(No Model.)

A. C. MACALLISTER.

Sad Iron Heater.

No. 235,092. Patented Dec. 7, 1880.

Fig: 1.

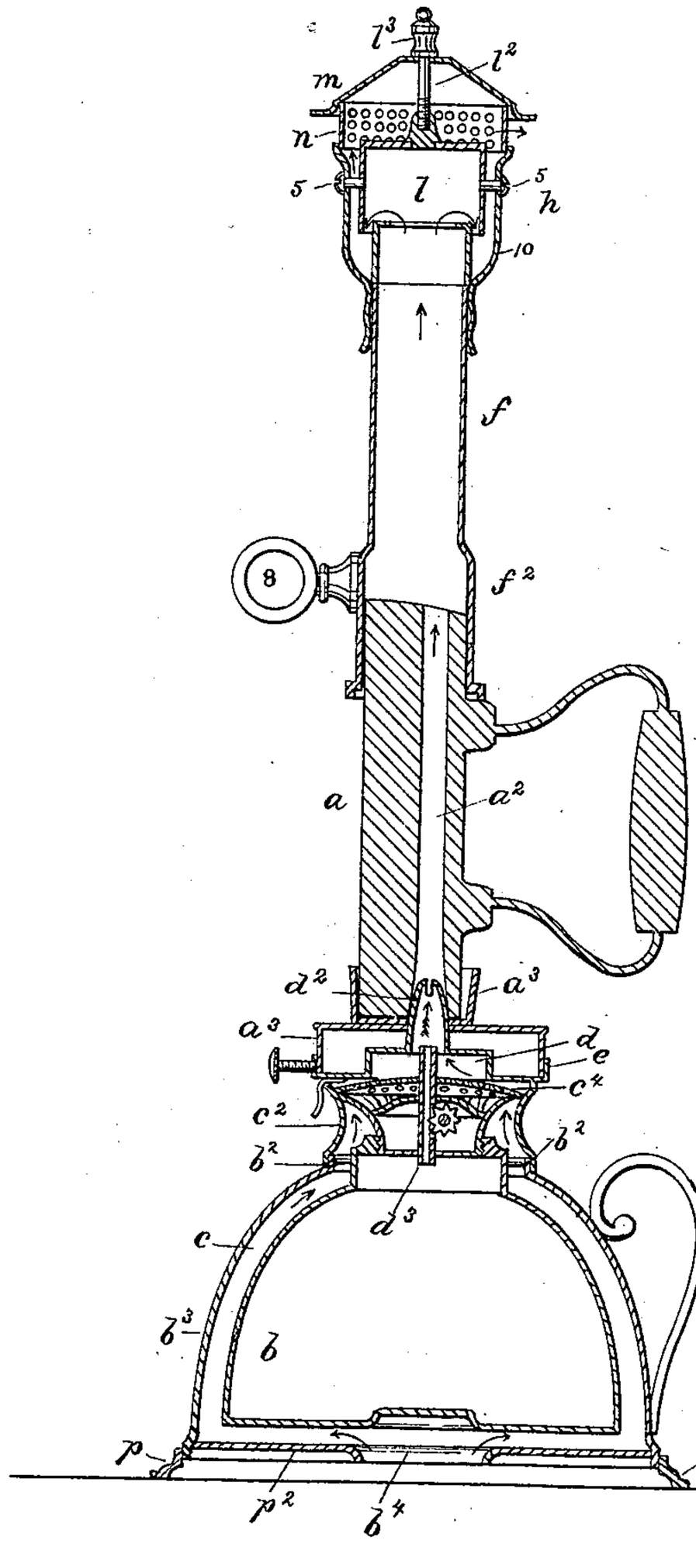
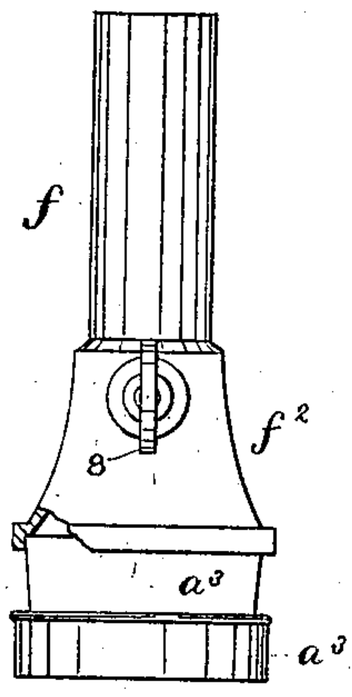


Fig: 2.



WITNESSES-

P. D. Dearborn.

Arthur Reynolds.

INVENTOR-

Alma C. Macallister

by Crosby & Gregory Attys

UNITED STATES PATENT OFFICE.

ALMA C. MACALLISTER, OF BROOKLINE, MASSACHUSETTS.

