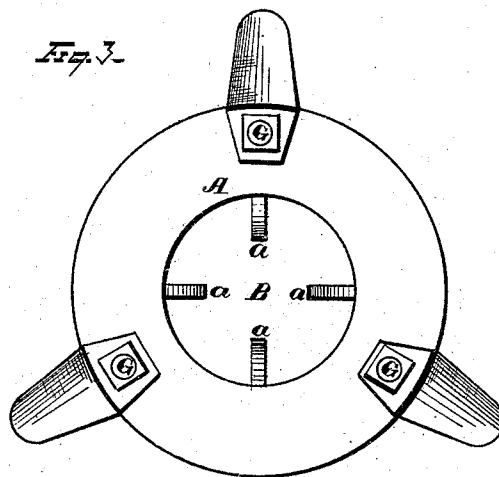
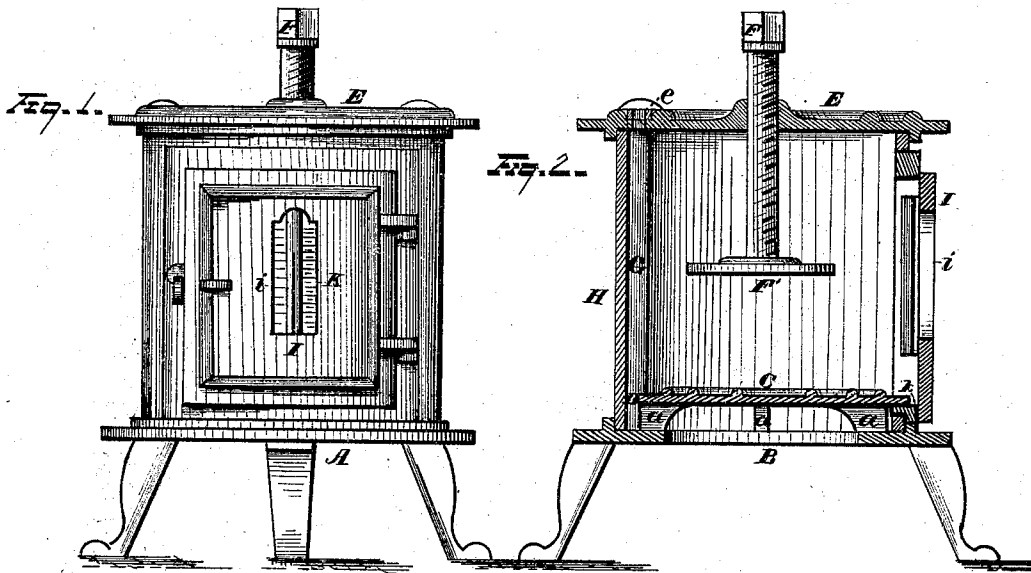


L. W. CLARK.
DENTAL-HEATER.

No. 178,114.

Patented May 30, 1876.



WITNESSES
Ed. S. Nottingham
F. O. M. Cleary

INVENTOR
Lewis W. Clark,
By Sleggett & Sleggett.
Attorneys

UNITED STATES PATENT OFFICE.

LEWIS W. CLARK, OF THORNTON, INDIANA.

IMPROVEMENT IN DENTAL HEATERS.

Specification forming part of Letters Patent No. 178,114, dated May 30, 1876; application filed April 8, 1876.

To all whom it may concern:

Be it known that I, LEWIS WARREN CLARK, of Thornton, in the county of Boone and State of Indiana, have invented certain new and useful Improvements in Heaters for Dental Plates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to heaters for dental purposes, especially in softening and molding celluloid or other like substance, from which blanks for artificial dentures are composed. It consists, first, in a close oven, with a removable-bed platform, allowing of a space interval between same and sides of the oven, whereby the heat and flame may be directly carried into the chamber, and without any conducting medium; second, in combination with the foregoing, of a screw-lever platen for compressing the flask, and its subject-matter, as is of customary use in the art; third, in the provision of said removable platform, having annular corrugations, for the supply and heating of water, whereby the flask, superimposed upon which, may be subjected to an equal and constant degree of temperature, and also may receive the advantage of a steam-bath in the moistening and rendering plastic of its contained celluloid; fourth, in the combination with all the foregoing, of the inclosing-jacket, provided with dampers, and a thermometer protected from direct action of the rising heat by a flange overlapping from the platform onto a projecting sill.

