Mar. 6, 1923. 1,447,774.

A. J. FORTUNATI.

PARALLELOMETER.

FILED NOV. 29, 1919.

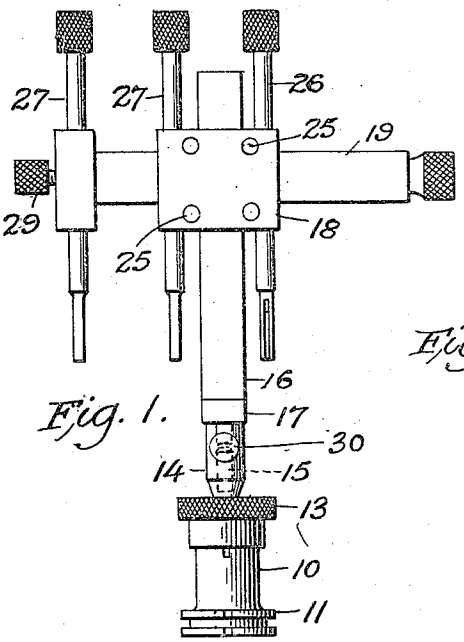


Fig. 1.

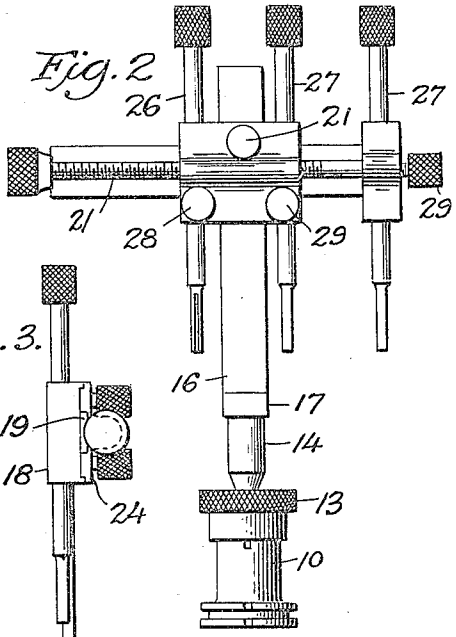


Fig. 2.

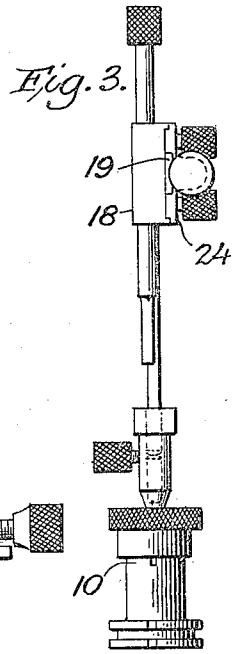


Fig. 3.

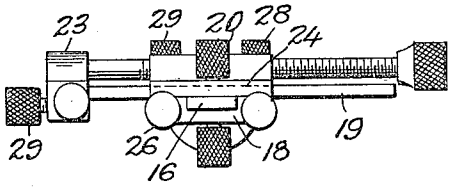


Fig. 4.

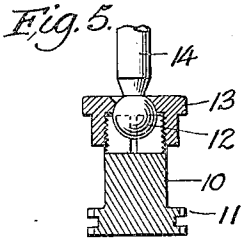


Fig. 5.

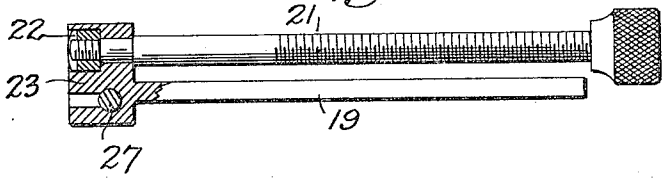


Fig. 6.

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UNITED STATES PATENT OFFICE.

ALEXANDER J. FORTUNATI, OF BOSTON, MASSACHUSETTS.

PARALLELOMETER.

Application filed November 29, 1919. Serial No. 341,490.

To all whom it may concern:

Be it known that I, ALEXANDER J. FORTUNATI, a citizen of the United States, and resident of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Parallelometers, of which the following is a specification.

