

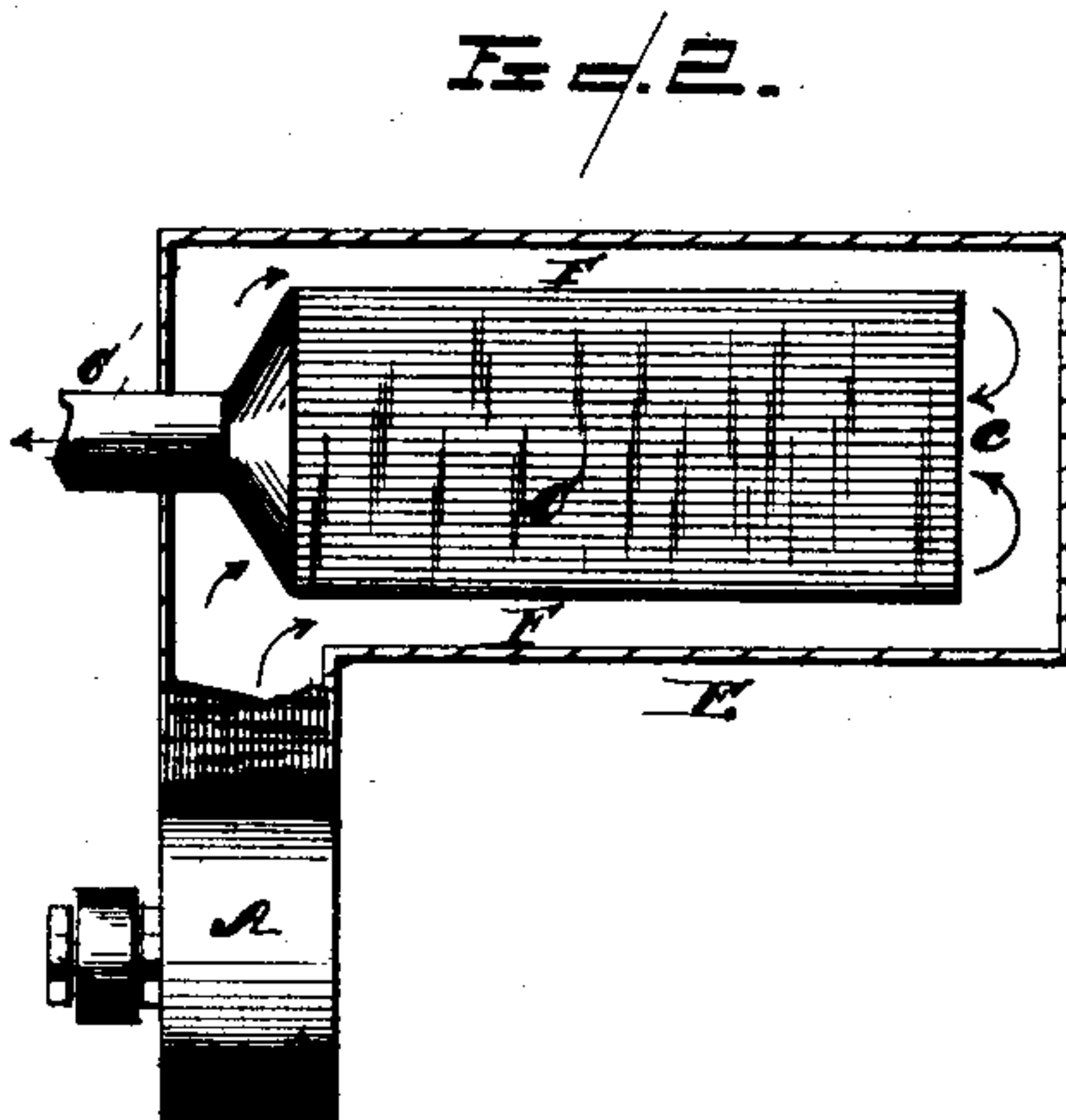
