

(No Model.)

2 Sheets—Sheet 1.

J. CINNAMON.
VENTILATING REFLECTOR.

No. 583,980.

Patented June 8, 1897.

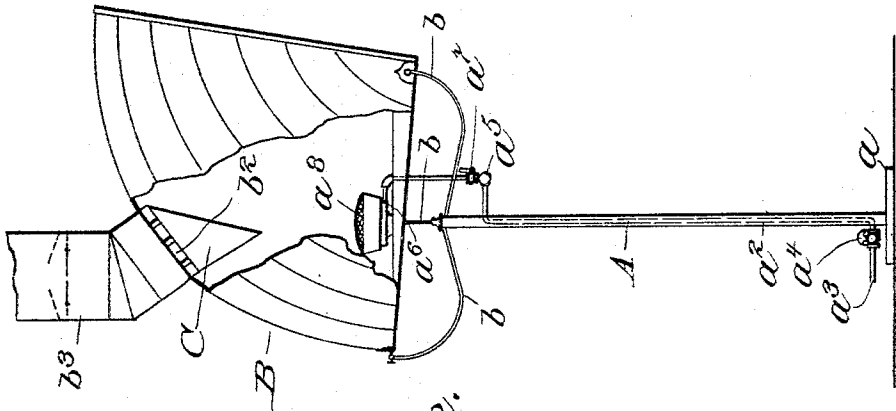


Fig. 2.

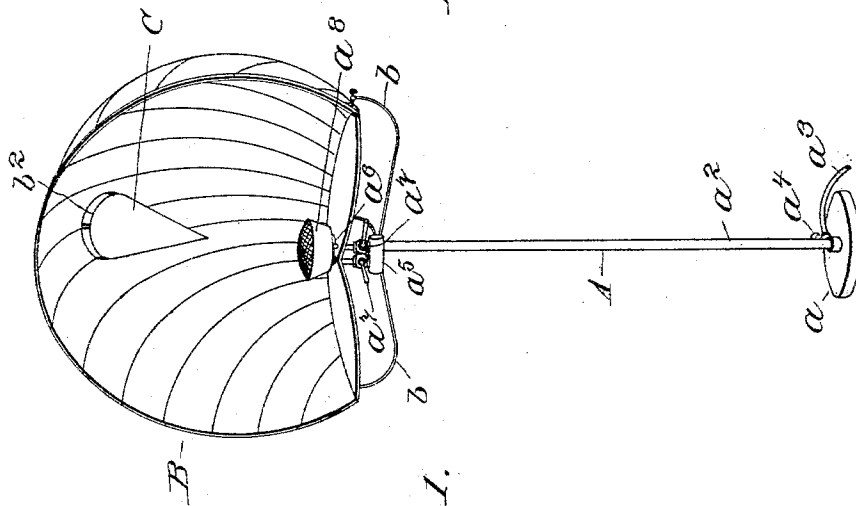


Fig. 1.

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INVENTOR

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Wm. A. Brown

ATTORNEYS.

(No Model.)

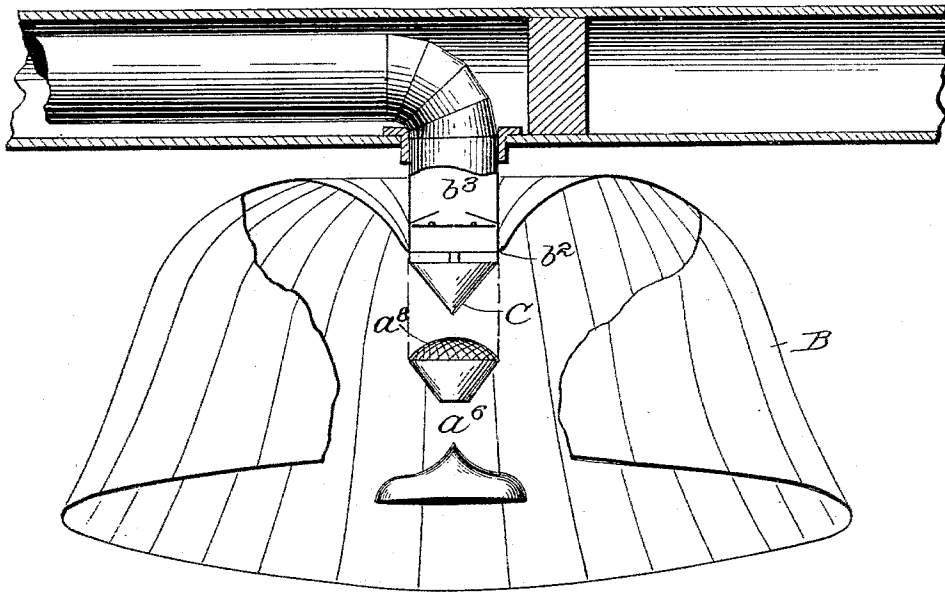
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Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN CINNAMON, OF NEW BRIGHTON, NEW YORK, ASSIGNOR TO THE
HIGH VENTIL HEATER AND HEAT REFLECTING COMPANY, OF NEW
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VENTILATING-REFLECTOR.

