

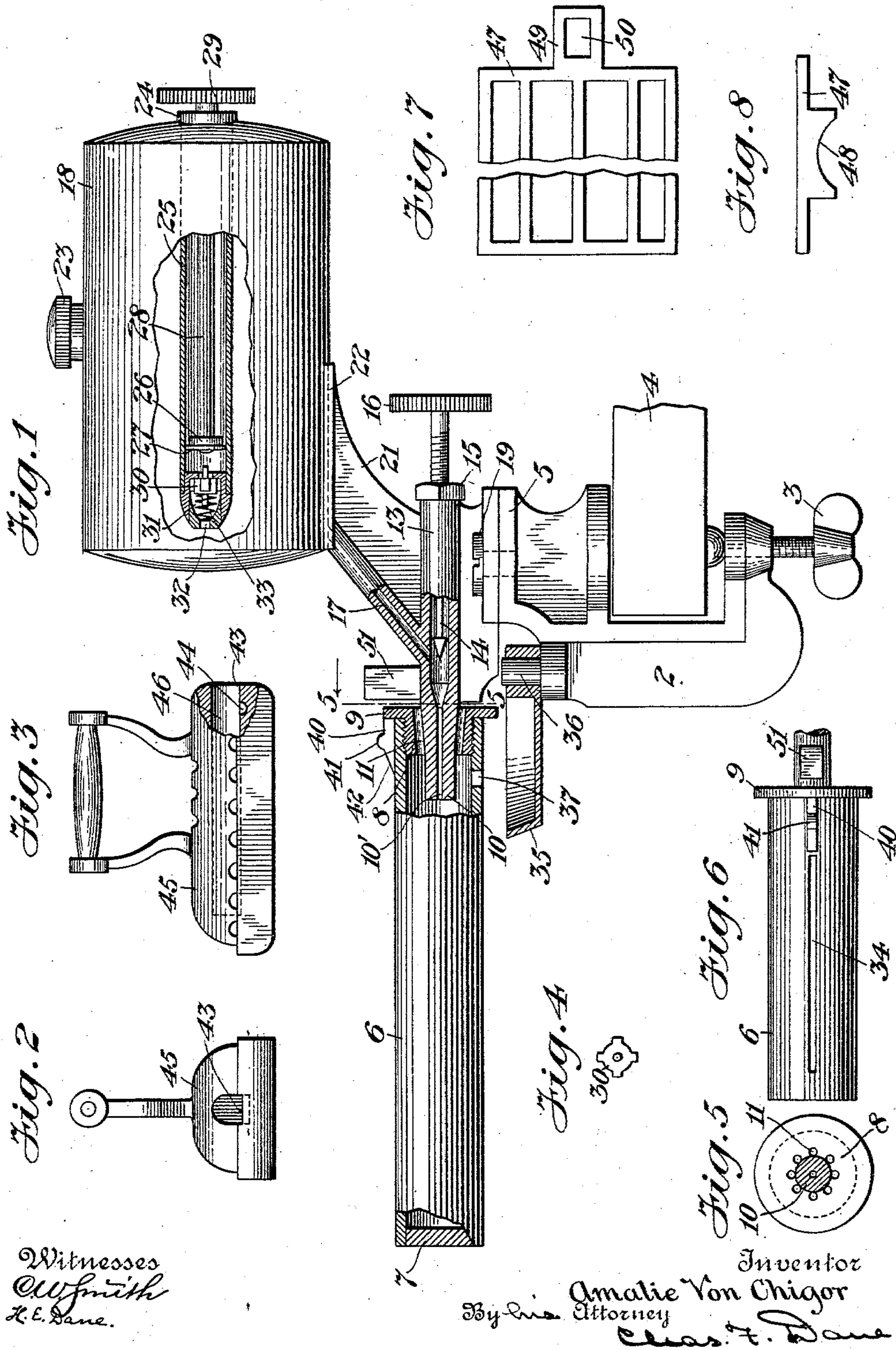
No. 753,042.

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A. VON CHIGOR.
HEATER.

APPLICATION FILED JAN. 14, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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HEATER.

SPECIFICATION forming part of Letters Patent No. 753,042, dated February 23, 1904.

Application filed January 14, 1902. Serial No. 89,714. (No model.)

