

No. 682,756.

Patented Sept. 17, 1901.

J. C. SCHROEDER & G. P. SPANGLER.

ARTIFICIAL DENTURE.

(Application filed Mar. 23, 1901.)

(No Model.)

Fig. 1.

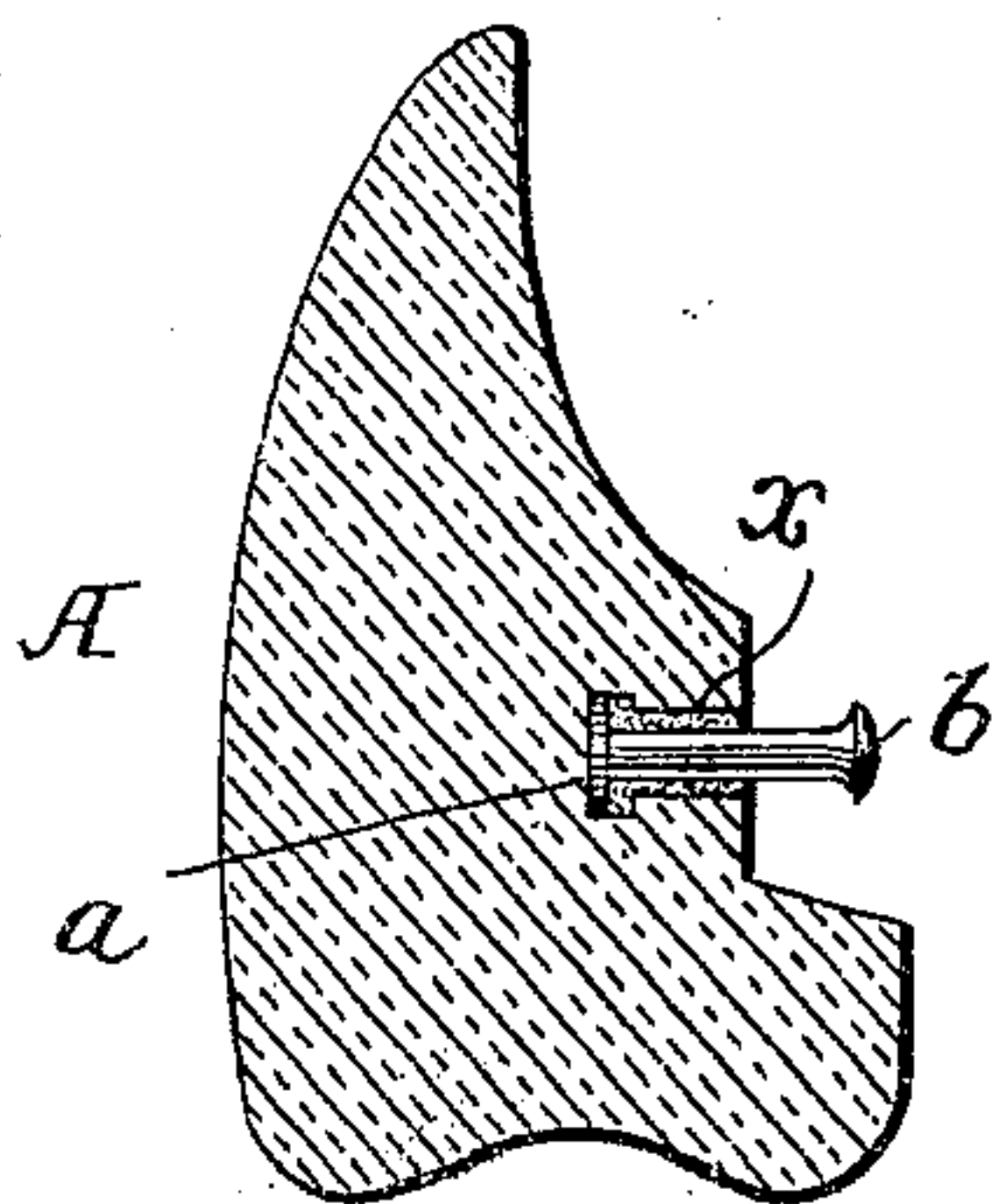


Fig. 2.

