F. H. CURL.

PATTERN FOR CASTING FINGER RINGS.

APPLICATION FILED OCT. 31, 1910.

996,978.

Patented July 4, 1911.

2 SHEETS—SHEET 1.

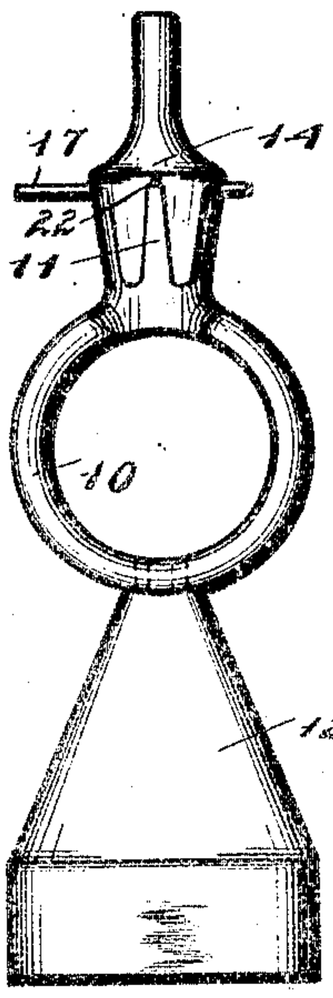


Fig. 1.

Fig. 2.

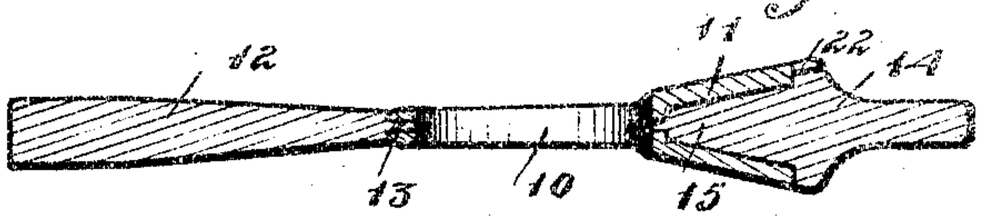
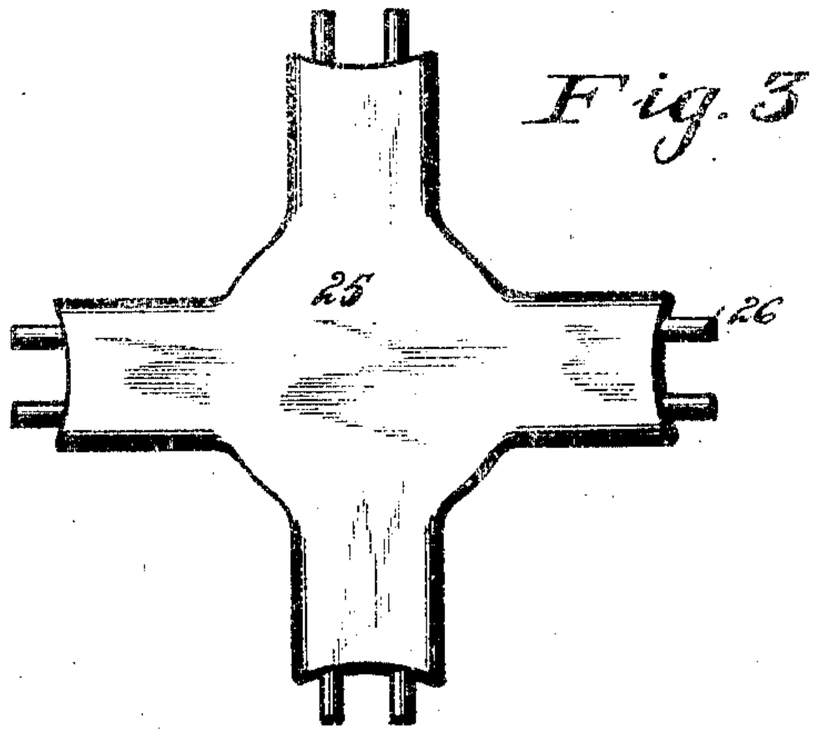


Fig. 3.



