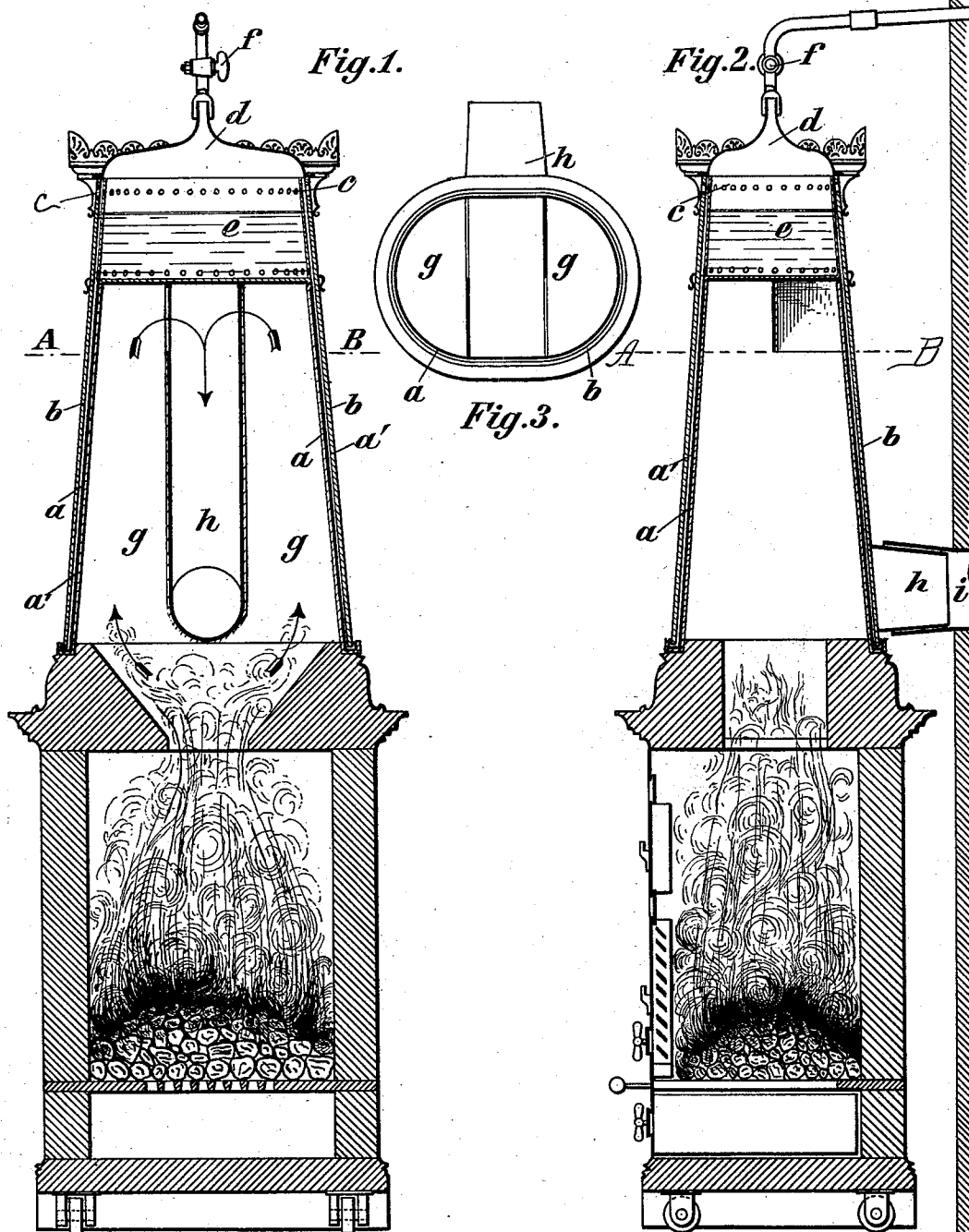


(No Model.)

A. MÜLLER.
HEATING STOVE.

No. 508,962.

Patented Nov. 21, 1893.



Attest
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UNITED STATES PATENT OFFICE.

AUGUST MÜLLER, OF HANOVER, GERMANY.

HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 508,962, dated November 21, 1893.