To all whom it may concern:

Be it known that I, AMALIE VON CHIGOR, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Heaters, of which the following is a specification.

This invention relates to improvements in heaters, and particularly to a device for heating household articles—such as sad-irons, cooking utensils, &c.—and its main object is to provide an improved heater for concentrating a sheet of flame upon the article and raising the temperature thereof to the proper point in the shortest possible time, and means for positively locating the article to be heated, so that it cannot be accidentally dislodged.

The principal feature of my improved heater is a Bunsen-burner tube having at one side thereof a long slot through which the fuel, in the form of gas or vapor, will flow in a solid sheet to form a solid sheet of flame, this burner being supplied with air and gas in any suitable manner.

Another important feature of the invention is the provision of suitable locking means for so locking on the burner the sad-iron or other article to be heated as to prevent improper movement and accidental dislodgment of the article, two pairs of coöperative locking-faces being preferably employed—one pair on the article and the other in fixed relation with the burner—for preventing longitudinal and turning movements of the article with respect to the burner.

In the drawings, Figure 1 is a sectional side elevation of a heater constructed in accordance with my invention and attached to a table or bench by means of a clamp-screw. Figs. 2 and 3 are respectively an end view and a side elevation of a sad-iron having a longitudinal bore adapted to receive the burner of the heater. Fig. 4 is a detail which will be hereinafter described. Fig. 5 is a transverse section of the Bunsen burner through line 5 5 of Fig. 1. Fig. 6 is a plan of said burner. Fig. 7 is a plan of a shelf adapted to be supported by said burner, and Fig. 8 is an end elevation of said shelf.

Similar characters designate like parts in all the figures of the drawings.

My improved heater may embody or be secured to any suitable support; but one of its elements is preferably a clamp-bracket 2, having the usual clamp-screw 3 for securing the bracket to the end of a table, bench, or other desired support. This bracket has the usual shelf 5 for supporting the devices constituting the heater proper, which devices are in this case a burner, a tank, and connections between them for supplying and controlling the supply of the fuel. In the construction shown the burner is separate from the body of the bracket 2, although it is obvious that the burner may be made in one piece therewith, if desired. The Bunsen burner which I have shown is designated generally by 6 and is preferably closed at its forward end by means of a plug 7, its rear end having communication with suitable means for supplying air and gas thereto. At the rear end thereof the burner-tube is screwed onto a threaded plug 8, having a flange 9, which constitutes a stop-wall for limiting the movement of an article placed on the burner and consequently locating said article in a position to be most effectively heated by the burner. As shown in Figs. 1 and 5, this plug 8 has a central bore through which the inlet-tube 10 of the burner is inserted, while air may be admitted to the burner to mix with the inflowing gas through one or more air-inlets, such as 11. The gas-inlet 10 is substantially of the usual type and has a small fuel-passage 10' therein, and this tube 10 is extended and increased in diameter to form a valve-chamber 13, in which works a needle-valve 14, screw-threaded at its outer end, where it passes through the plug 15, which closes the valve-chamber and adjustable in position by turning a knurled head 16 at the outer end of the valve-stem. At the upper side thereof an inclined branch tube or passage 17 leads into the valve-chamber 13 from the fuel-tank, which is designated by 18.

The fuel-tank 18 may be supported and constructed in any suitable manner, but will preferably be mounted as shown herein and provided with an inclosed air-pump for mixing

with the fuel, which will usually be gasoline, a suitable body of compressed air. In this case the shelf 5 of the bracket has adjustably fastened thereto by means of screws 19 a casting in the form of a bracket 21, which constitutes the direct support for the tank and the burner. The supply-tubes and the valve-chamber form parts of this casting. The immediate support for the tank is formed by a rest or shelf 22, integral with the upper end of the casting 21 and having its supporting-face curved to conform to the periphery of the tank which rests upon it, the fuel to be delivered to the burner being supplied to the tube 17 through a suitable opening in the under side of the tank 18.

