

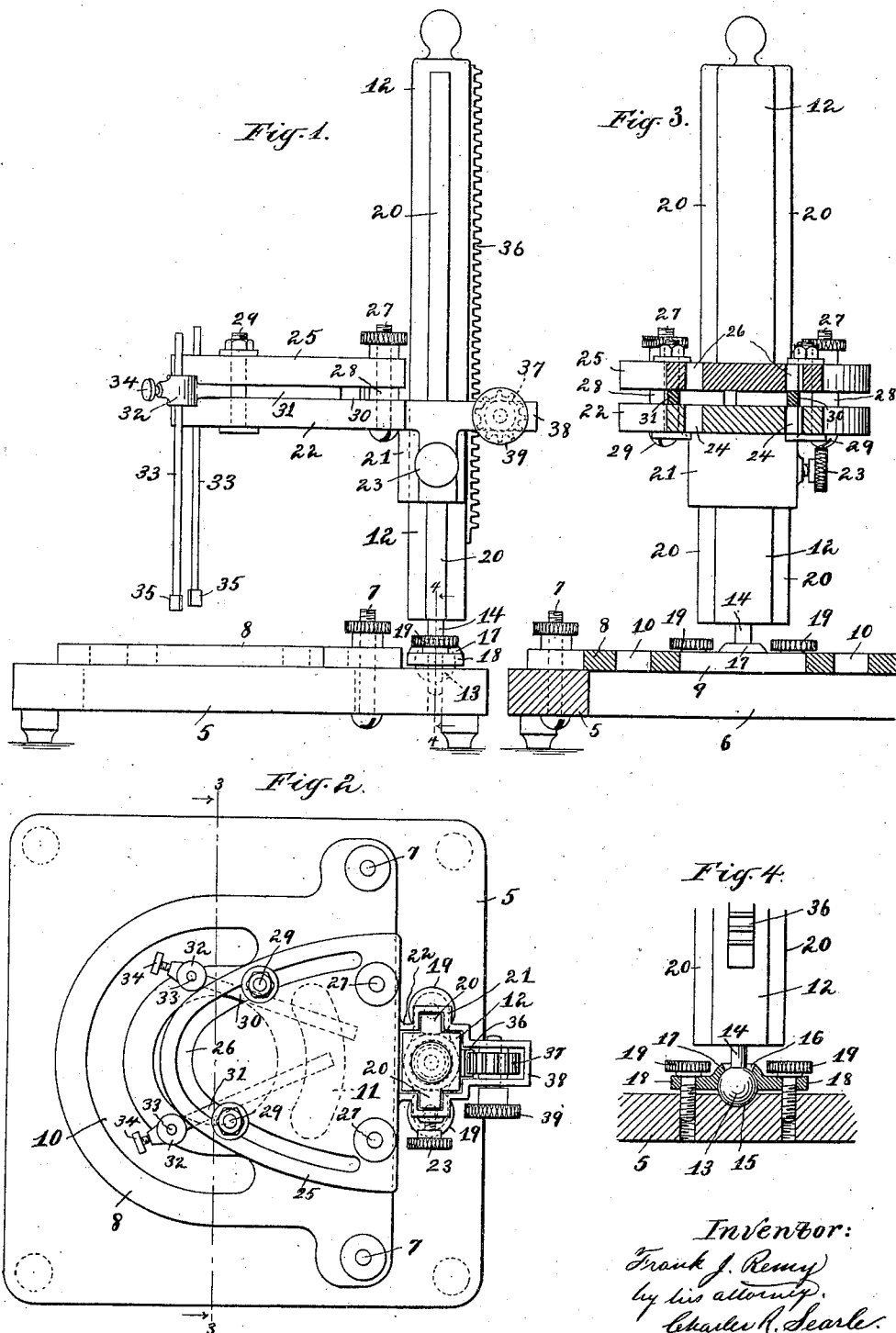
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F. J. REMY

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PARALLELOMETER

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Inventor:
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UNITED STATES PATENT OFFICE.

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PARALLELOMETER.

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To all whom it may concern:

Be it known that I, FRANK J. REMY, a citizen of the United States, residing in the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Parallelometers, of which the following is a specification.

The invention relates to instruments employed in dentistry in the construction of removable bridges, and the object of the invention is to provide an instrument on which the model may be firmly mounted in proper position, with means for indicating parallelism of the seats of the inlays, adapted to be adjusted accurately in all required directions to conform to the work, and to maintain such adjustment reliably.

The invention consists in certain novel features and details of construction and arrangement by which the above objects are attained, to be hereinafter described and claimed.

The accompanying drawings form a part of this specification and show an approved form of the invention.

Figure 1 is a side view of the improved parallelometer.

Figure 2 is a corresponding plan or top view.

Figure 3 is a vertical section, partly in front elevation, the plane or section being indicated by the line 3—3 in Figure 2.

