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भारत सरकार
विज्ञान और प्रौद्योगिकी मंत्रालय
वैज्ञानिक और औद्योगिक अनुसंधान विभाग
टेक्नोलॉजी भवन, नया महरौली मार्ग,
नई दिल्ली - 110016
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
Department of Scientific and Industrial Research
Technology Bhavan, New Mehrauli Road,
New Delhi - 110016



F.No.14/726/2017-TU-V

Date: 16th May, 2019

**The Chairman
Coorg Dental and Medical Science Trust
Kanjithanda Kushalappa Campus, Maggula,
Coorg District,
Virajpet - 571 218
Karnataka**

Subject: Renewal of Recognition of Scientific and Industrial Research Organisations (SIROs).

Dear Sir,

This has reference to your application for renewal of recognition of Coorg Dental and Medical Science Trust, Virajpet, Karnataka as a Scientific and Industrial Research Organisation (SIRO) by the Department of Scientific and Industrial Research under the Scheme on Recognition of Scientific and Industrial Research Organisations (SIROs), 1988.

2. This is to inform you that it has been decided to accord renewal of recognition to **Coorg Dental and Medical Science Trust, Virajpet, Karnataka from 01.04.2019 upto 31.03.2022**. The recognition is subject to terms and conditions mentioned overleaf.
3. Receipt of this letter may kindly be acknowledged.

Yours faithfully,

**(Dr. S.K. Deshpande)
Scientist - 'G'**

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TERMS AND CONDITIONS FOR RECOGNITION OF SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATIONS (SIROs)

1. The organizations should acknowledge receipt of the recognition letter by stating that they will abide by the terms and conditions of recognition.
2. The recognition will entitle the SIRO to receive such administrative support from the DSIR, Ministry of Science & Technology as may be required on issue to promote or encourage scientific research activities.
3. SIROs recognized by DSIR are also deemed to be registered. A separate certificate of registration** is issued along with the recognition letter. The recognition would be valid for the period specified in the recognition letter and application for renewal of recognition shall be submitted in the prescribed proforma at least 3 months before the expiry of the valid recognition. Failure to submit application in time may lead to automatic lapsing of the recognition & registration.
***However, the certificate of registration is not issued to SIROs engaged in activities falling within the definition of 'hospital' as per notification No. 51/96-Cus. Dt. 23.07.1996 issued by the Department of Revenue.*
4. The recognition of DSIR does not amount to approval u/s 35(1)(ii)/(iii) of Income Tax Act, 1961.
5. The registration will entitle the SIROs to avail of custom duty exemption on purchase of equipment, instruments, spares thereof, consumables, etc. used for research and development subject to relevant Government policies in force from time to time. Custom duty exemption has to be separately dealt with the customs authorities. The SIROs should abide by the terms & conditions of the customs notifications issued/amended from time to time.
6. Separate books of accounts shall be maintained by the SIRO for research & development activities and the R&D expenditure, both capital and recurring should be reflected the Annual Report and Statement of Accounts of the Organization in separate schedules.
7. Disposal/sale of equipment and products/prototypes/intermediates, if any, emanating from the R&D/pilot plant, should be intimated to DSIR immediately. The realization, if any, from above or any services rendered etc. shall be shown in the R&D accounts of the organization as income of the SIRO in the audited accounts as well as annual report and should be used or reinvested for research activities only. In case of disposal/sale of R&D equipment, clearance from custom authorities will also be required in view of the applicable notifications under which the equipment was imported/purchased in India.
8. Accelerated depreciation allowance as per Rule 5(2) of Income Tax Rules 1962 will be available on investments on plant & machinery by any industrial unit which has made these investments for the purpose of commercialization of technology/know-how acquired from a SIRO recognition by DSIR.
9. Brief summary of the achievements of the organization shall be submitted to the DSIR every year. This should include details related to papers published, patents obtained and process developed, new products introduced, awards & prizes received, copy of Annual Report and Statement of Accounts of the organization etc. List of equipment, instruments, parts and consumables imported/purchased using the duty exemption should also be submitted to DSIR along with the Annual Report.
10. Any violation of the terms & conditions mentioned-above and / or provisions of taxation in force will make the organization liable to de-recognition.
11. The organization will also conform to such other conditions for recognition stipulated in the Guidelines or as may be specifically provided in the recognition letter.


