R. S. WILLIAMS.

DENTAL FOIL.

No. 181,508. Patented Aug. 22, 1876.

Fig: 1.

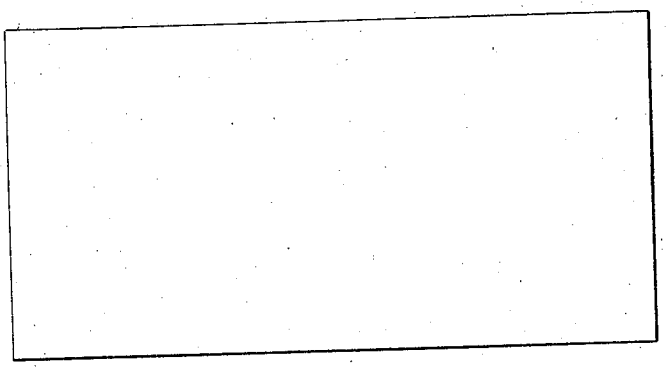


Fig: 2.

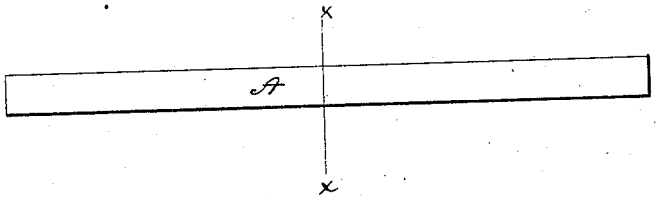
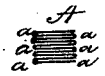


Fig: 3.



Witnesses:

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per [illegible]

Atty

UNITED STATES PATENT OFFICE.

RICHARD S. WILLIAMS, OF NEW YORK, N. Y.

IMPROVEMENT IN DENTAL FOIL.

Specification forming part of Letters Patent No. **181,508**, dated August 22, 1876; application filed June 28, 1876.

To all whom it may concern:

Be it known that I, RICHARD S. WILLIAMS, of the city, county, and State of New York, have invented a new and useful Improvement in Dental Foil; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making part of this specification.

This invention is in the nature of an improvement in dental foil; and the invention consists in, as an improved article of manufacture, foil for dental purposes arranged in parallel laminæ, of equal width and length, the several laminæ being folded alternately in opposite directions, and the entire series of laminæ forming substantially a rectangular ribbon or pile with smooth uncorrugated surface.

In the accompanying sheet of drawings, Figure 1 is a plan or top view of sheet of foil; Fig. 2, a plan or top view of my ribbon or pile; and Fig. 3, a cross-section of same in line *x x*, Fig. 2.

Similar letters of reference indicate like parts in the several figures.

Dentists, when preparing foil for use, ordinarily cut the foil into strips of suitable width, fold it over continuously, fold over fold, and then roll it up on a small broach, or similar instrument, forming a small cylinder, which is inserted and packed into the cavity to be filled. This preparation of the foil not only takes time, but a serious disadvantage arises from preparing foil in this way—that is, the folding of the foil fold over fold in one continuous direction practically results in each succeeding fold binding the others, so that when the folding is completed the entire series makes a comparatively rigid ribbon or pile that will not bend squarely, but will rather "pucker" at the bend, so that, after such a pile has been rolled into cylinders by the dentist, as above described, much of its plasticity is lost, and it is not, therefore, so well suited to fill the sinuosities of a dental cavity.

By my method, however, of forming the pile or ribbon of foil, these objectionable features are obviated, for in constructing the ribbon or pile, instead of folding the foil over and over continuously, I fold each lamina, *a*, alternately from one side and the other of the strip or sheet of foil, making a ribbon or pile, A, that may be opened and closed in a similar manner to the bellows of an accordion. The laminæ, being unconfined by any wrapping, as in the case of a continuous fold, before described, are not, therefore, stiffened and deprived of their plastic quality to any material extent.

The ribbon or pile in this way constructed may be rolled up into cylinders on a broach, as before mentioned, or it may be cut off into suitable lengths with shears, and used without further preparation, excepting to anneal it, should the dentist desire to do so, in which case the edge of the last lamina may be made to adhere to the others, thereby preventing its unfolding.

I am aware that foil has been heretofore "crimped" by a machine constructed for that purpose, in which case the laminæ are folded in a manner similar to that which I have described as my invention; but my process of forming ribbons or piles of foil is not to be confounded with this crimping process, nor are the products of the two processes to be regarded as the same, for the reason that foil which has been crimped has a surface which is composed of small wrinkles or corrugations, the formation of which necessarily shortens the length and lessens the width of the ribbon or pile produced by this crimping process; besides, the wrinkles or corrugations, of necessity, to some extent, add to the stiffness or non-plasticity of the foil; whereas foil folded as I have described, by any process other than the crimping process, does not take away either from the length or width of the sheet of foil from which the ribbon or pile is made, and the surface of the foil is substantially smooth and unchanged.

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

As an improved article of manufacture, a ribbon or pile of dental foil, constructed of a series of laminæ folded alternately from one side and the other of a sheet of foil, and having a smooth uncorrugated surface, substantially as described.

RICHARD S. WILLIAMS.

Witnesses:

S. B. GOODALE,

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