SPECIFICATION forming part of Letters Patent No. 583,980, dated June 8, 1897.

Application filed July 27, 1896. Serial No. 600,596. (No model.)

To all whom it may concern:

Be it known that I, JOHN CINNAMON, a citizen of the United States, residing at New Brighton, in the county of Richmond and State of New York, have invented certain new and useful Improvements in Ventilating-Reflectors, of which the following is a specification.

The invention relates to improvements in ventilating-heaters and heat-reflectors. The use of my devices of this class as ordinarily constructed is attended with partly unsatisfactory results owing to the passage of a small proportion of radiated heat-rays into the open flue, which experience teaches should be located vertically over the heater to obtain the best ventilation, so that the superheated air may rise directly into the flue and not cling to the walls of the reflector lower down, retarding its expulsion. The loss of heat-rays into a flue, although comparatively small in all my previous devices, yet it is in all cases almost total loss. The present device is designed to prevent radiation into the open flue or uptake for the air from consumed gases and at the same time to offer free and unobstructed passage for it, the object being to render the use of such heaters effective and economical by intercepting the heat-waves at a point intermediate of the generator or radiator and the entrance to the fuel air-flue, and, further, to divide or break up all of such waves and direct these rays against a main reflector; by which they may be redirected, as desired, and in a manner to insure positively against their passage into the flue.

The invention contemplates the production of a means at once simple, inexpensive, and efficient by which the effect as above set forth may be obtained, and in the present embodiment employs a comparatively small and somewhat conical reflector, which is placed between the flue and the heater, and preferably at a point immediately in advance of the flue-opening, as an obstruction to the further progress of all escaping heat-rays, which would otherwise pass out and be wasted. By reason of its conical form this interceptor serves to deflect the heat-rays

from their natural course and turn them against the reflector proper, by which they are directed outward and downward toward the floor and lower part of the walls of the room, chamber, or compartment.

I will now proceed to describe the detail construction of the device, with reference to the accompanying drawings, in which—

Figure 1 is a view in perspective of the invention applied. Fig. 2 is a view in elevation of the same, a portion of the wall of the main reflector being broken away to more clearly illustrate the shape and relative arrangement of parts; and Fig. 3 is a sectional perspective view of a modification.

Similar letters of reference indicate corresponding parts in the several views.

In the drawings, A represents a standard designed to serve as a support for the heater, and consists of a base *a*, from the center of which a tubular upright or pedestal *a*² extends and serves as a protecting casing for the fuel-supply pipe *a*³. This pipe is provided with a main valve *a*⁴ near the base of the pedestal for the regulation of the supply, and at its upper end terminates in a reservoir or tank *a*⁵, common to a series of burners *a*⁶, which, by means of individual valves *a*⁷, may be separately controlled. These burners are partially or wholly inclosed by a radiator dome or casing *a*⁸ of suitable construction.

B represents the main reflector, which in form may be said to be a hollow section of a sphere arranged to partially surround the radiator or source of heat and is adjustably held by arms *b*, capable of being tilted so as to direct the radiated heat outward at a desired angle. In the rear upper wall of the reflector an opening *b*² is formed through which the products of combustion pass into the outlet-flue *b*³.

The foregoing describes mechanism which forms no part of the present invention except so far as it may serve in illustrating its application and the advantages resulting therefrom. It will be apparent, however, that a heater of this class in operation will prove both inefficient and expensive for the reasons above stated.

C represents the combined heat-wave interceptor and deflector which constitutes the novel feature of the herein-described device. In form the deflector may vary more or less from a true cone, as may be found necessary in securing the best results. Generally, however, it will be an approximately conical polished metal shell having a base of a diameter corresponding to that of the opening of the outlet-flue, and sustained adjacent thereto with its apex pointing toward the source of heat, the distance of the base of the cone from the flue-opening being such that the area of the intervening circumferential space shall not be less than that of the flue-opening. This is essential, so as to allow for the ready escape of the deteriorated air with but little if any retardation of velocity. It is further essential that the form and relative arrangement of the deflector be such as to avoid reflection of heat-waves back to the heater on any normal line. On the contrary, under the action of the deflector the heat waves will be directed either directly toward the floor or indirectly, as by a second reflection from the main reflector.

The deflector serves a further purpose in regulating the velocity of a current of heated air passing over hot or incandescent surfaces,

and under such conditions acts as a conservator of heat for reflection and avoids a possible objection—to wit, an excessive velocity of a current of heated air into the flue and the consequent waste by convection.

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

1. The combination with a heater, a reflecting-chamber partly inclosing said heater, an offtake-flue from said chamber, a reflector as large as, or larger than, the flue, placed between the flue and the heater with sufficient space between said reflector and the flue to allow of passage of the heated gases from the heater into the flue.

2. The combination with a heater or burner, of a combustion-chamber partly inclosing the same and having reflecting-walls, an offtake-flue from said chamber, and a reflector placed between the flue and the burner and spaced from the flue, the said reflector being as large or larger than the flue, and forming practically a continuation of the reflecting-surface.

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Witnesses:

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M. V. BIDGOOD.