Aug. 19, 1924. 1,505,792

L. O. LUDLUM

DENTAL DEVICE

Filed June 3, 1924

Fig. 1.

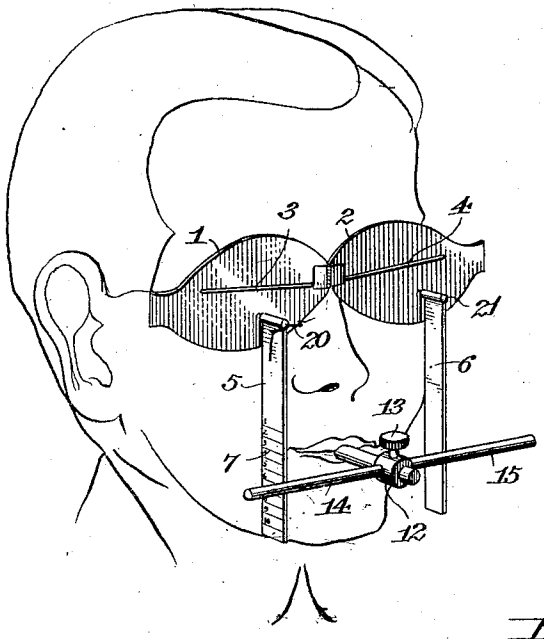


Fig. 4.

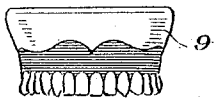


Fig. 3.

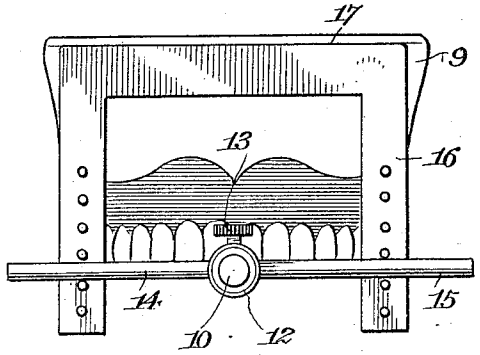
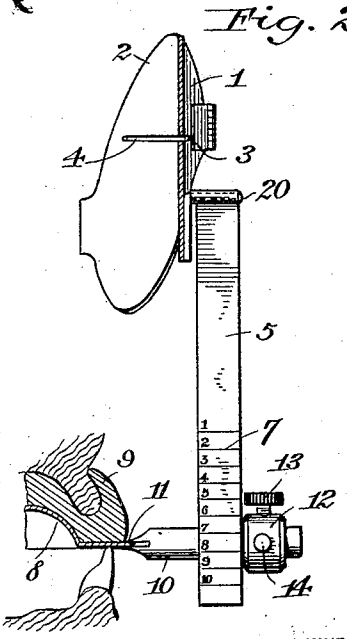


Fig. 2.



WITNESSES:

Eris Feinle.

Robert I. Hulsizer.

INVENTOR,

L. O. Ludlum.

BY Munn & Co

ATTORNEYS.

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UNITED STATES PATENT OFFICE.

LOUIS O. LUDLUM, OF ST. LOUIS, MICHIGAN.

DENTAL DEVICE.

Application filed June 3, 1924. Serial No. 717,622.

To all whom it may concern:

Be it known that I, LOUIS O. LUDLUM, a citizen of the United States, and a resident of St. Louis, in the county of Gratiot and State of Michigan, have invented a new and Improved Dental Device, of which the following is a full, clear, and exact description.

This invention relates to a dental device for use in connection with the preparation and mounting of artificial teeth.

An object of the invention is to provide simple and efficient means whereby the teeth on a dental plate may be mounted with respect to a line parallel to the line of vision of the eyes of the person using the teeth.

Another object concerns the provision of means whereby this parallelism may be quickly and easily determined.

The invention is illustrated in the drawings, of which—

Figure 1 is a perspective view of the device applied to the features of a person;

Fig. 2 is a vertical sectional view taken through the device;

Fig. 3 is a front elevation of a portion of the device applied to a dental plate for the purpose of marking said plate; and

Fig. 4 is an elevation of a dental plate on which a suitable characteristic line has been marked in a predetermined manner.

The form of the invention shown in the drawings is a preferred form, although it is understood that modifications in the construction and arrangement of the parts and in the character of the materials used may be adopted without departing from the spirit of the invention as set forth in the appended claims.