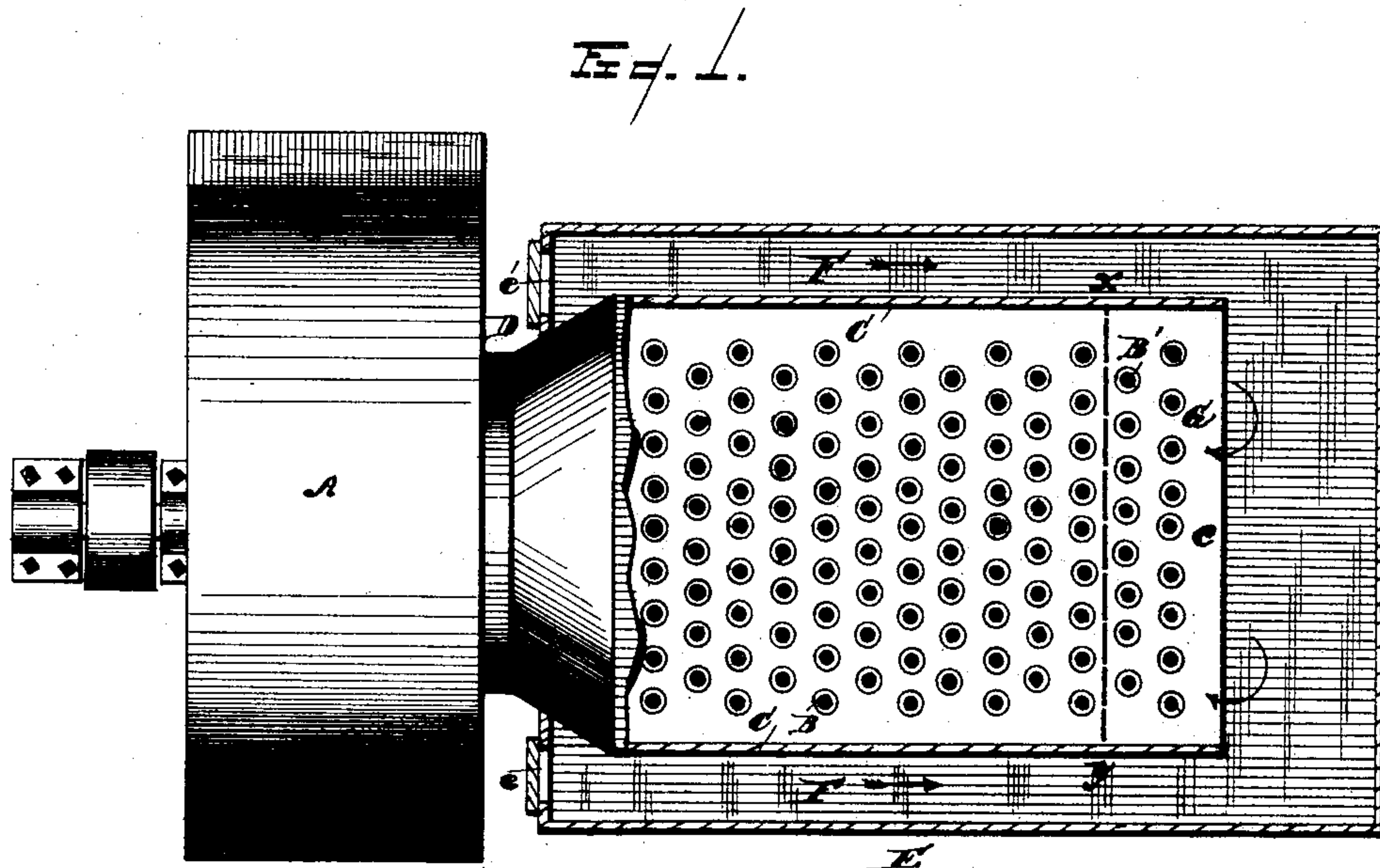
(No Model.)

