No. 687,987. Patented Dec. 3, 1901.

# F. O. JAQUES, Jr.

## DENTAL PRESS.

(Application filed May 8, 1901.)

(No Model.) 2 Sheets—Sheet 1.

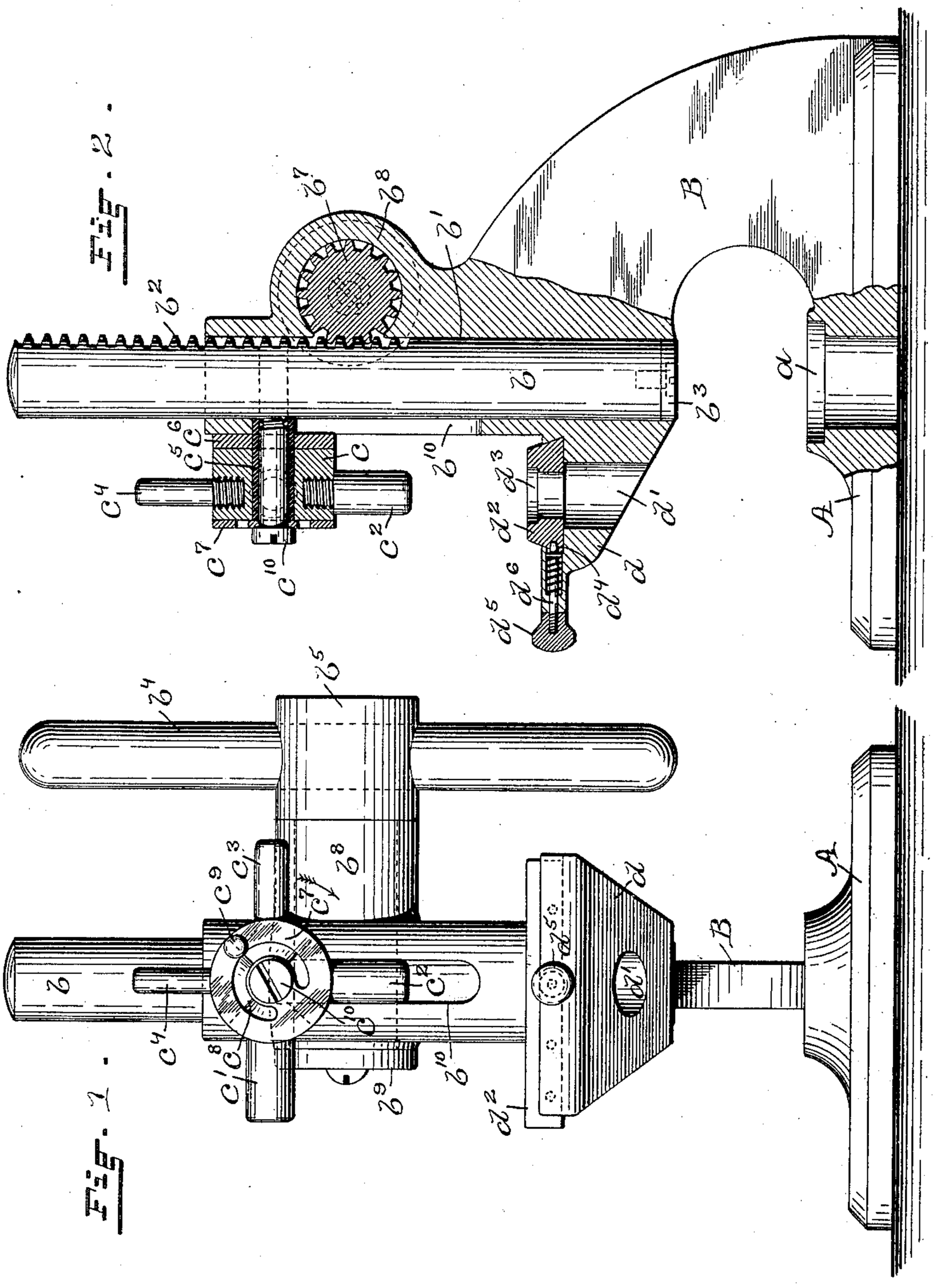

Fig. 1.