Witnesses.
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A. G. Hague

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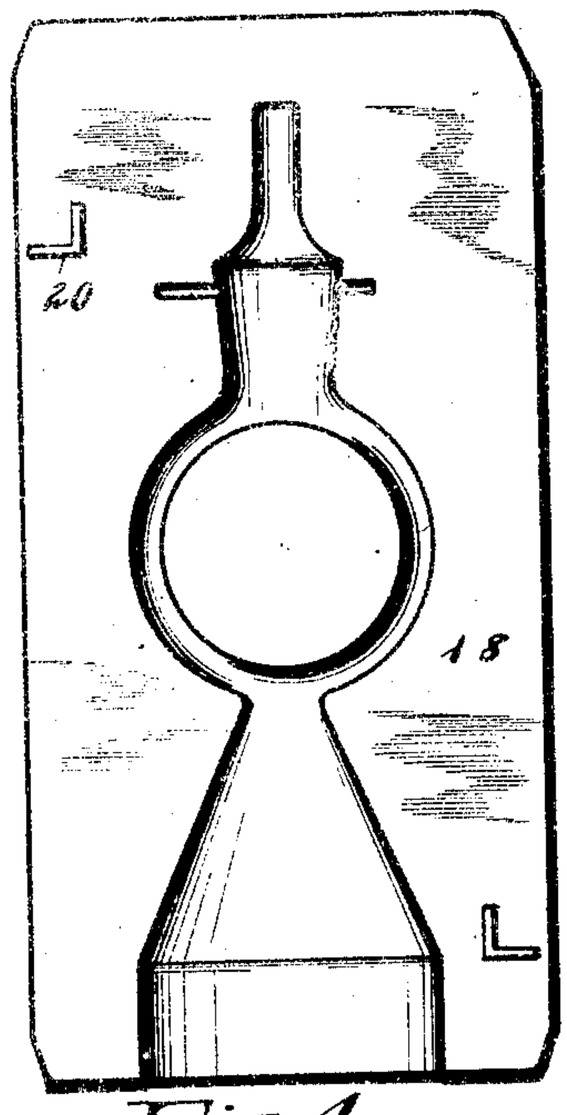


Fig. 4.

Fig. 6.

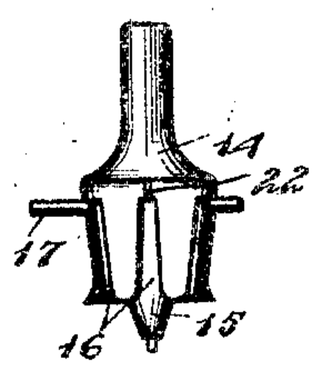
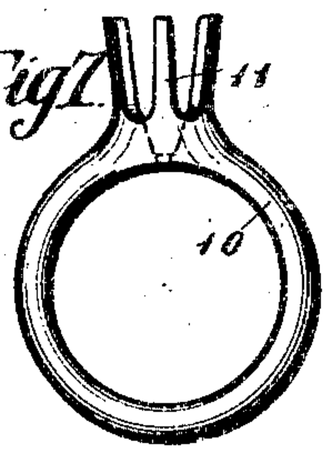


Fig. 7.



