

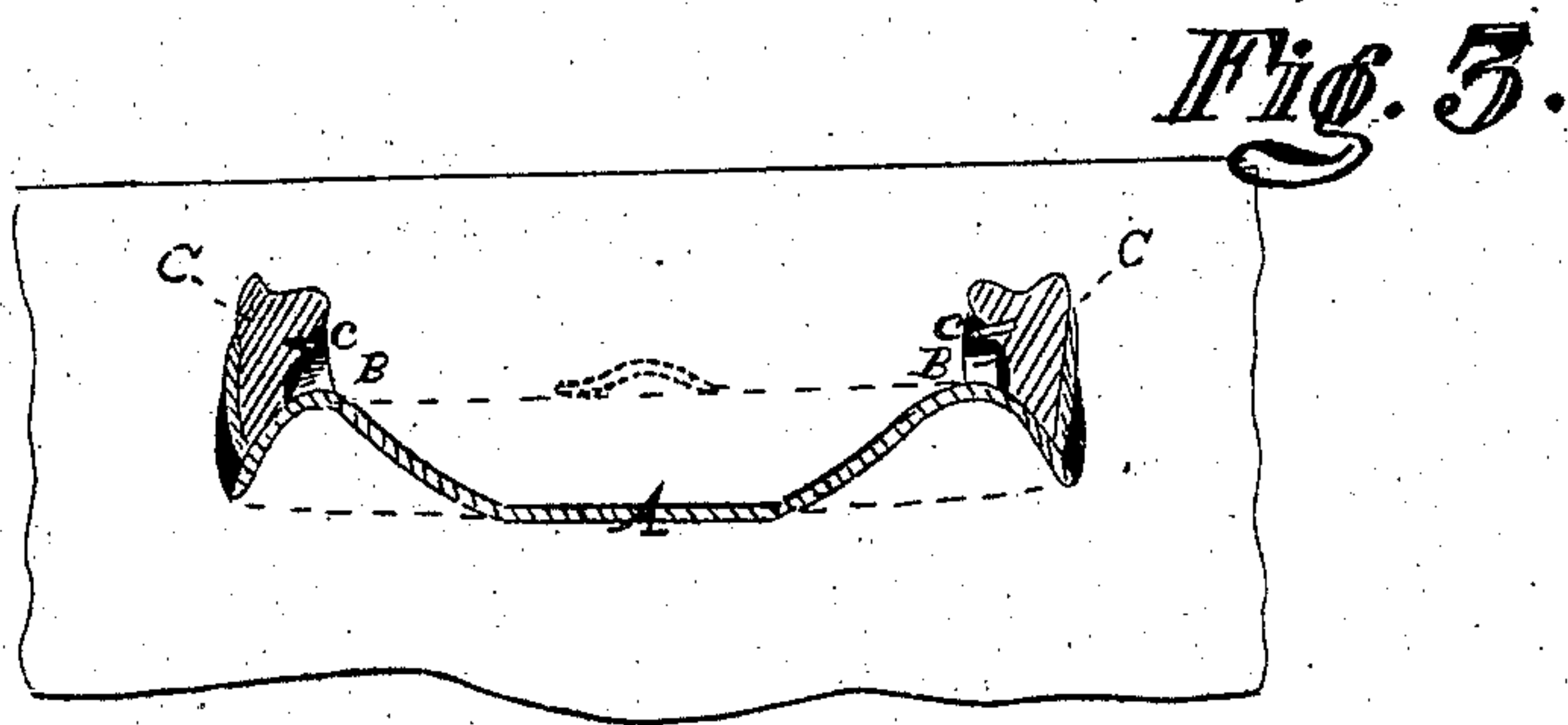
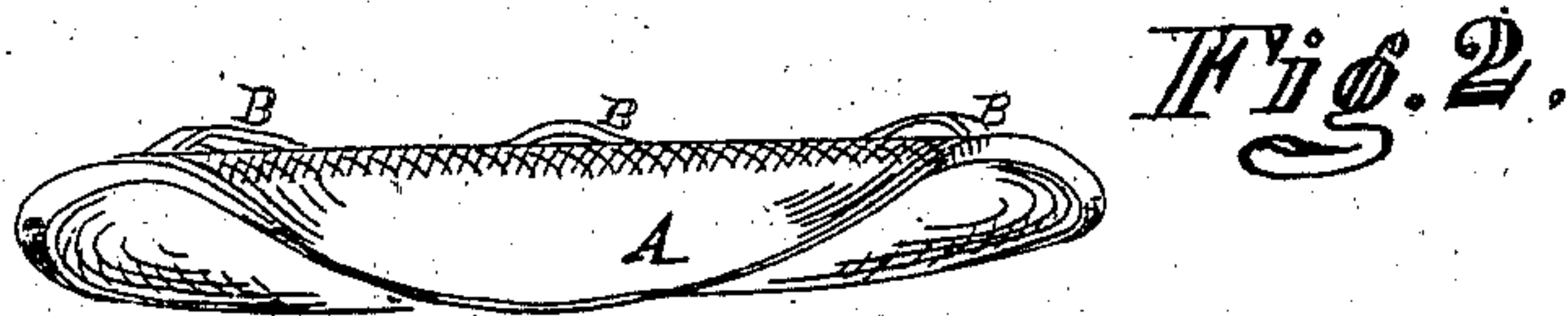
