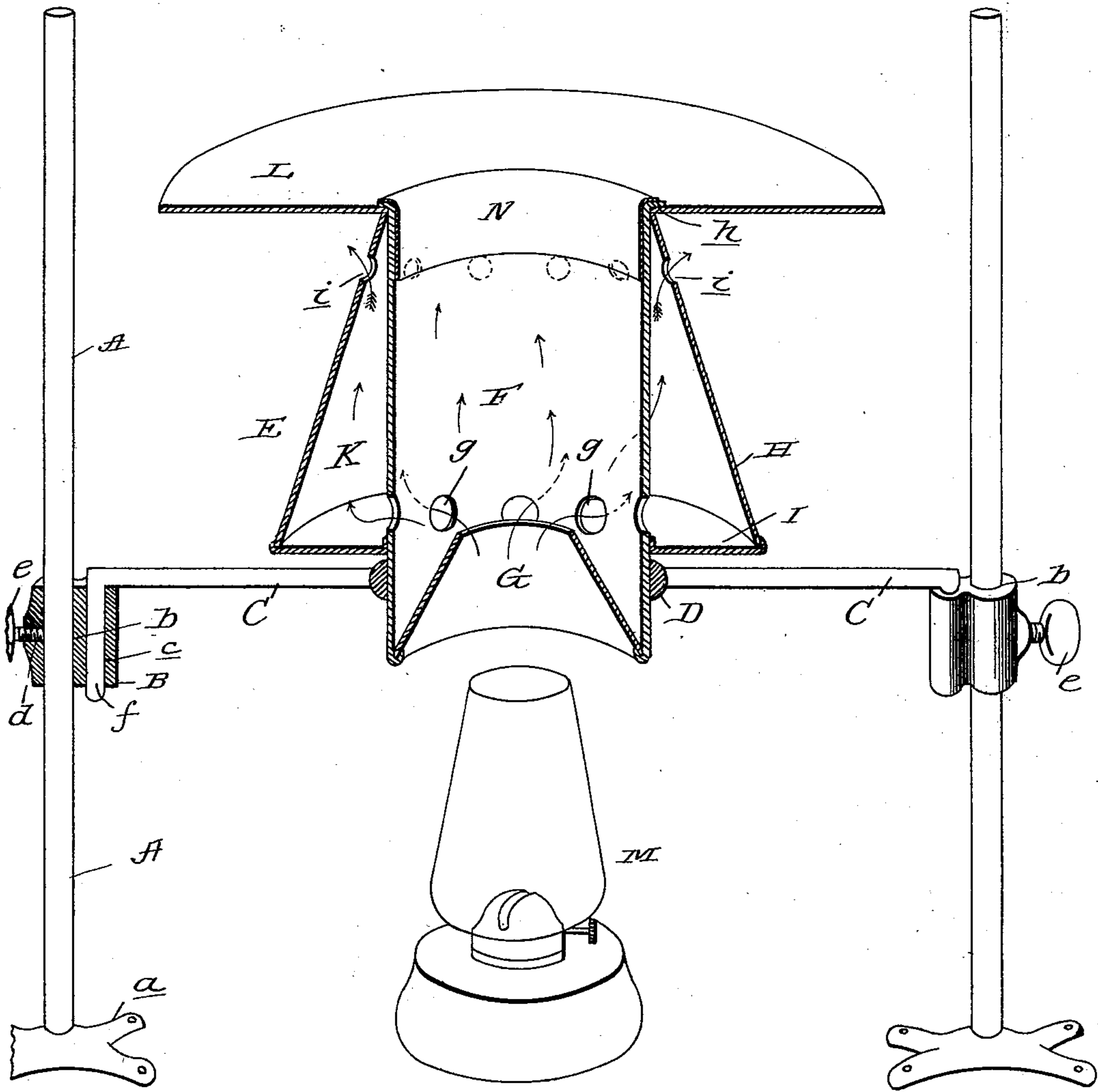


(No Model.)

G. M. DRUM.
HEATING APPARATUS.

No. 509,366.

Patented Nov. 28, 1893.



Witnesses:

E. Raeder

H. F. Matthews.

Inventor

George M. Drum

By

James J. Sheehy

Attorney

UNITED STATES PATENT OFFICE.

GEORGE M. DRUM, OF WEST SUPERIOR, WISCONSIN.

HEATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 509,366, dated November 28, 1893.

Application filed January 16, 1893. Serial No. 458,587. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. DRUM, a citizen of the United States, residing at West Superior, in the county of Douglas and State of Wisconsin, have invented certain new and useful Improvements in Heating Apparatus; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same.

