

No. 763,385.

PATENTED, JUNE 28, 1904.

A. L. FISHER.
SWAGING OR FITTING DENTAL PLATES.
APPLICATION FILED AUG. 11, 1903.

NO MODEL.

Fig. 1.

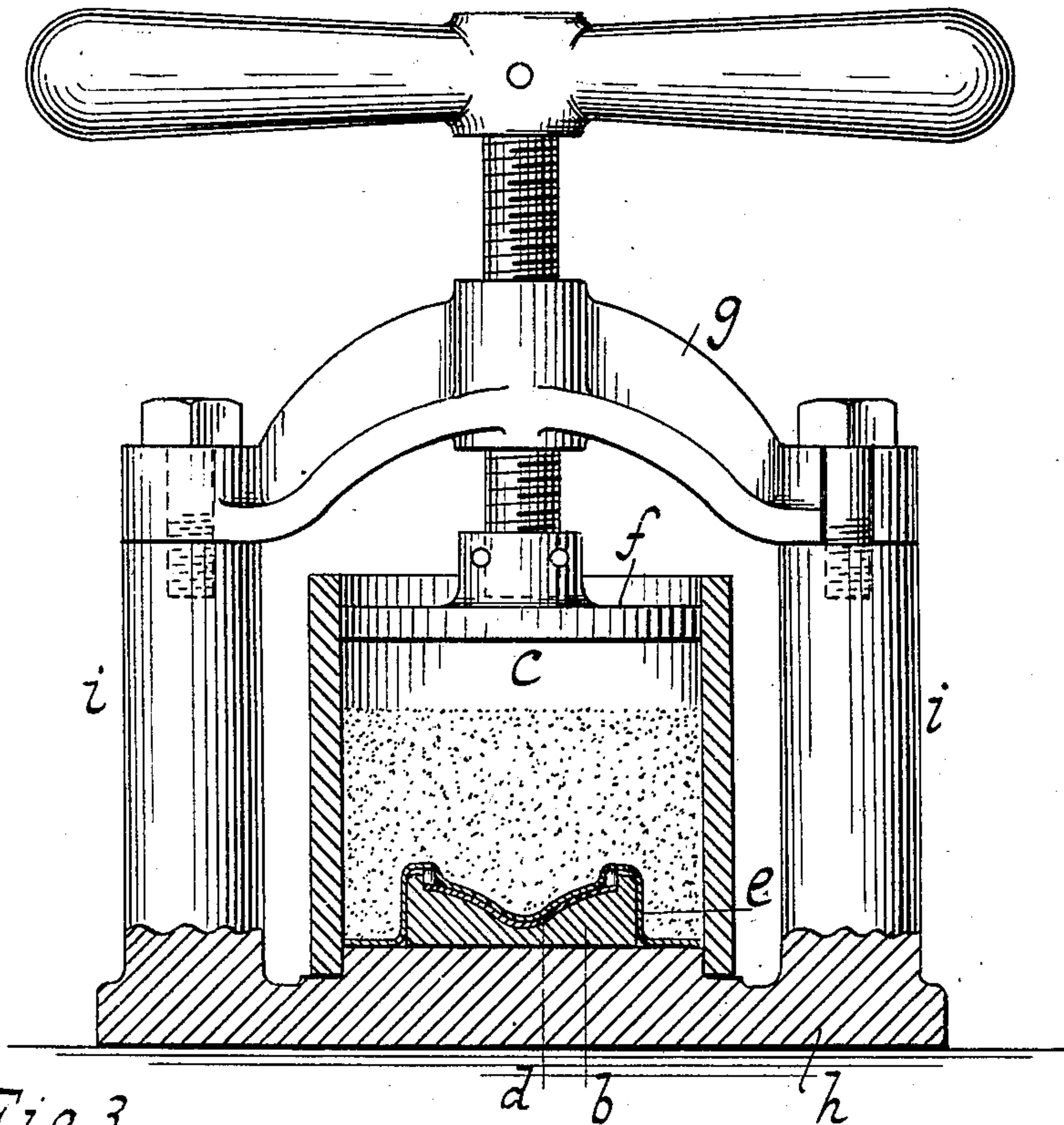


Fig. 3.

