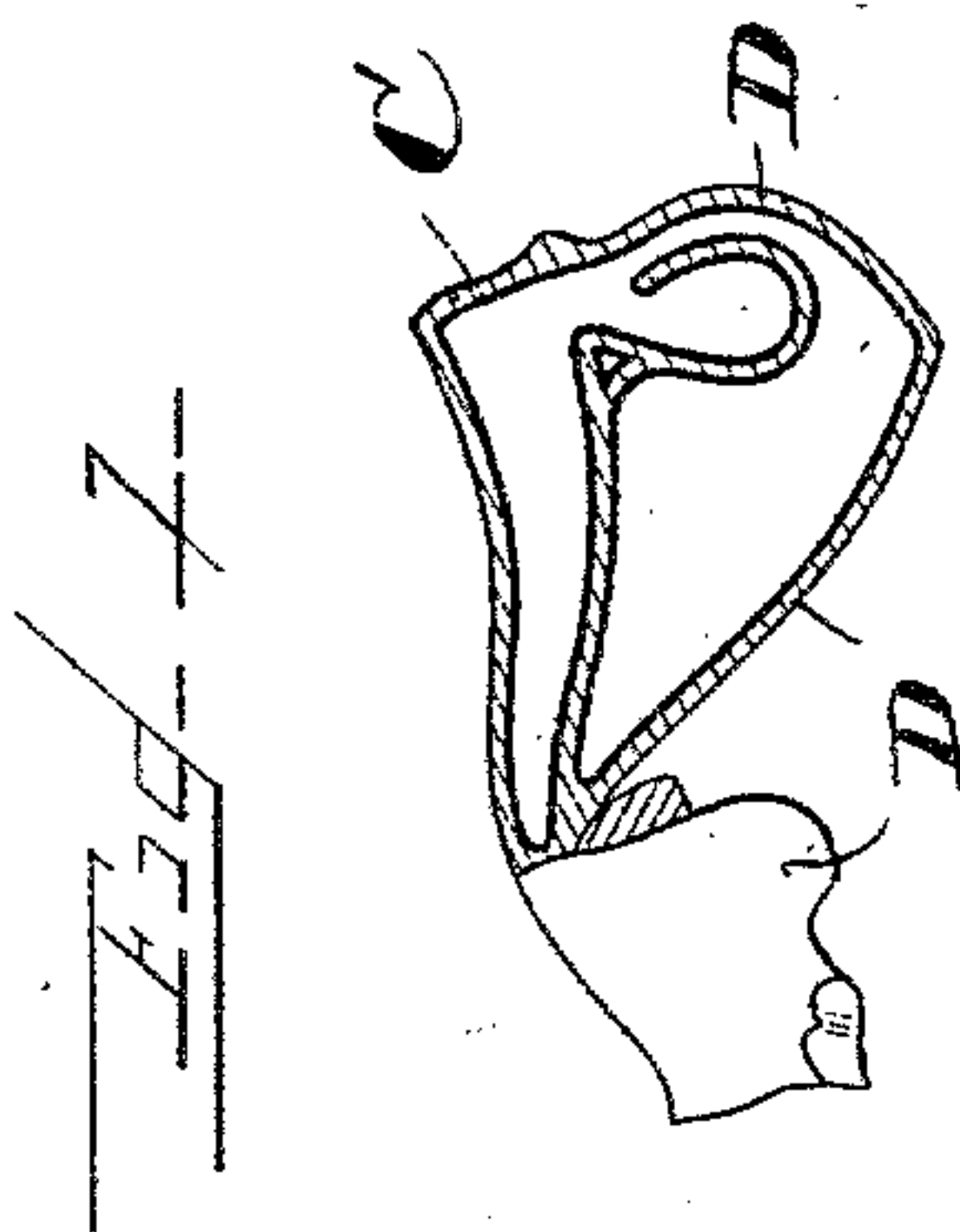
