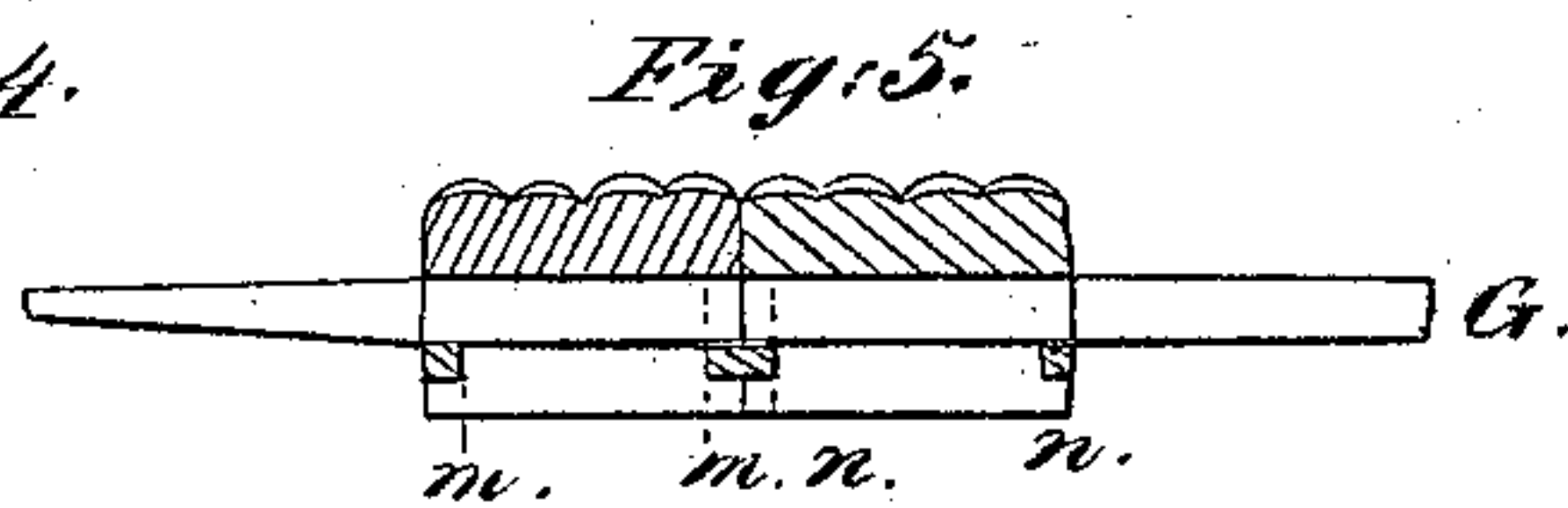
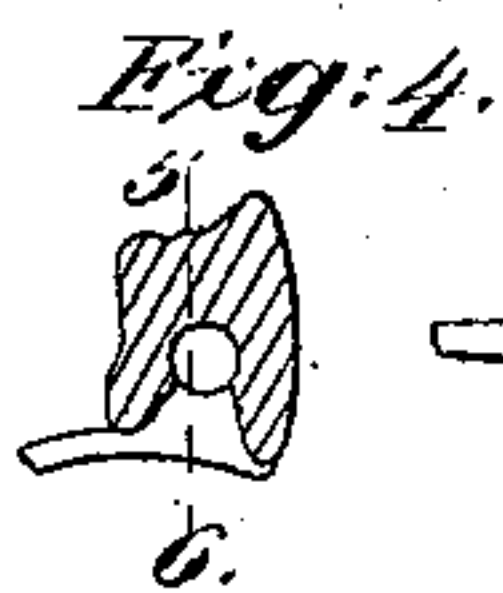