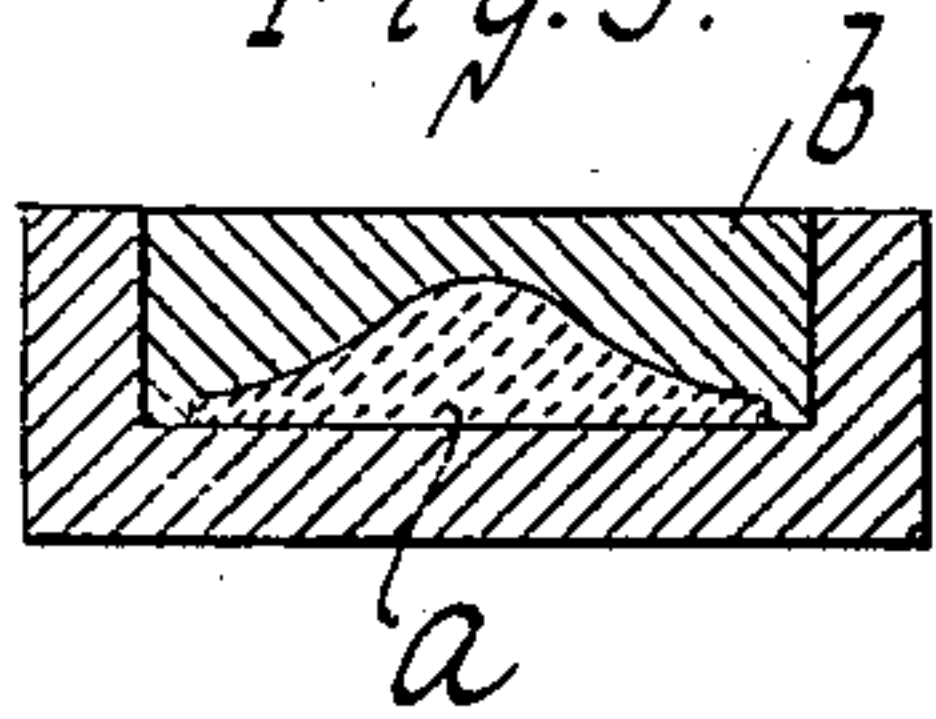
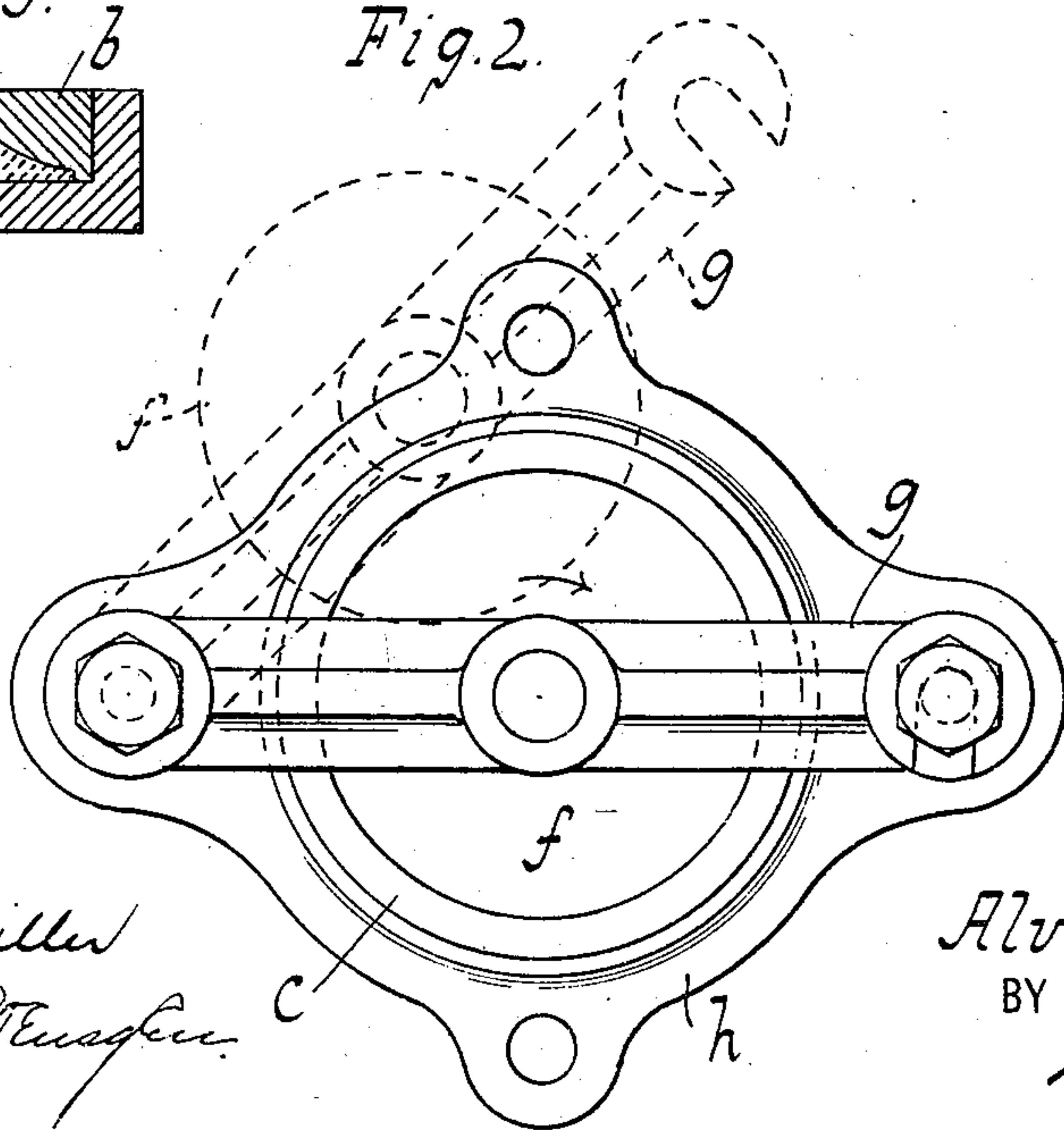


Fig. 2.