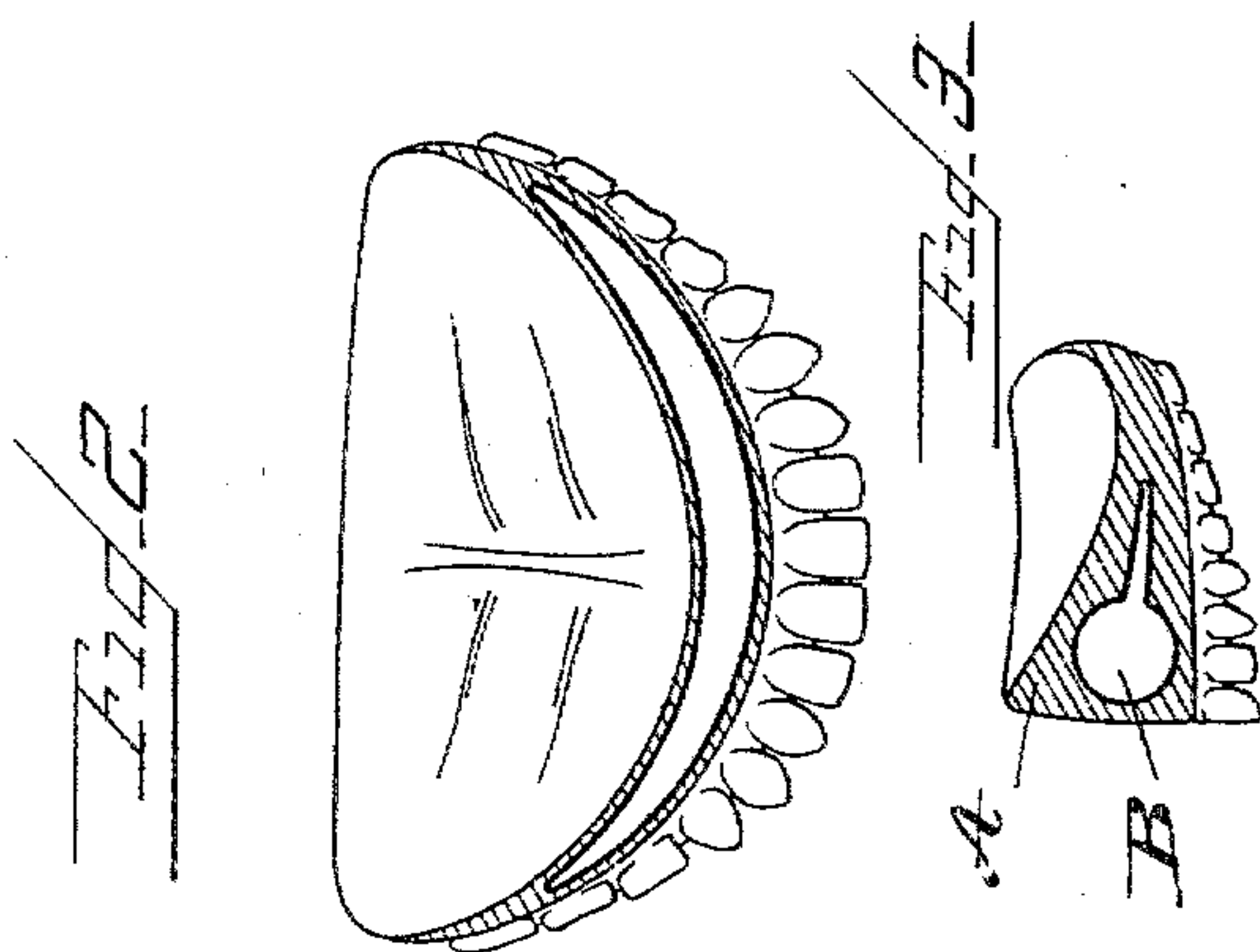


