

Research: Presentation of the lamdabot, an in-office robot capable of bending steel and nitinol arches to be used for lingual orthodontics

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The intention of researchers in orthodontics is to plan, design and, whenever possible, to manufacture products that facilitates and improves the treatment, both in an efficient and practical manner. This way, the researcher is contributing to the well-being of the patient and the orthodontist treating him.

Unlike in labial technique, the elaboration of wire arches for the lingual technique requires to be personalized for each one of the patients, because of the compensations that must be incorporated to avoid unwanted movements during the orthodontic therapy.

This characteristic is one of the causes of the high level of difficulty inherent to the lingual technique, where the clinician requires both time and patience to fabricate the wires in the precise way this needs to be done. This feature of the lingual technique has kept many orthodontists from working with it.

To close this gap, companies have offered to manufacture the wires. To date, this solution is available only from specialized labs and at a very high cost, because the equipment used to personalize the wires tends to be expensive.

During the last three years we have tried to find a practical solution to this problem. In April 2011, the JCO published the encouraging results we had had with the prototype of a wire bending robot of low cost, capable of precisely elaborating the arches, and adequate to be kept in the facilities of a dental clinic, because of its size and characteristics.

Biography

Alfredo Gilbert, DDS, MS., is a Certified Orthodontist of the Mexican Board of Orthodontics. He received his undergraduate degree from the Mexican National Autonomous University is a specialist of the Intercontinental University, same place where he got his Master degree. He serves on the editorial review board of the "Ortodoncia Actual" journal and is the author of "Lingual Orthodontics: The Truly Invisible Orthodontics", a book published in 2008. He wrote two chapters for "Lingual & Esthetic Orthodontics", book published in 2011 and edited at Quintessence Publishing.

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