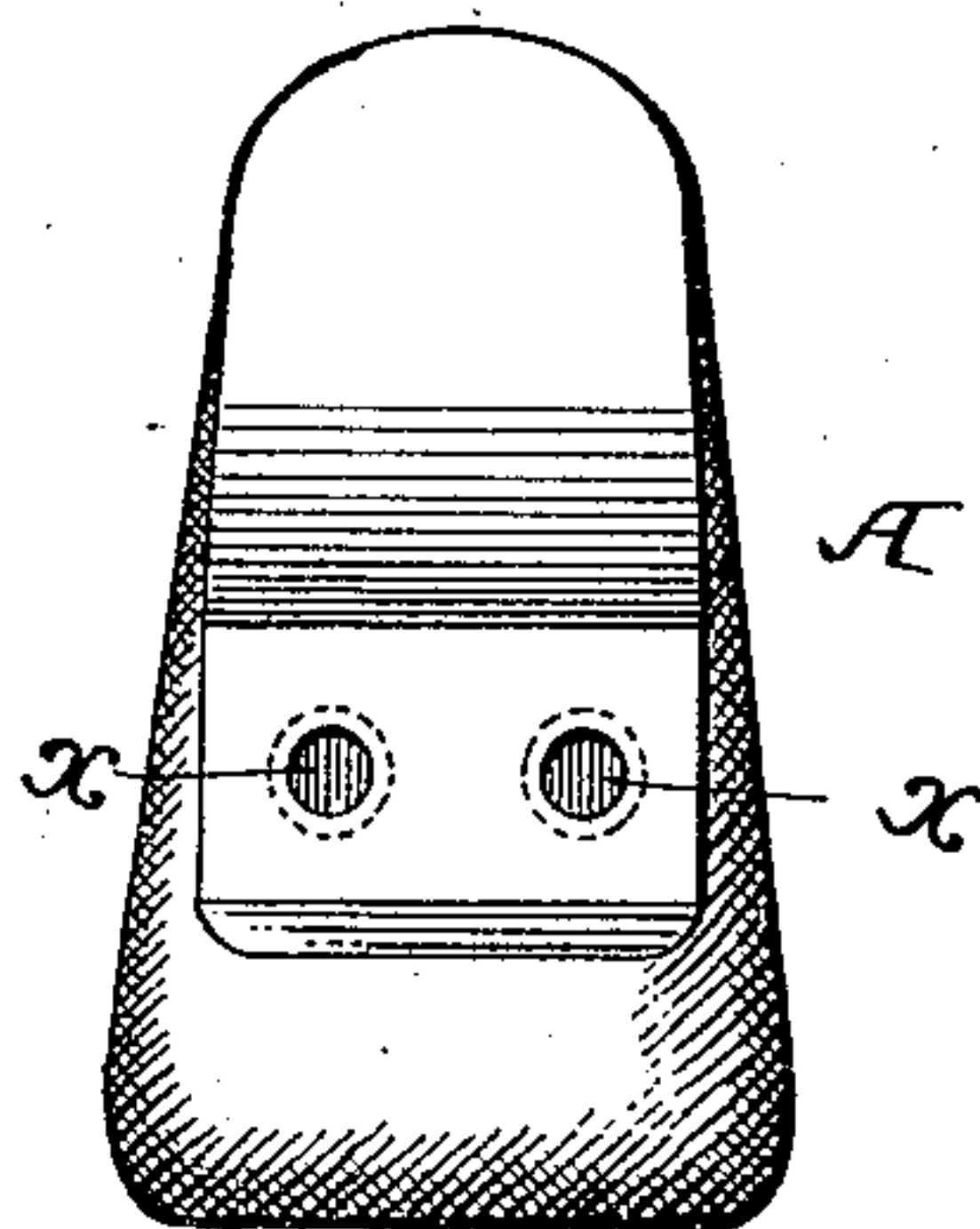


Fig. 3.

