

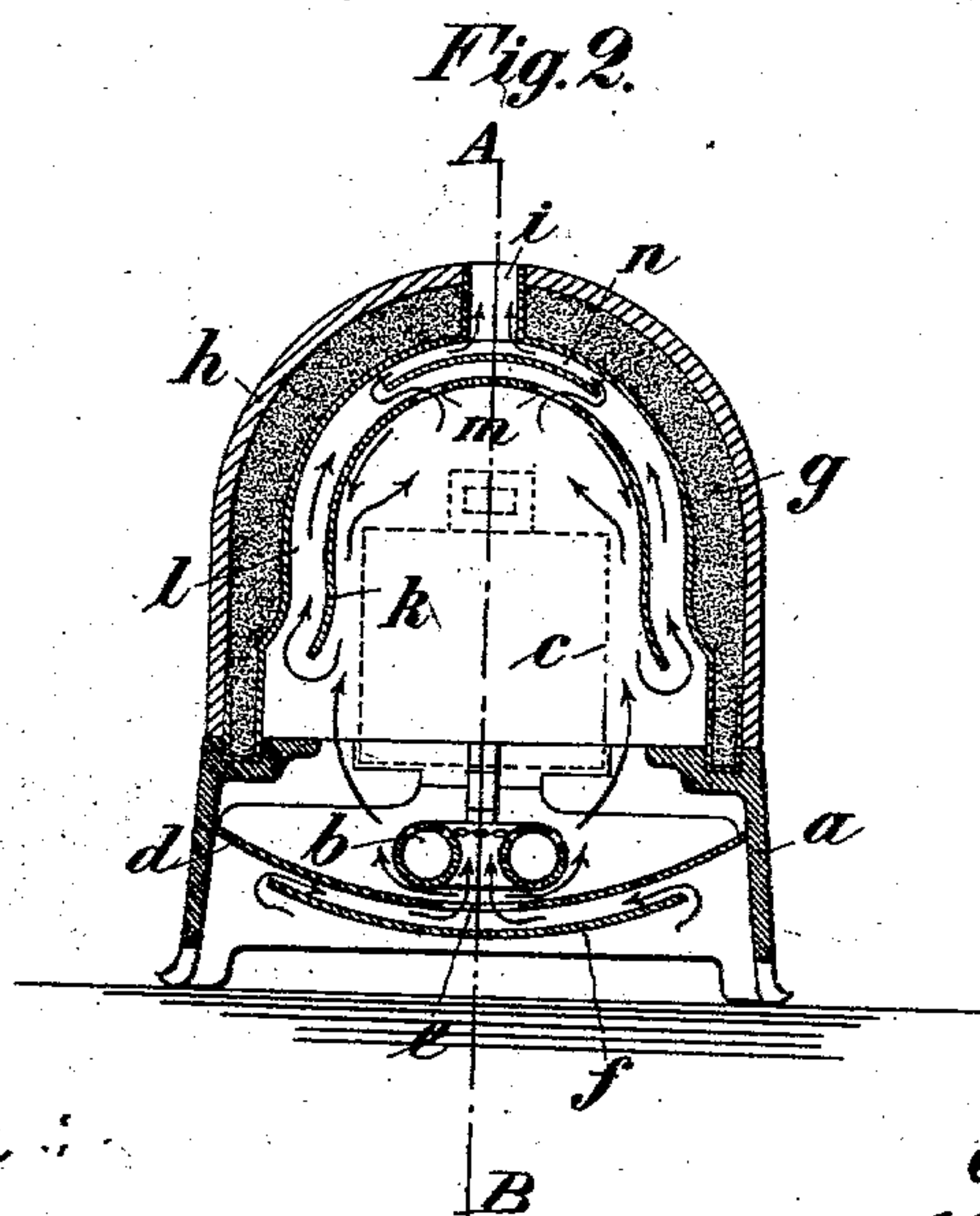
