No. 633,128. Patented Sept. 19, 1899.

F. ERNST.

ARTIFICIAL TOOTH.

(Application filed May 31, 1898.)

(No Model.)

Fig. 1.

Fig. 2.

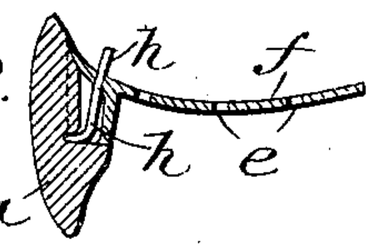


Fig. 3.

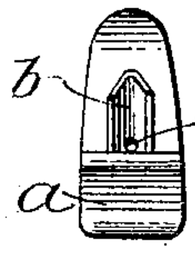


Fig. 4.

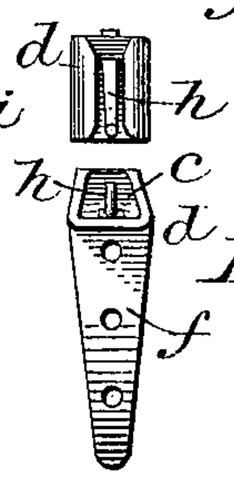


Fig. 5.

Fig. 6.

Fig. 7.

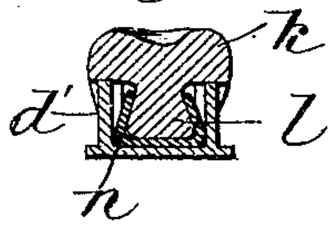


Fig. 8.

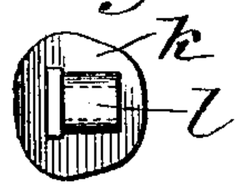


Fig. 9.

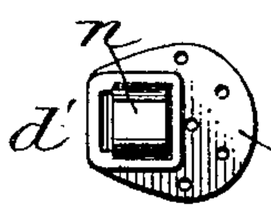


Fig. 10.

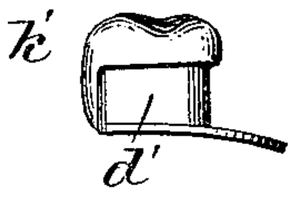


Fig. 11.

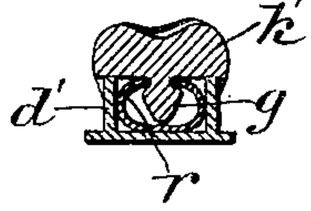
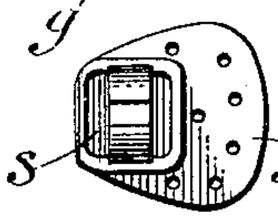


Fig. 12.

Fig. 13.



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by Harold L. Story
Atty

UNITED STATES PATENT OFFICE.

FRIEDRICH ERNST, OF HAMBURG, GERMANY.

ARTIFICIAL TOOTH.

SPECIFICATION forming part of Letters Patent No. 633,128, dated September 19, 1899.

Application filed May 31, 1898. Serial No. 682,097. (No model.)

To all whom it may concern:

Be it known that I, FRIEDRICH ERNST, a subject of the Emperor of Germany, residing at Hamburg, Empire of Germany, have invented a new and useful Improvement in Artificial Teeth, of which the following is a specification.

The present invention relates to a new construction and arrangement of artificial teeth for the purpose of enabling a quick and easy exchange of the teeth made of minerals or cast of suitable metal in the plate which holds them, the teeth permitting of being fixed singly or as a number of teeth connected in one piece, in fact in any form, whether incisors, canines, bicuspids, or molars, to caoutchouc plates or to the so-called "bridgework" metal plates. For this purpose the tooth is so formed at the back and beneath its crown that a dovetail or wedge-shaped piece is obtained which may be divided into two cheeks connected with each other and provided with a recess in order to be pushed in longitudinal direction into a corresponding guide-groove of a metal casing containing a spring of suitable metal which springs into the said recess when the tooth has reached its proper position. The metal casing is provided either with a metal tongue, as known, or, in the case of several teeth connected firmly with each other, with a metal plate which can be vulcanized to the caoutchouc or soldered to the metal plate, or the metal casing can be soldered immediately to the tooth-plate. Through this peculiar formation of the sliding teeth firmly secured in the metal casing, from which they can only be removed by force, the great industrial advantage is obtained over pinned teeth and other artificial teeth firmly connected with the plate that when one or several teeth break the same can immediately and easily be replaced without the wearer having for any length of time to dispense with all the teeth or with the lower or upper plate. Besides, the work of replacing is much easier than when all are secured permanently together, as it can be carried out without the aid of special tools very quickly and requires no skill.

By the accompanying drawings a few forms of the improvement are given as examples.

Figures 1 and 2 are side views and section of a front tooth and its casing. Fig. 3 is a rear view of the tooth. Figs. 4 and 5 are front and bottom views of the casing. Figs. 6 and 7 are side view and section of a molar tooth and its casing. Figs. 8 and 9 are bottom view of such tooth and plan view of the casing for it. Figs. 10, 11, 12, and 13 are views corresponding to Figs. 8, 9, 10, and 11, but showing a modification.

Throughout the drawings like letters of reference indicate like parts.

In Figs. 1 to 5, *a* is the tooth, provided with the wedge-shaped or dovetail part *b*, which fits and slides in the correspondingly-shaped opening or recess *c* in the casing. The casing *d* has a tongue or plate *f* with holes *e* for attachment to a bridge or plate. A metal spring *h* is fixed in the casing in position to engage and spring into the small hole or recess *i* in the tooth to retain the tooth in the casing.

In Figs. 6, 7, 8, and 9 the molar tooth *k* has a dovetail projection *l*, which is forced down between the two spring-arms *n*, which close upon it and so retain it firmly in place. The spring-arms *n* may be formed in a single piece, as shown, and secured in the bottom of the recess *m* in the casing *d'*. The casing is provided with an attaching-plate *f'*.

In Figs. 10, 11, 12, and 13 merely the shape of the projection *q*, spring *r*, and a socket or recess *s* in the casing *d'* is different from Figs. 6 to 9; but the operation is similar, as is evident.

Having now described my invention, what I claim is—

1. In combination an artificial tooth provided with a dovetail projection, a casing fitted to the projection, and a catch for locking the projection removably and under spring action when in the casing, substantially as set forth.

2. In combination an artificial tooth provided with a dovetail projection, a casing fitted to the projection and into which the said projection slides, and a spring secured to the

said casing and engaging a recess in the said tooth, substantially as set forth.

3. In combination for use with plates or bridgework, a casing for separate teeth provided with fastening devices for securing it to the plate or bridgework and with a groove or hollow containing a spring, an artificial tooth provided with a dovetail projection fitted to said groove or hollow and engaged by said spring, substantially as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

FRIEDRICH ERNST.

Witnesses:

WALDEMAR F. LEONHARD,

E. H. L. MUMMENHOFF.