पेटेंट कार्यालय
शासकीय जर्नल

**OFFICIAL JOURNAL
OF
THE PATENT OFFICE**

निर्गमन सं. 32/2019
ISSUE NO. 32/2019

शुक्रवार
FRIDAY

दिनांक: 09/08/2019
DATE: 09/08/2019


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पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

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(54) Title of the invention : AN ORAL HYGIENE COMPOSITION COMPRISING PLANT PART(S) OF JATROPHA CURCAS

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:NA

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:NA

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:NA

Filing Date

:NA

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(72)Name of Inventor :

1)Dr. SHANTHALA B M

2)SUNIL MUDDAIAH


3)ANUSHA JAYADEVAN

(57) Abstract :

The invention relates to an oral hygiene composition comprising plant part(s) of Jatropha curcas. More particularly, the invention relates to an oral hygiene composition comprising extract of Jatropha curcasleaves very effective as antibacterial agent against carcinogenic microorganism streptococcus mutans.

No. of Pages : 9 No. of Claims : 8


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FORM 2
THE PATENTS ACT, 1970
(39 OF 1970)

AND
THE PATENT RULES, 2003
COMPLETE SPECIFICATION
(See section 10 and rule 13)

**"AN ORAL HYGIENE COMPOSITION COMPRISING PLANT PART(S) OF
JATROPHA CURCAS"**

Name of Applicant	Nationality	Address
Dr. Shanthala B M	Indian	Coorg Institute of Dental Sciences, SH 88B, Kodagu Coorg District, Virajpet, Karnataka 571218 India

The following specification describes the invention and the manner in which it is to be performed:


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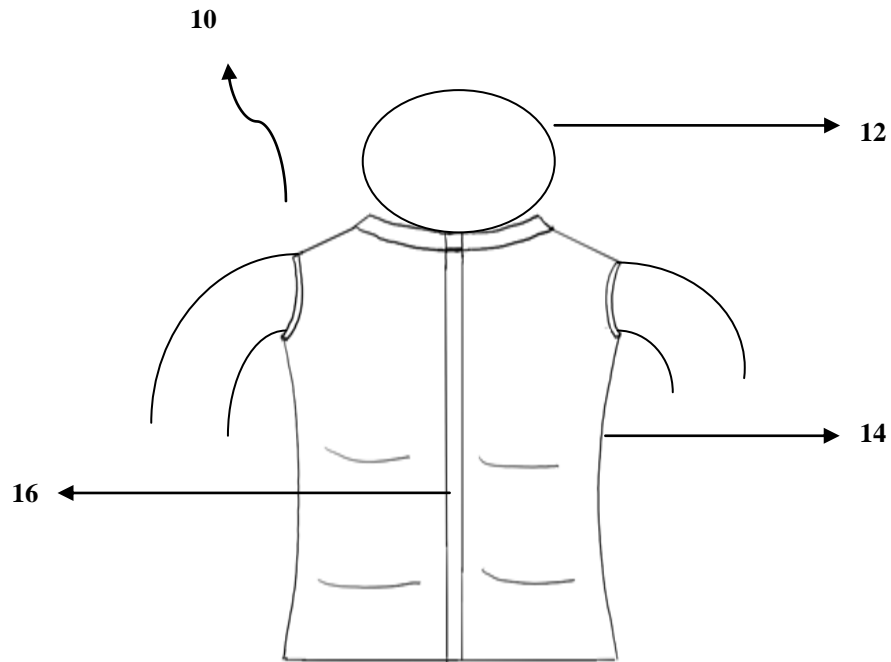



Figure 1


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Aravathan

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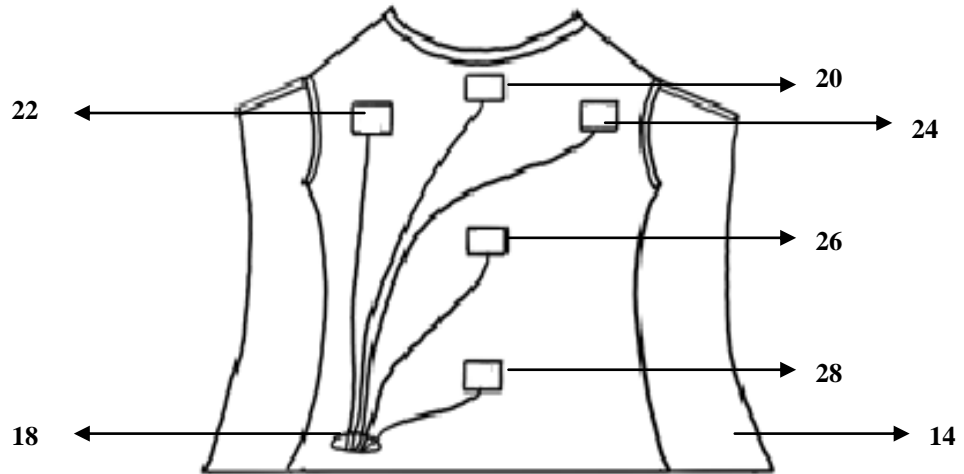



