

(No Model.)

D. E. MORSE.
DENTAL APPARATUS FOR GRINDING TEETH.

No. 506,522.

Patented Oct. 10, 1893.

Fig 1

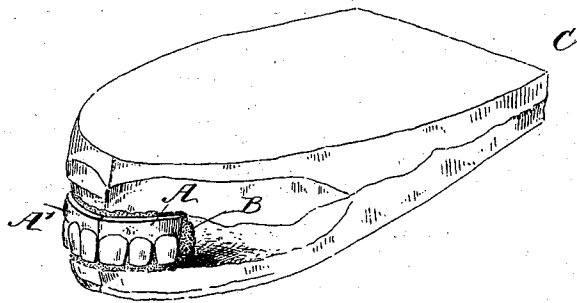


Fig 2

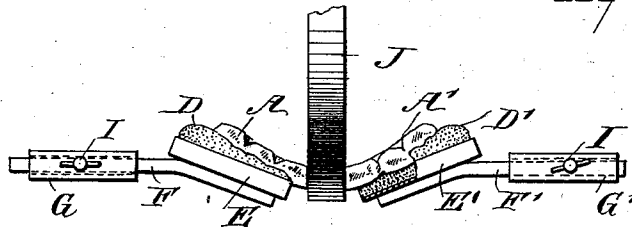
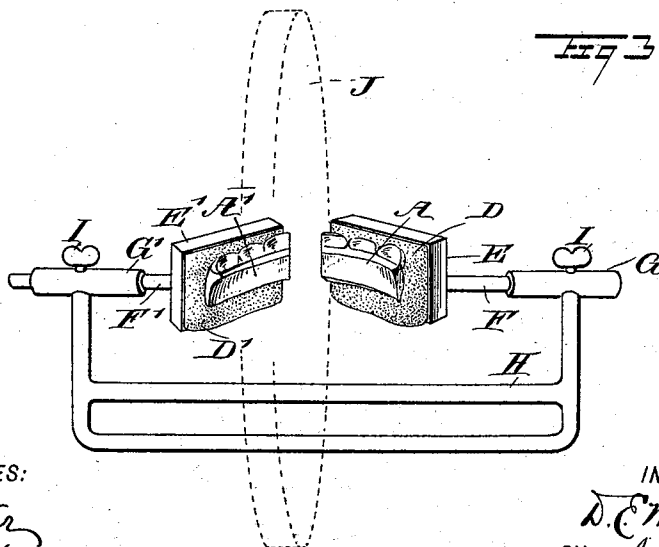


Fig 3



WITNESSES:

H. Walker
C. Sedgwick

INVENTOR

D. E. Morse
BY *Munn & Co*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

DANIEL E. MORSE, OF NEW YORK, N. Y.

DENTAL APPARATUS FOR GRINDING TEETH.

SPECIFICATION forming part of Letters Patent No. 506,522, dated October 10, 1893.

Application filed August 15, 1893. Serial No. 483,167. (No model.)

To all whom it may concern:

Be it known that I, DANIEL E. MORSE, of the city, county, and State of New York, have invented certain new and useful Improvements in Methods of and Means for Grinding Artificial Teeth, of which the following is a full, clear, and exact description.

The invention relates to dentistry, and its object is to provide a new and improved method of and means for conveniently and rapidly fitting and joining adjacent block sections of porcelain or other artificial teeth.

The method consists in removing the block sections from their mold in the position they occupied thereon, and then grinding the adjacent edges of the block sections on parallel grinding faces.

The invention also consists of a frame provided with sliding carriers adapted to hold the adjacent block sections.

The invention further consists of certain parts and details and combinations of the same, as will be hereinafter described and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the block sections as arranged on the mold. Fig. 2 is a plan view of the frame and carriers holding the block sections in contact with the opposite faces of the grinding wheel; and Fig. 3 is a rear elevation of the same.

In fitting block sections of artificial teeth, the prepared block sections A and A', are first temporarily attached to an adhesive substance B, held on the two part mold C, as illustrated in Fig. 1. The two block sections A and A' are then removed from the adhesive substance B by embedding the said block sections, while still in position on the mold, in adhesive substances D and D', respectively, held in carriers E and E', respectively, held in an angular position on rods F and F', respectively, in alignment with each other and fitted to slide longitudinally in suitable bearings G and G', respectively, secured on a frame H. The adhesive substances D and D' are in a sufficiently pliable state so that when the frame H, with the carriers E and E', is

pressed upon the block sections A and A', at the time the latter are still on the mold C, then the said block sections readily embed themselves in the said adhesive substances D and D' in exactly the same position in which they were on the adhesive substance B in the mold C, the only difference being that the inner faces of the block sections are on the adhesive substance B while the outer faces are in contact with the adhesivesubstances D and D'. By the operator then removing the frame H, the block sections A and A' are detached from the adhesive substance B and are thus held in the substances D and D' arranged in the carriers E and E'. The operator then dips the frame, with the block sections and adhesive substances D and D', into water so as to harden the adhesive substances to securely fasten the block sections in place therein.

In order to hold the carriers E and E' in proper position during this operation, I prefer to fasten the rods F and F' in place in their bearings by set screws I. See Figs. 2 and 3. The operator now slides the rods F and F' outwardly so as to separate the adjacent edges of the block sections A and A' and then applies the frame to a grinding wheel so that the two adjacent edges of the block sections are on opposite parallel faces of the grinding wheel, and by the operator then pressing the rods F and F' toward each other, the two adjacent edges of the block sections A and A' are simultaneously ground to a mitering angle. When sufficiently ground the frame H is removed from the grinding wheel and the ground block sections A and A' are removed from the adhesive substances D and D', and when now fitted, their adjacent edges will properly contact with each other throughout their thickness. It is understood that by this arrangement the adjacent edges of the two block sections A and A' are ground simultaneously and to that angle to which they had on the mold C, so that when the two block sections are fitted in position on the plate, a complete perfect joint is obtained.

It will be seen that by the improved instrument or apparatus, the block sections are taken from the mold in the proper position they are to occupy on the plate and are then

ground at their adjacent edges, so that they touch evenly at the front and back, to allow only the pink enamel of the gum portion to touch. By this arrangement, a perfect joint
5 is obtained and, as the two sections are ground simultaneously, considerable time and labor are saved.

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

1. The herein-described method for grinding artificial teeth, consisting in first removing the block sections from their mold in the position they occupied thereon, and simultaneously grinding the adjacent edges of the
15 block sections on parallel grinding faces, substantially as shown and described.

2. In a device of the class described, a frame provided with sliding carriers adapted to support the block sections in the same position
20 they occupied on the mold, substantially as shown and described.

3. In a device of the class described, the combination with the frame, of carriers fitted to slide longitudinally in the said frame, and
25 adhesive substances held in the said carriers and adapted to receive the block sections in the same position they occupied on the mold, substantially as shown and described.

DANIEL E. MORSE.

Witnesses:

W. H. MORSE,

GEORGE A. MCEACHREN.