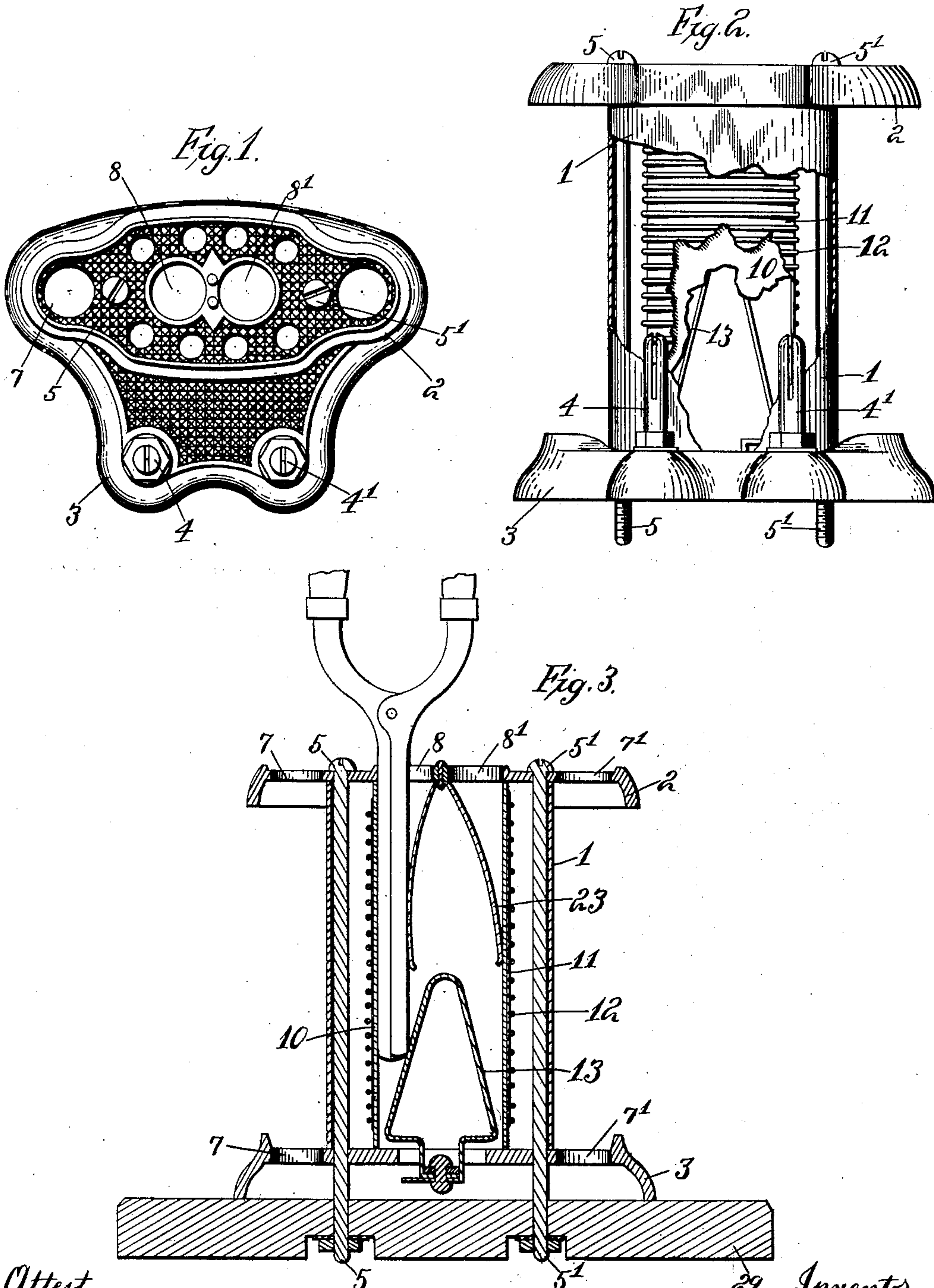


H. W. DENHARD.  
CURLING IRON HEATER.  
APPLICATION FILED AUG. 10, 1908.

932,539.

