

(No Model.)

M. J. F. KNEIFF.
ARTIFICIAL TEETH.

No. 501,429.

Patented July 11, 1893.

FIG. 1.

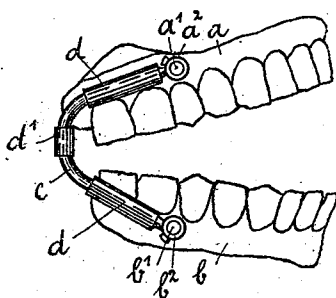
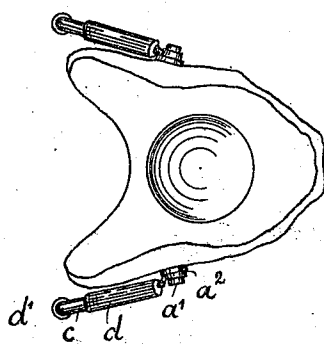


FIG. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

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ARTIFICIAL TOOTH.

SPECIFICATION forming part of Letters Patent No. 501,429, dated July 11, 1893.

Application filed August 2, 1892. Serial No. 441,965. (No model.)

To all whom it may concern:

Be it known that I, MAX JOHANN FERDINAND KNEIFF, of Berlin, in the Kingdom of Prussia and German Empire, have invented a certain new and useful Improvement in Artificial Teeth, of which the following is a specification.

This invention relates to artificial teeth and has for its object to provide novel, simple, and efficient means for flexibly connecting the upper and lower plates of a set of teeth, whereby the presence of helical metal springs to form the flexible connection is entirely avoided, which springs are objectionable in that they press the upper and lower plates against the palate and gums with too much force, especially in gold mounted teeth, and furthermore are hard and chafe the inner sides of the cheeks.

The object of my invention is accomplished in the manner and by the means hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of a set of artificial teeth flexibly connected together according to my invention, and Fig. 2 is a plan view of the same.

In order to enable those skilled in the art to make and use my invention I will now describe the same in detail, referring to the drawings where the letters *a* and *b* indicate respectively the upper and lower plates of a set of artificial teeth, the upper plate being provided with lateral pins *a'* and the lower plate with similar pins *b'*. The two plates are flexibly connected by strips *c* of elastic india rubber, preferably circular in cross section, and each having its extremities connected with the pins *a'*, *b'* through the medium of eyes *a²*, *b²*. The end portions of the elastic india rubber strips *c* are surrounded by small tubes or hollow sections *d*, composed of inelastic material, so that they are comparatively non-yielding. These tubes or hollow sections *d* are preferably composed of vulcanized rubber, and they extend a suitable distance away from the ends of the strips *c*, for the purpose of securing a straight direction of movement of the strips *c* in a vertical direction, thereby

preventing said strips from yielding or bulging out laterally when in practical use.

In some cases I may, in order to increase the rigidity of each strip *c* at or near the center thereof, that is to say, at the point where it bends, also provide a similar surrounding collar *d'* at that point of its length, and by varying the length of such central collar or portion I am thus enabled to regulate the spring action of the strip according to the requirements of each case. It is also obvious that, instead of attaching the ends of the strips to the jaw portion of the set of teeth by means of pins and surrounding eyes, I may employ any other suitable means for the purpose.

It will be seen that my improved india-rubber strips are free from the objections usually found in the spiral springs heretofore generally employed, and that they possess numerous advantages over the same. They are soft and yielding like the fleshy portions of the mouth, and therefore not liable to chafe the latter. Substances which are subject to decomposition cannot permeate the same or settle therein. They may be easily cleaned by brushing, they cannot break suddenly, and may be easily replaced when losing their springing qualities in the course of time. Moreover they may be made thicker than the spiral springs heretofore employed without thereby interfering in a disagreeable way with the inner sides of the cheeks, and will thus make the cheeks appear rounder.

Having thus described my invention, what I claim is—

1. The combination with the upper and lower plates *a*, *b*, having laterally projecting pins *a'*, *b'*, of the elastic india-rubber strips *c*, having their extremities provided with eyes *a²*, *b²* mounted on said pins, and inelastic sections *d* mounted on the end portions of the elastic strips for securing a straight direction of vertical movement of said strips and thus preventing them from yielding or bulging laterally when in use, substantially as described.

2. As a means for flexibly connecting the upper and lower plates of a set of artificial

teeth, the elastic india-rubber strips adapted to connect at their ends to the said plates, and having the inelastic sections d surrounding their end portions, and similar inelastic
5 sections d' at their central portions, substantially as and for the purposes described.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

MAX JOHANN FERDINAND KNEIFF.

Witnesses:

FRANZ EMIL AM RUINING,

OTTO MICHLE.