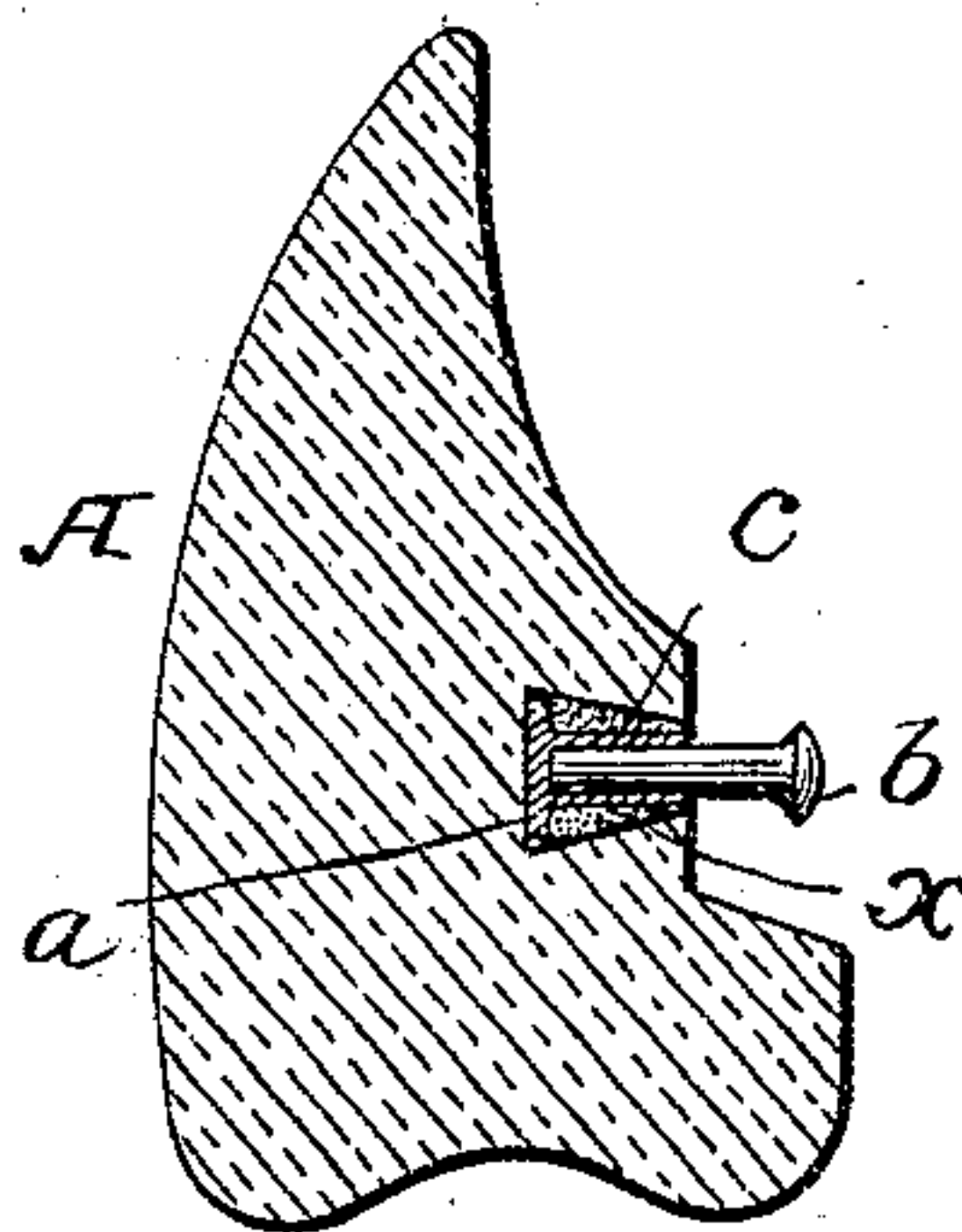


Fig. 4.