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Fig. 4.

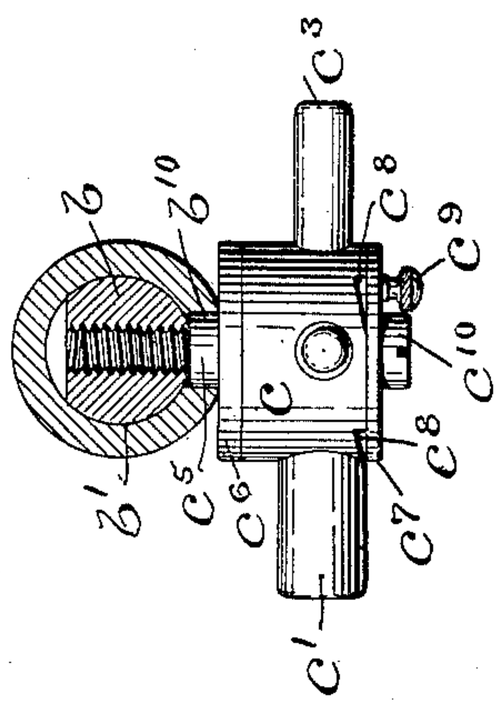



Fig. 5.

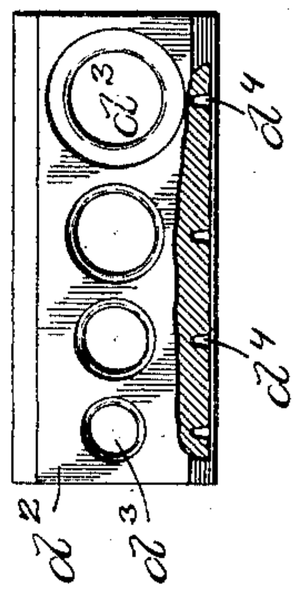
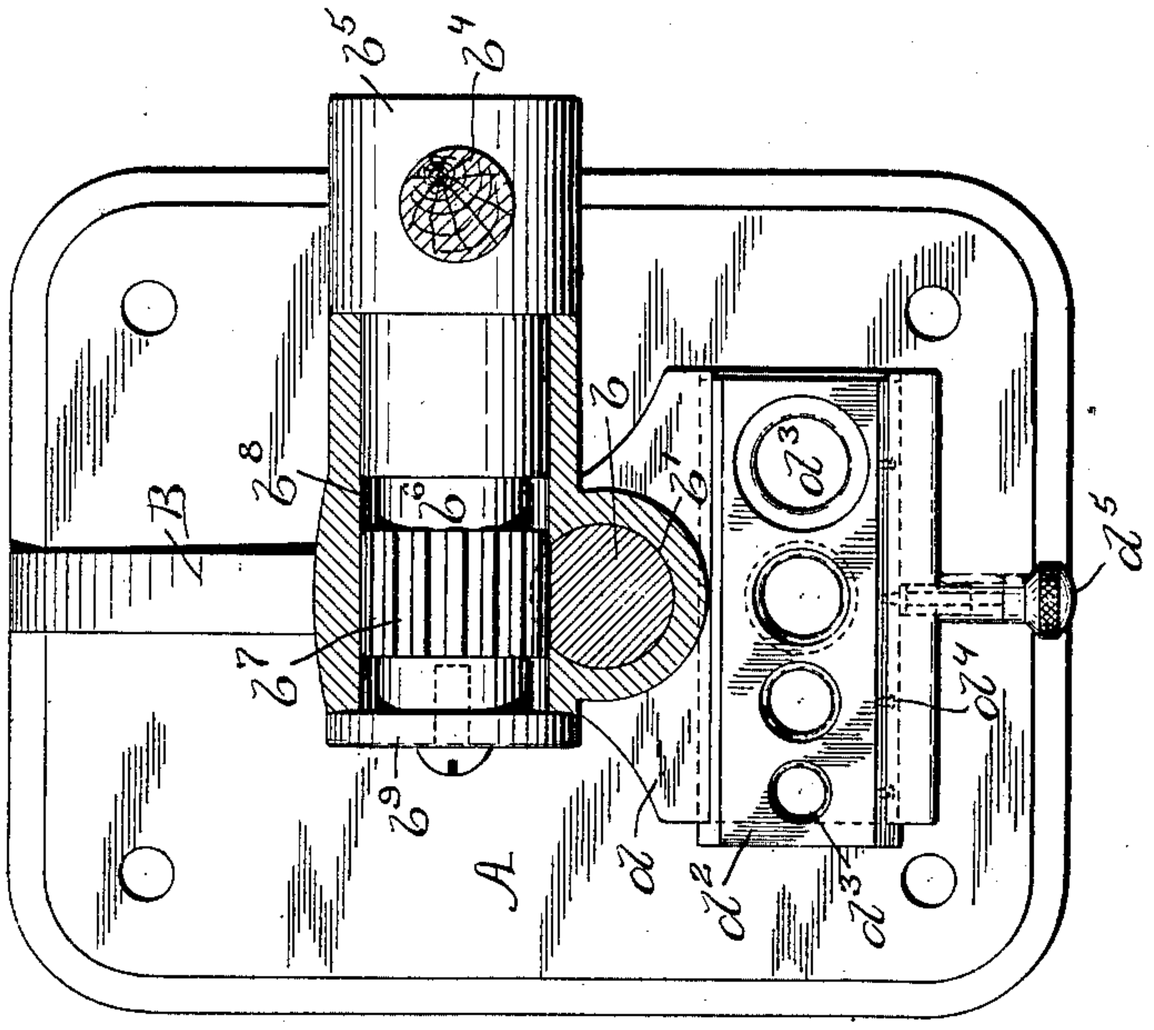