Figure 2a


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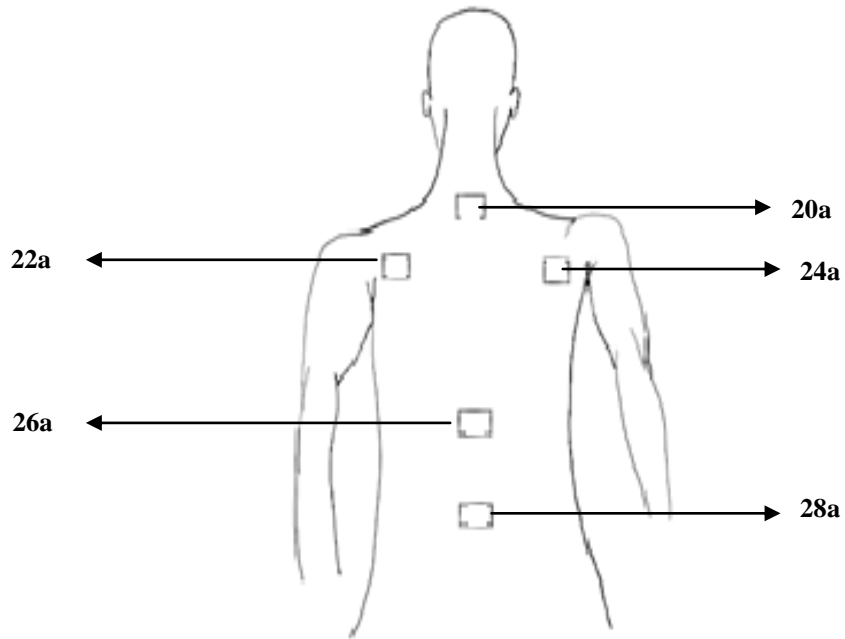


Figure 2b

Alamethan

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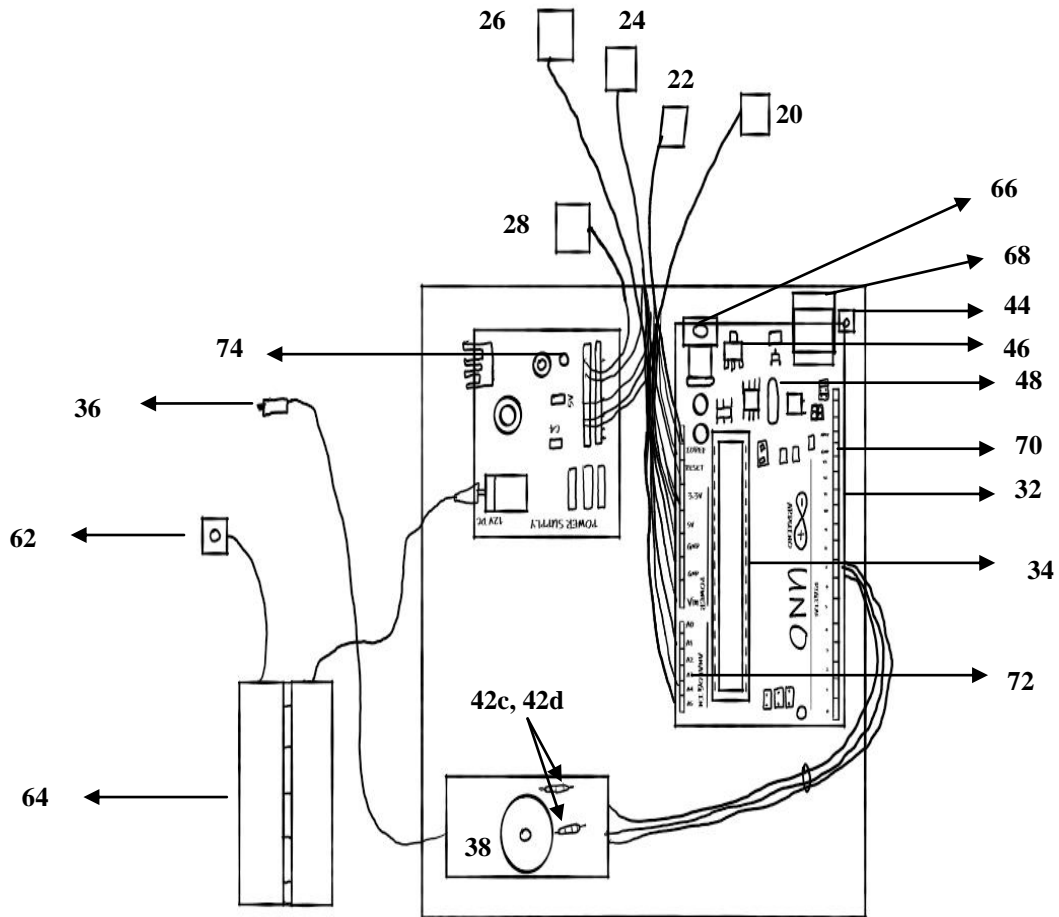