At its upper side the tank 18 has the usual fuel-opening closed by a screw-cap 23. At its rear end it has another opening for the reception of the barrel of a pump, which is held in place at the rear of the tank by a screw-cap 24. This pump-barrel is designated by 25 and contains a piston 26 of slightly smaller diameter than the chamber in the pump-barrel, and at the forward end of the piston a flexible washer 27 is secured thereto and serves as a valve to permit air to flow from the rear to the front end of the pump-barrel and to be compressed in front of the piston and forced past a suitable check-valve into the body of the tank. The pump piston-rod is designated by 28 and terminates in a milled head 29 for operating it. The check-valve just referred to is shown at 30 and works in a small valve-chamber 31, fitted to and closing the front end of the pump-barrel, except at the point 32, where an outlet is provided for permitting the compressed air to pass into the tank 18. A spring 33 normally holds this valve against its seat.

The principal feature which distinguishes my improved Bunsen-burner tube from other similar types is a long continuous slot 34 in the side thereof, through which the commingled air and gas will flow in a solid sheet instead of being divided up into a number of small jets, as is usually the case. This construction permits a solid sheet of flame to impinge against an article to be heated and causes the rapid heating of such article. A flashing pan or cup, such as 35, is provided for the purpose of holding a small quantity of gasoline or other fuel, which may be ignited to heat up the burner and vaporize the gasoline flowing thereinto before the burner is lighted. This flash-pan is preferably pivoted at 36 on the bracket 2, so that it can be swung aside and charged readily. The burner at the point where it coöperates with this pan has an auxiliary opening 37, through which the ignited fuel and air may enter.

The burner 6 is adapted and intended to support directly the article against which its flame impinges. For this reason I provide in fixed

relation with said burner one or more locking-faces for locating such article. One of these locking-faces is shown at 40 and is intended to prevent turning of the article during heating, while the other locking-face is a lug 41, rising from and projecting beyond the periphery of the burner and connected thereto by the sloping face 42. These two locking-faces are intended to coöperate with a corresponding flat locking-face 43 and a recess 44 in a sad-iron 45, which is of the type shown and described in my prior patent, No. 663,117, granted December 4, 1900. This sad-iron has a longitudinal bore 46, adapted to receive the burner 6, and the flat wall 43 constitutes one wall of this bore. The sad-iron is placed upside down on the burner 6 with the wall 43 in contact with the flat face 40, and when in this position it is impossible to turn it. At the same time the iron will be locked against accidental longitudinal movement by the engagement of the lug 41 in the recess 44. Other articles to be heated may be supported by a shelf or stand, such as 47, which is of the "grid" type and has at its forward end a curved rest 48, adapted to be supported directly on the burner 6, while its rear end is provided with a rectangular open lug or frame 49, the opening 50 in which corresponds in contour to the exterior of a locking-post 51 at the rear end of the burner. This locking-post is adapted to pass through the opening 50 and its locking-faces hold the shelf, so that it cannot be accidentally turned or moved longitudinally.

The device just described constitutes a simple and effective apparatus for heating a variety of articles and holding them firmly in place while applying thereto a heating-flame of maximum size, and such a heater is simple in construction, not liable to get out of order, and can be manufactured at a low cost.

What I claim is—

1. In a heater, the combination with a bracket, of a Bunsen-burner tube secured to said bracket and having at one side and in fixed relation therewith a locking-face, means for supplying air and gas to said burner, and an article to be heated having a locking-face coöperative with said first locking-face.

2. In a heater, the combination with a bracket, of a Bunsen-burner tube secured to said bracket and having at one side and in fixed relation therewith a locking-face, means for supplying air and gas to said burner, and a sad-iron having a longitudinal opening adapted to receive said burner one wall of said bore constituting a locking-face coöperative with said first locking-face.

3. In a heater, the combination with a bracket, of a Bunsen-burner tube secured to said bracket and having a locking-lug projecting beyond the periphery of the burner, means for supplying air and gas to said burner, and

a sad-iron having a longitudinal opening adapted to receive said burner and also having a locking-recess coöperative with said lug.

4. In a heater, the combination with a
5 bracket, of a Bunsen-burner tube secured to
said bracket and having at one side a locking-
face and also having a locking-lug projecting
beyond the periphery of said burner, means
for supplying air and gas to said burner, and a
10 sad-iron having a longitudinal opening adapted
to receive said burner and also having a

locking-face and a locking-recess coöperative
respectively with said first locking-face and
with the lug for preventing turning and lon-
gitudinal movements of said sad-irons. 15

Signed at New York city, in the county of
New York and State of New York, this 26th
day of September, A. D. 1901.

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Witnesses:

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