H. MANNON, H. M. BROWN AND R. G. PERKINS.

INDICATING DEVICE.

APPLICATION FILED JUNE 16, 1919.

1,328,007. Patented Jan. 13, 1920.

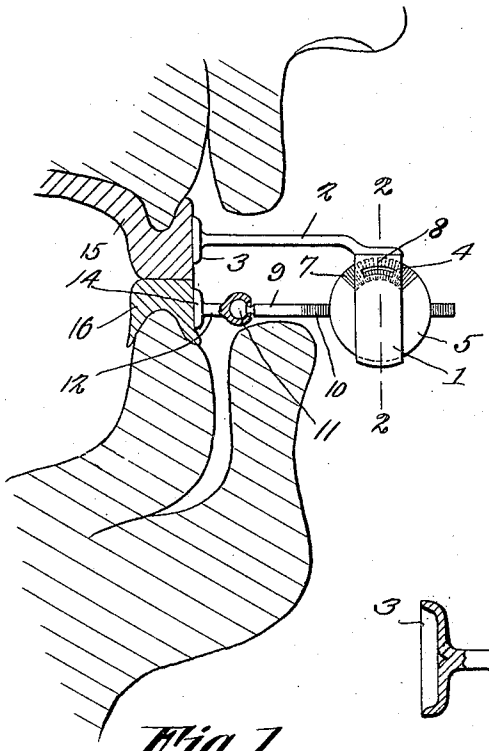


Fig. 1.

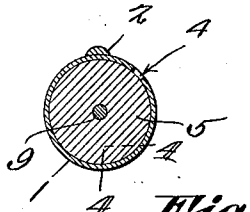


Fig. 2.

Fig. 3.

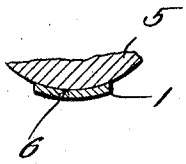


Fig. 4.

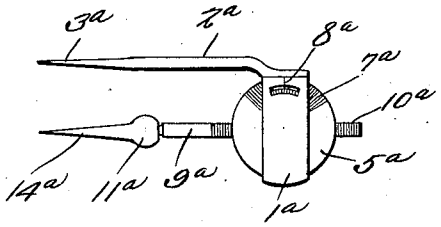


Fig. 5.

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UNITED STATES PATENT OFFICE.

HOMER MANNON, HERMAN M. BROWN, AND ROBERT G. PERKINS, OF HUNTINGTON, WEST VIRGINIA.

INDICATING DEVICE.

1,328,007. Specification of Letters Patent. Patented Jan. 13, 1920.

Application filed June 16, 1919. Serial No. 304,616.

To all whom it may concern:

Be it known that we, HOMER MANNON, HERMAN M. BROWN, and ROBERT G. PERKINS, citizens of the United States, residing at Huntington, in the county of Cabell, State of West Virginia, have invented a new and useful Indicating Device, of which the following is a specification.

It is the object of this invention to provide a simple but efficient means whereby the lateral excursions of the mandible, as well as the advancement and retraction thereof may be ascertained, to the end that these movements may be reproduced in an articulator, or for other purposes.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that sort to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows, in side elevation, a device constructed in accordance with the invention, assembled with bite plates in the mouth of a patient, parts appearing in section; Fig. 2 is a transverse section taken on the line 2—2 of Fig. 1; Fig. 3 is a side elevation showing one of the attaching members, parts being broken away; Fig. 4 is a section taken approximately on the line 4—4 of Fig. 2; and Fig. 5 is an elevation disclosing a slight modification in the invention.

In carrying out the invention as disclosed in Figs. 1 to 4, both inclusive, there is provided a support 1, preferably in the form of a ring, and supplied with an arm 2, carrying an attaching means, which may be a cup-shaped head 3. The support 1 is provided with an elongated opening 4.

A carrier 5, in the form of a sphere, is mounted in the support or ring 1 for universal rocking movement, the carrier being concaved, as shown at 6, to retain the carrier without, however, interfering with the free rocking movement of the carrier. The carrier 5 is supplied with graduations 7, visible through the opening 4 in the support 1, the support having an index 8, located adjacent to the opening 4 and adapted to coöperate with the graduations 7. The opening 4, ordinarily, is located in an arc, the center of which is coincident with the center of a circle represented by the circumference of the carrier 5.

An indicating member 9, which may be a rod, is mounted for right line reciprocation in the carrier or sphere 5 and is disposed diametrically of the sphere. The indicating member 9 is supplied with graduations 10. Through the instrumentality of a ball and socket joint 11, the rear end of the indicating member 9 is connected to a stem 12 carrying a head 14 like the head 3.

In practical operation, the heads 3 and 14 may be heated slightly, the head 3 being caused to adhere to the upper bite plate 15, the head 14 being caused to adhere to the lower bite plate 16. When the mandible is moved, the advancement and protrusion of the mandible, as well as the lateral excursions thereof may be noted, since the graduations 7 appear through the opening 4 and coöperate with the index 8 when the sphere or carrier 5 rocks in the support 1, the rod 9 having right line sliding movement in the carrier 5, and it being possible to read off the graduations 10 at the periphery of the carrier 5.

In case that the patient is edentulous in the upper jaw, or in the mandible, only, then a quantity of wax may be placed in the head 3, or in the head 14, and this wax, being heated, will cause the head to adhere to the natural teeth which may remain either in the upper jaw or in the mandible.

Although the cup-shaped heads 3 and 14 constitute an efficient attaching means, some other attaching means may be employed. In Fig. 5 of the drawings, parts hereinbefore alluded to have been designated by numerals previously used, with the suffix "*a*". In Fig. 5, the arm 2^a has a point 3^a, replacing the cup-shaped head 3, the socket member of the ball and socket joint 11^a carrying a point 14^a. The points 3^a and 14^a may be introduced, respectively, into the upper bite plate 15 and into the lower bite plate 16. If the points 3^a and 14^a are used, a little care on the part of the operator will avoid false readings, due to too deep intro-

duction of the points into the bite plates, on a second application, when it is sought to check up a previous reading.

Attention is directed to the fact that the opening 4 is located forty-five degrees remote from a horizontal plane passing through the center of the sphere or carrier 5. Owing to this location of the opening 4, an absolutely correct observation may be made both as to the advancement and protrusion of the mandible, and as to the lateral excursions thereof.

The device forming the subject matter of this application provides a simple but exceedingly accurate means whereby the movements of the mandible may be noted and reproduced without locating the condyle points by the use of a face bow or otherwise.

Having thus described the invention, what is claimed is:—

1. In a device of the class described, a support; a graduated carrier mounted to rock in the support; a graduated indicating member slidable in the carrier; attaching means assembled with the support; and attaching means assembled with the indicating member.

2. In a device of the class described, a support; a graduated sphere having universal movement in the support; a graduated indicating member having right sliding movement in the sphere; attaching means assembled with the support; and an attaching means assembled with the indicating member.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

HOMER MANNON.
HERMAN M. BROWN.
ROBERT G. PERKINS.

Witnesses:
J. A. PACK,
H. S. MITCHELL.