

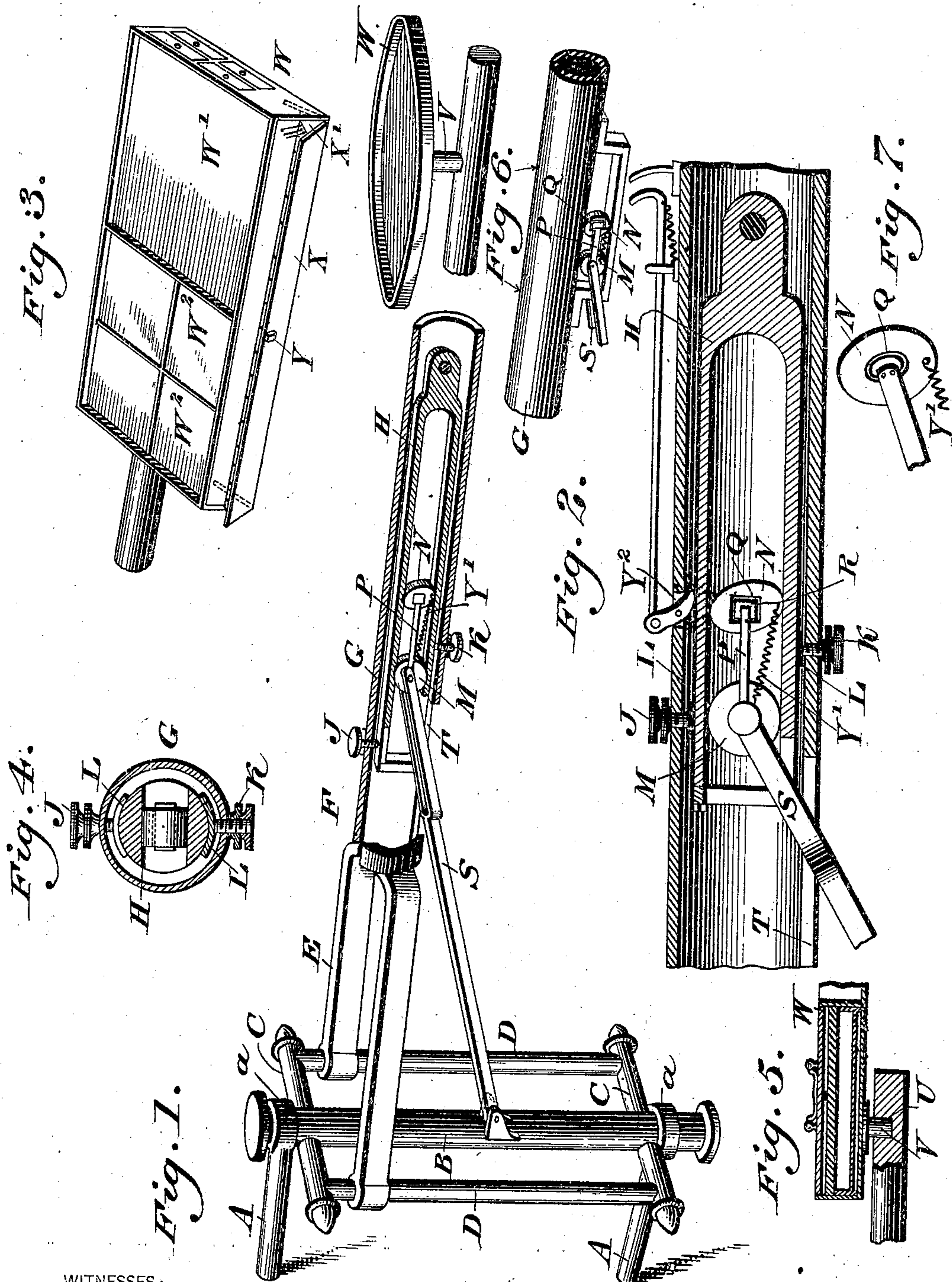
(No Model.)

2 Sheets—Sheet 1.

E. R. PETTIT.
DENTAL BRACKET.

No. 502,933.

Patented Aug. 8, 1893.



