

(No Model.)

N. S. JENKINS.
PORTABLE MELTING APPARATUS.

No. 585,442.

Patented June 29, 1897.

Fig. 1.

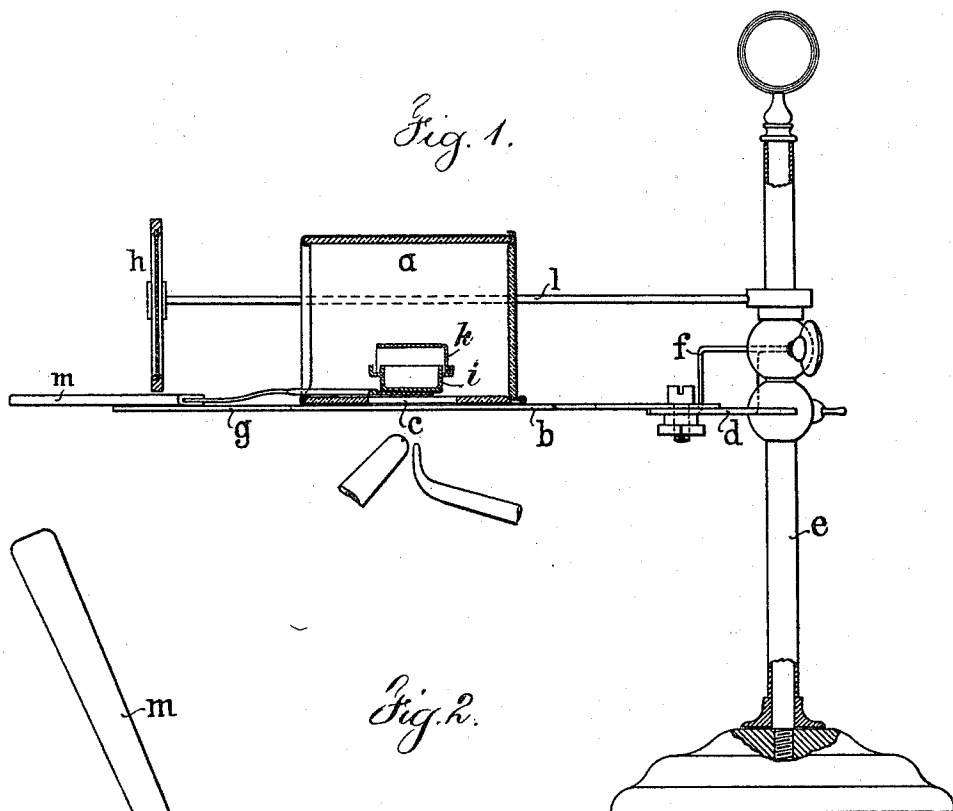
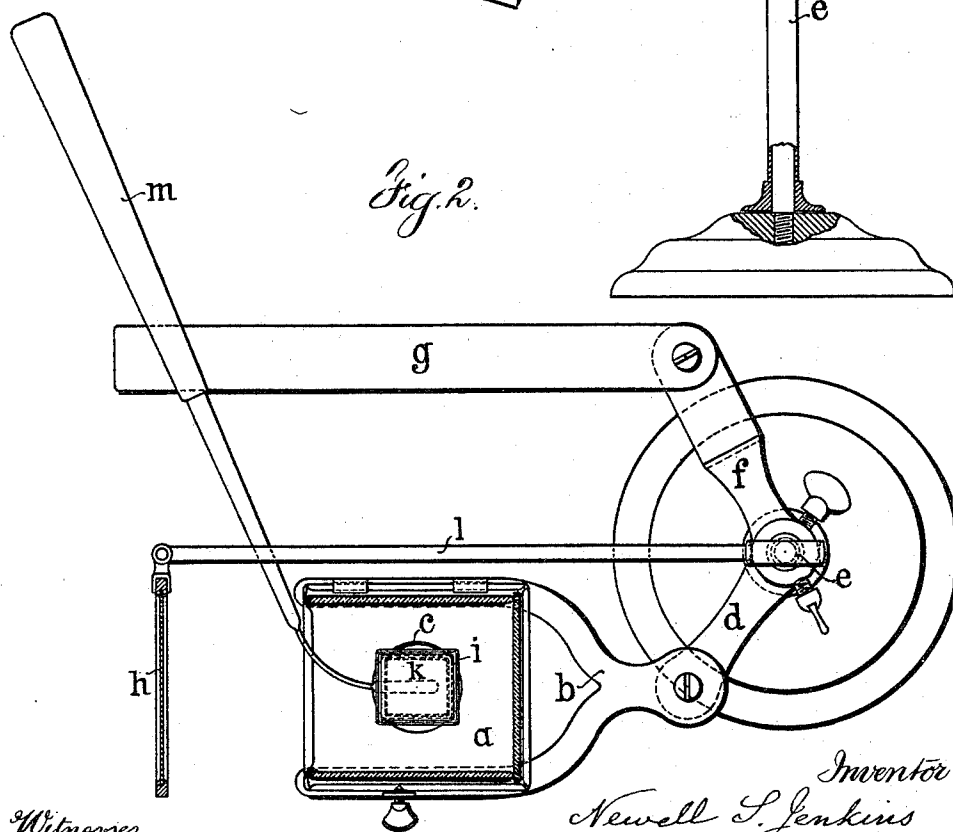


