No. 695,507. Patented Mar. 18, 1902.

F. D. STRANG.

JEWELER'S MOLD.

(Application filed June 20, 1900.)

(No Model.)

Fig. 1.

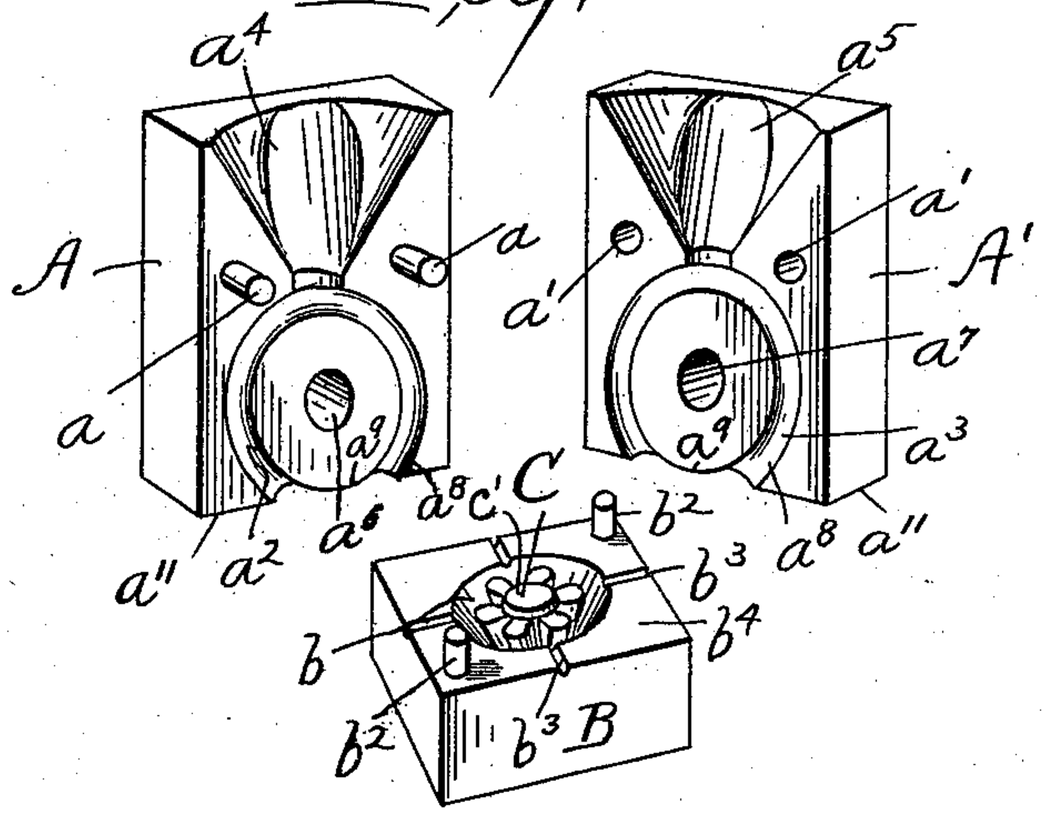

Fig. 2.

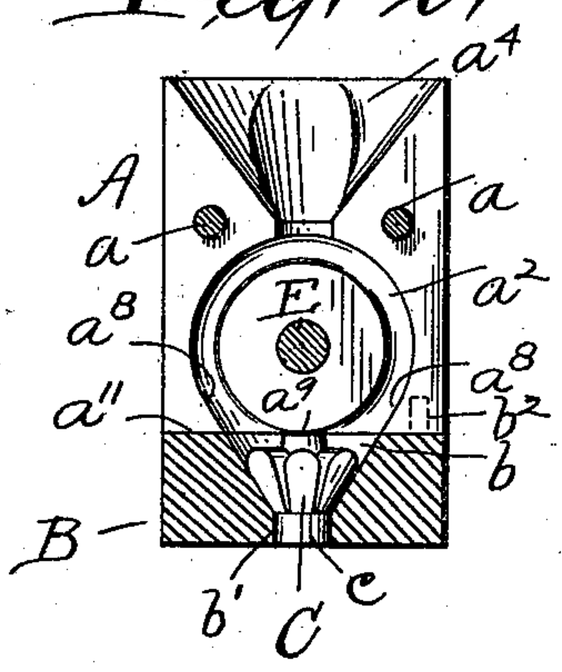

Fig. 4.

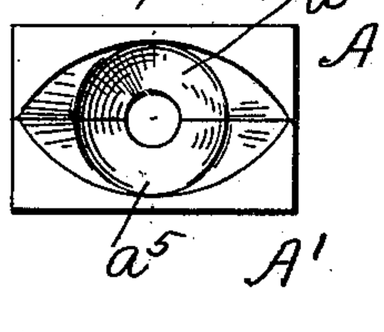

Fig. 3.

