

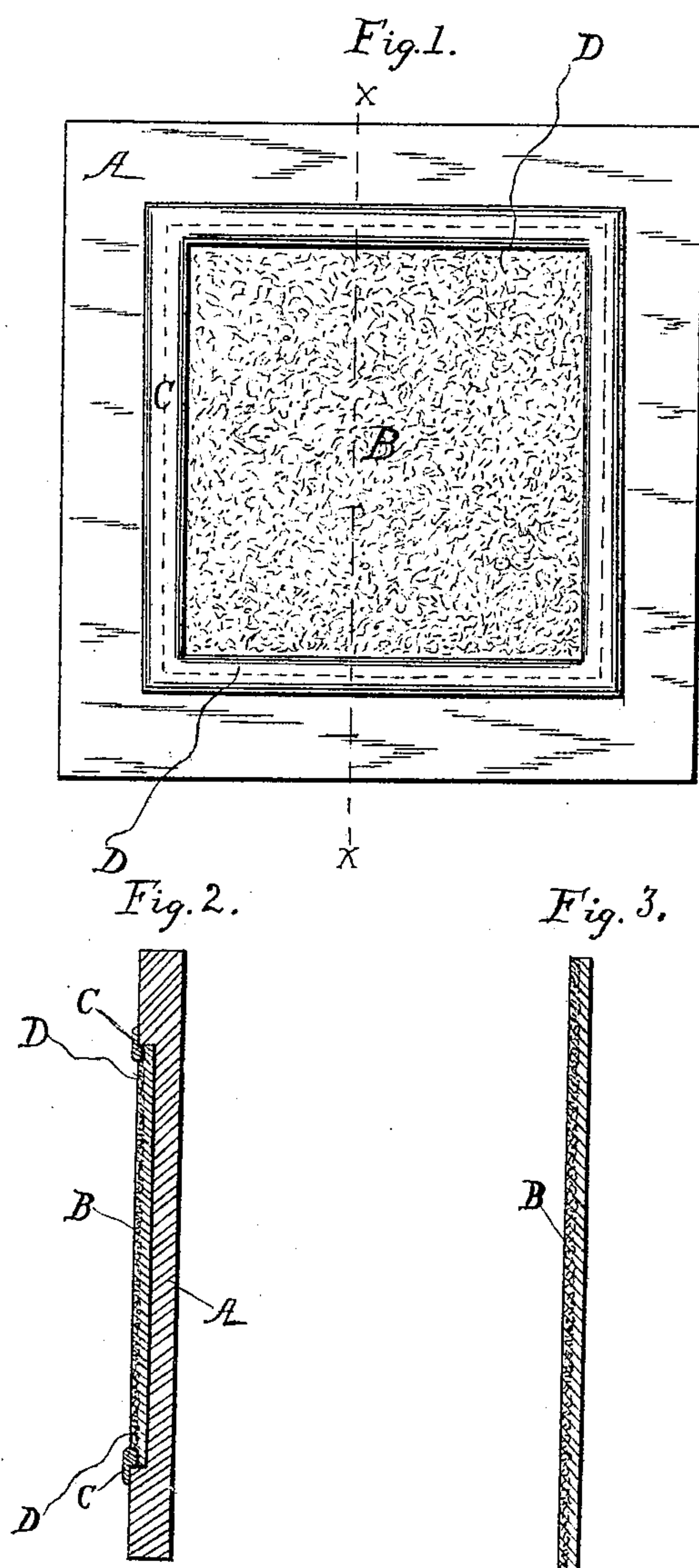
(No Model.)

J. A. DALY.

FOIL FOR DENTAL LININGS, &c.

No. 390,950.

Patented Oct. 9, 1888.



Attest:

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# UNITED STATES PATENT OFFICE.

JOHN A. DALY, OF WASHINGTON, DISTRICT OF COLUMBIA.