(No Model.)

C. F. F. SCHRÖDER.
MOUNTING FOR ARTIFICIAL TEETH.

No. 545,211.

Patented Aug. 27, 1895.



Witnesses,

J. D. Kugshung
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UNITED STATES PATENT OFFICE.

CARL FERDINAND FR. SCHRÖDER, OF BERLIN, GERMANY.

MOUNTING FOR ARTIFICIAL TEETH.

SPECIFICATION forming part of Letters Patent No. 545,211, dated August 27, 1895.

Application filed June 9, 1894. Serial No. 514,039. (No model.)

To all whom it may concern:

Be it known that I, CARL FERDINAND FRIEDRICH SCHRÖDER, a subject of the Emperor of Germany, residing at Berlin, in the Kingdom of Prussia and German Empire, have invented certain new and useful Improvements in Hollow Metal Fittings for Artificial Sets of Teeth, Obturators, and the Like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

I have illustrated my said invention in the accompanying drawings, in which—

Figures 1 and 2 are detail views of a dental plate, showing my invention applied thereto; and Fig. 3, a sectional view of an obturator formed according to my invention.

My invention is fully disclosed in the following description and claim.

The metal fillers hitherto used for strengthening the internal plates of india-rubber and similar sets of teeth do indeed insure great durability, but are very expensive and very heavy, especially so when made of gold or other costly metal. Metal fillers made of less costly metal have proved lighter, but also less durable, and besides such are apt to be corroded by acid, &c. At all events such fillers have often proved to be injurious to the health of the wearer.

As shown in Figs. 1 and 2, I employ a thin hollow metal form B, of suitable shape, which is inserted in the plastic material and before the latter is vulcanized, and this hollow metal form strengthens the plate and makes the same much lighter than it could be made otherwise.

Metal fillers for parts replacing part of the roof of the mouth or of the jaws and for obturators have never yet been used. Hitherto balls of cotton have been formed to replace such parts, wherewith the india-rubber pieces, shaped accordingly, have been stuffed before vulcanization. In the vulcanizing process these cotton balls burned away, holes remained instead, a bad smell and taste were the consequence, and the durability of the set was diminished. Besides, the pieces treated with cotton could be only small, be-

cause the cotton acts injuriously on the india-rubber. Therefore pieces replacing parts of the jaws, as of the roof of the mouth, could not be perfectly produced.

This new invention has the object of reducing the weight of these above-described metal fillings and fittings to one-third of the present weight, the durability being the same, or, rather, increased. The cost will be less, and hollow bodies of any size and unlimited durability will be produced. All this will be made by very thin hollow fillings of material not thicker than a sheet of fine paper. The required forms may be given to the material by bending or stamping, and a very thin layer of india-rubber or other similar material is wanted as a cover, even in places where it has been hitherto almost impossible for the dentist to get proper filling.

Gold or silver in a thin foil is pressed over lead mold, and after having been taken out again a hollow piece remains, shaped accordingly, as shown at C. The opening caused by taking out the mold need only to be shut in the usual proper manner by bending or pinching with tongs. In this way an exactly-shaped hollow form made of metal sheet is produced corresponding with the hole to be filled. Perforation made in the blank before molding it admits the filling mass in such a manner as thereby to increase durability of the piece in question. It must be added that only a very little filling mass can enter the holes, the pieces being strengthened by it, but not filled. In this way the heaviest pieces may be made for replacing part of the jaws, &c. In polishing and finishing these hollow metal bodies covered with india-rubber, as shown at D, Fig. 3, it is not possible to hurt the internal metal, because the same will be noticed at once as soon as the file touches it. Generally a special mold will not be wanted, because in most cases balls or tubular pieces will serve as well. The same may easily be shaped accordingly by pressure. Such pieces may be joined by soldering crampon-like-shaped pieces therewith. In this way the whole roof of the mouth, as far as this is possible, may be replaced by these hollow pieces of very little weight, the hollow pieces being joined by soldering wooden pegs

to them. Thus a form is produced which, though being very light, will last forever. These being very light will easily adhere to the inner walls of the mouth, and this will
5 make the new pieces very agreeable to the wearer and very useful. Besides, the pieces thus produced show no pores or holes, as always to be seen in thick india-rubber pieces of the description made in the old manner.
10 The new pieces give no bad taste to the mouth of the wearer and do not smell at all, show rents, or fall to pieces. These pieces are not sulphureted, and therefore the wearing of
15 ones, and the same do not produce heat and

dryness in the mouth, as did the old ones, which often caused vomiting.

What I claim, and desire to secure by Letters Patent of the United States, is—

The combination in a dental plate or obturator of a hollow metallic strengthening form and a surrounding coating of vulcanite, substantially as described.

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

CARL FERDINAND FR. SCHRÖDER.

Witnesses:

PAUL FISCHER,

HANS BAUERLEIN.