WITNESSES:

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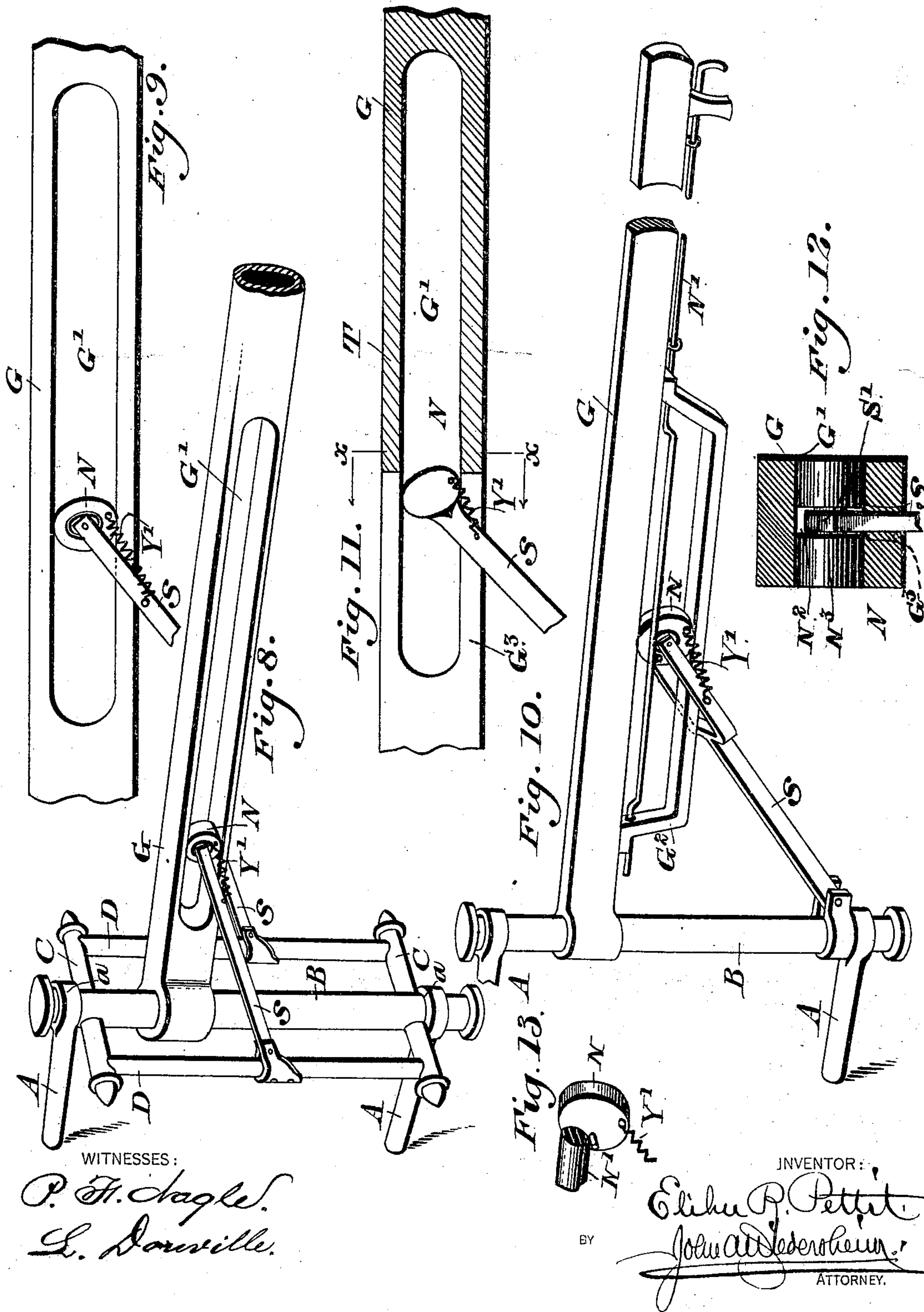
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UNITED STATES PATENT OFFICE.

ELIHU R. PETTIT, OF PHILADELPHIA, PENNSYLVANIA.

DENTAL BRACKET.

