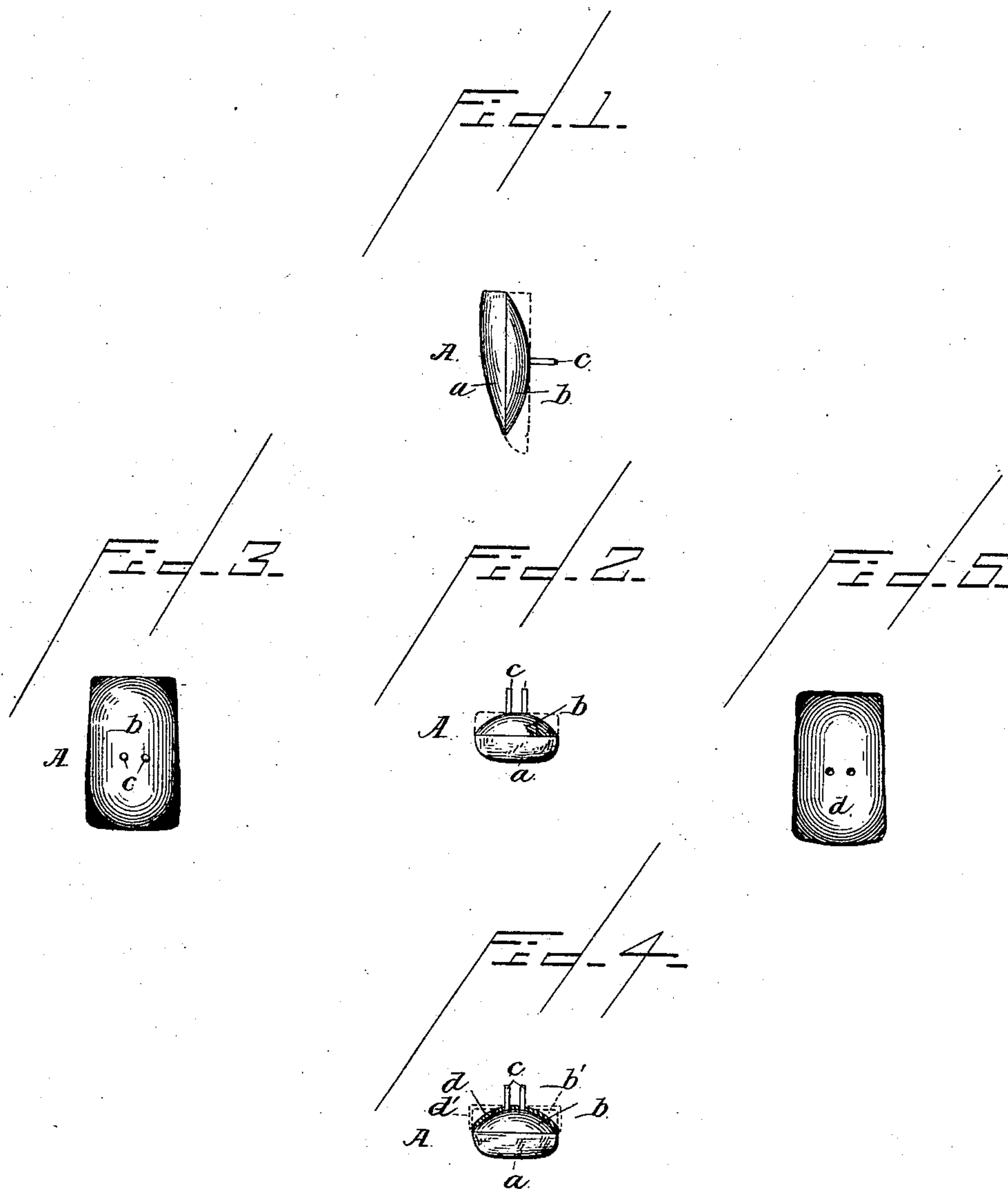


(No Model.)

J. G. HOLLINGSWORTH.
TOOTH FACING.

No. 543,685.

Patented July 30, 1895.



Witnesses:

W. R. Remley.

[Signature] By

Inventor,

Jeptna G. Hollingsworth,

Higdon & Higdon

Attys.

UNITED STATES PATENT OFFICE.

JEPHTHA G. HOLLINGSWORTH, OF KANSAS CITY, MISSOURI.

TOOTH-FACING.

SPECIFICATION forming part of Letters Patent No. 543,685, dated July 30, 1895.

Application filed January 26, 1895. Serial No. 536,311. (No model.)