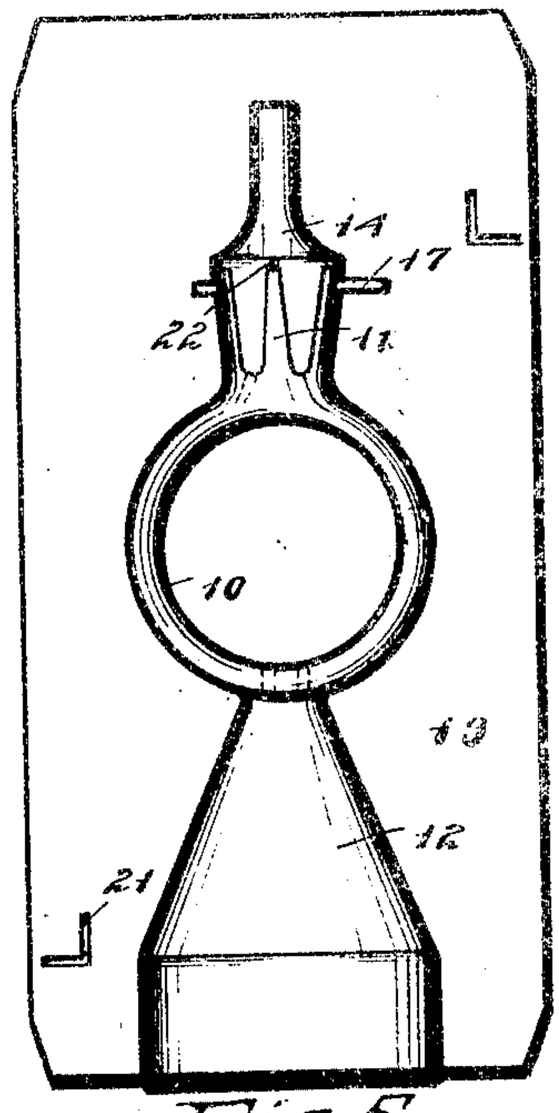
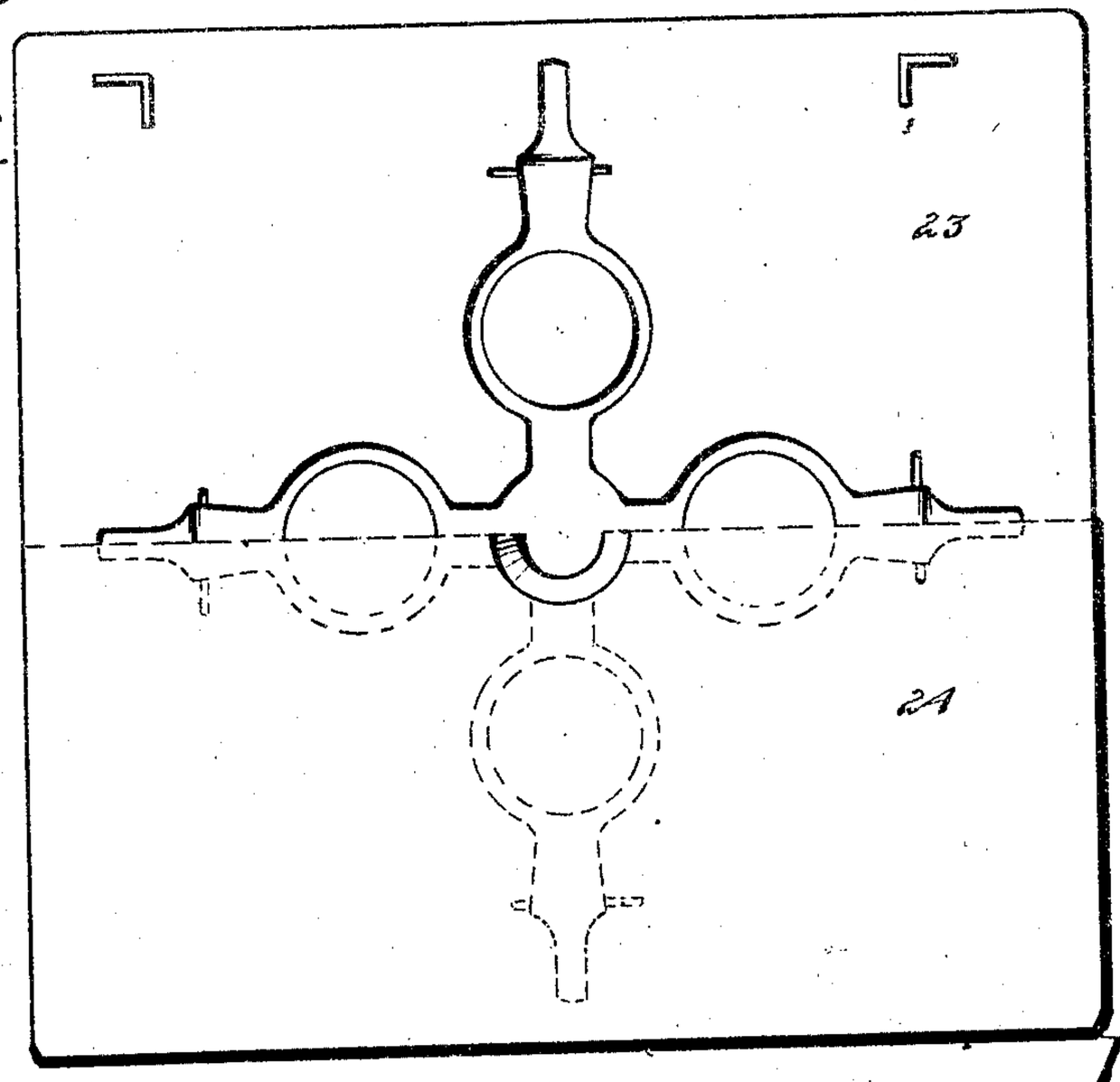