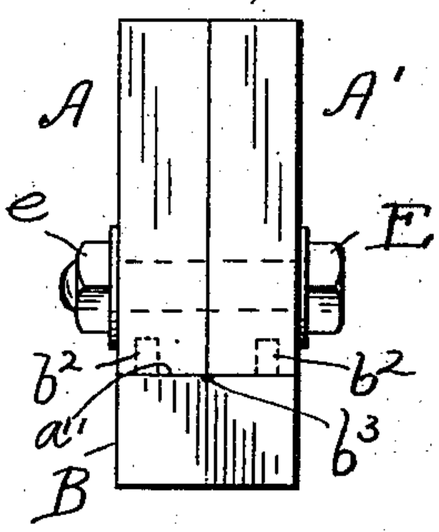

Fig. 5.

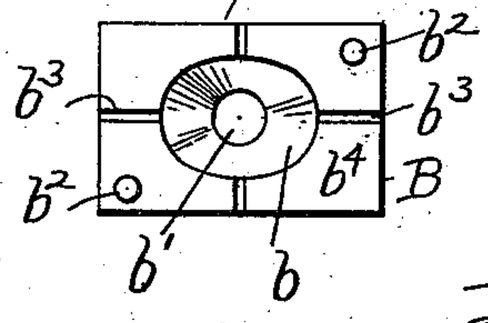

Fig. 6.

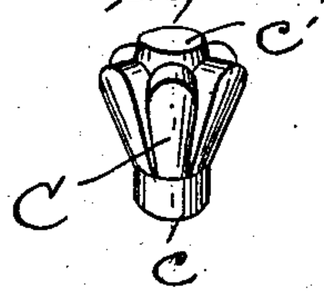

Fig. 7.

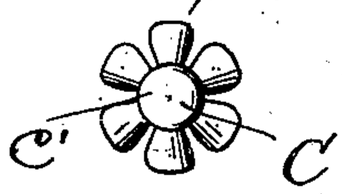

Fig. 8.

Witnesses
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Frank D. Strang,
By his Attorneys,
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UNITED STATES PATENT OFFICE.

FRANK D. STRANG, OF CLEVELAND, OHIO.

JEWELER'S MOLD.

SPECIFICATION forming part of Letters Patent No. 695,507, dated March 18, 1902.

Application filed June 20, 1900. Serial No. 21,001. (No model.)

To all whom it may concern:

Be it known that I, FRANK D. STRANG, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Jewelers' Molds, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The invention relates to molds such as may be used by jewelers, &c., in casting rings and ornaments; and its object is to provide an improved mold which shall be adjustable to mold seamless rings adapted to receive a variety of settings.

The invention consists in forming the mold in sections, the mold for the setting being formed within one of these sections, which section is adapted to carry a core which may be of any one of a variety of shapes. By this means while still using the same mold a great variety in the settings may be obtained, all of which will be more fully described hereinafter and definitely set forth in the claims.

The mold is made of steel. It is heated during the casting to prevent its too suddenly chilling the metal cast. To cause the molten metal to flow easily, the mold is first greased and then sprayed with some slippery substance, as soapstone or a mixture of soapstone and borax, for example.

In the drawings, which fully disclose my invention, Figure 1 is a perspective of the sections or parts forming the mold and showing their inner faces and with the core set in one of the sections. Fig. 2 is a vertical section through the mold, being in the plane of the parting faces of two of these sections and cutting through the part carrying the core for the setting, the core being shown in full carried within it. Fig. 3 is an end elevation of the complete mold. Fig. 4 is a top plan thereof. Fig. 5 is a plan of the upper side of the setting mold-section. Fig. 6 is a perspective view of the core shown in Figs. 1 and 2, which is adapted to form a claw-setting. Fig. 7 is a plan of the same. Fig. 8 is a perspective view of a core which is used to form a simple cone-setting.

Referring now particularly to the drawings, A and A′ represent the side parts of the mold. They may be formed of rectangular blocks, as shown, and they carry incomplete annular grooves a^2 and a^3, respectively, in their inner faces, which when the faces are brought together unite to form the mold for the body of the ring. Only the inner edge of the groove is a complete circle, the lower faces a'' of the blocks cutting through the groove substantially tangent to the inner edge. One of the parts A A′ carries dowel-pins a a, which are adapted to fit into holes a' a' in the other part, whereby the registering of the recesses a^2 and a^3 with each other is assured. On their upper side the inner faces are recessed, as at a^4 and a^5, which recesses connect, respectively, with the grooves a^2 and a^3, and when these two parts of the mold are brought together these recesses form the hopper-like jet shown for the mold. The two parts A A′ are provided with registering openings a^6 a^7, passing through the center of the ring portion for the reception of a bolt E, which, with its nut e, holds the two sections together during casting.