## FOIL FOR DENTAL LININGS, &c.

SPECIFICATION forming part of Letters Patent No. 390,950, dated October 9, 1888.

Original application filed January 6, 1886, Serial No. 187,805. Divided and this application filed March 3, 1888. Serial No. 266,040. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN A. DALY, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Foil for Dental Linings, &c., of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to gold-foil of the character used for coating or lining dental plates and for similar purposes. It is especially intended to apply to gold-foil for the lining of vulcanite plates.

This application is in substance a division of my application, Serial No. 187,803, filed January 6, 1886.

The object of the invention is to produce a gold-foil having one burnished surface and the other a porous or spongy surface which will firmly adhere to a plate of vulcanite, vulcanized rubber, celluloid, or other similar material when vulcanized thereon.

While there may be other methods of producing my foil, the method I prefer and have practiced is as follows: I take a sheet of beaten, compacted, and burnished gold leaf or foil of usual character well known in the arts, said foil being of a highly-malleable character. This leaf or foil I secure to a non-conducting plate of plaster-of-paris, vulcanized rubber, or similar material. The foil may be slightly secured to the plate by a varnish or other adhering material, and the edges of the foil or leaf covered with wax or otherwise held down, so that no liquid can enter between the foil and the non-conducting plate. A metallic connection having been made with some portion of the sheet of foil or leaf, and suitable battery connections having been made, as usual in electro-deposition, an electro-deposit is made on the uncovered sheet of foil, in the usual manner. This electro-deposit will be a pure metal, but will be somewhat porous or of a spongy character, as will be apparent under the microscope. The color also will differ largely from that of the burnished surface.

Figure 1 of the drawings is a plan of the sheet of foil on its non-conducting base with the edges covered with wax, showing wire connections and a roughened surface. Fig. 2 is a section of same on line *x x*. Fig. 3 is a

section much enlarged of a foil with an electro-deposited surface.

A indicates the non-conducting plate; B, the foil; C, the wax to protect the edges of foil; D, the battery-wires or anodes.

As this is intended merely as a diagrammatic representation, and as other mechanisms will readily suggest themselves to the skilled electroplater, no special elaboration of the drawings is considered necessary.

That portion of the edge of the foil covered by the wax C, if considerable, will be trimmed off, as it does not receive an electro-deposit. As this is much exaggerated in the drawings, and as with careful manipulation it amounts to but little, it may sometimes be disregarded.

The gold-foil I prefer to use is that known in the dental trade as "No. 10," "No. 20," or "No. 30." The electro-deposit on the one surface of this foil is of considerable thickness, preferably at least as thick as the original foil. The sheet thus produced, if of gold, will be almost absolutely pure, and will have no foreign substance intervening between the compacted and burnished part and the spongy or porous part.

When rubber or similar material is vulcanized to the spongy face of the foil, it will adhere firmly, while it cannot be made to adhere to the ordinary burnished foil.

I am aware that a foil having a roughened surface is referred to in an English patent; but in such patent no description is given; and I am not aware that any foil similar to mine having one burnished surface and the other a spongy or porous surface has ever been known prior to my invention. A gold-foil for filling teeth is well known having an electro-deposit on both surfaces. This would be worthless for lining a dental plate.

I am also aware that a platinum sheet has been described having an electro-deposit on both surfaces, and that the surface of a foil has been roughened by beating with a brush and by the attachment of foreign substances by solder or adhesive materials. The gold-foil I produce has one porous surface, which is uniform over the entire sheet. The leaf or sheet of foil is also practically of uniform thickness.

I am also aware that a dental plate already coated with a foil has been thickened by an



electro-deposit on the outer or palatal surface  
of the perfected dental plate.

What I claim is—

5 A metallic foil of a single metal having one  
burnished surface and the other a spongy or  
porous surface uniform over the entire sheet,  
substantially as described.

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

JOHN A. DALY.

Witnesses:

W. A. BARTLETT,  
GEO. R. BYINGTON.