Fig. 3.

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# UNITED STATES PATENT OFFICE.

FERNANDO O. JAQUES, JR., OF PROVIDENCE, RHODE ISLAND, ASSIGNOR OF ONE-HALF TO WILLIAM N. KIDDER, OF PROVIDENCE, RHODE ISLAND.

## DENTAL PRESS.

SPECIFICATION forming part of Letters Patent No. 687,987, dated December 3, 1901.

Application filed May 8, 1901. Serial No. 59,261. (No model.)

*To all whom it may concern:*

Be it known that I, FERNANDO O. JAQUES, Jr., a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Dental Presses, of which the following is a specification.

This invention has reference to an improvement in presses for forming dental crowns and similar articles.

The invention consists in the peculiar and novel construction and the combination of the parts more fully set forth hereinafter.

My improved press is especially designed for cutting out the blank and forming the same into the cap or tube inclosing the crown or part of a tube; but the construction of the parts and the combination may be used in presses used for other purposes.

The object of the invention is to facilitate the construction and the operation of the press.

Figure 1 is a front view of my improved dental press. Fig. 2 is a side view of the same shown partly in section. Fig. 3 is a top view of the press shown partly in section. Fig. 4 is a top view of the rotatable die-holder, showing the connection with the rack-bar. Fig. 5 is a top view of the drawing-die.

Similar marks of reference indicate corresponding parts in all the figures.

In the drawings, A indicates the base of the standard, and B a bracket extending from the base and forming the support of the operative parts. In the base A is formed the die-holder $a$, in which for dental work the female cutter-die is supported.