As stated, the two parts A A′ of the mold form the mold only for the body of the ring, the lower side a'' intersecting the annular groove. Now the part B, which is a base for and at the same time completes the mold, is set with its inner or upper face b^4 against the face a''. A recess b in its inner face unites with the recesses a^2 and a^3 to form a complete mold. The neatness in the appearance of the cast ring is increased by making the outline of the body-mold run easily and gently into the mold of the base B. Thus, as seen in Fig. 2, the outline of the recess is straightened at a^8 to form a continuation of the outline of the recess b. This base B has an opening or depression b' at the bottom of the recess b to hold a core, as C, in place, as shown in Fig. 2, which determines the form of the part receiving the setting. This particular core C, which is further illustrated in Figs. 6 and 7, is adapted to give the ring a claw-setting. It has a short shank c on its under end, which fits into the opening b', and a boss c' on its upper end, which rests against the inner surface of the mold at a^9. Fig. 8 illustrates another form of core C′, which is used to give the ring a simple cone-setting. It has the shank c, adapted to fit the opening b'. These two forms of core are intended to

be illustrative of all forms which could be used, according to the setting desired.

The upper face of the base B is preferably provided with dowel-pins b^2 b^2 in two diagonally opposite corners, (which take into holes in the face a'',) and it may have vent-grooves b^3, as shown.

Having described my invention, I claim—

1. In a jeweler's ring-mold, the combination of two upper sections having on their inner faces grooves which coöperate to form a mold for the body of the ring, a section which is the base for said mold and contains the part of the mold which forms the setting for said ring, said base having a recess, and a core removably held within said recess, substantially as described.

2. In a jeweler's ring-mold, the combination of two upper sections having on their inner faces grooves which coöperate to form a mold for the body of the ring, a section which is the base for said mold and contains the part of the mold which forms the setting for said ring, said base having a recess, and a core having a projection taking into the recess in said base, the upper end of said core contacting the bottom face of said upper sections whereby said core is held in place, substantially as described.

3. In a jeweler's ring-mold, two upper sections having on their inner faces grooves which coöperate to form the body of the ring, a base-section fitting against said upper sections, said base having a main recess adapted to connect with said coöperating grooves and a reduced recess at the bottom of the main recess, combined with a core adapted to occupy said main recess and having a shank fitting said reduced recess, substantially as described.

4. In a jeweler's ring-mold, a pair of side sections, each of which has on its face an incomplete annular groove, the bottom of said sections being substantially tangent to the inner edge of said groove, combined with a bottom section which contains a recess adapted to continue the opening comprised by said coöperating grooves, and a core contained within said recess and abutting with its upper extremity the bottom face of said side sections, substantially as described.

5. A mold made of metal and comprising a plurality of body-sections disposed face to face and each having a parti-annular chamber, said chambers registering to form a body-mold space, each chamber being cut away on a line making a chord to said parti-annular chamber, to thereby expose a part of each chamber, a core in said chamber, the face of the core constituting one wall of said chamber to thereby define the internal diameter of the ring, and a crown-mold section having a crown-mold space in communication with the body-mold space, said crown-mold section abutting the face of the body-section left by the cut as a chord and forming that portion of the other wall of the annular chamber which lies between the points where the chord cuts said annular chamber.

6. A mold made of metal and comprising a plurality of body-sections disposed face to face and each having a parti-annular chamber of variable depths, said chambers registering to form a body-mold space, each chamber being cut away on a line making a chord to said annular chamber to thereby expose a part of each chamber, a core in said chamber, the face of the core constituting one wall of said chamber to thereby define the internal diameter of the ring, and a crown-mold section having a crown-mold space in communication with the body-mold space, said crown-mold section abutting the face of the body-section left by the cut as a chord and forming that portion of the other wall of the annular chamber which lies between the points where the chord cuts said annular chamber.

7. A mold made of metal and comprising a plurality of body-sections disposed face to face and having parti-circular chambers registering to form a body-mold space, said sections being cut away on a line making a chord to the circle, to thereby expose part of the mold-space, a pin to unite the two sections, a core to define the internal diameter of the ring, and a crown-mold section having a flat face to fit against the body-sections of the mold, and having a mold-space in communication with the body-mold space.

8. A multipart mold made of metal and consisting of two main separable substantially duplicate sections having like parti-annular chambers adapted to register one with the other, and a runaway, said chambers being cut away on a line making a chord to said circular chambers to thereby expose a part of each chamber, a core centered in said chamber, and a third or auxiliary mold-section adapted to fit against the face of the mold material left by the cut made as a chord, said auxiliary mold-section having a projection surrounded by a space, said space communicating with the mold-space of each main section and defining the exterior shape of the crown of the ring to be cast the said projection defining the size and location of the jewel-space in the crown, said auxiliary section being confined to the main section during casting.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

FRANK D. STRANG.

Witnesses:
ALBERT H. BATES,
OTTO STRANG.