Application filed April 28, 1893. Serial No. 472,252. (No model.)

To all whom it may concern:

Be it known that I, AUGUST MÜLLER, builder, of 6 Alexanderstrasse, Hanover, in the Kingdom of Prussia and German Empire, have invented new and useful Improvements in and Connected with Stoves for Heating Rooms, Conservatories, and Like Spaces, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to that class of heating stoves which are adapted to humidify as well as to warm the air of the room, conservatory or other space in which they are placed, whereby the evil effects attending the presence of a highly dried atmosphere are avoided; and the invention consists of an improved construction and arrangement of such stoves.

In the annexed drawings, Figure 1 represents a front sectional elevation and Fig. 2 a side sectional elevation of a stove constructed according to my invention. Fig. 3 represents a cross section of the apparatus, taken upon the lines A B, Figs. 1 and 2.

Upon reference to the drawings it will be seen that my improvements consist essentially in an improved arrangement and disposition of a water heating space relative to the heat radiating flue of a stove of the above mentioned type.

a designates a sheet metal heat radiating flue, superimposed upon a stove of slow combustion or other suitable type.

b is an outer sheet metal casing disposed around the flue *a* in such a manner that an annular space or jacket *a'* exists between the metal *a* and the metal *b*. In the upper part of the casing *b* is a water space *c* which communicates, by means of perforations provided around its bottom, with the annular jacket *a'* above mentioned. The casing *a* is divided into two side rising flues *g* by a central descending flue *h*.

The mode of action of my improved stove is as follows:—Within ten to fifteen minutes after the stove has been lighted, ebullition of steam in the annular jacket *a'* commences. The rising steam escapes into the room or space being warmed through apertures *c*, and the air in such room is thereby humidified and warmed simultaneously. The exit of steam from the stove may be regulated by ad-

justing the cap *d* over the apertures *c*, whereby the surplus steam may be allowed to escape through the pipe *f*.

The entire apparatus above described is mounted upon four rollers which may when desired run in rails adapted to receive them. When it is required to sweep the chimney which carries off the products of combustion of the stove, the apparatus is drawn away from the flue *z*, the joint existing between the flues *h* and *i* being such as will allow this to be done. The flue *i* is plugged during the sweeping which prevents the entry of soot into the room, and after the sweeping is completed the plug is removed and the heating apparatus is re-instated.

In order to utilize the heat of the surplus steam generated by the stove, such steam may be led to a receiver disposed (where a large room is to be warmed) in the same room as the stove, or the steam may be led to a receiver disposed in a neighboring room. In these instances of the application of my invention the steam generating portions of the stove may be with advantage suitably enlarged. A space containing thirty-five thousand cubic feet can by the above described method of employing a stove constructed according to my invention be heated at a cost of from fourteen to sixteen pence per diem.

Pine branches or other suitable fragrant, medicinal, or antiseptic materials may be placed in the water space *c*, whereby their fragrance or other property is disseminated throughout the space being warmed.

By the use of a stove constructed and operating as above described, the temperature of the room or other place in which it is situated may be raised to any desired degree while the necessary humidity of the atmosphere is at the same time maintained, and the deleterious effects of a dry heated atmosphere, so often produced by heating stoves as at present constructed, are prevented. The arrangement of flues *g* and *h* insures a sufficient draft for the stove, while the construction illustrated in the drawings, comprising as it does comparatively few joints precludes the dissemination of dust and dirt.

By virtue of the qualities above enumerated, my improved stove is particularly suitable for employment in hospitals and like

places, while its capability of producing a regulated humidity of atmosphere renders its application to the heating of conservatories and other places containing growing plants and the like, particularly advantageous.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A heating stove consisting of a combustion chamber, a vertical flue having a water space encircling it, a water chamber with perforations leading to the water space, and exit openings from said water chamber for the escape of the steam, substantially as described.

2. A heating stove consisting of a combustion chamber, a vertical flue, a water space surrounding said flue, a water chamber at the top of the stove, perforations leading therefrom to the water space, exit openings and a movable rim controlling said perforations, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

AUGUST MÜLLER.

Witnesses:

WILH. KÜKEN,
F. SHADHLER.