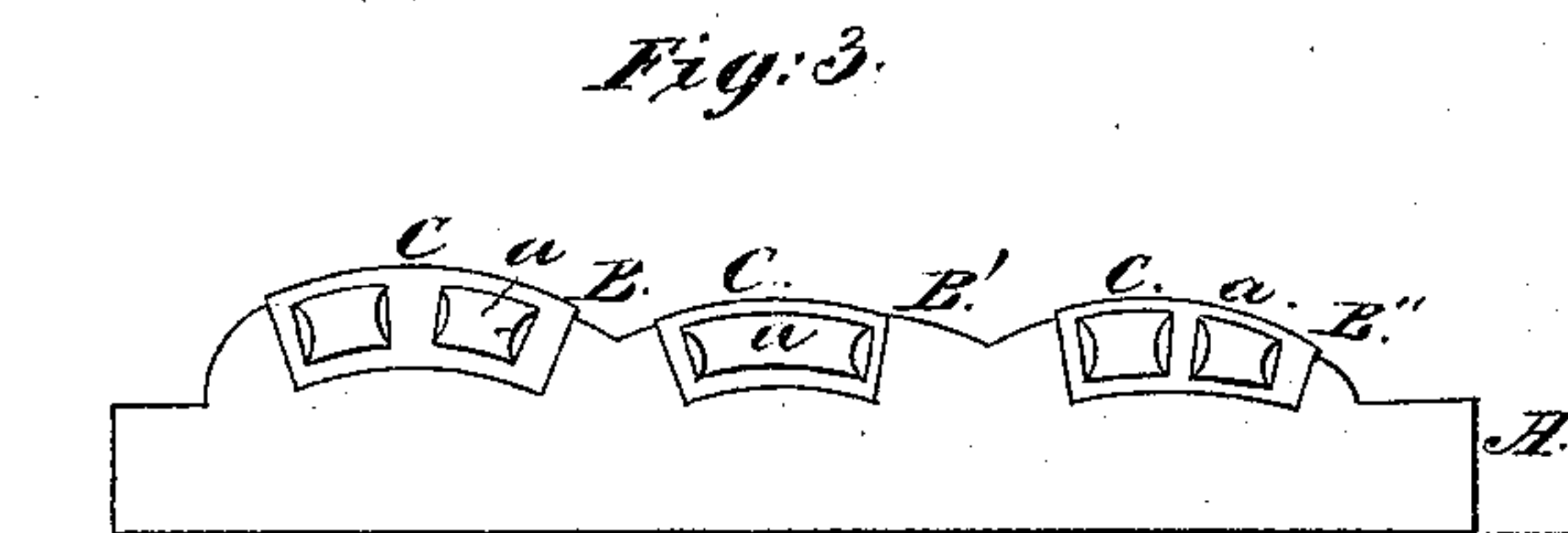