WITNESSES:

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SWAGING OR FITTING DENTAL PLATES.

SPECIFICATION forming part of Letters Patent No. 763,385, dated June 28, 1904.

Application filed August 11, 1903. Serial No. 169,148. (No model.)

To all whom it may concern:

Be it known that I, ALVIN L. FISHER, a citizen of the United States, residing at Brooklyn borough, New York city, in the county of Kings and State of New York, have invented new and useful Improvements in Swaging or Fitting of Dental Plates, of which the following is a specification.

In case of badly-fitting dental plates it is of advantage to be able to swage or mold such a plate with the teeth upon it to give the same the desired shape or accurate fit required.

This invention relates to means or apparatus for securing accurate fit; and the invention resides in the details set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is an elevation, partly in section, of an apparatus for carrying out this invention. Fig. 2 is plan view of Fig. 1. Fig. 3 shows a sectional view of a plaster cast and a mold formed from the cast.

In the drawings is shown a cylinder *c*. This cylinder is open at both ends, and a base *b* has an offset made to accurately fit or extend a sufficient distance into the cylinder to securely close its lower end when the cylinder is placed on the base. At the same time the cylinder can be readily removed from the base when required, as the cylinder rests on or is removably supported on such base without being fastened or secured. When in use, the cylinder sitting on and about the base is in fixed position or secure against shifting. The risers or posts *i* support a cross-head *g*, adapted for supporting or running a screw-actuated plunger *f* into and out of the cylinder. One end of the cross-head *g* is shown as having a hook engagement with one of the posts, and the other end of the cross-piece pivots on its post. The cross-piece when the plunger or piston *f* is run up or out of the cylinder can have its hook end swung to one side or to clear the cylinder from the piston. The cylinder can then be dismounted. The parts can thus be separated or assembled, as required. When the hook end is swung to its post, the cross-piece *g* is supported at both its pivot and hook ends and offers a firm

bearing for the plunger, which is swiveled in a piston *f*, hereinafter referred to.

The detachability of the parts allows a mold *b* to be properly placed on base *b* and also allows the heating of the parts, as required in carrying out the invention.

A plaster cast *a* is taken of the interior of the mouth. This cast is then used for forming a mold *b*. The mold *b* can be formed of any suitable material, such as plaster, so as to readily adapt itself to the shape of the plaster cast *a*. After the mold *b* is sufficiently hard it is removed from the plaster cast *a* and placed in a cylinder *c* or on the base before the cylinder is put in place. The imperfect plate of artificial teeth *d* is then placed on the mold *b*, and both the mold and the plate of teeth are covered by some suitable light material, such as a silk handkerchief *e* or other close-woven fabric. Before being covered by the fabric *e* the mold and the plate of teeth are warmed to at least boiling-point to soften the imperfect plate to be altered or reshaped. Fine white sand heated to about two hundred and twenty-five (225°) or two hundred and fifty (250°) degrees Fahrenheit is then poured over the fabric covering the mold and the plate, the said fabric, preventing the sand from filtering through and onto the plate and the mold. The piston *f* is then brought over the cylinder *c* and forced downward into the same to maintain a pressure of about one hundred pounds, more or less, as required in the cylinder, and at this pressure the imperfect plate will be molded or shaped to fit snugly into the interior of the mouth. The continuous pressure of the piston on the sand causes the latter to press the softened or heated plate *d* to conform to mold *b*.

The plunger or piston fits the cylinder or is of equal diameter with the interior thereof to act on the sand across the entire interior area of the cylinder.

The posts or risers *i* can be cast to or formed in one piece with the base or made separate or detachable therefrom.

What I claim as new, and desire to secure by Letters Patent, is—

1. A dental swaging apparatus, comprising

a base provided on its upper side with an integral boss and on the opposite sides of said boss with vertical standards, an open-ended imperforate cylinder fitted at its lower end closely
5 about said boss, a yoke pivotally mounted at one end on one of said standards and provided at its other end with a hook, a set-screw tapped in the upper end of the other standard and arranged to engage the hooked end of said yoke,
10 a screw carried by said yoke, and a plunger swiveled upon the lower end of said screw and arranged to reciprocate in said cylinder, substantially as and for the purpose specified.

2. A dental swaging apparatus, comprising
15 a base provided on its upper side with a boss,

an open-ended cylinder fitted about said boss, a mold resting on the boss, a flexible diaphragm loosely arranged over the mold, a cushion consisting of hot sand disposed on said diaphragm, a plunger above the sand, and
20 means for forcing down said plunger upon the sand, substantially as and for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing
25 witnesses.

ALVIN L. FISHER.

Witnesses:

WM. H. FRIDAY,

FREDERICK A. LEHMANN.