SAD-IRON HEATER.

SPECIFICATION forming part of Letters Patent No. 235,092, dated December 7, 1880.

Application filed October 20, 1880. (No model.)

To all whom it may concern:

Be it known that I, ALMA C. MACALLISTER, of Brookline, county of Norfolk, and State of Massachusetts, have invented an Improvement in Sad-Iron Heaters, of which the following description, with the accompanying drawings, is a specification.

This invention relates to improvements in sad-iron heaters, and has for its object such construction of mechanism for that purpose as will enable the oil in the heater to burn steadily in any ordinary draft either in a dwelling or out of doors.

In this my invention I employ an oil-lamp supplied with atmospheric air to support the combustion of the oil at the wick only at the bottom of the lamp, the said air rising to the burner or point of combustion through an air-space between the oil-tank and inclosing-jacket of the lamp.

Surrounding the burner, and adapted to receive the usual sad-iron, is placed the ordinary holder for receiving the heel of the sad-iron. This sad-iron is provided with a longitudinal space, which constitutes a flue above the burner. I have added to this sad-iron a chimney shaped to remain in position upon the nose of the sad-iron, and provided at its tip with a draft-protecting cap having outlets below its top or cover for the heat, smoke, &c., in the chimney.

Figure 1 represents, in vertical section, a large sad-iron and chimney and draft-shield, to illustrate my invention as it will appear when a sad-iron is being heated. Fig. 2 is a side elevation of the holder for the heel of the sad-iron with the sad-iron removed, the chimney being set upon or fitted thereto.

The sad-iron a, having a flue, a^2, and the holder a^3, for the heel of the sad-iron, are all of usual construction.

The oil-tank b is suspended by studs b^2 within the jacket b^3, having an inlet, b^4, for atmospheric air, the said air rising through the chamber c c^2, thence through holes or openings in a reticulated distributing-plate, c^4, thence into the chamber d of the burner d^2, the latter having within it the usual wick-tube d^3.

The holder a^3 is circular at its base to fit within the prongs e as the base of an ordinary glass chimney, and its upper end is made oblong to receive within it the heel of the sad-iron, the opening at the said heel receiving within it the cone of the burner.

The chimney f has a mouth-piece, f^2, to fit over and receive within it the nose of the sad-iron, the opening at the base of the said mouth-piece being of such size and so shaped as to fit the open top of the holder a^3 whenever it is desired to mount the chimney directly upon the holder rather than upon the iron.

The mouth of the chimney is of such size and shape as to fit over and cover the top of the holder. The chimney has a suitable handle, 8, by which to handle it. At its upper end the chimney has fitted to it a draft-protecting cap, h, composed, as herein shown, of a cap-shell or piece of metal, 10, having screws or studs 5, to support within it an inverted cup, l, having extended upward from it a rod, l^2, the purpose of which is, by means of the nut l^3, to hold in place on the cap the cover m and perforated ring or annulus n, through which the heated products of combustion pass off into the atmosphere. It is obvious that this rod may be omitted and the annulus and cover be joined together and with the shell 10 of the cap by other usual means—as, for instance, flanging or brazing.

The inverted cup l, extended a little below the top of the chimney, prevents any air blown into the holes of the perforated ring n from entering the chimney. All the air received in the chimney comes through the chamber c c^2 and flue a^2. All the air to the burner comes entirely from the chamber c c^2, and the supply of air to the burner is steady and uniform, no matter what may be the direction of the current of air outside the jacket b^3.

The jacket stands on feet p, so that the air may circulate under its bottom p^2 to enter the inlet b^4.

Indoors, under ordinary drafts, the addition of the chimney without its cap affords an extended flue-space, which enables greater combustion and more rapid heating of the iron.

I claim—

1. In a sad-iron heater, the chimney provided with a mouth to fit over and receive the nose and extend the flue-space of the sad-iron, substantially as described.

2. The combination, with the chimney f, of a cap, h, composed of an outer shell, 10, ex-

tended down over the chimney, an inverted cup, *l*, suspended within said shell, with an air-space between the two, and extended below the mouth of the chimney, with an air-space between it and the chimney, a cover, *m*, placed above the shell, and a foraminous ring, *n*, interposed between the cover and shell to afford outlets for the products of combustion, substantially as described.

3. In a sad-iron heater, the lamp composed of the burner, its wick-tube, the jacket and tank, and an air-chamber, *c*, between the jacket and tank, supplied with air only at the bottom of the jacket to support combustion of the oil in the burner, in combination with the sad-iron holder adapted to receive the heel of a flue-containing sad-iron, and a chimney having a mouth to fit over or receive within it the nose of the sad-iron to prolong or extend its flue and increase the draft and combustion, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALMA C. MACALLISTER.

Witnesses:

SARAH E. MACALLISTER,

PAUL WEST.