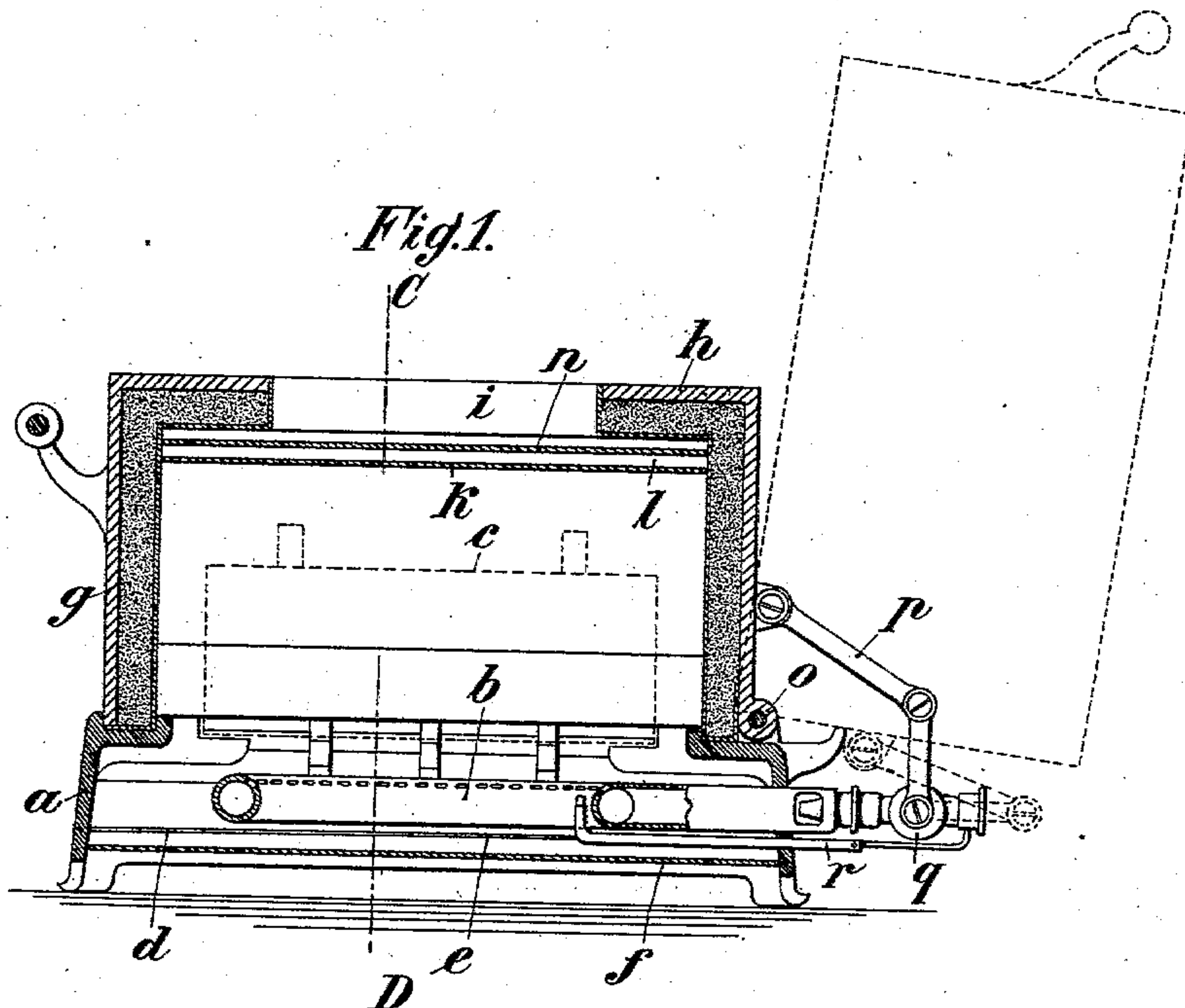
No. 704,824.