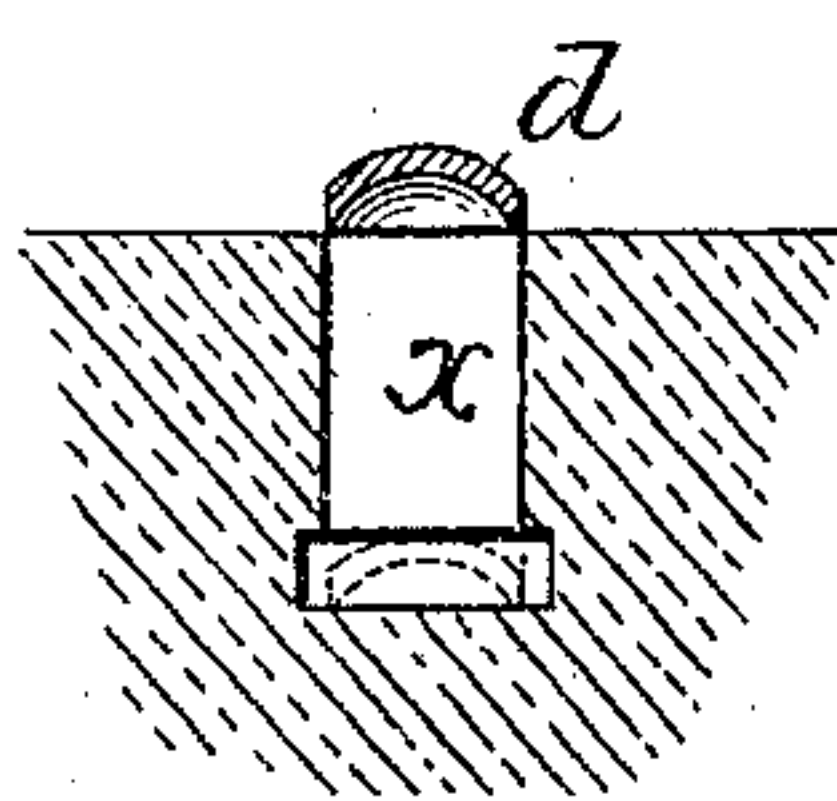


Fig. 5.

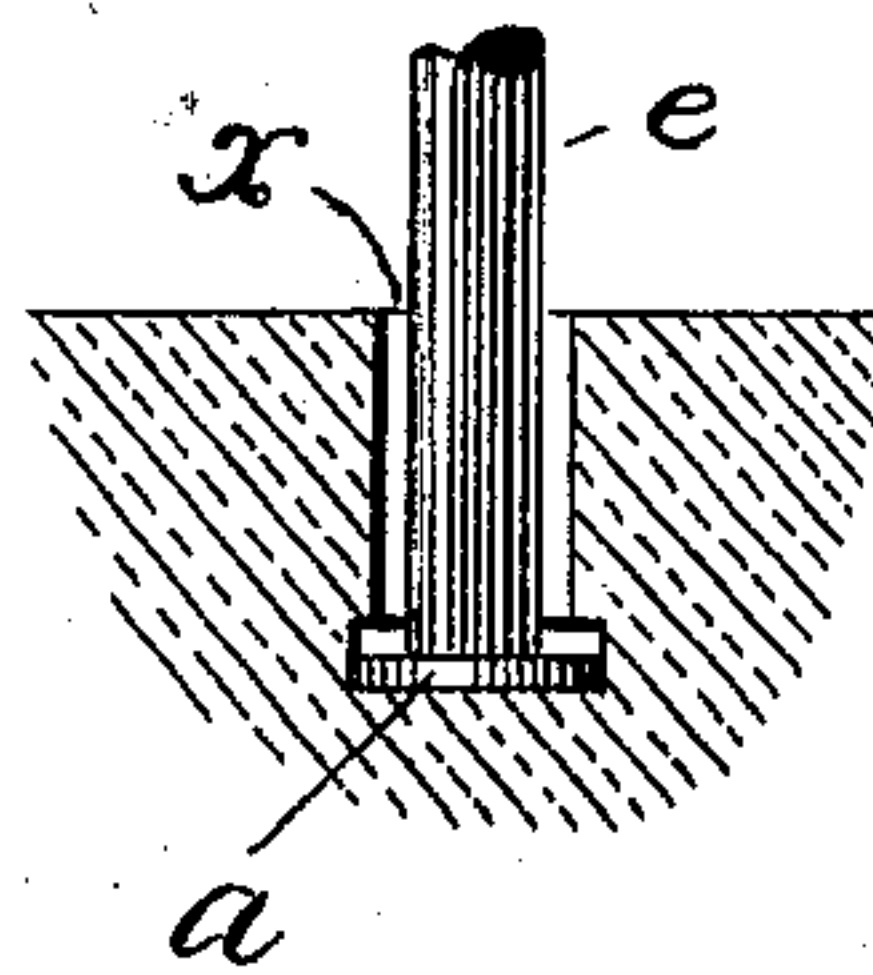


Fig. 6.