Figure 4 is a vertical section through certain portions, taken on the line 4—4 in Figure 1 and partly in rear elevation.

Similar reference numerals indicate the same parts in all the figures.

The base 5 of the instrument is shown as rectangular, having a large opening 6 therein, on which is removably mounted, by bolts 7, a platform 8 provided with a central circular opening 9 and concentric slots 10 and 11 adapted to afford means for fastening firmly thereto the model, not shown, in the desired position corresponding to the position occupied by the teeth which are to serve as abutments for the completed bridge.

Mounted on the base 5 immediately in rear of the platform 8 is a vertically disposed standard 12 supported upon a ball 13 secured thereto by a neck 14 in axial alignment with the standard and seated in a hemispherical socket at 15 in the base and arranged to permit the standard to be in-

clined in all directions within the limits afforded by the opening 16 in a hemispherical collar 17 having laterally extended lugs 18 by which the collar is secured to the base by the screws 19 with sufficient frictional pressure upon the inclosed ball to insure the maintenance of the standard in the vertical or any inclined position in which it may be placed.

On each side face of the standard is a vertical rib 20 serving as guides for a yoke 21 inclosing the standard and carrying a shelf 22 projecting over the platform 8 and movable vertically with the yoke 21 toward and from the platform. The shelf is held at the desired height by a set screw 23 in one side of the yoke impinging against its rib 20 on the standard.

The shelf is semielliptical in plan to approximate the shape of the human jaw and is slotted as at 24 parallel with and closely adjacent its curved sides and end.

Upon the shelf is a clamping plate 25 corresponding in shape and size with the shelf and similarly slotted at 26. The plate is held to the shelf at the rear by oppositely located bolts 27 extending through holes in the shelf and plate and through distance washers 28 between them by which the shelf and plate are held apart at the rear. Movable bolts 29 extending through the slots 24 and 26 serve to draw the plate and shelf together at the front and clamp between them the square bars 30 and 31 of approximately the same thickness as the washers 28.

Each bar carries at its outer overhanging end a boss 32 drilled vertically to receive a rod 33 slidably mounted therein and held by a set screw 34. On the lower ends of the rods are rectangular heads 35 of the required shape to match the cavities in the inlays which are temporarily mounted in the model and adapted subsequently to receive the ends of the bridge as usual in this class of dental work.

By loosening the nuts of the bolts 29 the bars 30 and 31 may be shifted in any position angularly to each other with their rods 33 at the required distance apart, and the heads 35 may be adjusted as to height relatively to each other and held by the screws 34 which also permit the rods to be partially rotated in the bosses so that the plane faces of the heads 35 may be adjusted angularly relatively to each other.

The ball and socket support for the standard permits the shelf and clamping plate, with their rods, to be set at any desired inclination to the base 5 and its platform 8 on which the model is mounted and secured.

The shelf 22 and its attachments is moved vertically along the standard 12 by means of a rack 36 on the rear face of the latter and a pinion 37 mounted in an extension 38 of the yoke 21 at the rear, operated by a button 39 on the projecting shaft of the pinion.

The instrument when set with the heads 35 in the desired positions will remain reliably in adjustment with the heads properly presented relatively to each other and to the model to insure the desired parallelism of the work while permitting the elevation of the heads out of the way above the model to allow easy access to the latter in making observations or any changes required in the work.

I claim:—

1. In a device of the character set forth, a base, a standard thereon, a shelf movable vertically on said standard, a clamping plate on said shelf, bars mounted between said shelf and plate and held adjustably thereby, and rods adjustably mounted in said bars.

2. In a device of the character set forth, a base, a platform thereon adapted to receive and hold a model, a standard on said base, a shelf movable vertically on said standard and projecting above said plat-

form, bars adjustably mounted on said shelf, and rods adjustably mounted in said bars.

3. In a device of the character set forth, a base, a vertically disposed standard mounted thereon, means for holding said standard adjustably in an inclined position relatively to said base, and vertically disposed rods carried by said standard.

4. In a device of the character set forth, a base, a vertically disposed standard mounted thereon, means for holding said standard adjustably in an inclined position relatively to said base, a shelf, a yoke on the latter, a rack on said standard, a pinion mounted in said yoke and in mesh with said rack, clamping means on said shelf, bars held by such clamping means, and rods adjustably mounted in said bars.

5. In a device of the character set forth, a base, a vertically disposed standard mounted on said base by a ball and socket joint, means for engaging such ball frictionally to hold said standard at the desired angle to said base, a shelf, a yoke on the latter inclosing said standard, a rack on said standard, a pinion in said yoke in mesh with said rack, a plate on said shelf, bars between said shelf and plate, means for clamping said plate upon said bars, and rods adjustably mounted in said bars.

In testimony that I claim the invention above set forth I affix my signature.

FRANK J. REMY.