This invention relates to dental instruments of precision and especially to parallelometers for securing and transferring delicate measurements in dental work, and its object is to provide a support to be secured in a dental cast and universally carried measuring points which are adjustable with relation to each other, both vertically and horizontally and to be removed to effect accurate reproductive work. These and other details and objects are more fully described in the specification set forth in the appended claims, and illustrated in the accompanying drawings, wherein:

Fig. 1 is an elevation of the improved device,

Fig. 2 is a view from the opposite side of the instrument,

Fig. 3 is an end view,

Fig. 4 is a plan view,

Fig. 5 is a detail of the base and swivel in section,

Fig. 6 is an enlarged detail view of the adjusting beam and its screw.

Devices for measuring where great delicacy is necessary are many, especially in micrometers, callipers, beam compasses and such where members are adapted to slowly move with relation to each other and carry pointed rods or pins which are used to measure distances or dimensions accurately and to transfer these measurement from the teeth to a cast to prepare dental bridges, plates, etc.

In the present invention, the parallelometer is adapted to be firmly anchored in the cast on which the work is to be built and comprises the base 10, with notched flanges 11, at its lower end and split and socketed at its upper end to contain a swivel ball 12, which is confined in its socket by the cap 13.

As the base 10 is inserted in the cast to a limited extent only, the flanges and notches materially assist in giving the base a firm anchorage.

The ball 12, is the lower end of a swivel post 14, bored out to contain the stem 15, of the column 16, the former being shown in dotted lines in Fig. 1. At the top of post 14 is a head 17 on the top of which is located the column 16 and that is adapted to give said column a firm foundation.

The column 16 passes through a block to which it is secured by means of a clamping screw 20 and the block is made of two pieces 18 and 24 held together by screws 25, the piece 18 having a vertical channel for the said column while the piece 24 has a horizontal channel for the beam 19 that is adapted to play through the block but be moved and held by a screw 21 whose threaded portion plays in a perforation in the part 24 and whose end is swivelled by means of the nut 22 in the head 23 of the beam 19. When this latter screw is rotated it moves with the beam 19 either to one side or the other.

The plate 18 has at each end perforations, one to receive the slotted or split plug 26 that is adapted to hold or carry an attachment, while the other perforation receives the plug 27. A third plug, 27, is carried by the head 23 and set screws 28 and 29 are provided to hold the plugs after they have been adjusted vertically. The swivel post 14 also carries the set screw 30 to enter a groove around the stem of the column 16 and connects the two.

This device is preferably used in dental work and the base 10 is inserted in a cast leaving the various plugs free to be moved to secure desired measurements and parallelisms to be reproduced in bridges and plates and the swivel 12 affords means for hastily dropping the plugs into position if desired or to move them in any direction. The test plug 26 may be used as an initial marker while the others are used to measure space therefrom.

By means of the above described device, the plugs may be set at any desired angle and measurements taken and the said plugs may then be secured to any casts in the course of preparation and the measurements applied thereto. The parts are separable and may be removed or replaced at will, while the whole may be set by means of the base in a cast and the parts rigidly secured to perform their function.

What I claim is:

1. In a parallelometer, the combination of an upright, a plurality of plugs secured in said upright, a beam on said upright, a plug adjustable in said beam, means for moving the beam on the upright, a base for the up-

right, and means for holding the upright at different angles relatively to the base.

2. In parallelometers, the combination of a base, an upright connected with the base by a universal joint, a movable beam supported by the upright, a plug carried by the beam and adapted to be moved towards or from the plugs carried by the upright, and means for holding the plugs when adjusted.

3. In parallelometers, the combination of an upright, a base, a universal joint connecting the upright with the base, plugs adjustably carried by and parallel with the upright, means for holding the plugs in adjustment, a sliding beam on the upright, an adjustable plug on the beam and parallel with the above mentioned plugs, and means for sliding the beam and its plugs on the upright.

4. In parallelometers, the combination of a base having a socket, an upright having at its lower end a ball for the socket, parallel plugs adjustable in the upper end of the upright, a sliding beam playing in the upright, an adjustable plug in said beam and parallel with the plugs in the upright, adjusting means for the beam to move its plug to and from the plugs in the upright, and means for holding all the plugs when adjusted longitudinally.

Signed at New York in the county of New York and State of New York this 10th day of November A. D. 1919.

ALEXANDER J. FORTUNATI.

Witnesses:
A. W. Baker,
James F. Duhamel.