Fig. 5.

Fig. 8.



Witnesses.
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UNITED STATES PATENT OFFICE.

FRED H. CURL, OF DES MOINES, IOWA.

PATTERN FOR CASTING FINGER-RINGS.

996,978. Specification of Letters Patent. Patented July 4, 1911.

Application filed October 31, 1910. Serial No. 590,019.

To all whom it may concern:

Be it known that I, FRED H. CURL, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a certain new and useful Pattern for Casting Finger-Rings, of which the following is a specification.

The object of my invention is to provide a pattern of simple, durable and inexpensive construction that may be made of any suitable inexpensive metal and furnished in sets of various sizes to jewelers, whereby the jeweler having the pattern may, by the use of a simple and inexpensive mold, cast finger rings of precious metal quickly and easily at a minimum of expense.

My invention consists in certain details, in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Figure 1 shows a side elevation of a pattern embodying my invention. Fig. 2 shows a vertical, central, sectional view of same. Fig. 3 shows a detail, plan view of a multiple gate that may be used in connection with my improved ring pattern. Fig. 4 shows a plan view of a top mold member having an impression therein made of my improved pattern. Fig. 5 shows a similar view of the lower mold member having my improved pattern therein. Fig. 6 shows a side elevation of the core member of my improved pattern. Fig. 7 shows a side elevation of the ring member of my improved pattern, and Fig. 8 shows a plan view of a mold adapted to receive a number of my improved patterns connected with a multiple gate, one half of the upper mold member being removed and the pattern in the lower mold member beneath it being illustrated by dotted lines.

Referring to the accompanying drawings, I have used the reference numeral 10 to indicate the body portion of the ring member of my improved pattern. At one point on the circumference of the body portion is a series of prongs 11 of the kind and shape now in common use for the purpose of holding precious stones. At the side of the body portion 10 opposite from the prongs 11, I preferably provide two small openings such as indicated by dotted lines in Fig. 1, for the purpose of receiving a gate pattern member 12 which is provided with lugs 13 to enter said opening.

In connection with the ring pattern member I employ a core member which comprises a body portion 14 having a central cone-shaped portion 15 designed to enter the interior of the space between the prongs on the ring pattern member, and also provided with a series of recesses 16 designed to receive said prong members on the ring portion. Extended through the body portion 14 is a guide pin 17 having one short and one long end projecting beyond the body portion.

The mold members with which my improved pattern is employed comprise a number of upper and lower mold members, the upper member being indicated by the numeral 18, as shown in Fig. 4, and the lower by the numeral 19, as shown in Fig. 5. These mold members may consist of two pieces of cuttlefish bone or they may be made of ordinary mold frames employed in connection with molders' sand or other suitable material. In order to provide for holding the two mold members in coinciding positions, I provide a number of L-shaped metal guides 20 partially embedded in one of the mold members 18 and designed to enter corresponding depressions made in the other mold member as shown at 21 in Fig. 5.