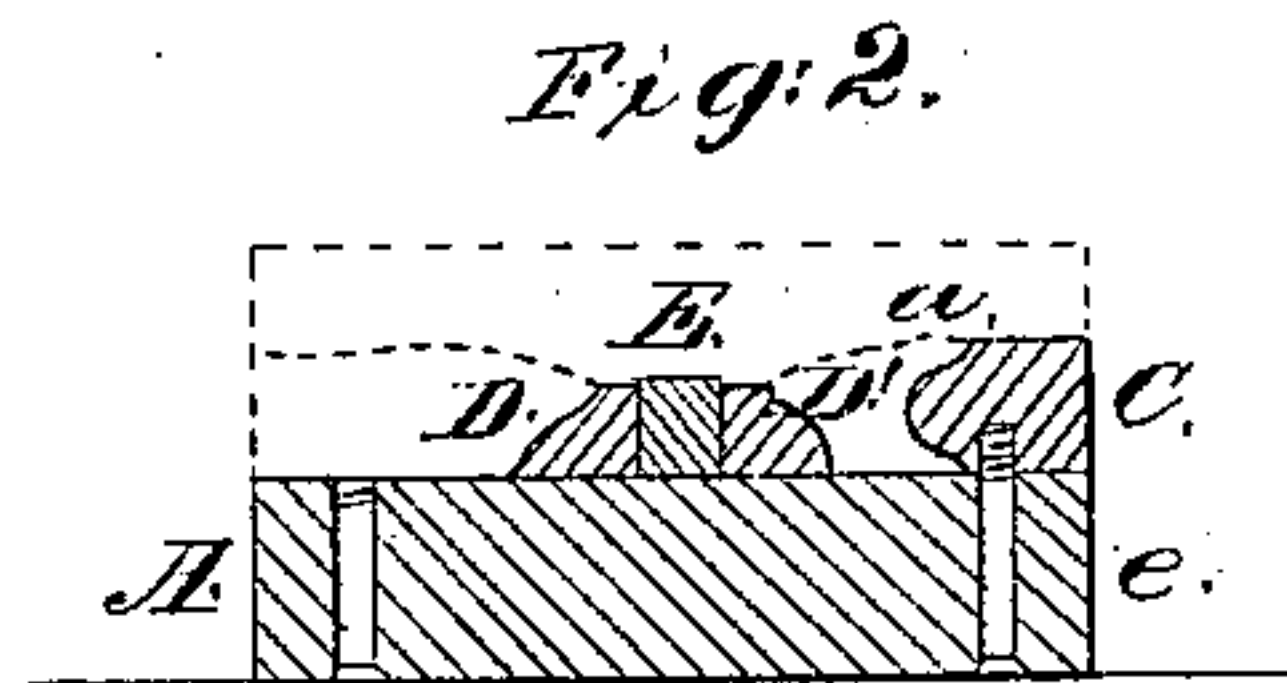
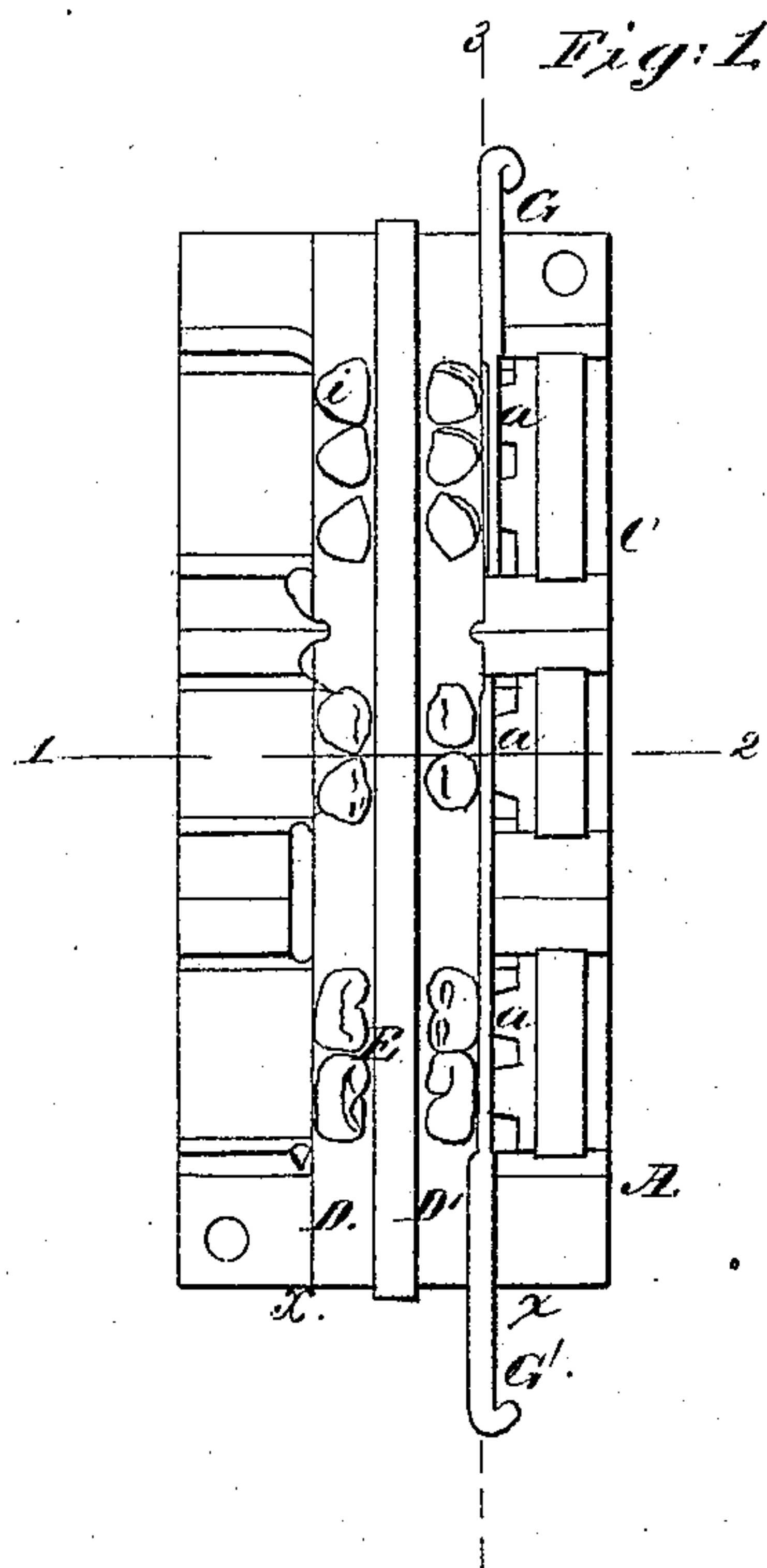