SPECIFICATION forming part of Letters Patent No. 502,933, dated August 8, 1893.

Application filed December 31, 1889. Serial No. 335,536. (No model.)

To all whom it may concern:

Be it known that I, ELIHU R. PETTIT, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Dental Brackets, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to dental brackets, and consists of a support, a rigid arm movably attached to said support, an automatically operating eccentric in connection with said arm for locking the same in a horizontal position at varying heights, and an arm attached to said eccentric and said support.

My invention further consists of the novel construction of the table hereinafter set forth and claimed.

Figure 1 represents a sectional perspective view of a dental bracket embodying my invention. Fig. 2 represents an enlarged sectional elevation of the automatic device and a portion of the bracket arm. Fig. 3 represents a perspective view of my improved table. Fig. 4 represents a cross-sectional view of the bracket arm. Fig. 5 represents a sectional elevation of a portion of the table and arm. Fig. 6 represents a modification of the arm. Fig. 7 represents a modified form of the eccentric. Fig. 8 represents a perspective view of a modified form of the bracket, showing the arm directly connected to the support. Fig. 9 represents a side elevation of a portion of the arm shown in Fig. 8. Fig. 10 represents a perspective view of a modified form of the bracket showing a different mode of applying the locking eccentric. Fig. 11 represents a sectional elevation of a portion of the arm showing a modification of the locking eccentric. Fig. 12 represents a transverse section on the line x, x , Fig. 11. Fig. 13 represents a detail perspective view of the eccentric and attachment shown in Fig. 10.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings: A, designates a support adapted to be attached to the wall or other place of securement, and formed with apertured ears a , to receive a main vertical post

B. Said post B has movement in said ears a , and is provided with two cross-bars C, connected by uprights D, upon which are pivotally mounted the arms E of a yoke F, attached to an arm G, constructed either of tubing, as shown in Figs. 1, 2 and 4, or of a solid bar, as shown in Figs. 6 and 10, and in the latter instance, the locking device will be applied to the lower part of the outside of the bar. The yoke F is connected to the arm G, and to said latter arm is attached a round or angular slotted bar H, the outer end of which is pivoted in the tubular arm G, or substituted by a rigid support on the outside of a solid arm, as shown. Screws J and K, Figs. 1, 2, and 4, engage bearing plates L, located on the upper and lower sides of the said bar H. The screw J is set so that the horizontal position of the slotted bar H will be changed or slightly moved at an angle to the horizontal, to permit the eccentric N, to take hold and prevent the movement of the roller M within the slot, when the support is moved. The screw K is so adjusted that when the bar H rests upon it, the slot in said bar is exactly horizontal, or at right angles to the bars D. It will be understood that a slight upward play of the arm H, is allowed by setting the screw J, to permit the said arm to slightly rock, the degree of adjustment being regulable as desired.

Within the slot of the bar H, is mounted a roller M connected to a locking eccentric N by a yoke P, or its equivalent, the said eccentric having a square, angular or an oval opening Q, shown in Fig. 7, the said opening being slightly larger than an axle R passing therethrough, and to which the yoke P is attached. The eccentric N is arranged at an angle to a vertical plane, and the opening Q therethrough is substantially at a right angle to the yoke P. The said opening being slightly larger than the said yoke, allows the latter to bear against the walls of said openings, and move the eccentric to overcome the resistance of a spring Y' connected to the lower portion of said eccentric N, when it is desired to lower the arm G. The forward end of a yoked arm S, is connected to roller M, extending through

a slot T, cut through the arm G, and the opposite end of said arm S is pivotally connected to the post B. The outer end of the arm G is formed with a socket or opening U, Fig. 5, in which is movably mounted a stud or post V secured adjacent to the inner end of a table W. The said table W is divided into a large compartment W' for the reception of tools or instruments, and into sub-divided compartments W², in the rear of compartment W' for the reception of gold and other materials for filling teeth, &c. One side of the table is formed with a V-shaped receptacle or holder X, hinged at its lower part, to which is secured a board X' of the table, the said receptacle being adapted to be folded back into a recess into the table. Said receptacle X is preferably formed with a series of holes for the reception of drills and other instruments for use with the dental engine.