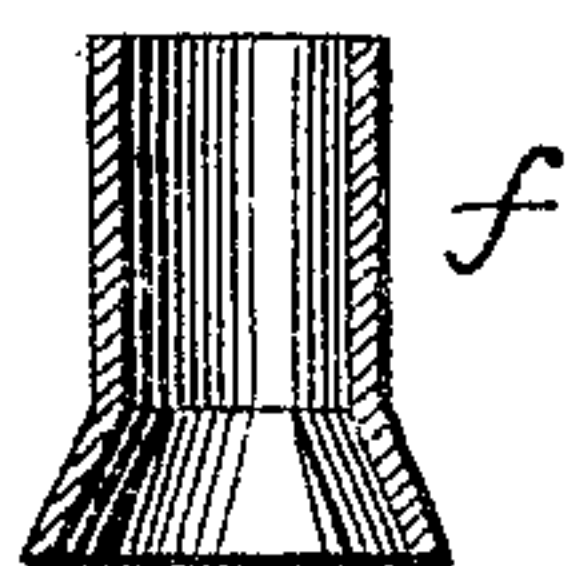


Fig. 7.

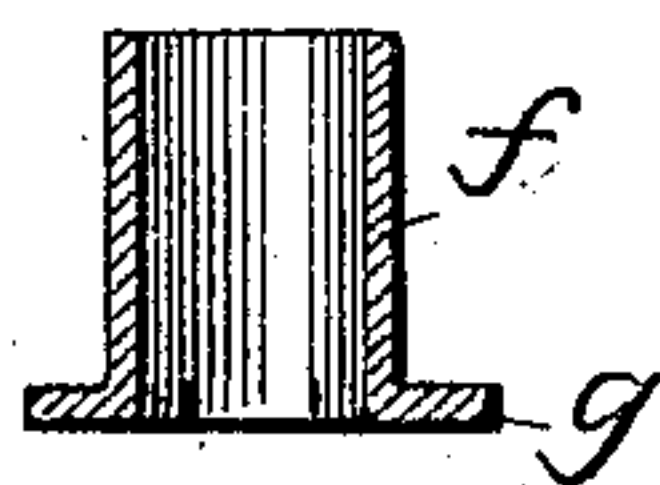
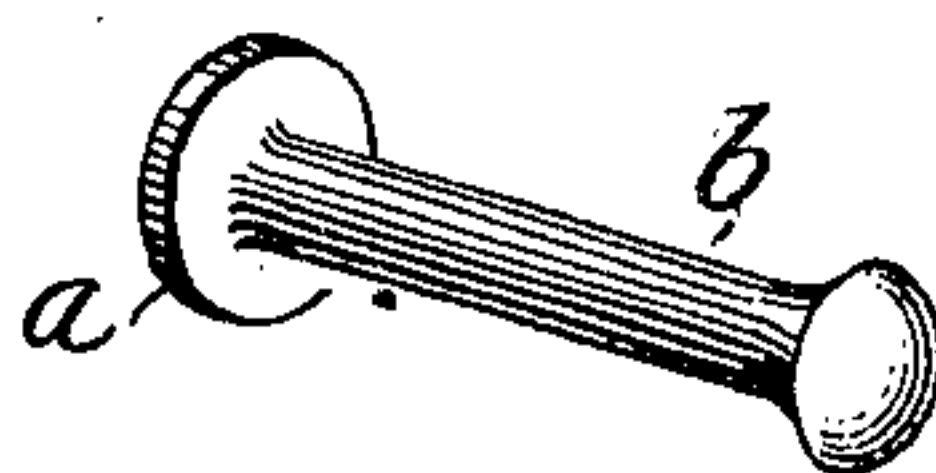


Fig. 8.



Witnesses

J. G. Hinkel
Am. Gillman & Co.

Inventors

John C. Schroeder
George P. Spangler
By
Loren L. Luman
Attorneys

UNITED STATES PATENT OFFICE.

