

June 30, 1931.

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1,812,008

DENTAL IMPRESSION BAND

Filed Dec. 19, 1929

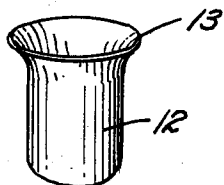


**Fig. 1**

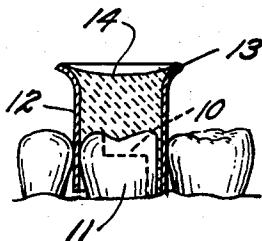


**Fig. 2**

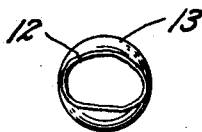


**Fig. 3**

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## UNITED STATES PATENT OFFICE

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## DENTAL IMPRESSION BAND

Application filed December 19, 1929. Serial No. 415,336.

This invention relates to an impression band for use in dentistry. The usual dental impression band comprises a short metallic cylinder of any suitable, soft, non-corrosive metal. The bands are generally employed for obtaining impressions of the cavity which has been prepared for an inlay so that a model of the tooth can be obtained for use in the laboratory. The usual dental impression bands have been very unsatisfactory and impractical because there is absolutely nothing upon the bands to provide a finger grip to facilitate their removal. The impression compound hardens into the cavity and into the undercut exterior surfaces of the tooth, making it an exceedingly difficult operation to lift the band after the impression compound has hardened. It is, at times, necessary to employ two fingers of each hand in order to obtain sufficient grip and the struggle to lift the band causes distortion in the impression which makes it impossible to form a perfectly fitting inlay in the laboratory. This struggle to remove the band is exceedingly distressing to the patient and often when great effort is put upon the band to remove it, it will suddenly snap from place so that the tightly gripped fingers will force the sides inwardly and break the thin edges of the delicate impression surfaces.

The principal object of this invention is to provide an impression band with a finger gripping projection adjacent one of its extremities so that a firm grip can be obtained thereon between the thumb and fingers of one hand which will allow the band to be easily lifted from the place without crushing or distortion.

The straight sharp edge of the usual impression band often cuts or scratches the thumb of the operator when he is endeavoring to force the impression compound therein.

Another object of this invention is to provide an impression band which will not in-

jure the thumb of the operator and which will act as a funnel to compress and direct the compound against the tooth.

A further object of the invention is to provide an impression band, the lower portion of which, can be shaped to conform to the outline of any desired tooth without distorting or constricting the top thereof so that there will be no interference with the forcing of the impression compound against the tooth.

A still further object is to provide an impression band of larger area adjacent its outer extremity so that the impression compound cannot be drawn from the band by its adherence to the tooth.

Other objects and advantages reside in the detail construction of the invention, which is designed for simplicity, economy, and efficiency. These will become more apparent from the following description.

In the following detailed description of the invention reference is had to the accompanying drawings which forms a part hereof. Like numerals refer to like parts in all views of the drawings and throughout the description.

In the drawings:

Fig. 1 is a perspective view illustrating the preferred form of the improved dental impression band.

Fig. 2 illustrates the improved dental band in use.

Fig. 3 is an end view of the band illustrating how the operating extremity may be distorted without constricting the gripping extremity.

The use of an impression band is well known in the dental profession and will be but briefly outlined here. The cavity in the tooth is prepared in the usual way such as indicated at 10 in the tooth 11 of Fig. 2. The band is then partially filled with impression compound, such as indicated at 14, which has been previously softened by heat-

ing and is forced onto the tooth with the thumb closing the outer extremity thereof. Considerable pressure is applied to force the impresison compound to flow into and con-  
 5 form to the contour of the tooth and cavity. The compound is then allowed to cool and the band is lifted from the tooth. We now have within the band a perfect impression of the tooth and cavity which can be filled  
 10 with amalgam or similar modeling substance to obtain a perfect model of the tooth. The inlay can then be built up to fit this model tooth with the assurance that it will also fit the natural tooth when placed  
 15 thereon, provided the impression was not disturbed or damaged during the removal of the band.

This improved dental band is illustrated at 12. In its preferred form, one extremity  
 20 of the band 12 is turned outwardly entirely around its periphery to form a slightly bell-shaped extremity 13. The bell-shaped extremity 13 stiffens one extremity of the band 12 and holds it in a substantially perfect  
 25 circle regardless of how the remainder of the band may be distorted to fit over any particular tooth.

The principal purpose, however, of the bell shaped extremity 13 is to provide a finger  
 30 grip which will allow the band to be easily, positively, and accurately lifted from the tooth after the impression has set without it being necessary to grip the band with  
 35 damaging pressure. The impresison compound 14 fills the band and the bell shaped extremity 13 so as to provide a firm solid unit for gripping. The compound within  
 40 the enlarged extremity 13 forms a key to prevent the compound from adhering to the tooth and being drawn from the band 12.

It will be noted that the bell shaped extremity also acts both as a funnel-like guide to direct the impression compound into the  
 45 band 12 and as an enlarged seat for the operator's thumb so that a greater pressure may be brought to bear without danger of cutting.

As before stated the principal object of the invention is to provide a projection  
 50 which will prevent the fingers from slipping from the band without requiring the fingers to grip the band with a destructive pressure. It appears at this time that this object is best accomplished both from the standpoint  
 55 of manufacture and practicality by either swedging, rolling, stamping, or spinning a bell shaped extremity on the band. It is desired to be understood, however, that this principle could be carried out in any other  
 60 way which would form a projection adjacent one extremity of a band.

While a specific form of the improvement has been described and illustrated herein, it is desired to be understood that the same  
 65 may be varied, within the scope of the ap-

pended claim, without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired secured by Letters  
 Patent is:—

Dental impression band comprising a relatively short cylindrical tube and an outwardly flared extremity formed on said tube.

In testimony whereof, I affix my signature.

WILLIAM P. LACE.

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