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

NEWELL SILL JENKINS, OF DRESDEN, GERMANY.

PORTABLE MELTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 585,442, dated June 29, 1897.

Application filed April 16, 1897. Serial No. 632,421. (No model.)

To all whom it may concern:

Be it known that I, NEWELL SILL JENKINS, a citizen of the United States of America, residing at Dresden, in the Kingdom of Saxony, German Empire, have invented certain new and useful Improvements in Portable Melting Apparatus, of which the following is a specification.

This melting apparatus is portable, and is especially devised for the use of dentists in fusing materials—such as porcelain, enamel, and the like—for filling cavities in teeth or for melting enamel upon artificial teeth and platinum or gold plate and for other like purposes.

In the drawings, Figure 1 is an elevation partially in section, and Fig. 2 is a plan view partially in section.

The melting apparatus consists mainly of a small muffle *a*, preferably of metal and lined inside with asbestos. The muffle is open at front and its bottom is provided with a hole *c* of suitable size.

The bottom rims of the muffle rest on a fork-shaped carrier *b*, on which the muffle is held by small clamps. The fork-shaped carrier *b* is hinged to an arm *d*, which may be shifted on the rod *e* of a support into the proper height for working purposes. On said rod *e* another arm *f* is mounted, capable of being shifted to suitable height, to which arm the carrier *g* is hinged. A third arm *l* is mounted on the rod *e*, capable of being shifted with the arm *f* into proper height and carrying at its end a small glass screen *h*, which, at a proper distance from the open front of the muffle *a*, protects the operator from the heat in the muffle.

To this apparatus belongs the melting-ladle *i*, the handle *m* of which is supported by the carrier *g* when the ladle rests in the muffle, and above the hole in the bottom the ladle is preferably made of platina, and a small protecting-cover *k* may be inserted into its properly-shaped rim, which cover is open in front to allow inspection of the melting process.

Below the bottom hole of the muffle a gas jet or burner is placed and the flame is increased in its intensity by means of a blow-pipe with bellows or air-pressure apparatus, and the flame is directed against or around the ladle.

The ladle *i* is partly filled with a paste made of a mixture of powdered asbestos and water, and on this paste is put the form or counter-

impression of the tooth-cavity formed by gold or platinum foil, into which impression the material to be melted (porcelain, enamel, or such like) in a powdered state is inserted. By means of the blow-pipe flame the ladle is brought to incandescence and the powdered material becomes fused and forms a plug exactly in the form of the tooth-cavity from which the impression has been taken. The material to be melted may be mixed with any suitable coloring-matter to correspond with the color of the tooth to be filled, and the plug can be held in the tooth-cavity by suitable cement.

This apparatus is also employed in melting porcelain, enamel, or the like upon artificial teeth, or platinum, or gold plate, or other metals.

The muffle confines the heat so that the necessary temperature can be obtained, the parts are easily manipulated, the apparatus is portable, and the attendant is protected from the heat while observing the operations.

I claim as my invention—

1. The muffle of refractory material having an open end and a hole in the bottom, in combination with the supporting-arm, the ladle and the handle-support, by which the ladle can be sustained within the muffle and above the bottom hole, substantially as specified.

2. The muffle of refractory material having an open end and a hole in the bottom, in combination with the supporting-arm, the ladle and the handle-support, by which the ladle can be sustained within the muffle and above the bottom hole, and a cover for the ladle open at the front so that the melting operation can be inspected, substantially as specified.

3. The muffle of refractory material having an open end and a hole in the bottom, in combination with the supporting-arm, the ladle and the handle-support, by which the ladle can be sustained within the muffle and above the bottom hole, and a glass shield and an arm for supporting the same in front of the muffle, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

NEWELL SILL JENKINS.

Witnesses:

HERNANDO DE SOTO,
CARL KNOOP.