Patented July 15, 1902.

H. HENNIGER.
MUFFLE FURNACE FOR IRONS.

(Application filed Apr. 29, 1902.)

(No Model.)



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UNITED STATES PATENT OFFICE.

HUGO HENNIGER, OF FRANKFORT-ON-THE-MAIN, GERMANY.

MUFFLE-FURNACE FOR IRONS.

SPECIFICATION forming part of Letters Patent No. 704,824, dated July 15, 1902.

Application filed April 29, 1902. Serial No. 105,143. (No model.)

To all whom it may concern:

Be it known that I, HUGO HENNIGER, tailor, a subject of the King of Prussia and Emperor of Germany, residing at Bibergasse 6, Frankfort-on-the-Main, in the Kingdom of Prussia and Empire of Germany, have invented certain new and useful Improvements in Muffle-Furnaces for Irons, of which the following is a full, clear, and exact description.

10 This invention relates to a gas-heated muffle furnace or stove for imparting heat to irons and the like, and has for its object to impart a large amount of heat to massive articles—as, for instance, to heavy smoothing-irons for
15 tailors' work-rooms—so that the irons may be brought quickly to a high degree of heat in the furnace or stove with a small consumption of gas.

20 In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a central vertical longitudinal section of my improved muffle-furnace for
25 irons, taken on the line A B of Fig. 2, the position of the movable parts when the furnace is open being shown in dotted lines. Fig. 2 is a vertical transverse section of the same, taken on the line C D of Fig. 1, the arrows
30 indicating the route of the currents of air and gas through the furnace.

a is a grid.

b is a gas-burner, and *c* is a smoothing-iron (shown in dotted lines) seated on the grid.
35 Underneath the gas-burner *b* is located a shutting-off plate *d*, having a longitudinal aperture *e* for admitting atmospheric air, and underneath the shutting-off plate *d* is a guiding-plate *f*, so that the fresh air entering through
40 the base of the grid becomes warmed by the shutting-off plate *d*, which is heated by the heat radiating from the gas-flame, thereby increasing the heating effect of the flame. Both the heating-flame and the hot combustion-
45 gases act upon the irons *c* or the like, and very effectually so, because by reason of a non-conducting lining *g*, located within a mantle *h* and which forms an inclosing cover or muffle, providing a combustion-chamber. The lining
50 of the cover or muffle prevents the heat escaping through the mantle. The combustion-gases retain their heat for a long time in the

furnace, as they are not permitted to immediately escape. The cover or muffle has an aperture *i*. Within the combustion-chamber
55 formed by the cover or muffle and spaced from the walls thereof is located an arched guiding-plate *k*, providing a conduit *l*. In order that the hot combustion-gases may not flow directly into the conduit *l* without having
60 to pass around the iron to be heated, a few draft-apertures *m* are disposed in the crown of the guiding-plate *k*.

In starting the furnace a part of the combustion-gases escape through the apertures
65 *m* in the guiding-plates *k*, whereby rarefaction of the air and gas in conduit *l* takes place, the consequence of which is that the remaining part of the combustion-gases is guided to the conduit *l* around the guiding-
70 plate by the route indicated by the arrows, and is thus a second time guided past the object to be heated.

n is a baffle-plate disposed underneath the aperture *i* in the cover or muffle, over the aperture
75 *m* in the guiding-plate, which prevents the combustion-gases in the furnace attaining too great a speed upward, and so prevents too great a part of the combustion-gases escaping through the apertures *m* in the guiding-plate *k*.
80 In order to facilitate the inserting of the iron *c* the muffle has a hinge connection *o* with the grid *a*, so as to enable it to be turned back into the position shown by dotted lines
85 in Fig. 1.

p is a jointed connection between the muffle and a gas-valve *q* in the supply-pipe of the gas-burner, so that when the muffle is opened the gas-valve is rotated, so as to turn off the gas to the gas-burner. Extending from a
90 point in the supply-pipe in rear of the gas-valve to the gas-burner is a small tube *r*, so that a lighting-up flame is left burning when the gas-burner is out of operation. After the iron is inserted the act of closing the muffle
95 turns on the gas-valve.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A muffle-furnace comprising a muffle providing a combustion-chamber, a guiding-plate
100 disposed within the muffle and spaced from the walls thereof; said guiding-plate being approximately arch-shaped in cross-section

and provided with restricted outlet-apertures in the crown thereof, a burner situated underneath said guiding-plate, and means for supporting the article to be heated between
5 the burner and the guiding-plate.

2. A muffle-furnace comprising a muffle having an aperture in the crown thereof and providing a combustion-chamber, an arched guiding-plate provided with restricted outlet-apertures in the crown thereof and disposed
10 within the muffle and spaced from the walls thereof, a burner situated underneath said guiding-plate, means for supporting the article to be heated between the burner and the
15 guiding-plate, and a baffle-plate situated between the guiding-plate and the aperture in the muffle.

3. A muffle-furnace comprising a muffle providing a combustion-chamber, an arched guiding-plate provided with restricted apertures
20 in the crown thereof and disposed within the muffle and spaced from the walls thereof, a burner situated underneath said guiding-plate, means for supporting the article to be
25 heated between the burner and the guiding-plate, a shutting-off plate having an aperture and located underneath the burner, and a

guiding-plate underneath the shutting-off plate.

4. A muffle-furnace comprising a hinged
30 muffle providing a combustion-chamber, a burner situated in the muffle, a supply-pipe leading to the burner and having a valve, and means for communicating motion from the
muffle to the valve in the supply-pipe; said
35 valve being open when the muffle is in operative relation with respect to the burner and closed when the muffle is moved away from the burner.

5. A muffle-furnace comprising a hinged
40 muffle providing a combustion-chamber, a burner situated in the muffle, a supply-pipe leading to the burner and having a valve, means for communicating motion from the
muffle to the valve in the supply-pipe, and a
45 small tube extending from the supply-pipe in rear of the valve to the burner.

In witness whereof I subscribe my signature in presence of two witnesses.

HUGO HENNIGER.

Witnesses:

CARL BUCKMULLER,
EMIL SCHMELL.