D. E. FOSTER.

COLLAPSIBLE HOLDER FOR DENTAL MODELING COMPOUNDS.

APPLICATION FILED FEB. 24, 1915. RENEWED AUG. 5, 1916.

1,200,335. Patented Oct. 3, 1916.

Fig. 1.

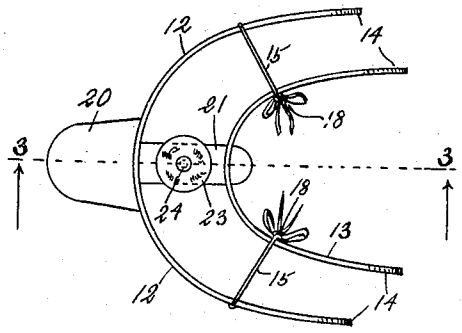


Fig. 5.

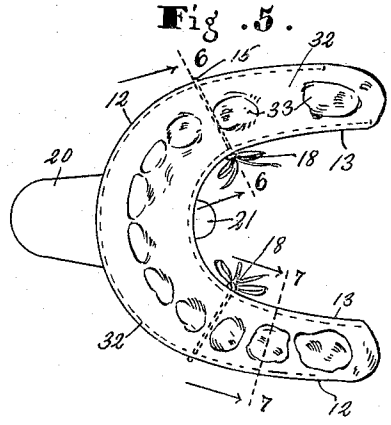


Fig. 2.

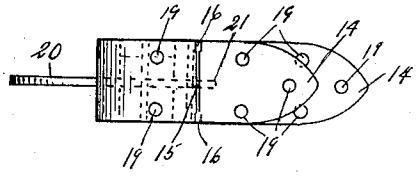


Fig. 6.

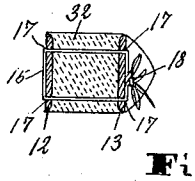


Fig. 7.

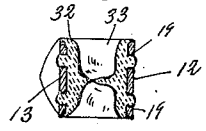


Fig. 3.

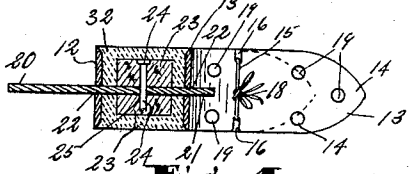


Fig. 8.

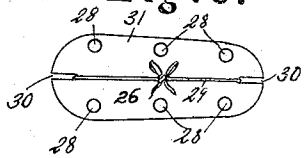


Fig. 4.

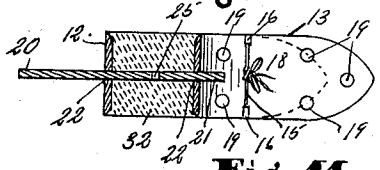


Fig. 9.

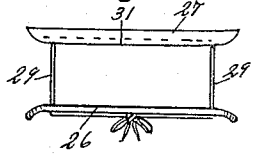


Fig. 11.

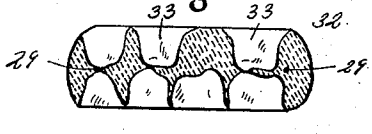
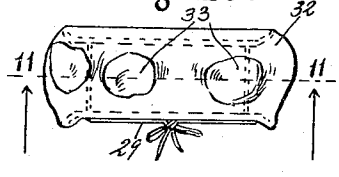


Fig. 10.



Witnesses:

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UNITED STATES PATENT OFFICE.

DOUGLAS E. FOSTER, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO SAMUEL G. SUPPLEE, OF NEW YORK, N. Y.

COLLAPSIBLE HOLDER FOR DENTAL MODELING COMPOUNDS.

1,200,335. Specification of Letters Patent. Patented Oct. 3, 1916.

Application filed February 24, 1915, Serial No. 10,351. Renewed August 5, 1916. Serial No. 113,396.

To all whom it may concern:

Be it known that I, DOUGLAS E. FOSTER, a citizen of the United States of America, residing at Los Angeles, county of Los Angeles, State of California, have invented a certain new and useful Collapsible Holder for Dental Modeling Compounds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to collapsible holders for dental modeling compound, and it may be said to consist in the provision of the novel and advantageous features and in the novel and improved construction, arrangement, and combination of parts as will be apparent from the description and claims which follow hereinafter.

One object of the invention is to provide a novel and improved construction for the holder which permits the taking of an impression of all or part of the jaws with the teeth in normal occlusion, so that the operator is enabled to do quick and accurate work in forming perfectly adapted crowns, bridges, or artificial dentures from a model of the impression, and the continued presence and annoyance of the patient is dispensed with.

