May 6 , 1924. 1,493,373

N. E. MORGAN

COMBINED CRUCIBLE AND POURING DEVICE

Filed Oct. 12 , 1920

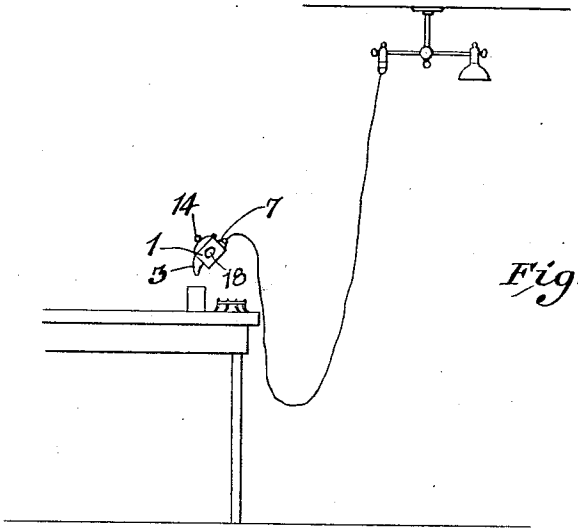

Fig.1.

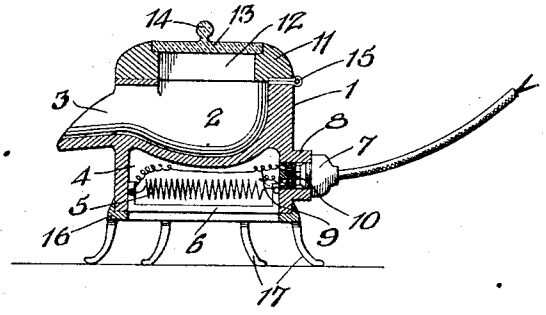

Fig.2.

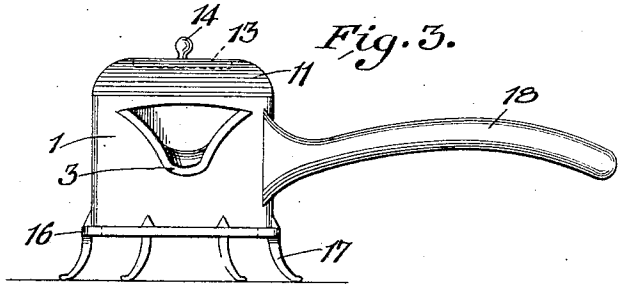

Fig.3.

Inventor

N. E. Morgan

By Mason Fenwick & Lawrence,

Attorneys

Patented May 6, 1924. 1,493,373

UNITED STATES PATENT OFFICE.

NUMA ERVIN MORGAN, OF ATLANTA, GEORGIA.

COMBINED CRUCIBLE AND POURING DEVICE.

Application filed October 12, 1920. Serial No. 416,380.

To all whom it may concern:

Be it known that I, NUMA E. MORGAN, citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Combined Crucible and Pouring Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in combination crucible and pouring devices for use in the melting and pouring of metal, such as gold, silver and metals of like character which are used in the manufacture of dental appliances such as gold crowns, plates or the like. The main object of the present invention is the provision of a crucible for melting metal wherein a source of electricity is used for supplying the heat to melt the metal and wherein the molten metal can be quickly and readily poured from the crucible into the mold.

Another object of the present invention is the provision of a crucible provided with a melting chamber for receiving the metal and having an electric heating coil arranged beneath this melting chamber and suitably connected with a source of electric supply. The crucible is also provided with a pouring spout having communication with the metal receptacle whereby the molten metal can be readily poured from the body of the crucible into a mold and in order to facilitate the pouring operation, a handle member is secured to the body of the crucible at one side thereof.

A further object of the present invention is the provision of an electrical crucible for heating precious metals, such as gold, silver and the like, which are used for the construction of crowns, plates and other dental appliances, said crucible being provided with a supporting member whereby to support the crucible while the metal is being heated and said crucible being further provided with a handle member to facilitate the pouring of the molten metal from the crucible.

With the above and other objects in view, the invention consists in the novel features of construction, the combination and arrangement of parts hereinafter more fully set forth, pointed out in the claim and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a crucible constructed in accordance with my invention,

Figure 2 is a longitudinal sectional view through the same, and

Figure 3 is a front elevation.

Referring now more particularly to the drawings, the numeral 1 indicates the body of my improved crucible which in the present instance is shown as substantially cylindrical in form, provided with a metal receiving chamber 2, terminating at one side thereof into a spout 3, which extends from one side of the body whereby the molten metal from within the chamber 2 can be readily poured into a mold or other receptacle.

The lower end of the body 1 is provided with an annular recess 4 in which the heating coil 5 is arranged. This heating coil is retained in position by means of a U-shaped bracket 6, the ends of which are attached to the side walls of the cavity 4 while the intermediate portion thereof bridges the lower end of the cavity as illustrated in Figure 2.

The heating coil 5 is connected to an electric current through the medium of the plug 7 which is removably engaged within the sleeve 8 formed upon the body 1 in any convenient location and is connected to the coils 5 through the medium of the wires 9. It will be noted that the wires 9 which extend from the plug 7 inwardly from the coil are insulated from the sleeve 8 by means of the non-conductive core 10.

The upper end of the body 1 is closed by means of a cover member 11 which is provided with a central opening 12, normally closed by means of a cover plate 13 having a finger piece 14 formed thereon whereby a cover plate can be readily removed. The cover member 11 is hingedly connected to the body 1, as shown at 15, said hinge being preferably connected at the rear of the body as shown in Figure 2.

It will be noted in the accompanying drawings that the cover plate 13 which is removably arranged within the annular recess formed in the upper side of the cover 11 is preferably constructed of a transparent material whereby the molten state of the

metal can be observed by the operator so that he can readily ascertain as to when the metal is in the required molten condition for pouring.

The crucible 1 is preferably supported upon a standard which includes an annular body rim 16 having a plurality of radially projecting legs 17 formed thereon for supporting the same, the upper ends of said legs projecting upwardly beyond the upper face of the rim and adapted to engage the lower side walls of the body 1 to securely retain the body in position upon the rim and so arranged that it can be readily removed when desired. In order to facilitate the handling of the crucible 1, a handle member 18 is connected to one side of the body member 1 and may be either formed integral or welded thereto, as the case may require.

From the above description, taken in connection with the accompanying drawings, it will be readily apparent that I have provided a simple and durable crucible whereby a source of electric current is provided for heating the metal contained therein and whereby the molten metal can be readily poured therefrom into a mold or receptacle of the like character after the metal has become heated to the required state.

While I have shown and described my invention as particularly adapted for use in melting and pouring of metal, such as gold, silver and the like used in the manufacture of dental appliances, it will be understood that the same can be varied slightly in construction and adapted for use by jewelers, plumbers and in fact in various ways of this kind where a device for melting and pouring metal can be used.

What I claim is:

A melting furnace comprising a body member having a receiving chamber, an integral spout communicating with the chamber; a pouring handle secured to the body member; a cover member hinged to the top portion of the body and adapted to normally close the receiving chamber; said cover having a central opening, a removable transparent cover plate normally closing said opening; a depending rim formed integral with said body member and forming a recess below said receiving chamber; an electric coil arranged within said recess, and a plug adapted to be inserted in an aperture formed in said rim, for supplying electric current to said coil.

In testimony whereof I affix my signature.

NUMA ERVIN MORGAN.