To all whom it may concern:

Be it known that I, JEPHTHA G. HOLLINGSWORTH, of Kansas City, Jackson county, Missouri, have invented certain new and useful
5 Improvements in Tooth-Facings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

The object of my invention is to produce as
10 a new article of manufacture a tooth-face of porcelain or equivalent material which will not crack or split under the contracting strain exerted by the cooling solder employed to secure the backing fitted upon the tooth-face
15 and crown permanently together.

All porcelain tooth-faces, up to the date of my invention, have been manufactured with a flat back, and therefore had, at the junction of the cervical, approximal, and cutting-margins with the said flat back, decided angles,
20 and as it was necessary that the thin backing of gold or platinum should fit perfectly the lingual or posterior surface of the facing, the dentist had to burnish the backing upon the facing by hand, and as this was exceedingly
25 particular and tedious work, owing to the fact that he had to hold a small article of peculiar shape between the ends of his fingers and thumb, it is obvious that the backing was
30 bent slightly around the angles or corners of the facing by the burnishing operation. This slight bend was desirable, also, in order that the backing should not pull or warp away from the facing when said backing was united
35 by solder with the crown, as hereinafter more particularly referred to. Before burnishing the backing upon the facing it was perforated and fitted upon the ordinary pins projecting from the lingual surface of the facing in the
40 customary manner. The facing with the said backing was then applied to the crown and the connection between the backing and the crown made secure by hot or melting solder, which, contracting as it cooled, caused the
45 said bent portions of the backing to exert a great pressure upon the said angles or corners of the facing. This pressure frequently cracked or split the facing and therefore rendered it valueless, without taking into consid-
50 eration the time employed by a skilled dentist upon it, and the loss of time necessarily employed in separating the gold-backing and

crown from the solder, to be reprepared for future service.

Facings of porcelain, originally sound, and
55 constructed in accordance with my invention, cannot be cracked or split by the contraction of the cooling solder, and therefore are of great commercial value.

In the accompanying drawings, which illus-
60 trate my invention, Figure 1 is a side view. Fig. 2 is a top plan view. Fig. 3 is a back view. Fig. 4 is a top plan view of the facing, and shows also the backing in section. Fig.
65 5 is a front view or view of the concave side of the backing.

All of said figures are on a greatly-enlarged scale.

In the said drawings, A designates a tooth-
70 facing, which comprises the front or labial face *a*, of the required configuration and appearance, and the back or lingual face *b*, which is rounded or curved, being what I term an
75 "oval" or "convex" back in trade. This curvature preferably extends from the cervical to the cutting margin, and from one approximal margin to the other. The ordinary pins *c*
80 project from the lingual or posterior surface of the facing in the usual manner, and temporarily support the backing *d* in its proper position relative to the facing. When solder
85 is applied to secure the backing and crown together it embeds said pins, to make the connection secure and permanent.

I term the improved facing the "oval" back,
85 in contradistinction to the straight or flat back facings, which, as hereinbefore stated, and as illustrated in dotted lines in Figs. 1, 2,
90 and 4, are provided with the objectionable angles *b'*, around which the ends of the backing extend, as also illustrated in dotted lines
95 in Fig. 4, at *d'*. With the flat back it is obvious that as the solder, which is applied to the backing and crown (not shown) and not
100 in contact with the facing at all, begins to cool and contract it causes the end portions of the backing to grip tightly the facing, so that the corners or angles of the same are compelled to sustain practically all the strain. If the backing did not overlap said angles or
corners the contraction of the solder would not secure the backing closely and snugly against the back of the tooth, but would rather warp or bend it away, so that it would

be functionless. With the oval or convex back, however, it is not necessary to cause the backing to overlap the margin of the back, but comes flush with the same, as shown
5 clearly in Fig. 4. The facing is then applied to a crown of proper form (not shown) with the backing fitting snugly into a correspond-
ingly-contoured opening in the side of the crown, and the pins, which may be headed or
10 nicked in the usual manner to form a spur or a roughened surface, project into an internal cavity in said crown, into which is now poured hot or melting solder, which, contracting as
it cools, exerts a gripping pressure upon the
15 curved backing, which slides or contracts slightly and is held firmly and snugly against the oval or convex surface of the facing, so that when the tooth is finished up the mar-

gins of the backing do not show, be it either a gold or platinum backing, and the tooth 20 presents an agreeable and sightly appearance. It also obviates the necessity of grinding the margins of the tooth, as practiced by most dentists.

Having thus described my invention, what 25 I claim as new, and desire to secure by Letters Patent, is—

As a new article of manufacture, a tooth facing, having an oval or convex back.

In testimony whereof I affix my signature 30 in the presence of two witnesses.

JEPHTHA G. HOLLINGSWORTH.

Witnesses:

M. R. REMLEY,
G. Y. THORPE.