May 13, 1924. 1,494,103

O. DE CARDY

PROCESS FOR DIE CASTING

Filed June 23, 1922

Fig. 1.

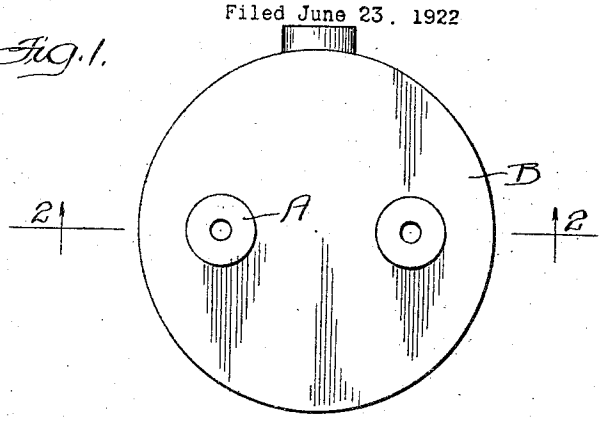


Fig. 2.

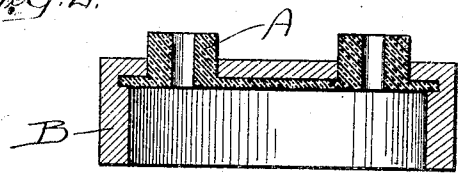


Fig. 5.

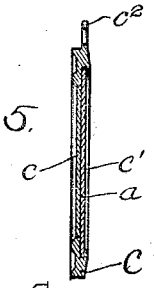


Fig. 4.

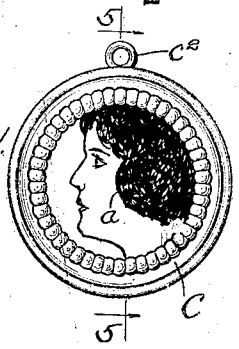
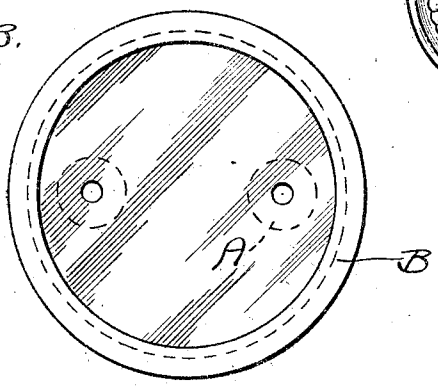


Fig. 3.



Witness:

Inventor:
OTTO DE CARDY

By

Atty

Patented May 13, 1924. 1,494,103

UNITED STATES PATENT OFFICE.

OTTO DE CARDY, OF CHICAGO, ILLINOIS.

PROCESS FOR DIE CASTING.

Application filed June 23, 1922. Serial No. 570,426.

To all whom it may concern:

Be it known that I, OTTO DE CARDY, a citizen of the United States, residing in Chicago, Cook County, Illinois, have invented certain new and useful Improvements in Processes for Die Castings, of which the following, taken in connection with the drawing, is a description.

My invention has for its object the process of castings moulded over non-metallic materials, such for instance as fiber, bakelite, celluloid, rubber and the like, which may be used in a great variety of places in different kinds of work.

It is an object of my invention to cast a metal frame over or around such materials where needed for insulating in electrical work, to provide conduits for carrying wires or forming brackets for same or extending wires through openings in certain places where a sustaining member may be needed and desired to be formed of material, such as above named.

It is a further object of my invention to provide a process for casting metal over or around such materials as above enumerated which may be used for ornaments, such as buckles, buttons or the like, such for instance as are frequently used in political campaigns, and together may be printed upon a paper placed between pieces of transparent celluloid and a form cast around them which securely holds the parts in place and without in any way injuring the transparent material.

In the accompanying drawings I have illustrated different forms of construction showing the possibilities of moulding such metals as white brass or zinc alloy metals by casting at approximately 900 degrees Fahrenheit and by inserting the bakelite or other material in any shape or form in the mould and casting the metal around it to form the shape desired.

The conventional forms shown in the drawing are merely illustrative of the die mould in my invention and in these drawings—

Figure 1 is a plan view of a metallic disk cast about an insulating member,

Figure 2 is a sectional view through the same,

Figure 3 is a plan view taken from the seat opposite to that shown in Figure 1,

Figure 4 is a plan view of a button frame cast with my process,

Figure 5 is a sectional view taken on line 5—5 of Figure 4.

In referring to the drawings A represents a disk or frame of any material such as fiber, bakelite, rubber or the like, which may be of any size or shape desired for the purpose intended and which is placed in a mould of suitable design for the frame, housing or covering B. Any white brass or zinc alloy metals which will mould at approximately 900 degrees heat is poured in a mould and surrounds the frame A, securely holding it within the casing formed by the hardening metal. The heated metal contacting with the fiber or like material at approximately the temperature mentioned will not melt or destroy said material, but will at once soften the material and form a unit with the contacting surface of the moulten metal which will practically weld or hold together the meeting surfaces of the materials forming a permanent structure.

In the form of construction shown in Figs. 4 and 5, a button of medallion is formed by utilizing an inset of paper which may have printed matter thereon for advertising or any image, such as the face *a* shown in Fig. 5, which is provided with a transparent covering *c*—*c'* on both sides thereof of the same size and contour as the paper inset. After placing these parts *a*—*c*—*c'* in proper relation to each other, they are placed in the mould and the molten metal cast therein which forms the frame C, enclosing the edges of the paper *a* and the cover transparent disks *c*—*c'*. The eyelet c^2 may be cast on the rim of the frame or other fastening means may be provided if desired. It will be understood that I contemplate the use of various shapes and designs and of various styles and ornamentations, where buttons, pins, buckles, medallions or the like are made, as well as any size, shape or contour of structure for maintaining insulating members in electrical work of any kind.

I claim:—

A process of die casting which consists in

arranging an inset of a non-metallic substance in a mold design to form a frame having fixed engagement with said non-metallic substance, then pouring molten metal into said mold at a temperature which will soften that portion of the non-metallic substance contacting with the molten metal and weld the meeting faces thereof together to form a permanent union between the non-metallic substance and the metal.

In testimony whereof I have signed this specification.

OTTO DE CARDY.