B. ST. JOHN.
Plate for Artificial Teeth.

No. 196,397. Patented Oct. 23, 1877.

Fig. 1.

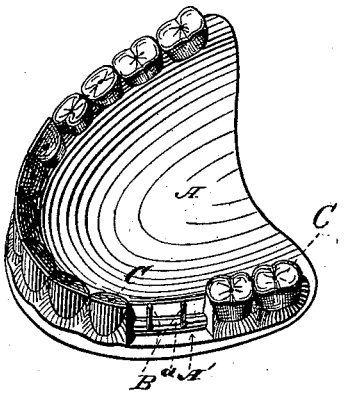

Fig 2

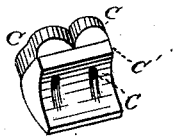

Fig. 3.

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UNITED STATES PATENT OFFICE.

BELA ST. JOHN, OF WOLCOTTVILLE, CONNECTICUT.

IMPROVEMENT IN PLATES FOR ARTIFICIAL TEETH.

Specification forming part of Letters Patent No. **196,397**, dated October 23, 1877; application filed August 15, 1877.

To all whom it may concern:

Be it known that I, BELA ST. JOHN, of Wolcottville, in the town of Torrington, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Plates for Artificial Teeth; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of an improved plate and set of teeth embodying my invention, two of said teeth being detached. Fig. 2 is a detail view of two of the teeth adapted to be used with my improved plate, and Fig. 3 is a detail view of one of the U-shaped fastening pins or staples.

The nature of my invention consists in a certain peculiar construction and combination of artificial tooth-plates, teeth, and fastening devices, and also in a peculiar process for manufacturing the same, both as hereinafter particularly set forth.

In the accompanying drawings, A designates a plate for artificial teeth, which plate may be made of metal, vulcanized india-rubber, celluloid, or any other suitable material. It does not differ in form from those already in use, excepting the necessary adaptations to each individual mouth.

B designates a series of upright U-shaped fastening pins or staples, which are embedded in said plate, and arranged around the outer edge of the same in a curved line.

C designates the artificial teeth, which are of ordinary construction, except that each has a socket, *c*, extending up from the bottom, so as to adapt said teeth to be set upon said pins, which pins are slightly inclined inward to make the fastening more secure. Said plate is peripherally recessed at A′, to receive said teeth C, and in said recess there is a peripheral bead, *a*, which fits into recess *c′* of said teeth. This construction makes said parts hold together firmly when in use.

The process of manufacturing such plates is as follows: A plaster cast of the mouth is first made in the usual way. A trial-plate of wax, similar in form to the permanent plate A, is next placed upon said cast. The teeth are then placed in the wax plate in the positions to be occupied by them in the permanent plate. The teeth are then removed from the wax plate, and tin or lead foil is placed upon them at the parts that are to come into contact with the trial-plate. The ends of the fastening-pins (which are bent into the form of staples) are then inserted into said holes *c* of each pair of teeth B, leaving the bent middle part of each pin downward. Then put the teeth back on the trial-plate. When cold, remove the teeth, leaving the staples in the trial-plate, with the foil attached to the plate. The trial-plate with the staples is now put in a flask, in the usual way, and the bottom part of the flask filled with plaster, the plaster being varnished and oiled, and the staples and foil brushed with water. On opening the flask, the wax is removed, leaving the staples attached to the plaster. The plate is then made in the same manner as if teeth were in the place of the staples. After the plate is formed the tin-foil is removed from it, and the ends of the staples or pins are bent inward sufficiently to give them spring for holding the teeth. Any space that there may be between the teeth and plate is readily filled by running melted wax, gutta-percha, or shellac into the interstice.

The shape of the fastening-pins may be considerably varied without departing from my invention. So may the construction and arrangement of the other parts mentioned.

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

1. The combination of tooth-plate A and U-shaped elastic fastening-pin B, embedded therein, and having upwardly-extending prongs, with detachable teeth C, having upwardly-extending sockets, substantially as set forth.

2. The process of manufacturing plates for artificial teeth, consisting, first, of making a cast of a person's mouth; next, fitting a trial-plate of wax thereon, and setting the teeth in said trial-plate; next, removing the teeth,

partly coating them with foil, inserting the ends of the fastening-pins in them, and replacing them in the trial-plate; next, removing the teeth, leaving the fastening-pins or staples in the plate; next, casting plaster about the pins or staples in a flask, and removing the wax; finally, forming the permanent plate upon said cast, so as to have the fastening-pins partly embedded therein, all substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

BELA ST. JOHN.

Witnesses:
ALLEN G. BRADY,
W. E. BRADY.