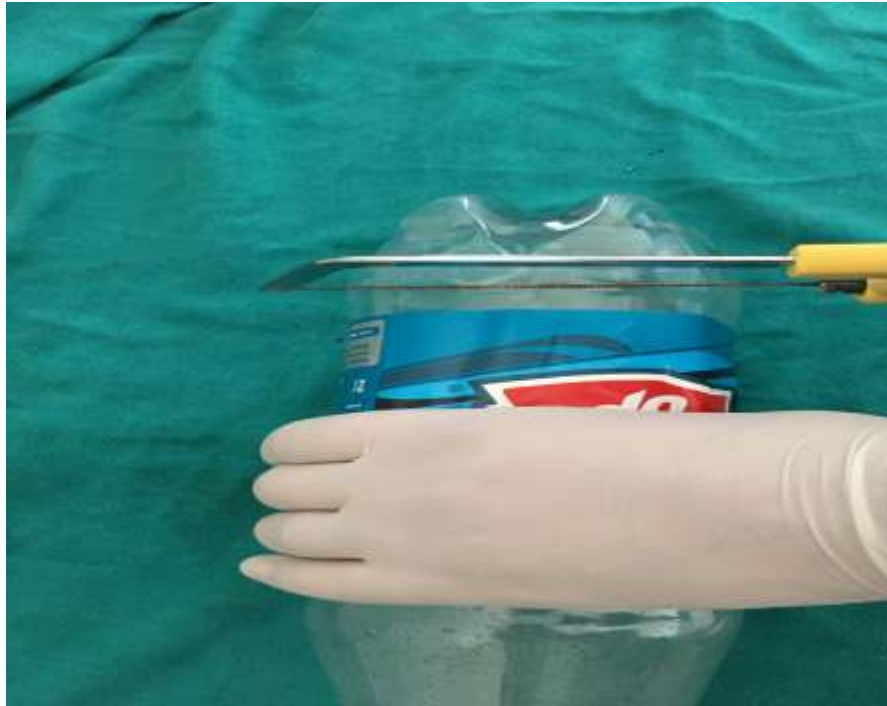


Figure 2: Proximal end of the bottle being cut

Then through the circular portion of the bottle a partly semi-circular portion is cut out and 14 markings were made on it at equal and opposite distance (Fig 3).

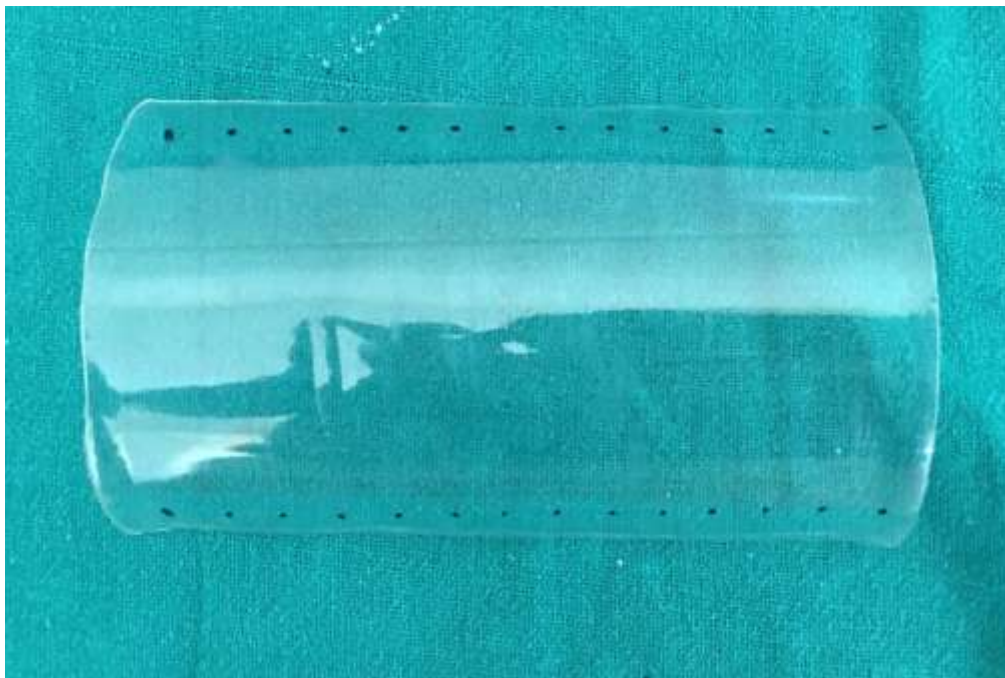


Figure 3: Cut out semi-circular portion with the markings

These points on the semi circular portion simulated points for arch wire placement. Holes were drilled at these markings with a micro-motor straight hand piece to make 14 slots to hold arch wires. Dimensions of the preformed arch wires to be placed in these slots were then written on either side of the slots with a permanent marker pen. The written dimensions helped in the easy identification and accessibility of the arch wires. The arch wire slots were made according to the need of an orthodontist. Then a hole just large enough at the centre of the semicircular portion is drilled with a micro-motor straight hand piece for the placement of the disposable plastic bottle hood. The cut out hood of the bottle is then inserted through the drilled hole (Fig 4 and 5).



Figure 4: Orthodontic wire stand (front view)



Figure 5: Orthodontic wire stand (side view)

The cut out hood of the disposable plastic bottle serves as a base for the customised orthodontic wire stand. The plastic stand is best set up on a firm surface and can be angled to suit the user for easy dispensing of arch wires. This feather light weight orthodontic wire stand can be customized according to the need and use of an orthodontist.