In practical operation with this form of my invention I connect the ring pattern, the core pattern and the gate pattern, as shown in Fig. 5, and then place them in position upon the mold member 19 and then place the mold member 18 on top of it and force the two mold members firmly together. This causes the material of the cuttlefish bone to be depressed at the points where the pattern members engage it so that the adjacent surfaces of the mold members may come in contact with each other. I then remove the complete pattern and finally replace the core pattern thus leaving a mold cavity in the material consisting of the gate and of the ring member. The notches 16 of the core member are so arranged that the metal will flow into them and produce perfectly formed prongs for the ring being molded. The melted precious metal is then poured into the mold in the ordinary way and small grooves 22 are provided at the ends of the notches 16 through which the air bubbles may escape at the ends of the prongs.

In order to provide for casting a number

of rings at the same time I provide a mold of the kind illustrated in Fig. 8 consisting of a lower member 23 and an upper mold member 24 and I place therein a number of patterns of the kind illustrated in Figs. 1 and 2 and I connect all of these patterns by means of a multiple gate pattern 25 as shown in Fig. 3. This pattern is provided with guide pins 26 for detachable connection with the ring pattern members in the same manner as the pins 13 on the gate pattern 12 as shown in Fig. 2.

By the use of my improved pattern a ring manufacturer may have an equipment for casting rings of various sizes and shapes, which equipment is comparatively inexpensive and of few parts that occupy a small amount of space. For instance, the equipment required for ordinary purposes may consist of a single gate pattern member, a number of ring pattern members of all the various sizes of ring bodies and also the various sizes of prongs for receiving the precious stones and then they need only have a number of core members corresponding to the sizes of the prong members of the rings so that, with an equipment consisting of a few core members a greater number of ring members and a single gate member, a ring manufacturer is provided with an equipment by which he can readily, quickly and easily make rings of all of the standard sizes of body portions and prong members that may be required, and as all of these pattern members may be made of cheap metal it is obvious that a complete equipment may be provided at a minimum of expense. Furthermore by the use of my improved patterns an operator may readily and easily prepare a mold and complete the casting operation without any other equipment in addition to my improved patterns than is necessary to melt gold or other precious metal.

I claim as my invention:

1. An improved pattern for casting finger rings, comprising a ring pattern member consisting of a body portion, and a series of prongs at one point thereon for forming a stone setting, and a core member comprising a body portion, a cone-shaped projection designed to enter between the prongs of the ring member and a series of notches designed to receive the prongs of the ring member, the said prongs and depressions being accurately fitted together so that when pressed into the material in which the casting is done they will form a substantially cylindrical mold cavity having a smooth exterior.

2. An improved pattern for casting finger rings, comprising a ring pattern member consisting of a body portion and a series of prongs at one point thereon for forming a stone setting, and a core member comprising a body portion, a cone-shaped projection designed to enter between the prongs of the ring member, and a series of notches designed to receive the prongs of the ring member, the said prongs and depressions being accurately fitted together so that when pressed into the material in which the casting is done they will form a substantially cylindrical mold cavity having a smooth exterior, and a gate mold member detachably connected with the ring mold member.

3. A pattern for finger ring castings, comprising a series of ring pattern members, each comprising a body portion and a series of prongs at one side thereof to form a stone setting, each also being provided with two openings at a point opposite the setting, a core member for each ring member comprising a body portion, a cone-shaped projection designed to enter the ring member and a series of notches surrounding the cone-shaped projection and designed to receive the prongs and to accurately fit them, and a multiple gate pattern member having a series of arms, each provided with two pins to enter the corresponding openings of one of the ring members, for the purposes stated.

4. An improved pattern for finger ring castings, comprising a pattern member having a circular body portion, a series of prongs to form a stone setting, said prongs being arranged around a substantially cone-shaped space between them, a core member comprising a body portion, a substantially cone-shaped projection designed to enter between the prongs of the ring member, and a series of notches surrounding the cone-shaped projection and designed to accurately fit the prongs of the ring member to form, when united, a smooth cylindrical exterior, and a pin extended through the core body portion and projected at one side a greater distance than at the other, for the purposes stated.

Des Moines, Iowa, October 25, 1910.

FRED H. CURL.

Witnesses:
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A. G. HAGUE.