In the drawings, Figure 1 is a front elevation, with the door closed; Fig. 2, a vertical central section in a plane passing through the door; and Fig. 3, a reverse plan view of the supporting-ribs of the platform, the latter being removed therefrom.

A is the supporting base-plate, having legs of suitable height to raise same above the table or shelf upon which it stands, so that any desired lamp or fire apparatus may be inserted beneath freely. Projecting centerward from said plate surface are lugs or standards

a, in any number, and cast of same piece with the bed-plate, which stand out over a circular opening, B, in face of said latter, and serve to support the movable platform C, as same is placed in position over said opening B.

These standards are carried up sufficiently from the plane of the bed-plate level to allow of a full-space distance between the bed-plate and the platform. Said distance may be desirably altered under any circumstances; but my object in any event is to give room for the flame and heated air to come up into the chamber from the fire apparatus situated beneath the platform, and but for which would enter through the opening B in a direct line, and not seek the present circuitous course.

This platform is of a diameter considerably less than that of the heater, and sufficiently so to allow of the above-described entrance of the products of combustion, an annular space, D, being thereby formed. E is the top plate, having a central aperture for the screw-lever F, passing through same, said lever being operated by a wrench, cross-bar, or any appropriate means. To the lower end of same is a platen or follower, F', of circular conformation, and such as to press the lid of the flask inclosed in the chamber down firmly, and to be increased in pressure action as the celluloid becomes plastic and yielding. Slide-dampers e are located in the top plate, and regulate the draft of the burning fuel, as well as allowing of exit for the smoke, flames, or other disagreeable products of combustion, that may gather in the chamber. G are the rods in any number, and uniting the upper and lower plates securely, about which the inclosing annular walls H of the chamber passes and surrounds. This inclosing wall is of sheet-iron, preferably while the remaining parts, excepting the screw-lever, which is wrought-iron, are of cast-iron. A door, I, in the front wall is provided with an elongated vertical slot, i, which allows of noting the registering of a thermometer, K, placed back of same, and protected from the immediately rising heat by means of the forward-projecting lip k on the sill of the door, and thus breaks the annular space D, otherwise making a constant circuit. The platform is notched as it meets

each of the tie-rods, thus forming a secure engagement against lateral and horizontal play, and maintaining a firm position.

The operation of the foregoing-described mechanism is as follows: Any flask or vessel for holding the celluloid or other material to be treated is used, and I make no claim to either same or the heat-producing means. The platform is covered with water, which it retains by its annular rings or grooves, the flask placed upon same, the platen followed down upon lid of the latter, and the fire well started beneath the heater.

A gas, oil, or alcoholic lamp may be used, only burning flame of same well up against the heater, as the celluloid warms beneath the attack of the heat coming up through the annular space D, in its deflection, after striking first the bottom of the platform. The platen may be further operated to settle down closer.

A second use of my invention is, in any instance where water may be wished to be heated, a cup or vessel of any description containing same may be placed directly upon the supporting-lugs *a*, and thus receive the initial compact of the flame. This is accomplished by removing entire from the heater the platform which rests on said lugs, and can be easily done, as is apparent.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a heater for manufacturing dental plates, the combination, with the cylinder, of a platform of less diameter than the cylinder, forming an annular opening for the introduction of heat between the platform and cylinder, substantially as and for the purpose set forth.

2. A closed heater for dental purposes, constructed with a removable platform, having annular grooves for the retention of water, and notched at its periphery to engage with the tie-rods of the frame, substantially as and for the purpose described.

3. In a heater for manufacturing dental plates, the sill of the door, constructed with a flanged lip to prevent the immediate impact of heat on a thermometer secured to the door of the heater, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of April, 1876.

LEWIS WARREN CLARK.

Witnesses:

SOLOMON BARNHART,
W. W. SMILEY.