No. 715,492. Patented Dec. 9, 1902.

H. A. LITTIG.

MECHANICAL DENTISTRY.

(No Model.) Application filed Apr. 2, 1902.

Fig. 1.

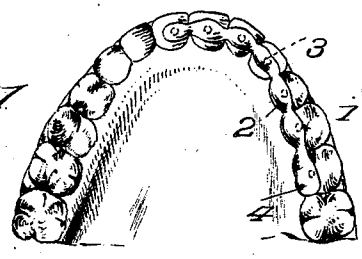



Fig. 2.

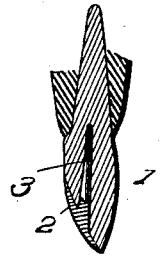



Fig. 3.

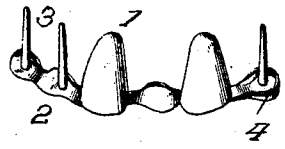
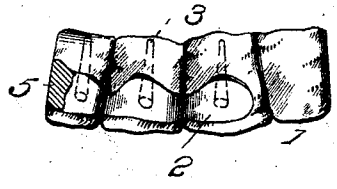



Fig. 4.




Witnesses

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# UNITED STATES PATENT OFFICE.

HENRY A. LITTIG, OF DAVENPORT, IOWA.

## MECHANICAL DENTISTRY.

SPECIFICATION forming part of Letters Patent No. 715,492, dated December 9, 1902.

Application filed April 2, 1902. Serial No. 101,105. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY A. LITTIG, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented certain new and useful Improvements in Mechanical Dentistry; 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 bridge, crown, and like work for artificial and natural teeth, the purpose being to preserve as much of the natural tooth as possible and to hide the bridge or metal backing, whether used simply to brace loose teeth or to fix a crown onto a root or to support one or more inserted teeth.

A further purpose of the invention is a construction admitting of the use of a minimum amount of material consistent with strength and durability.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a detail view of a set of teeth, showing the application of the invention. Fig. 2 is a vertical central section of a tooth. Fig. 3 is a perspective view of a bridge having teeth attached. Fig. 4 is a detail view showing a cavity in a tooth filled by the projecting portion of the bridge.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In accordance with this invention loose teeth are braced and strengthened by means of a bridge closely fitted to the posterior side of the teeth and attached thereto by means of pins fitted into openings bored into the pulp-cavities of the teeth to be braced or assist in connection with the bridge for staying the loosened teeth. The shape of the bridge and its size will depend upon the condition of the mouth and teeth and will seldom be the same in two cases. In the event of a tooth being missing it is replaced by means of an artificial tooth 1, which is attached to the bridge 2 in any substantial way. As shown in Figs. 1 and 3, the bridge is provided with two artificial teeth 1, and the bridge is extended beyond the spaces to be filled, so as to obtain a firm anchorage upon the solid teeth. Pins 3 are soldered or brazed to the bridge 2 and extend in parallel relation and are adapted to enter openings drilled in the pulp-cavities of the teeth in proximal relation to the spaces to be filled by the artificial teeth. Should the bridge include in its range a molar or bicuspid, the part overlapping the molar or bicuspid is shaped to form a cap, as shown at 4, to snugly fit over a cusp of the said molar and bicuspid. By having the cap embrace the cusp the bridge is prevented from lateral movement in any direction, thereby relieving the pins 3 of a great part of the strain when the teeth are used for biting or masticating food. The bridge is fitted to the posterior side of the teeth, so as to be concealed from view, and, if required, a part may be extended over the biting edge, so as to protect the same. In the event of a tooth within the range of the bridge having a cavity resulting from decay or otherwise an extension, as 5, (shown in Fig. 4,) is formed on the bridge, so as to snugly fit said cavity, thereby obviating the usual filling and enabling the tooth to be strengthened and braced by means of the bridge.

It is possible to crown teeth in accordance with this invention, it not being necessary to level the tooth with the gum, as generally required in crowning teeth.

In making a backing for a bridge attachment on a tooth with a cavity the nerve is removed, the root-canal enlarged to receive a good-sized pin or post, and the cavity is cut out, so there will be no undercut. The edges of the cavity are then beveled to insure the inlay and backing supporting the enamel. The pin or post is next fitted into the canal and a piece of gold, No. 36, applied thereto and caught with solder. The piece of gold is now burnished over the back of the tooth and

into and over the cavity to have a good fit. Next wax up the gold backing and fill out the cavity to make it a good shape. Next remove the backing with the wax and make an investment thereof in plaster, turning the backing flat on its back. Let the plaster harden and trim even with the wax. Melt out the wax and flow in solder or gold, which will sag into the cavity or impression in the plaster, making the inlay. The piece is now trimmed and will fit the back of the tooth and fill the cavity and will slip on and off just as easy as it would if it were on a plain tooth without any cavity. The backing is secured to the tooth by cement in the usual way.

Having thus described the invention, what is claimed as new is—

In a set of teeth, some of which have cavities, a bridge fitted to the posterior side of the teeth and having a projecting portion to fill the cavity of the decayed teeth, said bridge having pins to enter openings in the teeth within the range of the said bridge, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY A. LITTIG. [L. S.]

Witnesses:

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JOSIE LITTIG.