This invention has relation to improvements in that class of devices used in connection with a lamp for receiving the hot air and particles of combustion given off through the chimney for cooking and heating purposes, and the novelty will be fully understood from the following description and claims when taken in connection with the annexed drawing, in which, the figure is a view of my improved device showing the same partly in vertical section, and partly in elevation, in connection with a lamp.

Referring by letter to said drawing: A, indicates standards or uprights which are preferably composed of rods of metal, and are fixed to a base *a*, having screw holes for the reception of screws or other suitable fastening devices whereby said standards may be firmly secured to any suitable support. Arranged upon these standards are slidable sleeves B, which have a vertical aperture *b*, to receive said uprights, and a parallel vertical aperture *c*, to receive the angular branches of brackets, as will be presently described. Tapping the vertical aperture *b*, is a threaded aperture *d*, to receive thumb screws *e*, whereby said slidable sleeves may be adjustably secured upon the uprights A.

C, indicates brackets. These brackets extend horizontally and at diametrical opposite points from a ring D, and are provided at their outer ends with depending angular branches *f*, which are inserted in the vertical apertures *c*, on the slidable sleeves. In some cases, a single standard or upright might be employed, and in this construction, there would be but one bracket used, and the ring would be secured to the outer end of that bracket, as by firmly fixing the base of the upright, I find that one will be sufficient in devices of small size.

E, indicates my improved device. This de-

vice comprises a central, vertical flue F, which may be made of sheet metal or other suitable material, and it is provided at a suitable distance from its lower end with a circular series of transverse apertures *g*. At the lower end of this vertical flue, is provided a guide G. This guide which is also composed of sheet metal, is of a truncated cone shape, and is secured at its enlarged end to the lower end of the flue F, and is disposed centrally therein; the upper end or edge of said guide being arranged at a height about the base of the apertures or holes *g*, in the flue F.

H, indicates a radiator comprising a conical casing, which is connected at its lower enlarged end by a horizontal plate I, and is secured at its upper or reduced end to the upper end of the flue F, as shown at *h*, so as to form a chamber K, between the outer wall of the flue F, and the body H. This depending conical casing or body H, is provided at a suitable distance from its upper end with a circular series of holes or apertures *i*.

L, indicates a shelf, which is preferably of a circular form in outline, and is secured to the exterior of the flue and radiator at the upper end thereof so that hot air and other particles discharged from the chamber K, will strike the under side of said shelf. The flue being normally open at its upper end, a griddle or suitable vessel may be placed over said opening, to heat the contents, and dishes containing articles to be kept warm, may be placed upon the shelf. The device E, being placed in the ring D, a lamp M, or other suitable heating source is placed beneath the device, so that the hot air rising through the chimney, will be directed into the flue and against the bottom of the vessel placed at the upper end of said flue.

In operation, as the hot air and particles of combustion rise and are conducted into the flue, they carry with them cold air within the room and both mingling, are discharged against the griddle or vessel placed upon the flue, after which they are cast down and passed through the holes or apertures *g*, into the chamber K, and from thence up the tapering passage where they are discharged through the holes or apertures *i*, and against the shelf L. With a device of this character, I not only retain sufficient heat for light cook-

ing purposes, and for keeping articles placed upon the shelf, warm, but I obtain sufficient heat from the radiator to ordinarily warm a room.

5 In some cases, the guide G, may be dispensed with, although it is preferable to have it, and a reinforcing band N, is preferably placed in the upper end of the flue.

10 Having described my invention, what I claim is—

1. The combination with a lamp or other heating source; of an upright or standard, the heating device comprising the vertical flue having a series of transverse apertures near
15 its lower end, the depending conical casing, having a circular series of apertures near its upper end, and arranged exterior to the flue with its small end secured to the upper end of said flue, the plate securing the lower end
20 of said casing to the flue at a point below the apertures therein, and a shelf secured to the

upper end of the flue, and the bracket receiving said heating device and adjustably secured to the standards or uprights, substantially as specified. 25

2. The combination with the vertical flue, having a circular series of apertures near one end, the conical casing, having a circular series of apertures near its upper reduced end, and secured to the exterior of the flue so as
30 to form a chamber between the flue and said casing, and the shelf secured externally to the upper end of the flue, and above the apertures in the casing, substantially as specified. 35

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE M. DRUM.

Witnesses:

FRANK A. ROSS,
E. M. TUTHILL.