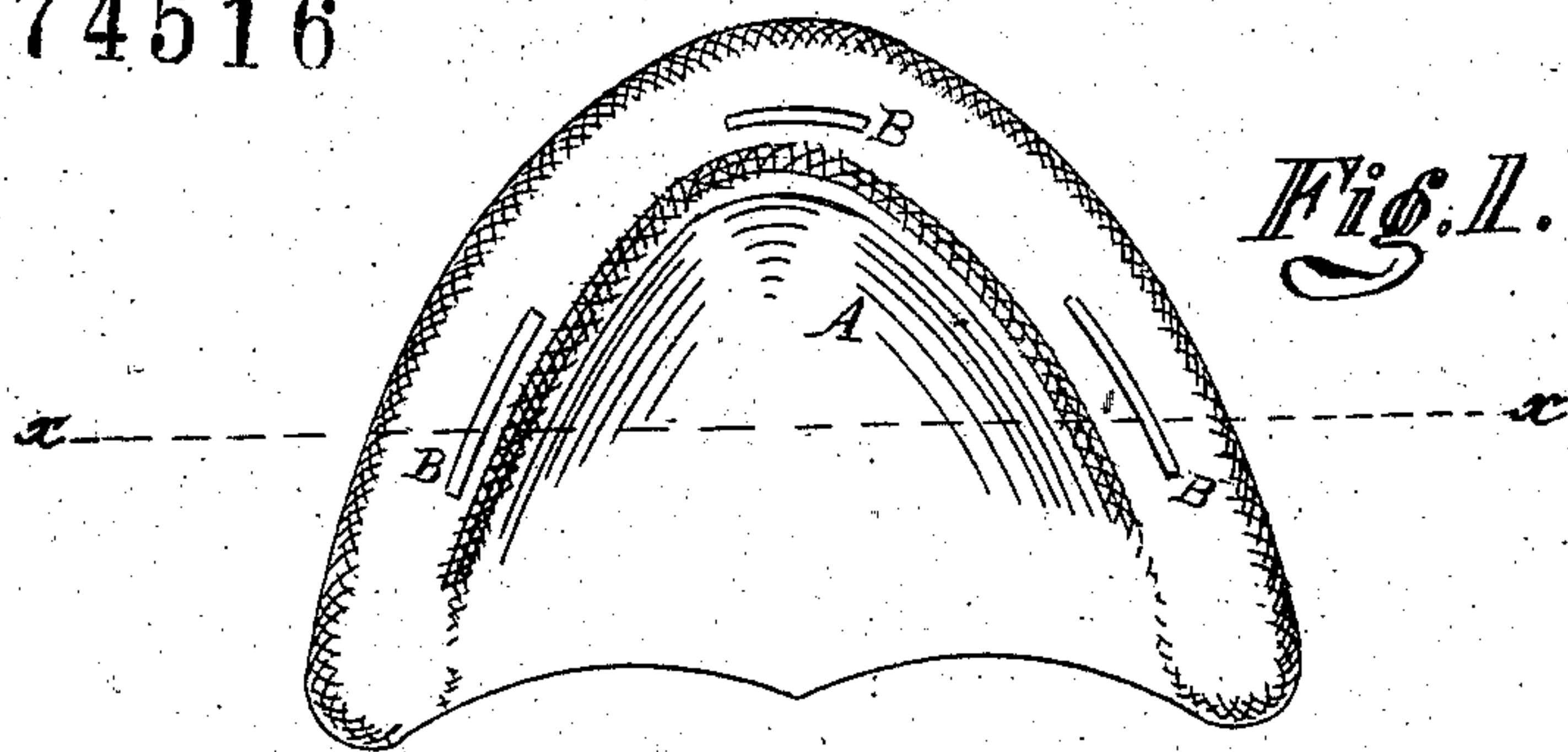
*Geo. Lewis Derr.*

