C. W. SPEIRS.

ELECTRICALLY HEATED CRUCIBLE, MELTING POT, AND THE LIKE.

APPLICATION FILED JUNE 2, 1919.

1,366,135. Patented Jan. 18, 1921.

Fig. 1.

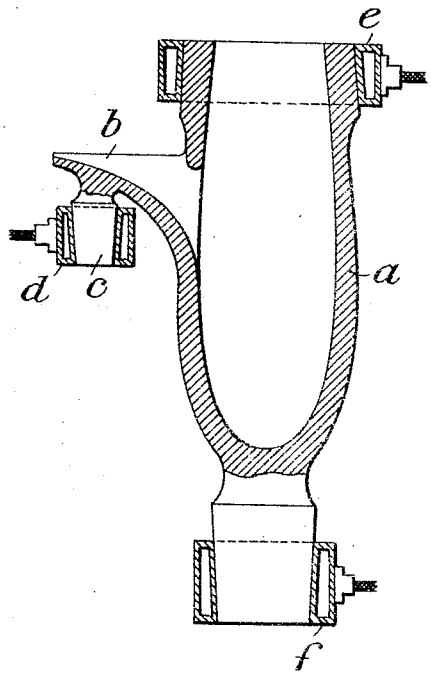
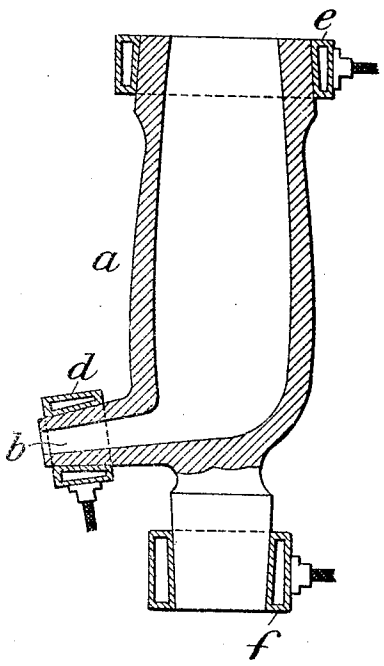


Fig. 2.



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ELECTRICALLY-HEATED CRUCIBLE, MELTING-POT, AND THE LIKE.

1,366,135. Specification of Letters Patent. Patented Jan. 18, 1921.

Application filed June 2, 1919. Serial No. 301,225.

To all whom it may concern:

Be it known that I, CHARLES WILLIAM SPEIRS, a subject of the King of Great Britain, residing at Battersea Works, Battersea, London, England, have invented new and useful Improvements in Electrically-Heated Crucibles, Melting-Pots, and the like, of which the following is a specification.

This invention has reference to electrically heated crucibles, melting pots and the like, that is to say, to crucibles or other vessels having spouts, pourers and tapping holes and composed of a material which conducts and can therefore be heated by the passage of an electric current.

In crucibles, melting pots or the like of this type the connections for the terminals of the electric current supply are placed at opposite ends of the vessel so that the current traverses the body of the latter, but it is found in practice that the spout, lip or pourer remains comparatively cool, thus tending to cool the metal which has been melted in the crucible or pot as it is being poured therefrom.

Now, this invention has for its object to obviate this disadvantage, and to this end provision is made for electrically heating the spout, lip or pourer. This may advantageously be effected, preferably just before pouring, by passing an electric current through the said spout, for which purpose the latter may be furnished at or near its outer end with a connection and a terminal, preferably of the water-cooled type, so connected up in the supply circuit to the crucible or pot that by the operation of a switch the current can be passed through the spout, lip or pourer and thence to one or both of the main terminals upon the crucible thus heating the spout or lip to the required temperature.

The invention may be carried into practice in various ways two of which are illustrated in the accompanying drawing, in which:—

Figure 1 is a vertical section of a crucible having the spout near the upper part, and

Fig. 2 is a similar view of a crucible provided with a tapping hole or pourer at the lower end.

In the arrangement shown in Fig. 1, *a* indicates the body of the crucible and *b* the spout, which latter, as shown, is provided with an extension *c* on to which the terminal *d*, advantageously of the water cooled type, is arranged.

e, *f* indicate water cooled terminals which are applied to the upper and lower ends of the crucible and through which the current will normally flow for heating the body of the crucible. The terminal *d* is advantageously connected up to the supply circuit so that by the operation of a switch the current can be passed through the spout *b* whence it flows to one or both of the main terminals on the crucible, whereby the spout can be raised to the required temperature.

The arrangement shown in Fig. 2 only differs from that shown in Fig. 1 in that the terminal *d* is directly applied to a tapping hole or pouring spout *b* at the lower part of the crucible.

Claim.

In an electrically heated crucible or the like, the combination with a pourer element, of electrical terminals at each end of the crucible and an electrical terminal fitted to the outer end of the pourer element, from which current can pass through the said element, to either or both of the main crucible terminals.

CHARLES WILLIAM SPEIRS.