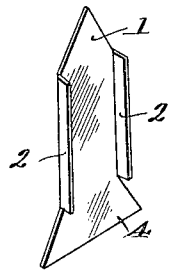
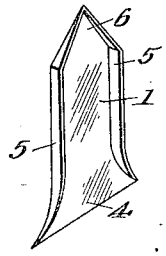
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ARTIFICIAL TOOTH ANCHOR.

APPLICATION FILED DEC. 8, 1915.

1,282,446. Patented Oct. 22, 1918.





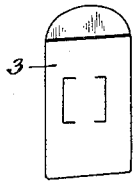


Fig. 3.

Fig. 4.

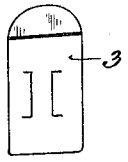




Fig. 1.

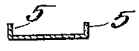


Fig. 2.

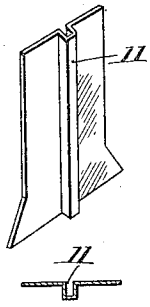


Fig. 5.

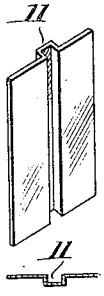


Fig. 6.



Fig. 7.

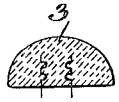


Fig. 8.

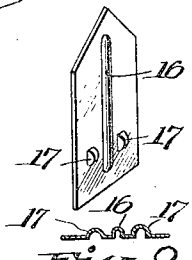


Fig. 9.

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UNITED STATES PATENT OFFICE.

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ARTIFICIAL-TOOTH ANCHOR.

1,282,446. Specification of Letters Patent. Patented Oct. 22, 1918.

Application filed December 8, 1915. Serial No. 65,803.

To all whom it may concern:

Be it known that we, THOMAS G. McMAHON and GUSTAV E. FRITZ, citizens of the United States, residing in Chicago, county of Cook, State of Illinois, have invented certain new and useful Improvements in Artificial-Tooth Anchors, of which the following is a specification.

This invention relates broadly to dentistry and more particularly to anchoring pins for artificial tooth facings.

The principal object of this invention is to provide an anchoring pin of very thin sheet metal strengthened at predetermined portions by displacing the metal out of the plane of the sheet.

Another object of the present invention is to provide an artificial tooth facing anchoring pin formed of very thin reinforced metal to provide suitable stiffness with maximum economy of material.

A still further and primary object of the present invention is to provide a pin for an artificial tooth facing which will present great longitudinal resistance under stress of mastication, and on which a backing will slide easily into position at the same time maintaining a very low cost of manufacture.

Still other and further objects of the present invention will in part be obvious and will in part be pointed out hereinafter by reference to the accompanying drawings wherein like characters are used to represent like parts throughout the several figures thereof.

Figure 1 shows one form of the invention having sides displaced at right angles to the body portion of the pin. Fig. 2 is a slightly modified form of the device shown in Fig. 1 and wherein all of the side edges of the pin are shown as provided with ribs. Figs. 3 and 4 illustrate the pins shown in Figs. 1 and 2, in position on the back of the facing. Figs. 5 and 6 illustrate our invention as applied to a rib extending longitudinally of the pin. Fig. 7 shows the form of pin illustrated in Figs. 5 and 6 when in position in a tooth facing. Fig. 9 is a view illustrating a form of pin provided with anchoring members punched from the face of the pin. Fig. 8 is a transverse section through a tooth facing showing the pins of Fig. 9 anchored in position in a facing.

Flat pins are more economical of manufacture than the type of round pin which was in general use, and it has been found that even the known types of flat pins may be still further improved by reinforcing the pin without adding to the necessary amount of material, the reinforcement being brought about by displacement of the material from a single flat plane. This construction permits of very light material being used and at the same time provides a pin of great strength both when acting as a strut as it is being pushed through a backing, or when acting as an anchor after it has been soldered in position in a backing. To this end various forms of our invention have been disclosed in the drawings and will now be explained.

In Fig. 1 the body portion 1 of the pin is relatively flat and is provided at each edge as at 2 with outstanding wings which materially strengthen the body portion, particularly when the anchor 4 is entirely embedded in a suitable porcelain facing 3, as is illustrated in Figs. 3 and 4. The modified form of this type of pin is illustrated in Fig. 2 wherein the body portion 1 is also relatively flat and the side wings 5 extend from the base 4 entirely to the tip 6 thereby reinforcing the entire length of the pin.

Figs. 5 and 6 show another form of our invention wherein the relatively flat body portion of the anchor is provided with a longitudinally extending rib 11 which extends substantially the entire length of the pin and is shown in Fig. 7 in position in a suitable porcelain facing 3.

In Fig. 9 is illustrated another form of our invention comprising a relatively flat pin provided with a rib 16 extending longitudinally of the pin and terminating short of each end of the said pin. The anchoring portion of the pin is provided with a pair of lateral projections 17 which may be formed by embossing the metal. These projections facilitate securely anchoring the pin in a suitable porcelain facing and the rib 16 strengthens the pin to facilitate the same being forced through a suitable backing when the tooth is being set in place.

In all of the various forms of our invention it is to be noted that the pin is quite simple in construction, is arranged in such manner as to provide the necessary strength and at the same time requiring a small amount of metal, thereby rendering the pin economical of manufacture and at the same

time providing a firm anchorage both in the porcelain facing and in the backing to which the tooth is adapted to be secured.

Having thus described our invention what we claim is:—

1. An an article of manufacture, an anchor pin for an artificial tooth facing, comprising a very thin metallic flat sheet member having one end constructed to be baked in an artificial tooth facing so that the said end comprises an anchoring portion, and having the other end constructed to extend outwardly from said artificial tooth facing and constituting the penetrating member, the portion of the metal constituting said pin being permanently displaced from out the normal flat plane of the sheet forming said pin to provide a very rigid rib structure extending lengthwise of the pin and tending to resist bending when said pin is baked in a suitable porcelain facing.

2. As a new article of manufacture, an anchor for an artificial tooth facing, said anchor comprising a pin of very thin flat sheet metal and having a length greater than its width, one end of said pin being adapted to constitute an anchoring portion constructed to be baked in a suitable porcelain facing, the other end of said pin being adapted to constitute a penetrating member constructed to penetrate and be soldered in a suitable backing, said pin being bilaterally symmetrical and having portions displaced from the normal flat plane of the sheet to stiffen said pin lengthwise against bending forces.

3. An article of manufacture comprising an artificial tooth facing, an anchor pin baked in said facing, said anchor pin comprising a sheet metal member extending at substantially right angles from the back of the tooth facing and having a rib extending longitudinally of said pin, and with the width of said pin being arranged at substantially right angles to the biting edge of the tooth whereby biting forces are delivered to substantially the greatest width of the said anchor pin.

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GUSTAV E. FRITZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."