No. 842,357. PATENTED JAN. 29, 1907.

H. F. STRONG.

METHOD OF FILLING TEETH.

APPLICATION FILED JUNE 9, 1905.

Fig. 1.

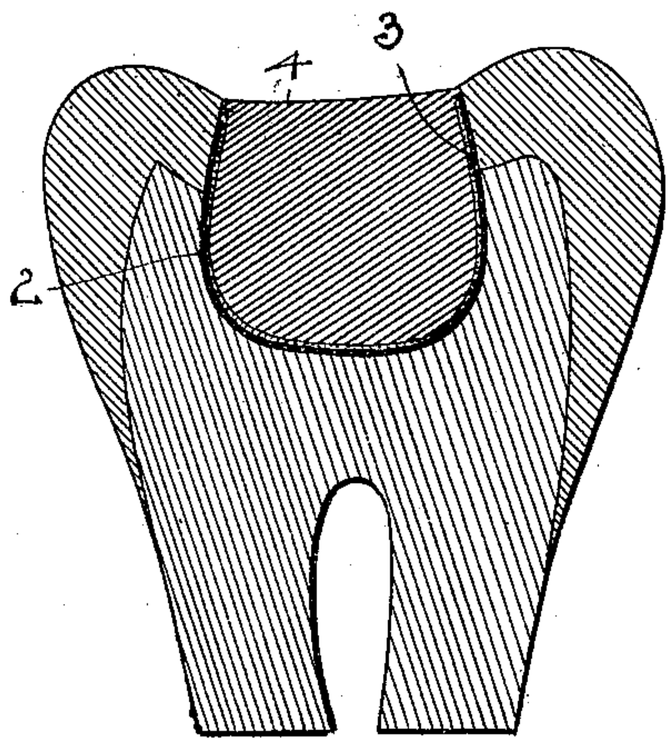
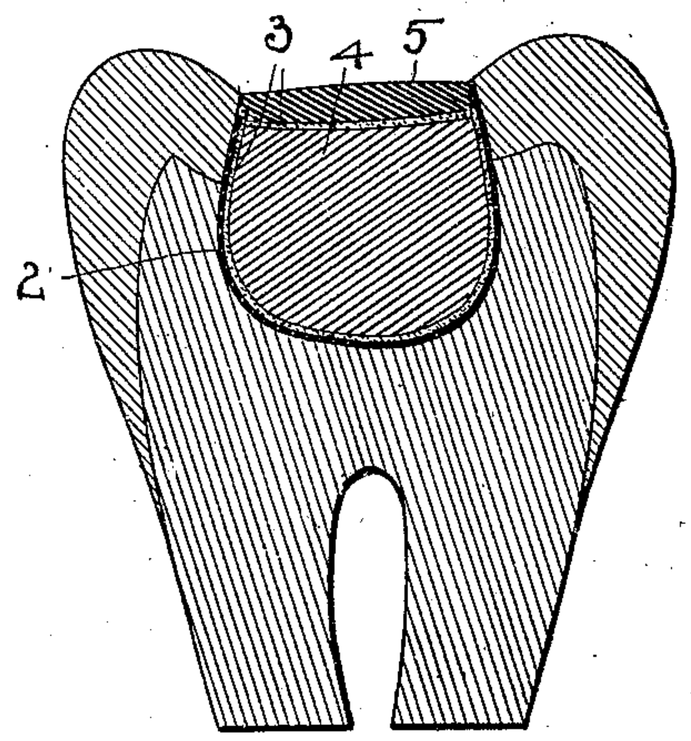


Fig. 2.



ATTEST.

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METHOD OF FILLING TEETH.

No. 842,357. Specification of Letters Patent. Patented Jan. 29, 1907.

Application filed June 9, 1905. Serial No. 264,434.

To all whom it may concern:

Be it known that I, HAMILTON F. STRONG, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Methods of Filling Teeth; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a method of filling teeth, all substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical sectional elevation of a human tooth, considerably enlarged and filled according to my invention. Fig. 2 is a corresponding view to Fig. 1, in which both gold and amalgam filling is shown.