Further objects of the invention are to provide a novel and improved holder which is practical and serviceable, economical to manufacture so that it can be furnished at a low cost to the user, simple and easy to manipulate, convenient and economical to use, easily assembled or disassembled, which can readily be adjusted to suit conditions in practice, and which is effective for its purpose.

Other objects and the advantages of the invention will be apparent to those skilled in the art from a careful consideration of the following description of preferred forms of construction embodying the invention, taken in connection with the accompanying drawings in which—

Figure 1 is a plan view of one form of the construction; Fig. 2 is an end elevational view of the same; Fig. 3 is a cross-sectional view of the same, taken on the line 3—3 of Fig. 1; Fig. 4 is a view similar to that of Fig. 3, but with the spacing attachment on the handle omitted; Fig. 5 is a plan view of the construction, after teeth have been impressed in the modeling compound to form a negative impression of the teeth; Figs. 6 and 7 are cross-sectional views taken on the lines 6—6 and 7—7 of Fig. 5; Fig. 8 is an elevational view of another form of the construction; Fig. 9 is a plan view of the same; and Fig. 10 is a plan view of the same, after teeth have been impressed in the modeling compound to form a negative impression of the teeth; and Fig. 11 is a sectional view taken on the line 11—11 of Fig. 10.

In the construction shown in Figs. 1 to 7 inclusive, the curved substantially vertical front and rear plates 12 and 13 are provided with openings 19 and are preferably formed with chamfered or rounded end portions 14 and have their separation from each other limited by cords 15 which latter are passed over and across the plates 12 and 13 through slits 16 (Fig. 1) or openings 17 (Fig. 6) provided in said plates. The slits 16 may be made sufficiently narrow to have the cords 15 wedged therein, or if desired the end portions of the cords may be tied together by a suitable knot 18. The detachable handle 20 is provided with an extension 21 which passes freely through openings 22 provided preferably substantially centrally in the plates 12 and 13. A spacing attachment may be detachably mounted substantially centrally on the extension 21, and it may consist of blocks 23 of cork or other suitable material placed on either or both sides of the extension 21 and held in place by a pin 24 which passes through the blocks 23 and through an opening 25 in the extension 21. It will be understood that the spacing attachment is adapted for use to effect a proper spacing of the jaws in the absence of occluding teeth on either or both jaws of the patient. The construction just described is more particularly designed for use in the execution of artificial denture work.

The construction shown in Figs. 8 to 10, inclusive is more particularly designed for use in the execution of bridge or crown work, and it consists of the substantially vertical front and rear plates 26 and 27 which are provided with openings 28 therein, and have their separation from each other limited by a cord 29 which is attached to the plates by passing it around the plates

through slits 30 provided in the plates. The plates 26 and 27 preferably have the end portions thereof chamfered or rounded, and the plate 27 is preferably convex on the front side 31.

It will be understood that in practice warmed dental modeling compound 32 may be placed between the plates 12 and 13, or the plates 26 and 27, and the holder may then be placed in position in a patient's mouth to receive the impression 33 of the patient's jaws or teeth or both. In a case not requiring the use of the spacing attachment, the handle 20 may be detached from the holder before the impression in the modeling compound is made. In biting into the modeling compound 32, the latter is squeezed against the plates and into the openings 19 or 28 and thus held within the holder. After the impression has been made and the modeling compound has cooled and hardened, the cords 15 or 29 can be cut and the plates detached from the modeling compound containing the negative impression.

The advantages of the holders will be readily apparent to those skilled in the art and it will be seen that they are well adapted to accomplish the objects of the invention as set forth hereinbefore.

The forms of construction which have been particularly illustrated and described admit of minor changes and modifications, wherefore the right is reserved to all such changes and modifications as do not depart from the spirit and scope of the invention which is defined in the appended claims.

I claim:

1. A collapsible holder for dental modeling compound, consisting of substantially vertical perforated front and rear plates, and flexible means attached to the plates to limit the separation of the plates from each other.

2. A collapsible holder for dental modeling compound, consisting of curved substantially vertical front and rear plates, and flexible means attached to the plates to limit the separation of the plates from each other.

3. A collapsible holder for dental modeling compound, consisting of curved substantially vertical front and rear plates, flexible means limiting the separation of the plates from each other, and a handle fitted on the plates.

4. A collapsible holder for dental modeling compound, consisting of curved substantially vertical front and rear plates provided with openings, flexible means limiting the separation of the plates from each other, a handle provided with an extension passing through said openings, and a spacing attachment mounted on the extension.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses at Los Angeles, county of Los Angeles, State of California, this 17th day of February, A. D. 1915.

DOUGLAS E. FOSTER.

Witnesses:
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WILLIAM M. GENTLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."