J. Terrell,

Molding Teeth.

N^o 40,581.

Patented Nov. 10, 1863.



Witnesses:

Charles Foster-

C. Howson

Inventor:

J. Terrell
per
Atty Henry Howson

UNITED STATES PATENT OFFICE.

J. TERRELL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MOLDS FOR FORMING ARTIFICIAL TEETH.

Specification forming part of Letters Patent No. 40,581, dated November 10, 1863.

To all whom it may concern:

Be it known that I, JOHN TERRELL, of Philadelphia, Pennsylvania, have invented certain Improvements in Molds for Artificial Teeth; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of certain improvements, described hereinafter, in molds for forming artificial teeth, my said improvements having been designed with the view of making depressions in the bases of the teeth, and of removing the teeth from the molds after the depressions have been made; also of making in the teeth longitudinal openings communicating with the said depressions, the teeth thus formed being particularly well adapted for being fastened to vulcanizable-gum plates and to each other.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a plan view, with the top removed, of my improved mold for forming artificial teeth; Fig. 2, a transverse section on the line 1 2, Fig. 1; Fig. 3, a longitudinal section on the line 3 4, Fig. 1; and Figs. 4, 5, sectional views, drawn to an enlarged scale, of the teeth made by the mold.

A is the bottom plate of the mold, the center of which, throughout its length between the points *x x*, Fig. 1, is a plain surface. That portion of the mold between the points *x* and the sides of the same is raised above the level of the central part in the form of a succession of arched projections, B B' B'', Fig. 3, the central portion of each projection being cut away in order to admit a block, C, on the inner face of which are one or more projections, *a*, these blocks C being permanently secured in their places by pins *e*.

D and D' are strips of metal, in which are cut, at points opposite the blocks C, depressions *i i*, corresponding to the form which it is desired to give to the backs and crowns of the teeth, the said strips being separated from each other by a wedge-formed key, E, which serves to keep them pressed tightly against

the inner sides of the raised portion of the mold. The cap of the mold (shown in dotted lines, Fig. 2) resembles those generally used in molds for casting teeth. G and G' are pins, which can be introduced into the molds through suitable openings in the ends of the same, the said pins when in the molds occupying such a position that they project across the faces of the block C and just touch the ends of the projections *a*, any portion of the mold which would interfere with the introduction of the pin being cut away. When teeth are to be formed in the molds, the pins G are removed and the plastic material, of which the teeth are to be made, introduced, care being taken that the material penetrates all the interstices below and around the projections *a*. The cap of the mold is then secured in its place, the pins G introduced, and, if necessary, immediately withdrawn, and the mold heated until the material therein is sufficiently baked. The cap of the mold is then detached and one key, E, removed, which permits one of the strips, D, to be moved back until it strikes the side of the other. The baked material (now in the form of blocks of teeth) may then be removed by sliding each block forward, so as to release the rear of the same from the projection *a*, and then lifting it from the mold. When all the blocks on one side have been removed, the other strip, D, may be moved back, and the operation repeated on the other side. It will be found that the blocks of teeth cast in this manner have oblong or other shaped depressions in their bases corresponding to the shape of the projections *a*, and that these depressions communicate with an opening (made by the pins G) which passes longitudinally through the block. This will be best understood by referring to the enlarged views of the teeth in Figs. 4 and 5, Fig. 4 being a transverse section of the block of teeth, and Fig. 5 a longitudinal section on the line 5 6, Fig. 4, the red lines showing the direction taken by the pins G through the block of teeth, the depressions in which are made between the points *m m* and *n n* by the projections *a*.

It will be apparent that the molds may be formed so as to make depressions of any shape and size in the bases of blocks of teeth for securing the same to vulcanizable-gum bases and to each other.

It should be understood that when the mold is in a finished state the blocks C are permanently secured in their places, the only object in making them separate from the mold in the first instance being that the projections *a* may be more readily formed.

I am aware that depressions have been made in the bases of teeth by forming projections in the mold, but these projections have been formed on blocks arranged to slide outward, so that the teeth might be removed, whereas in my mold the projections for forming the depressions in the teeth are stationary, the removal of the teeth being effected after the withdrawal of the key E and the moving of the strips D and D' in the manner described above.

I do not desire to claim of themselves the movable strips D and D', as they have been

heretofore used in molds, but for no other purpose than that of forming the crowns of the teeth.

I claim as my invention and desire to secure by Letters Patent—

1. The stationary projections *a*, for forming recesses in the teeth, in combination with the key E and movable strips D, for permitting the teeth to be withdrawn from the said projections in the manner described.

2. The employment of the movable pins G in the manner and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN TERRELL.

Witnesses:

H. HOWSON,
C. HOWSON.