Assuming that the cavity in the tooth has been suitably prepared for filling, the first step in the invention consists in the placing of tin-foil (indicated by 2) of one or more layers or thicknesses about the wall of the cavity and pressing the same against the said wall with a rubber point, a piece of spunk, or by any other suitable instrument, whereby what may be termed a "lining" of tin-foil is produced upon the walls of the cavity. This being done, the next step in the invention is to apply a suitable heavy coating or cover of non-conducting material (indicated by 3) over the tin-foil, but keeping said coating away from the margin of the cavity, so as not to expose the same to the moisture of the mouth. To produce or provide this non-conducting cover or film, I prefer to employ a medicated liquid varnish, which when dry leaves a uniform deposit upon the tin-foil of sufficient thickness to serve both as a means for preventing chemical union between the tin-foil and the filling and as a protection or preventive against sudden and severe thermal changes, as hereinafter set forth; but if a single application of varnish be found insufficient I may make two or more applications or possibly use a varnish which is heavier in solidifying matter, and thus make a single application suffice. Then as a last or final step in the process or method I proceed to fill the cavity with amalgam 4, as in Fig. 1, or amalgam and gold 5, as in Fig. 2, or the equivalent of either, or both. In the latter case, wherein gold is employed over or upon the amalgam, I prefer to apply one or more layers of medicated varnish to the surface of the amalgam before placing the gold, and when this dries, which occurs speedily by evaporization, I place the gold filling thereupon in the regular manner. By adding the varnish the gold can be almost immediately introduced in intimate contact with the amalgam and the gold filling completed without change in its color.

The compound known as "amalgam," as is well understood, is a composition of mercury and a certain percentage of other metals and has a peculiar affinity for gold, silver, and tin. Hence it follows that when amalgam is introduced into a cavity containing tin and brought in contact therewith a chemical union takes place between them, which deprives the tin and the amalgam of their respective advantages as filling materials. Therefore in order to avoid such union of the tin and the amalgam or gold filling with the amalgam when in otherwise intimate contact I interpose the coating or layers of medicated varnish, as hereinbefore described, which constitutes an impermeable film or division between said parts, and thereby preserve their respective identities, as well as preserving the tin in its purity as a cavity lining or foundation for the amalgam. Another material advantage in the use of a medicated varnish as above set forth or its equivalent is that it supplements the tin in an especially effective way to protect the sensitive pulp of the tooth from sudden and severe thermal changes in the mouth, as well as protecting the tooth from electrical shock or disturbance, owing to the very low conductivity of the varnish coating. In addition to this the said coating also protects the tooth from discoloration or blackening, to which it is known to be subject by the action of the amalgam usually employed. In the application of the varnish to the tooth between the gold and the amalgam, as in Fig. 2, there is the further important advantage, as already pointed out, of being able to immediately proceed with the application of the gold as soon as the varnish has been dried without waiting for the amalgam to harden, and this is very material to both patient and dentist in avoiding the long and tedious waiting which would otherwise necessarily occur. Finally, by the use of my invention as herein described the tin-foil and the medicated varnish are completely protected from

the fluids of the mouth, and I produce combination fillings which contain filling material that corresponds to and is in harmony with the living teeth with which it is brought into vital contact.

What I claim is—

1. The method herein described of filling teeth, consisting, first, in placing a lining of one or more layers of tin-foil about the wall of the cavity, then covering the tin-foil with a coating of non-conducting material in liquid form, and, finally, filling the cavity with amalgam, gold, or other suitable filling material.

2. The method herein described of filling teeth, which consists in placing a metallic lining about the wall of the cavity of the tooth and then covering said lining with a medicated liquid adapted to harden and form a non-conducting film over said lining, then partially filling said cavity with amalgam, and, lastly, coating the amalgam with the medicated liquid and covering the same with gold.

In testimony whereof I sign this specification in the presence of two witnesses.

HAMILTON F. STRONG.

Witnesses:

C. A. SELL,

R. B. MOSER.