Patented Aug. 31, 1909.



Attest.  
Bent Me Stahl.  
Edward N. Sartou

by Spear & Seely

Inventor,  
Harry W. Denhard  
Atty's.



# UNITED STATES PATENT OFFICE.

HARRY W. DENHARD, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO GEORGE B. KATZENSTEIN, JR.

## CURLING-IRON HEATER.

932,539.

Specification of Letters Patent.

Patented Aug. 31, 1909.

Application filed August 10, 1908. Serial No. 447,827.

*To all whom it may concern:*

Be it known that I, HARRY W. DENHARD, a citizen of the United States, residing at San Francisco, in the county of San Francisco, State of California, have invented certain new and useful Improvements in Curling-Iron Heaters, of which the following is a specification.

This invention is designed to produce an electrical heater for curling irons or similar appliances. It belongs to that class of heaters in which the device to be heated completes the circuit and causes the heating action, the withdrawal of the device or its absence from the heating position breaking the circuit and interrupting the current.

In the accompanying drawings,—Figure 1 is a plan view of the device. Fig. 2 is an elevation partly in section. Fig. 3 is a sectional view.

The device is preferably mounted upon a base plate such as a marble slab 29. A cast metal base 3 and a top 2 are fitted to an intermediate hollow shell 1, the three parts being held in place by screws 5 having threaded ends adapted to receive nuts thereon, the threaded ends passing through the slab or base plate 29 and the nuts upon the ends thereof being held in recesses in the under-face of the slab. An inner tube 10 of metal is provided which has an outer covering, preferably of mica, and around the mica 11 is the resistance coil 12, having electrical connection with the tube 10. The binding posts providing the electric connections are shown at 4—4'. The upper casting is provided with two holes side by side, as shown at 8, 8' adapted to receive two curling irons, if desired at one time, and when the curling irons are not in use, openings 7 are provided to receive the irons which pass through and are partially supported in like openings in the base plate 3 at 7'. One terminal is suitably connected to a resistance coil 12, while the other terminal is connected to a cone 13, which is suitably supported within the tube 10. A double spring 23 is supported from the top casting 2 and extends into the tube 10, the limbs of the spring bearing normally against the walls of the tube and the leaves of this spring are intended to bear against the curling iron and keep it pressed against the walls of the tube as shown in Fig. 3. The cone 13 is normally out of electrical connection

with the tube 10 and it requires the curling iron or its equivalent to bridge the space between.

When the curling iron is inserted as shown in Fig. 3, it bears not only against the wall of the tube 10, but against the cone 13, which completes the circuit, while on the withdrawal of the curling iron, the circuit is broken and the current ceases to flow. The cone 13 being of iron or steel and located within the coil 12 becomes an electromagnet. The magnetism of the part 13 breaks the electric-arc that forms when the curling iron is withdrawn from the heater and draws it toward itself, thus preventing the arc from doing any damage to the heater.

It will be seen that the iron can be inserted into the heater for quite a distance, but unless it is forced down until the iron touches the cone 13, no current will flow. This makes it possible to heat the iron after the heater has become heated for quite a while without consuming current.

What I claim is:—

1. In an electric heater, a heating chamber having a resistance coil in connection therewith, and a central cone having electrical connections with a space between the cone and chamber for the iron or like device, the circuit being closed or broken by the presence or absence of the iron substantially as described.

2. In an electric heater, a heating chamber, a resistance coil in connection therewith, a metallic part within the chamber having electrical connections, a space between adapted to be occupied by the iron or like device to make the electrical connection, and a spring for holding the iron in place, substantially as described.

3. In an electrical heater, a heating chamber, a coil in connection therewith, a central cone with electrical connections thereto, and means for inserting two curling irons or the like simultaneously for heating the same, the circuit being closed or broken by the presence or absence of the iron substantially as described.

In testimony whereof I have affixed my signature in the presence of two witnesses.

HARRY W. DENHARD.

Witnesses:

FRANK L. OWEN,  
A. DIXON.