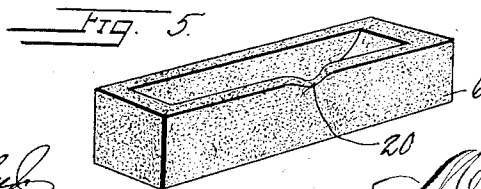
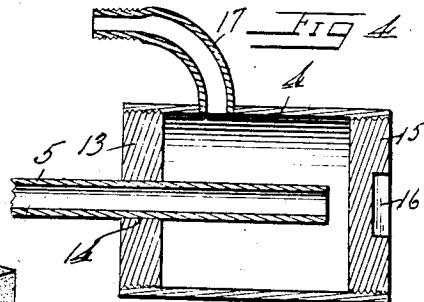
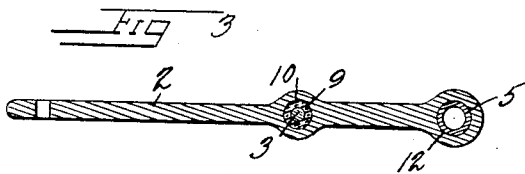
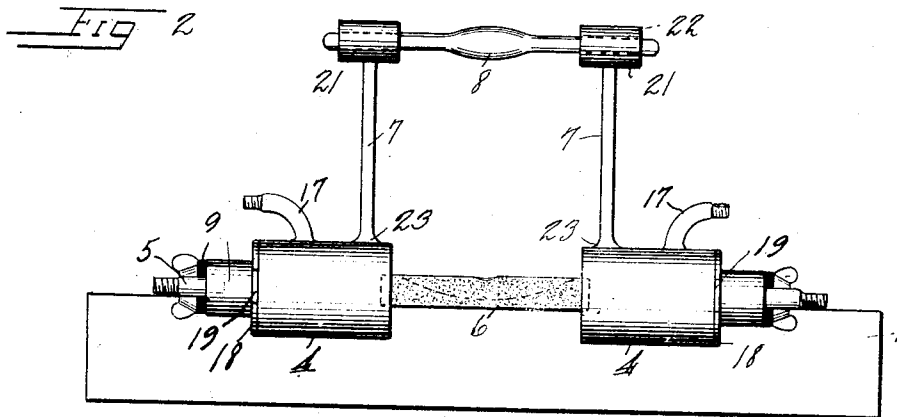
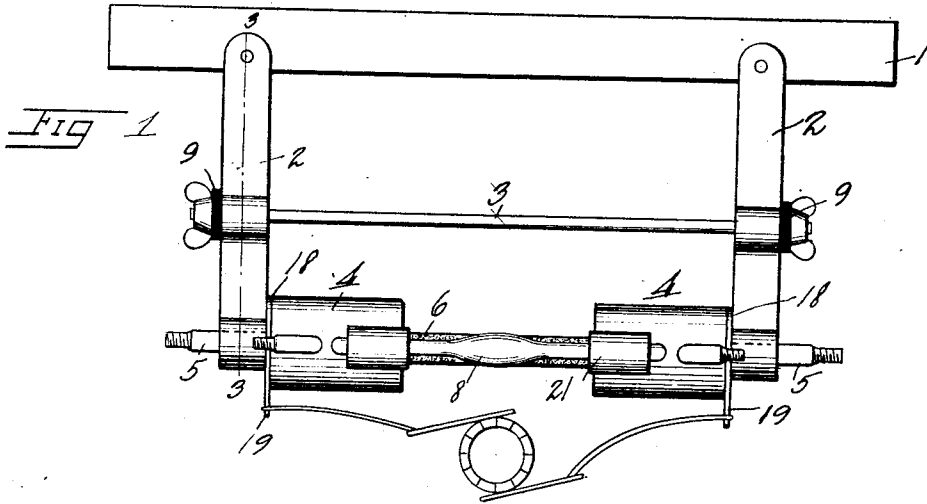


M. S. CLAWSON.
ELECTRIC FURNACE.
APPLICATION FILED FEB. 21, 1917.

1,306,948.

Patented June 17, 1919



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MONROE S. CLAWSON, OF WEEHAWKEN, NEW JERSEY.

ELECTRIC FURNACE.

1,306,948.

Specification of Letters Patent.

Patented June 17, 1919.

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To all whom it may concern:

Be it known that I, MONROE S. CLAWSON, a citizen of the United States, residing at Weehawken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Electric Furnaces, of which the following is a specification.

This invention relates to electric furnaces and more particularly to resistance furnaces and has for one of its objects the provision of a device of this character having improved means for discharging the melted metal.

Another object is to provide an improved receptacle in which the metal is melted.

A further object is the provision of improved means for holding said receptacle.

Other objects and advantages such as simplicity, durability, and cheapness in manufacture will be brought out in the following specification and illustrated in the accompanying drawings in which:

Figure 1 is a top plan view of my furnace,

Fig. 2 is a front view thereof,

Fig. 3 is a longitudinal sectional view of one of the supports.

Fig. 4 is an enlarged sectional view of one of the heads, and

Fig. 5 is a perspective view of the receptacle.

Referring more particularly to the drawings, my invention comprises a base or plate 1; supports 2 pivotally mounted thereon; a rod 3 connecting said supports; cylindrical heads 4 revolvably mounted between said supports on hollow shafts 5 passing through said supports; a member or receptacle 6 of high resistance material mounted between the inner ends of said heads, and levers 7 which are secured to the heads 4 and provided with a hand-hold 8 for tilting the receptacle to discharge its contents.