The plunger consists of the true cylindrical bar $b$, sliding in the cylindrical vertical bore $b'$ in the bracket B, the axis of which is on a line with the axis of the die-holder $a$. The bar $b$ is provided with the rack $b^2$, formed in the body of the cylindrical bar. To the lower end of the bar $b$ is removably secured the die $b^3$. The bar $b$ is actuated by the lever $b^4$ or a similar hand-operated device secured to or forming part of the boss $b^5$ on the shaft $b^6$ on which the pinion $b^7$ is formed. The shaft $b^6$ is journaled in the cylindrical bearing $b^8$, into which the shaft, with the pinion, is inserted from one end until the boss $b^5$ bears against the end. The disk $b^9$ is now secured to the other end of the shaft $b^6$, as shown in Fig. 3. The front of the bracket B is provided with the slot $b^{10}$.

The rotatable die-holder consists of the collar $c$, on which a series of dies are secured, so as to extend radially from the peripheral surface of the collar. In the preferred form the drawing-dies $c'$, $c^2$, $c^3$, and $c^4$ extend radially from the collar $c$. The collar $c$ is rotatably mounted on the tube $c^5$, the washer $c^6$ is placed between the collar $c$ and the face of the bracket B on each side of the slot $b^{10}$, and the spring-washer $c^7$ bears on the front of the collar $c$, which front face is provided with the notches $c^8$, with which the stop $c^9$ on the spring-washer $c^7$ engages when the dies are in the desired position. The bolt $c^{10}$ extends through the tube $c^5$ and is screwed into the bar $b$, the head of the bolt bearing on the spring-washer to hold it firmly against one end of the tube $c^5$, the other end of the tube bearing against the bar $b$.

The die-bed $d$ is preferably formed integral with the bracket B. It has the opening $d'$ and an undercut slide on which the die-plate $d^2$ is supported. The die-plate $d^2$ has the graduated and perforated drawing-dies $d^3$ and in one edge the notches $d^4$. The handle $d^5$ has the spring-pressed pin $d^6$, which when the die-plate $d^2$ is in the desired position enters one of the notches $d^4$ in the die-plate.

I do not wish to confine myself to the form or construction of the dies herein shown and described, as others may be substituted for them.

In using my improved press for dental crownwork the sheet-stock is placed on a die in the die-holder $a$, the rotation of the pinion $b^7$ forces the bar $b$ down, and the die $b^3$ cuts the required disk of stock. The so-cut disk is now placed on the largest of the drawing-dies $d^3$, which being placed in line with the largest drawing-die $c'$ the downward movement of the bar $b$ carries with it the rotatable die-holder and the die $c'$ acts to form the disk into a cup, which cup, when placed on the next die $d^3$ and acted on by the die $c^2$, is drawn out lengthwise while its diameter is reduced, and so on until the cap is reduced to the desired diameter and elongated to the desired length.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. A dental press having a cylindrical rack-bar provided with a cutter-die and a rotatable die-carrier connected with and operated by the rack-bar, as described.

2. In a dental press, the combination with the standard, a die-holder in the base of the standard, a die-bed projecting from the standard, and a die-plate having a series of dies supported on the die-bed, of a cylindrical rack-bar, a rotatable die-carrier connected with and operated by the rack-bar, and means for operating the rack-bar, as described.

3. In a dental press, the combination with the cylindrical rack-bar and the cylindrical way for the rack-bar, of the shaft $b^6$, the pinion $b^7$, the boss $b^5$ on one end of the shaft, the disk $b^9$ secured to the other end of the shaft, and means for rotating the shaft, whereby the pinion-shaft may be supported in a cylindrical bearing, as described.

4. In a dental press, the combination of the following instrumentalities: a cylindrical rack-bar having a die detachably secured to one end, a die-holder in line with the rack-bar, a die-bed in front of the rack-bar, a rotatable die-carrier connected with and operated by the rack-bar, graduated drawing-dies on the die-carrier, means for operating the rack-bar, and a graduated die-plate, whereby the blanks may be cut, cupped and drawn out, as described.

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

FERNANDO O. JAQUES, JR.

Witnesses:

ADA E. HAGERTY,

J. A. MILLER, Jr.