JOHN C. SCHROEDER AND GEORGE P. SPANGLER, OF YORK, PENNSYLVANIA.

ARTIFICIAL DENTURE.

SPECIFICATION forming part of Letters Patent No. 682,756, dated September 17, 1901.

Application filed March 23, 1901. Serial No. 52,643. (No model.)

To all whom it may concern:

Be it known that we, JOHN C. SCHROEDER and GEORGE P. SPANGLER, citizens of the United States, residing at York, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Artificial Dentures, of which the following is a specification.

Our invention relates to artificial dentures; and it consists in so constructing the body portions with undercut or inwardly-expanded recesses as to receive anchoring-pieces to which the ends of metallic pins of cheap metal may be soldered, as fully set forth hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view of an artificial denture consisting of a single tooth, showing the pin applied and secured to the metallic anchoring-piece. Fig. 2 is a rear face view of Fig. 1; Fig. 3, a view showing a different form of recess and a pin provided with a sleeve. Figs. 4 and 5 are views illustrating the method of securing a cheap metal anchoring-piece in the recess. Figs. 6 and 7 are views showing in section another form of anchoring-piece. Fig. 8 is a perspective view showing a pin with an anchoring-piece secured to the inner end thereof.

The body A of the artificial denture (which may be a single tooth or a block of connected teeth) is constructed in any suitable manner, so as to have one or more recesses or openings *x*, each of which is enlarged or undercut at the inner end. At the enlarged end of each recess there is placed a plate or anchoring-piece *a*, of metal, such as German silver or aluminium, which substantially fills the diameter of the enlarged part of the recess, so that it cannot be withdrawn, and into the recess extends the shank of a pin *b*, of any suitable cheap metal, as German silver or aluminium, the inner end in contact with the anchoring-piece and soldered thereto, so that the anchoring-piece prevents the withdrawal of the pin. The outer end of the pin may be provided with a head or may be otherwise formed for firm attachment to the body of rubber or other material constituting the plate. The plate material may extend into

the recess around the shank of the pin after the latter is soldered to the anchoring-piece, or, preferably, the solder may completely fill the space between the sides of the recess or opening and the pin above the anchoring-piece, making practically a solid dovetailed block at the inner end of the pin. Greater rigidity may in some cases be secured by surrounding the shank of the pin with a sleeve *c*, which may be tubular or consist of wire wound spirally.

By the above arrangement we are enabled to avoid the necessity of making use of platina for the purposes of securing artificial dentures to plates, avoiding the expense of the platina and permitting the use of heavier pins than could possibly be employed commercially if platina were used.

Any suitable means may be employed for inserting and securing the metallic anchoring-piece at the enlarged end of the recess or opening. For instance, a metallic cup *d*, of a diameter to pass through the contracted portion of the opening, may be inserted through the same and placed at the bottom of the opening in the position shown in dotted lines, Fig. 4. Then by pressure upon the convex face of the cup by means of a punch *e*, Fig. 5, the cup may be flattened out and expanded to practically fill the larger diameter of the opening. Instead of an anchoring-piece in the form of a cup it may be in the form of a tube *f*, slit at its lower end and the slit portion slightly expanded, so that when the tube is forced against the bottom of the recess the slit portions will spread outward, forming a flange *g*, as in Fig. 7. Whatever may be the method of the introduction of the anchoring-piece *a* it will occupy a position at the end of the pin when soldered thereto, as indicated in the perspective view, Fig. 8.

Without limiting ourselves to the precise construction and arrangement of parts shown, we claim as our invention—

1. In an artificial denture, a body portion having an undercut recess, combined with a metallic anchoring-piece distended in said recess and a metallic pin extending into the recess and soldered to said anchoring-piece.
2. The combination with the body of an

artificial denture having an opening enlarged
at the inner end, of a metallic pin extending
into said opening and surrounded by a sleeve,
and a metallic anchoring-piece distended at
5 the inner end of said opening soldered to the
ends of the pin and sleeve, substantially as
set forth.

In testimony whereof we have signed our

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

JOHN C. SCHROEDER.
GEORGE P. SPANGLER.

Witnesses:

BOYD C. WILKINSON,
HENRY R. KRABER.