Figure 3


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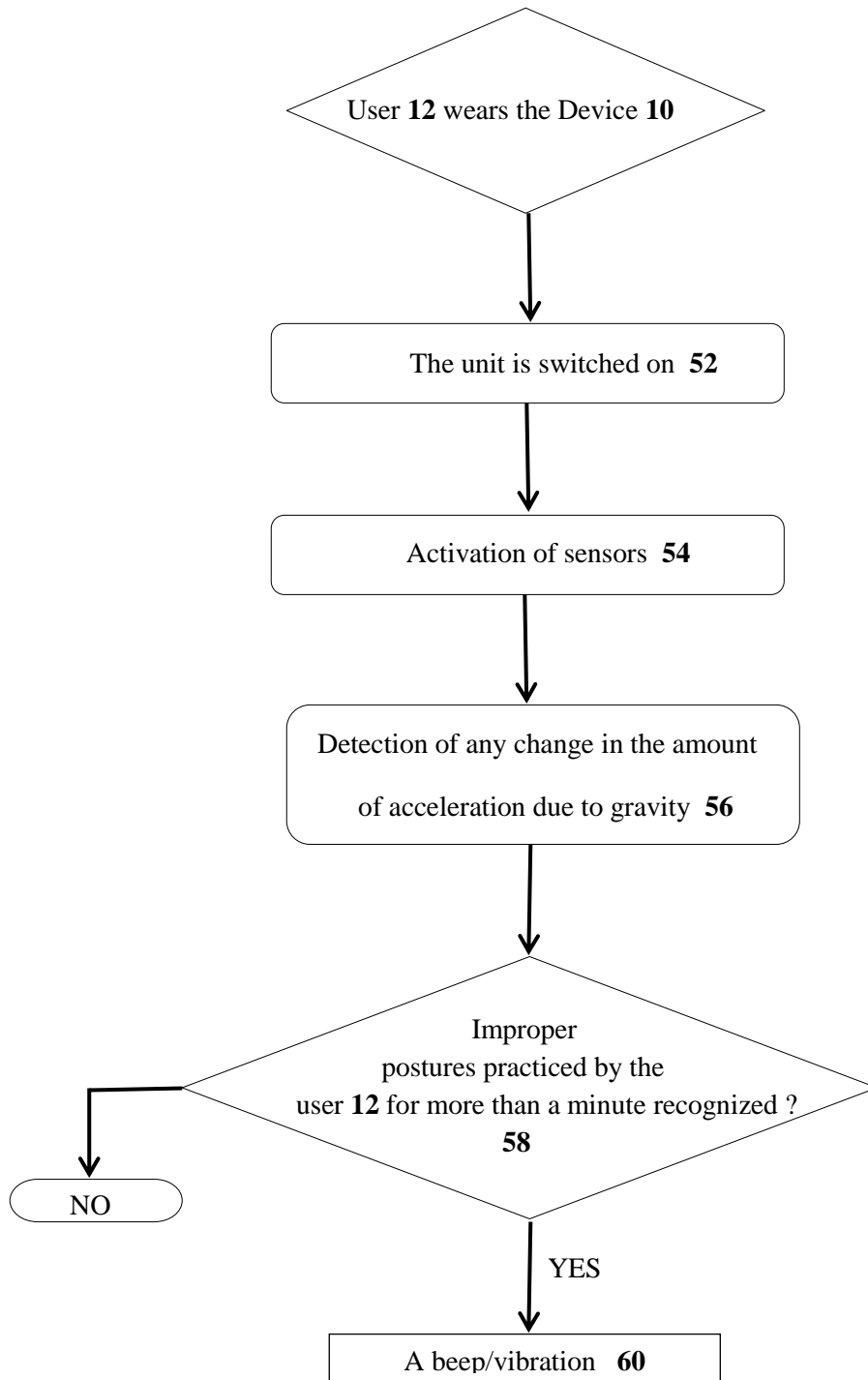