The base 1 is of nonconducting material, wood or fiber. Each of the supports 2 is pivoted at one end to the base 1 and extends horizontally therefrom. The rod 3 passes through bushings 9 of insulating material in apertures 10 in the supports and has a wing nut threaded upon each end to permit of adjusting the supports in mounting the receptacle 6 between the heads 4. The hollow shafts 5 on which the heads 4 are mounted extend through the apertures 12 in the supports 2 and have their outer ends reduced

to form hose connections and their inner ends extended centrally into the heads 4 to within a short distance of their inner ends.

The ends of the heads 4 are internally threaded, and threaded into their outer ends are plugs 13 having centrally located apertures 14 through which the hollow shafts 5 pass. Plugs 15 are threaded into the inner ends of the heads 4, and are counter-sunk or recessed at 16 to receive the ends of the receptacle 6. Intermediate of the ends of each head is an outlet pipe 17 having its free end reduced for attaching a hose to carry off the water used for cooling the heads.

Copper disks 18 having lugs 19, the functions of which will hereinafter appear, are fitted over the hollow shafts 5 and engage the heads 4 which are held revolvable by the hollow shafts 5.

The receptacle 6 is of high resistance material, preferably carbon or graphite, and is adjustably supported between the heads 4 by engagement of its ends within the recesses 16. The receptacle has a lip 20 to facilitate discharging its contents.

The levers 7 have enlarged heads 21 having apertures 22 in which is loosely mounted the hand-hold 8 whereby the levers are moved to partially rotate the heads 4 to which they are secured as at 23.

Connection between the source of current, which may be a generator or transformer, and the furnace is made by cables secured to the lugs 19 on the disks 18. The current will flow from one head to the other through the receptacle 6, the resistance of which will cause the generation of heat for melting the metal placed therein. After the metal is melted, the handle 8 is grasped and the levers 7 rocked to partially rotate the heads, whereupon the receptacle 6 will be tilted so that the metal will flow therefrom at the lip 20.

Having thus described my invention what I claim is:

1. An electric furnace comprising a main supporting member, side portions pivotally mounted on said supporting member, revolvable heads mounted in said side portions, a resistance member secured between said heads adapted to hold the material to be heated, and means for adjusting said portions.

2. An electric furnace comprising a main

supporting member, side portions pivoted thereon, heads carried by said side portions, a receptacle of high resistance material disposed between said heads, and means for urging said side portions toward each other for holding said heads and said receptacle in clamped relation.

3. An electric furnace comprising supports, shafts carried by said supports, heads revoluble upon said shafts and serving as contacts, a receptacle of high resistance material supported between said heads and having its top open, and means connected with said heads for partially rotating them whereby said receptacle may be tilted to discharge the contents thereof.

4. An electric furnace comprising spaced water-cooled heads, and a receptacle of high resistance material disposed between said heads; the sides of said receptacle being free, and said heads being in horizontal relation to each other whereby an increased temperature may be centered in said receptacle at the point of discharge.

5. An electric furnace comprising a pair of spaced water-cooled heads and a receptacle of high resistance material disposed between said heads in abutting relation thereto, the sides of said receptacle being free from contact with said heads, and said heads disposed horizontally in relation to each other whereby an increased temperature may be brought to the center of said receptacle where the metal is discharged.

6. An electric furnace comprising a main supporting member, horizontally extending side portions pivoted thereon, means for adjusting said side portions relatively to each other, stationary tubular shafts extending through said side portions in axial alinement with each other, hollow heads revoluble upon said shafts and having communication with the bores thereof, discharge tubes communicating with said heads, levers secured to said heads, a handle connected with said levers for moving said heads in unison, and a receptacle of high resistance material disposed in clamped relation between said heads.

7. An electric furnace comprising a pair of relatively movable, non-revoluble shafts, heads revoluble upon said shafts, a handle member connected with both of said heads,

and a receptacle of high resistance material clamped between and by said heads.

8. An electric furnace comprising supports, revoluble heads disposed in horizontal alinement between said supports and serving as contacts, a receptacle of high resistance material supported between said heads and having its top open, and means connected with said heads for partially rotating them whereby said receptacle may be tilted to discharge the contents thereof.

9. An electric furnace comprising a main supporting member, horizontally extending side portions pivoted thereon, means for adjusting said side portions relatively to each other, tubular shafts extending through said side portions in axial alinement with each other, hollow heads mounted upon said shafts in communication with the bores thereof and revoluble with respect to said side portions, discharge tubes communicating with said heads, levers secured to said heads, a handle connected with said levers for moving said heads in unison, and a receptacle of high resistance material disposed in clamped relation between said heads.

10. An electric furnace comprising supports, revoluble heads disposed between said supports and serving as contacts, a receptacle of high resistance material supported between said heads and having its top open, said heads being in horizontal relation to each other whereby an increased temperature may be centered in said receptacle at the point of discharge, and means connected with said heads for partially rotating them whereby said receptacle may be tilted to discharge the contents thereof.

11. In an electric furnace, a receptacle of high resistance material mounted between revoluble heads serving as contacts, said receptacle being open at the top, and said heads being in horizontal relation to each other whereby the temperature imparted to said receptacle is highest in said receptacle at the point of discharge of its contents.

In testimony whereof I hereto affix my signature.

MONROE S. CLAWSON. [L. s.]

Witnesses:

CARRIE E. SHELDON, [L. s.]

ANNIE L. CLAWSON. [L. s.]