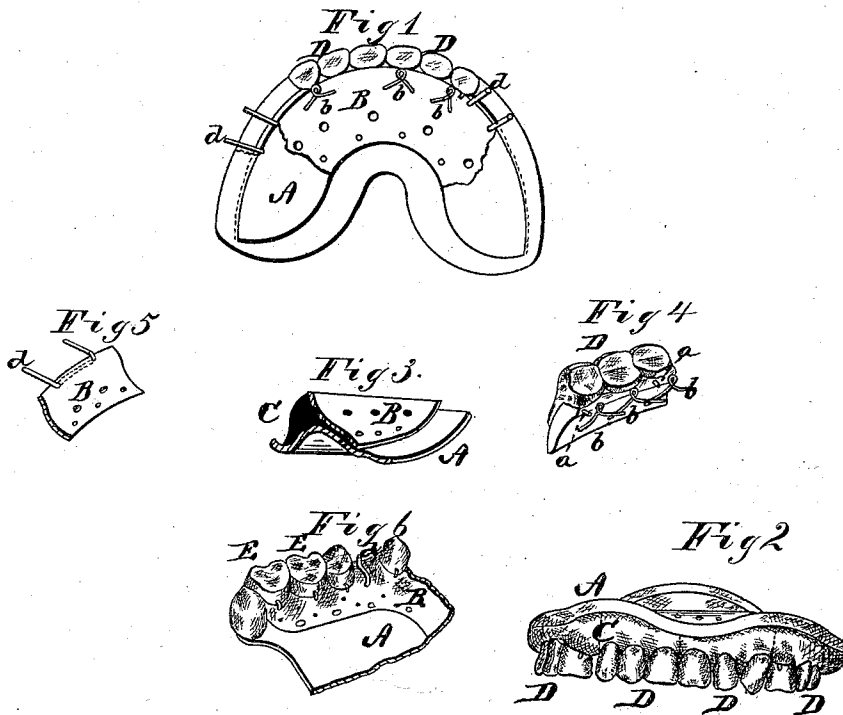


R. E. BURLAN.
Dental Plates and Teeth.

No. 147,369.

Patented Feb. 10, 1874.



WITNESSES.
A. L. Outland
C. L. Evers

By

INVENTOR
Robert E. Burlan
Alexander Mason
 Attorneys.

UNITED STATES PATENT OFFICE.

ROBERT E. BURLAN, OF PERRYSVILLE, PENNSYLVANIA.

IMPROVEMENT IN DENTAL PLATES AND TEETH.

Specification forming part of Letters Patent No. **147,369**, dated February 10, 1874; application filed January 12, 1874.

To all whom it may concern:

Be it known that I, ROBERT E. BURLAN, of Perrysville, in the county of Juniata and in the State of Pennsylvania, have invented certain new and useful Improvements in Dental Plates and Teeth; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the combination of the wires secured to the blocks and crossing each other, with the inner supporting palaten-plate and also in the front supporting-wires or stirrups.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a bottom view, and Fig. 2 a front view, of a set of teeth embodying my invention. Fig. 3 is a section through the base-plate and palaten-plate. Fig. 4 is a perspective view of a "block" of teeth having my device for fastening them attached. Figs. 5 and 6, show the means for fastening carved or single teeth.

A represents a dental base-plate made to fit the mouth. On the under side of this plate is fastened a palaten-plate, B, the two plates being riveted together along the inner edge of the palaten-plate, and they are arranged so as to leave a space between them, as shown in Fig. 3. C represents the plastic filling which is fixed around the base-plate and fills the space between it and the palaten-plate, and both of said plates being perforated, as shown, the plastic filling C passes through and fills said perforations. By leaving a space between the two plates A and B and filling the same with the plastic material C, the whole dental plate is rendered very strong, as one plate cannot bend without breaking the other, and by the plastic material filling the perforations in the plates, the whole are more firmly united together. D D represent blocks, forming each three teeth, such as are usually sold for dental purposes. Each tooth on these blocks is, on the inner side, pivoted with one or more rivets, *a*. Upon each of these rivets, or upon as many of them as may be necessary, is placed a wire, *b*,

which is twisted around the rivet and the ends extend upward and outward in opposite directions. After the dental plate has been prepared as above described, the blocks D D are fitted around the same, and the wires *b b* bent to fit on the under side of the palaten-plate B. The plastic material is then placed all around on the under side of the palaten-plate, covering the wires *b b* and rivets *a a* entirely, as well as uniting with the filling that passed through the perforations in said plate. The material is also put in to fill all the crevices between the blocks and wherever it may be necessary. After it has been thus prepared, the whole plate is placed in the furnace for fusing, and when completed the blocks are united and form a continuous gum. In using carved teeth the base-plate A and palaten-plate B are prepared with the filling C in the same manner as above described. A wire, *d*, is then bent in stirrup-form and the ends passed through holes in the palaten-plate B near the edge from the front side inward. The ends are then bent under the edge of said plate and forward, notches being made in the edge of the plate to receive and hold the wires. The ends of the wire stirrup *d* are then cut off the proper length and bent downward, as shown in Fig. 6. The teeth E E are then put in place, the plastic material put on and the whole fused in the furnace, as above described.

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

1. The wires *b b* attached to the rivets *a a* of the blocks D D, and crossing back and forth, substantially as and for the purposes herein set forth.

2. The combination of the crossing wires *b b* and the inner supporting or palaten-plate B, substantially as and for the purposes herein set forth.

3. The stirrups or front supporting-wires *d*, arranged substantially as described, and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of January, 1874.

R. E. BURLAN.

Witnesses:

C. L. EVERT,
A. N. MARR.