In its general aspects the invention concerns the provision of an optical device to be disposed adjacent the eyes of the person and adjusted with respect thereto so that certain visual effects are obtained. Depending from this optical device are a pair of scales or gages depending on opposite sides of the nose. Projecting from a dental plate or bite held within the mouth of a person is a stem, or other suitable means, on which a bar is suitably mounted. This bar is adjustable and portions of it lie adjacent the gages. By adjusting the bar on the stem until its opposite portions lie adjacent similar gage readings, the bar can be adjusted in a line parallel to the line of vision of the wearer. The bar is then adjusted in this predetermined position. The plate and the stem and bar are then removed from the mouth of the person and a straight edged instrument is applied thereto, one edge of said instrument being parallel to the bar. On the dental bite or mold a line is drawn along this straight edge, which line will be parallel to the bar and, consequently, will have a parallel relation with the line of vision of the person. Further treatment of the bite will then enable the manipulator to set the teeth on the casting or mold with relation to this line so that the teeth will have a definite relation, preferably parallel, to the line of vision of the person.

As shown specifically in the drawings, which represent one embodiment of the idea, I provide a pair of opaque plates 1 and 2 to be disposed in front of the eyes of the wearer. These are provided with horizontal strips 3 and 4 through which the person can see the light. Dependent from these plates are gages 5 and 6 on which suitable graduations 7 are marked. Within the mouth of the person is a dental plate 8 on which a bite 9 is disposed. The person takes this plate and bite in his mouth and clamps his jaws and teeth on them. A stem 10 is attached to the forward edge 11 of the plate 8 and projects, preferably, centrally from the mouth of the person. On this stem is a sleeve 12 adjustable thereon by means of a set screw 13. This sleeve has arms 14 and 15 extending therefrom in opposite directions and in line with each other. By adjusting the arms 14 and 15 until they lie opposite similar readings on the gages 5 and 6, the arms 14 and 15 can be disposed parallel to the line of vision through the strips 3 and 4. The screw 13 is then tightened to hold the arms in this position. The optical device is then removed from the eyes of the person and the dental plate removed from the mouth. A straight edge such as 16 is then applied to the arms 14 and 15, and the parallel edge 17 of this straight edge will necessarily be parallel with the arms 14 and 15. A line is then drawn on the bite or mold 9, which line will bear a definite relation to the desired line of the teeth and in parallelism with the line of vision of the person. A dentist manipulating the mold or casting and adjusting the teeth thereon will be able to aline them up with respect to the line so formed so that

the teeth when placed in the mouth of the person will be substantially parallel to the line of vision of the person.

This parallel relation is desired because the line of vision is preferably fixed, whereas if the teeth were adjusted in parallelism with the line of the mouth this relation would not always be harmonious because the line of the mouth may vary slightly, whereas the line of vision is practically horizontal. Preferably the gages 5 and 6 are suitably pivoted on pins 20 and 21 attached to the plates 1 and 2 so that the gages 5 and 6 can swing in any plane. It will thus be seen that I have provided a simple and efficient device for enabling dentists to adjust teeth on a mold or bite with respect to a definite physical characteristic of a person.

What I claim is:—

1. A dental device, which comprises a pair of slitted plates to be disposed in front of the eyes to determine the line of vision, and a gage dependent from each of said plates on opposite sides of the nose, extending down as far as the line of the mouth.

2. In combination with a dental device to be placed in the mouth, an optical device to be placed in front of the eyes to determine the line of vision, and means connecting the two for permitting the device in the mouth to be marked with a line parallel to the line of vision.

3. A dental device, which comprises a dental plate to be placed in the mouth, means projecting therefrom, an adjustable arm on said means, a slitted optical device to be placed over the eyes to determine the line of vision, and means dependent from said optical device with respect to which said arm can be adjusted whereby the adjustment of the arm may be made parallel to the line of vision.

4. In combination, a dental device to be placed in the mouth, a stem projecting therefrom out of the mouth, an arm adjustable on said stem, a pair of slitted plates to be disposed over the eyes to determine the line of vision, and dependent gages connected to said plates, said gages being dependent in proximity to said arm whereby the arm can be adjusted parallel to the line of vision.

LOUIS O. LUDLUM.