

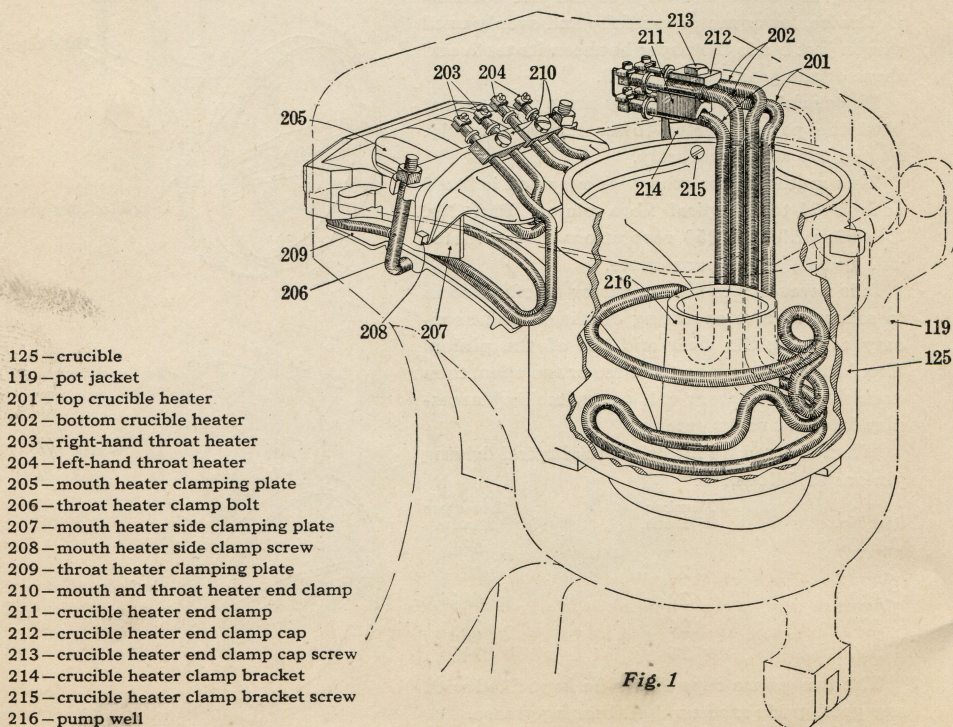
# LINO-THERM HEATING UNITS

Four separate heaters are employed. Two of them are immersed directly in the metal and partially surround the pump well. Another pair, which heat the crucible throat and mouth, not only contact the top and bottom of the throat, but also the vertical sides. This feature insures adequate heat for the type metal entering both ends of the mold when casting full-length slugs, a distinct advantage over all methods formerly used. Each of the four heaters consists of a length of steel tubing enclosing spirally wound nickel chromium resistance wire, which is surrounded by a special insulation of magnesium oxide. This insulation protects the resistance wire from contact with, and electrically insulates it from, the outer steel tubing. Terminals are fastened to the

ends of the resistance wire and are insulated from the outer tube. The ends are sealed to prevent breakage of the magnesium oxide. When formed into shapes as shown in the following illustration, these units are very rugged and efficient heaters for the Linotype electric pot.

## CRUCIBLE HEATERS

*To Remove*—Heat the metal to operating temperature, then dip the molten metal out of the crucible until the top of the heater is exposed. Make sure current is turned off. Remove pot cover, and disconnect wiring to heaters. Remove clamp which holds heaters



in place, with screw driver and pliers. Carefully remove heaters from crucible. Immediately replace defective heaters before the metal cools.

*To Replace*—Warm heaters to prevent chilling metal in crucible, then replace heaters in crucible. Replace heater clamps and connect wires as before. Replace pot cover and cement around mouthpiece.

## MOUTH AND THROAT HEATERS

To remove or replace mouth and throat heaters, it is necessary to remove the crucible from the pot, proceeding as follows:

Turn off switch. Remove pot cover and disconnect wiring. Remove crucible from pot jacket. Remove clamp plate and shields and replace defective heater. Reassemble with shields and clamp plates. Set crucible in jacket and repack with asbestos heat in-

sulation and connect wiring. Replace cover and cement around mouthpiece.

**CAUTION:** Be sure that voltage markings are correct. Shields are necessary to keep mouth and throat heaters absolutely free from insulating materials to avoid hot spots which may cause burnouts.

## FUSE RATING

Fusing of electrical equipment on machines must be taken care of by customer at time of installation. The 30 Em Pot fuses for 100-125 volt equipment should be two 20 ampere fuses and for 200-250 volt equipment, two 10 ampere fuses. The 42 Em Pot fuses for 100-125 volt equipment should be two 30 ampere fuses and for 200-250 volt equipment should be two 15 ampere fuses. Fuses of ampere ratings larger than recommended above must never be used. The equipment may be seriously damaged or even require replacement.

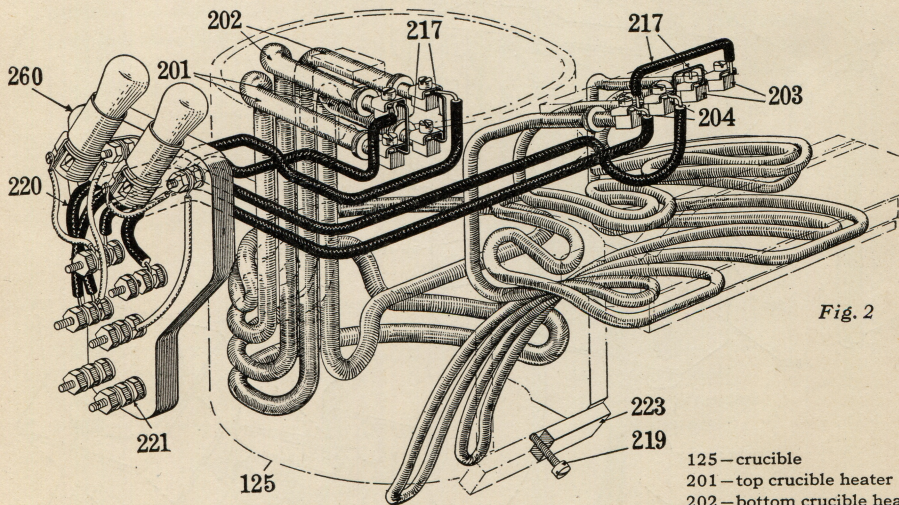


Fig. 2

The above diagram shows the connection of the crucible heaters and throat heaters with parallel connections. The parallel connection is used for either 100-125 volt or 200-250 volt conditions, the characteristics of the heaters changing with the voltage. The wiring of the indicating lamps as shown is for 110-125 volt equipment.

- 125 — crucible
- 201 — top crucible heater
- 202 — bottom crucible heater
- 203 — right-hand throat heater
- 204 — left-hand throat heater
- 217 — jumper or connector
- 219 — throat heater clamp screw
- 220 — insulated electric wire
- 221 — terminals
- 223 — throat heater clamping bar
- 260 — outside terminal block