To secure the receptacle X in a folded position against the table, a spring or other suitable catch Y is attached to the receptacle and engages the table.

As shown in Fig. 2, a small lever Y² is secured to the arm G, one end thereof working through an opening to bear against bar H, to hold the latter in a horizontal position, when a more rapid downward movement is desired, said device being operated by the thumb and one finger, to hold the said bar H down until the lever is released. When the arm G is raised, the free end of the slotted bar H descends slightly, and rests in a horizontal position on the lower plate L supported by the screw K. The arm S draws backward on the roller M, and drawing on the yoke P, moves the section N out of its locking position, and has a free movement in this direction. It will be understood that the eccentric N is drawn back by the yoke P, against the resistance offered by the spring Y', which latter spring always tends to draw the eccentric into a locking position.

To lower the arm G, it is only necessary to support its weight with the hand, so that the slotted bar H will rest upon the lower plate L in a horizontal position, when a slow downward movement of the hand will cause the arm G to descend, so long as the movement is not sufficiently rapid to change the slotted bar H from the horizontal. By suddenly removing the hand supporting the weight, the latter will instantly cause the bar H to change from its horizontal position, and the eccentric N will clamp and hold the bar firmly in position, with only an extremely small additional movement downward, depending upon the position in which the screw J has been set. It will be seen that the arm G can also be moved laterally by the pivotal connection of the post B with the supports A.

In Figs. 8 and 9, the bar G is shown slotted, as at G', and the use of the bar H is dispensed with. The eccentric N is employed alone and without the roller M and yoke T,

the arms S being connected to each side of said eccentric and to the uprights D of the bracket proper. In this instance the coiled spring Y' is connected to the eccentric N, and one of the arms S, and said eccentric has a sliding movement in the arm G as the latter is elevated and lowered.

In Fig. 10, a post B and supports A are used without the uprights D and cross bars C. The arm G has a lower bracket G² secured thereto to form a slot therewith, in which slot is mounted the eccentric N attached to a yoked arm S, said arm S being movably fixed to the post B, and having the spring Y' connected to one portion thereof and to the eccentric N. In this instance, the eccentric has a sliding movement when the arm G is raised or lowered, and a rod N' is attached thereto for unlocking the said eccentric when lowering said arm G.

In Figs. 11 and 12 the arm G is shown formed with a horizontal slot G', and a vertical slot G³ at a right angle to said slot G'. The eccentric N is formed with a slot N², to provide a bearing N³, which is surrounded by a loop S', formed with the end of a single arm S, adapted to be attached to a post B. In this instance, the eccentric N has a sliding movement in the slot G'.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a dental bracket, a support, a rigid arm movably attached to said support, to have a vertical and lateral adjustment, an automatically operating eccentric in connection with said arm, for locking the same in a horizontal position at varying heights, and an arm S attached to said eccentric and said support, substantially as described.

2. In a dental bracket, a support, a rigid arm supporting a table movably attached to said support, so as to be adjustable laterally and vertically, a slotted bar mounted in said arm, an automatic locking attachment located in said slotted bar, and an arm movably secured at its ends respectively to said locking attachment, and to said support, substantially as described.

3. In a dental bracket, an adjustable arm supporting a table, a bar connected to said arm, an automatically operating locking attachment carried by said bar, and screws engaging opposite sides of said bar, for adjusting the same, substantially as described.

4. In a dental bracket, an adjustable bar attached to an arm supporting a table, combined with a locking device consisting of a locking eccentric, a roller attached to said eccentric, and an arm attached to said roller, and to the support of the bracket, substantially as described.

5. In a dental bracket, an arm supporting a table having a lateral adjustment, a slotted bar adjustably attached to said arm, a locking device mounted in said bar, and an arm

secured to said locking device and pivotally attached to a support, substantially as described.

5 6. A table for dental purposes provided with a V-shaped hinged piece attached to one side thereof, having apertures therein for tools, and adapted to be folded back in a recess in said table, said V-shaped piece hav-

ing an outside flap or strip adapted to be locked against the side of the table, substantially as described.

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