Figure 5


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CASE REPORT

An Innovative Space Regainer “Banded Helical Retractor” in Space Management: A Case Report

Shanthala B Mallikarjun¹, Bobby Wilson², Soumya Joppan³, Safeena Puthiyandi⁴, Minu Suresh⁵

ABSTRACT

Background: The premature loss of the primary teeth after the eruption of first permanent molar can result in mesial shift of the first permanent molar. In such circumstances, we require space regainer. The “banded helical retractor” was designed to overcome some of the limitations of the conventional removable and fixed retainers.

Aim and objectives: This paper presents a case report with premature loss of second deciduous molar after the eruption of first permanent molar, and regaining the space loss by using innovative design “banded helical retractor”.

Case description: A 7-year-old patient with loss of space due to early exfoliation of 75 was given an innovative space regainer “banded helical retractor”.

Results: After 6-weeks followup, space was regained with uprighting of molars.

Conclusion: “Banded helical retractor” as a space regainer was effective in regaining the space in the short duration of time.

Keywords: Banded helical retractor, Premature loss, Space management.

International Journal of Clinical Pediatric Dentistry (2019): 10.5005/jp-journals-10005-1677

INTRODUCTION

The goal of a pediatric dentist is to guide the developing occlusion, preventing any anticipated deviations and/or intercepting the developing malocclusion. Premature loss of any of the primary molars can lead to the development of occlusal discrepancies and malocclusion in the permanent dentition. The consequence of the early and untimely loss of second deciduous molar in the lower arch is the mesial shifting of the first permanent molar, leading to space loss and inadequate arch length.¹

All removable appliances used for distalizing the molars are limited in effectiveness by the degree of cooperation of the child patient, adequate stability, and anchorage of the appliance.²

When fixed appliances with open coil springs are used to reposition the first permanent molars, there will be reciprocal force exerted to the teeth and the supporting tissue anterior to the space, resulting in undesirable flaring of the anterior teeth.³

Thus, in the innovative designing of the spring “banded helical retractor,” a fixed space regainer was considered to achieve the effects of spring design in mandibular arch to distalize the first permanent molars.

Planning the design and layout of a spring entails selecting a point of attachment so that the free-end sweeps along the intended line of movement of the tooth; further details are to ensure an optimum combination of length, number of coils, thickness, shape of the spring, and provision for guarding and guiding the spring over its range of activity. The length and thickness of a spring must be decided with regard to the space available.¹

This case report explains the need of timely intervention to regain the space loss in the mandibular arch owing to premature loss of second primary molar.

CASE DESCRIPTION

A female child patient aged 7 years was reported to the Department of Pedodontics and Preventive Dentistry with a complaint of missing

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Source of support: Nil

Conflict of interest: None

tooth in the left back tooth region for 6 months. Clinical examination revealed prematurely missing 75 (Fig. 1). The history revealed that the tooth was extracted owing to gross decay.

Arch space analysis revealed a space discrepancy of 2.5 mm.

An Orthopantomogram (OPG) revealed 3 mm amount of bone covering, developing 35 and mesially inclined 36 (Fig. 2).



Fig. 1: Clinically missing 75 and mesially shifted permanent molars

The decision of fixed banded helical space regainer was made.

Fabrication of the Innovative Appliance

- Banding of the first permanent molar and first deciduous molar was done.
- Molar tube was welded lingually to molar band.
- Wire component was fabricated using 19-gauge wire with helix 3 mm in diameter and active arm of 10 mm was placed across the mesial surface of the first molar and it was engaged into molar tube on the molar band (lingual). The 10 mm of active arm was measured by calculating the space from distal to helix to the end of the molar tube lingually. The measurements of helix, active arm, and the wire were considered to achieve an effective pressure of the appliance on the tooth. The retentive arm of the wire component was soldered lingually to the deciduous molar band (Fig. 3). The additional space of 2.5 mm was included for the aligning of the first molar and the retentive arm was given to avoid the discomfort to the patient by preventing soft tissue laceration.
- The finishing and polishing of the appliance was done and cemented after activation using GIC luting cements (Fig. 4). Activation was done by opening the coil in the spring to allow the force to be transmitted onto the first permanent molar.