*Setting Teeth.*

74516

PATENTED

FEB 18 1868



Witnesses  
*J. M. Bowen.*  
*H. Lewis*

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*Attorneys*

# UNITED STATES PATENT OFFICE.

GEORGE LEWIS DERR, OF MIFFLINTOWN, PENNSYLVANIA.

## IMPROVEMENT IN MODE OF SETTING ARTIFICIAL TEETH.

Specification forming part of Letters Patent No. 74,516, dated February 18, 1868.

*To all whom it may concern:*

Be it known that I, GEORGE LEWIS DERR, of Mifflintown, in the county of Juniata and State of Pennsylvania, have invented a new and Improved Mode of Setting Artificial Teeth; and I hereby declare that the following is a full and exact description thereof, which will enable one skilled in the art to understand and practice my said invention, reference being had to the accompanying drawings, which are made a part of this specification, and in which—

Figure 1 is a view of the under surface of a metallic plate prepared for the reception of an upper set of teeth. Fig. 2 is an edge view thereof. Fig. 3 represents a vertical section of the plate and teeth in position within the mold, ready for the reception of the fusible metal, as hereinafter described. The line *xx*, Fig. 1, indicates the plane of section.

Similar letters of reference refer to corresponding parts in the several views.

My invention consists in a mode of securing teeth prepared as for rubber plates to a plate of gold, silver, platinum, or other metal, by means of a non-shrinking fusible alloy, applied substantially as hereinafter described.

In the drawings, A may represent a plate, of silver or other metal, prepared for the reception of an upper set of teeth, and B B, strips, loops, or hooks of the same, or other hard metal, soldered to the said plate A. C C represent teeth, provided with projecting pins *c c* as for attachment to a rubber base.

My process is as follows: The strips B B are soldered to the surface of the plate A in such a manner as to form straps extending lengthwise within the cavities on the inner side of the section of teeth when the latter are in position; or a single wire may be used, soldered at intervals, so as to form a succession of loops around the plate. The teeth are set temporarily upon the plate by the aid of wax in the customary manner. The plate, with the teeth affixed, is then embedded, and sur-

rounded on all sides with plaster in a common flask. When the plaster is sufficiently set, the flask is opened, the wax parting, so that the plate remains in the lower part of the flask and the teeth in the upper part. All the wax is now carefully and completely removed from the teeth, pins, plate, and straps, and the flask is again closed, as shown in Fig. 3, in which view the dark spaces indicate the cavities from which the wax has been removed. It is then baked until thoroughly dry. The flask is then set upon edge, with the rear part of the plate uppermost, a gate is opened at one end and a vent at the other, and a fusible alloy is poured in, completely filling the space left by the wax, soldering itself to the silver plate, and, by the aid of the straps B B and pins *c*, forming an inseverable bond between the teeth and the plate.

The fusible alloy may consist chiefly of tin, with a small quantity of cadmium and bismuth to impart the necessary hardness; or any other suitable fusible and non-shrinking alloy may be used.

My invention is believed to combine the qualities of strength, durability, and economy more fully than any mode of setting teeth hitherto in use. The work occupies the least possible space in the mouth, and, being free from protuberances or cavities, may be readily kept clean.

I claim and desire to secure by Letters Patent—

The mode herein described of securing teeth to a metallic plate by straps B and pins *c*, connected by fusible metal run between and around them, substantially as described.

To the above specification of my improved mode of setting artificial teeth I have signed my hand this 17th day of January, A. D. 1868.

G. L. DERR.

Witnesses:

J. E. M. BOWEN,  
JAS. L. EWIN.