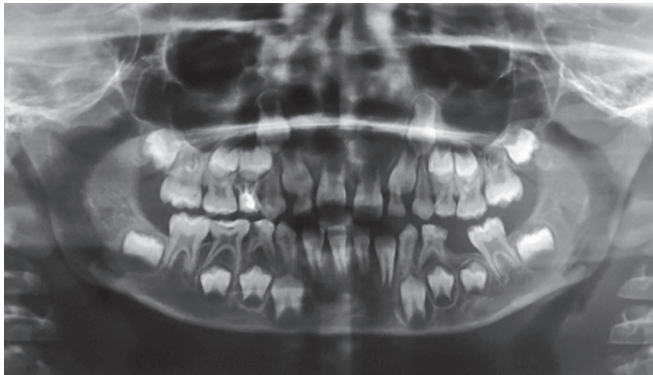


Fig. 2: Orthopantomogram reveals the space discrepancy of 2.5 mm with mesial inclination

Follow-up

The patient was recalled weekly for the followup, within 4 weeks, the required space was regained (Figs 5 and 6). This was further confirmed with OPG (Fig. 7). The appliance was maintained for 2 weeks, after which the lingual arch holding space maintainer was given (Fig. 8).

DISCUSSION

The eruptive forces of the permanent first molars tend to shift mesially, if the guiding planes of the distal surface of the mandibular second molar distal roots are prematurely missing.^{4,5} Orthodontically to regain the lost space due to premature exfoliation of primary molars and to achieve stable intercuspation of the molars by flattening the excess curve of spee would be challenging.⁶

Space maintenance after premature extraction of primary teeth is a key to guide the growth of healthy occlusion. The space maintenance involves either passive occlusal guidance or active occlusal guidance. Passive occlusal guidance involves the use of space maintainers, while active occlusal guidance involves space regaining, that is when an abnormality in the dimensional changes in the arches are detected to implement treatment of regaining the space lost due to premature extraction.² Mandibular first permanent molar suffer mesial inclination more than maxillary first permanent molar.⁵

In the present case, an innovative space regainer “banded helical retractor” designed regained the space loss at the shortest possible duration of time and the same appliance served as a passive appliance after the desired position of the molars was obtained.

The factors that were considered in designing the appliance were: patient compliance, ease to fabricate, effectiveness (force of action), shorter duration of appliance wear, and also serve as passive appliance after the alignment of molars.

Patient compliance for the appliance was good. This appliance was easy to fabricate. The anchorage for the appliance was achieved by soldering retentive arm of the springs to the bands of deciduous molars.

The ratio of 1:3 was considered to achieve the effectiveness of the appliance explained by Adams, that the effectiveness can be achieved by the short range of action of the active arm in the available space.¹



Figs 3A and B: (A) Retentive arm soldered to 74 band with the spring of helix 3 mm and active arm of 10 mm; (B) Innovative space regainer ‘banded helical retractor’

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(54) Title of the invention : SMART KINESTHETIC AND ERGONOMICALLY ENGINEERED DEVICE FOR ADEPT DENTISTRY (SKEEDAD)

(51) International classification :A61F0005020000, G06F0003048400, A47C0031120000, A41D0001040000, G01F0001680000
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(57) Abstract :

The present invention describes a smart kinesthetic and ergonomically engineered device for adept dentistry (SKEEDAD) 10. The device comprises a vest 14 and a circuit unit 18. The circuit unit 18 is coupled with one or more sensors (20, 22, 24, 26 and 28). The sensors (20, 22, 24, 26 and 28) are placed at neck/cervical region, right side of the shoulder, left side of the shoulder, upper back region and lower back region. The sensors get activated 54 once the battery is connected and the unit is switched on 52. When a faulty posture is detected 58 by the device 10, a beep and vibratory notification 60 will be given which alerts the clinician and thus aids in the self-correction of the improper posture and further adapt as well as maintain a better ergonomic practice.

No. of Pages : 20 No. of Claims : 9


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