M. C. HUYETT.

COMBINED HEATER AND FAN BLOWER.

No. 329,838.

Patented Nov. 3, 1885.



WITNESSES.

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MILES C. HUYETT, OF DETROIT, MICHIGAN.

COMBINED HEATER AND FAN-BLOWER.

SPECIFICATION forming part of Letters Patent No. 329,838, dated November 3, 1885.

Application filed August 4, 1885. Serial No. 173,578. (No model.)

To all whom it may concern:

Be it known that I, MILES C. HUYETT, of Detroit, county of Wayne, State of Michigan, have invented a new and useful Improvement in Combined Heater and Fan-Blower; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention is designed to provide an improved heater and fan-blower combined; and it consists of the combinations of devices and appliances hereinafter specified, and more particularly pointed out in the claims.

Figure 1 of the drawings is a horizontal section of a device embodying my invention, showing parts in plan. Fig. 2 represents a modification.

A represents a fan-blower.

B represents a series of radiating pipes or loops.

C represents a case inclosing said pipes or loops.

D represents the neck connecting the blower with the interior of said case, so that the air may communicate freely between the radiator-pipes and to the fan.

E represents an exterior cover or wall, located about the radiator, and its case forming an air-space, F, between it and said case. The case C is open at one end or perforated, as shown at *c*, the construction being such that the air from the air-space F may enter the case C and circulate about the radiator-pipes. Without the housing or wall E it is evident that a considerable heat will be wasted by radiation from the case C, but by locating the housing E about it this radiation heats the air in the air-space to a considerable extent before it is admitted to the interior of the case C, thereby saving the heat radiated from the case C, and preventing the entrance of the air into the interior of the case in a cool condition, and so, also, economizing the heat from the pipes themselves direct.

The housing E may be made of metal, or it may be made of mason-work, as may be preferred, said wall also being provided with flues or openings to admit air to the air-space F.

As shown in the drawings, *e e'*, Fig. 1, represent

such openings located adjacent to the blower in such a manner that the cool air may be admitted at the point farthest from its entrance into the interior of the case C, and so will then pass about the case C in the direction indicated by the arrows, being heated more and more until it comes to the openings, whereby it is admitted into the interior of the case C, by which time it is heated to a considerable degree.

I would have it understood that my invention contemplates the use of a suction or blower fan, as may be desired, and the arrangement of the exterior housing or wall may be varied accordingly, as may be necessary, my object being to introduce air into the air-space F, to be heated therein in its passage to the point of entrance into the radiator-case.

Beside combining with the radiator and fan combined the exterior wall or housing, arranged to heat currents of air prior to their admission into the radiator-case, my invention also contemplates the arrangement of a condensing-chamber in connection with the radiator, for the purpose of depriving the air of moisture prior to its admission to the radiator proper, so as to give to the air a greater drying capacity when forced from the radiator for drying purposes. Accordingly, G represents a condensing-chamber, shown in the drawings as divided from the radiator proper by the dotted line *x y*, although as a matter of fact no wall divides the condensing-chamber from the radiating-loops. The condensing-chamber may be provided with suitable loops, B', similar or dissimilar from those used in the radiator proper, in which water is to be circulated.

The expansion of the heated air in the air-space F enables the condenser more effectually to deprive it of its moisture.

I would have it understood that I desire to use my improved radiator and fan and exterior case combined with or without the condensing-chamber.

Fig. 2 shows the parts arranged adapting the device for a fan-blower instead of an exhauster, in which case the fan communicates with the air-space F, and forces the air through the radiator and through the exhaust-main C'.

What I claim is—

1. The combination, with a radiator, of an

inclosing-case constructed to admit air to the interior, a fan communicating with the interior of said case, and a housing or wall surrounding said case, leaving an air-space between it and said housing, said housing constructed to admit air into said air-space, and to permit its circulation partially about said case, and give it entrance into the interior of said case, so as to pass through the radiator, substantially as described.

2. The combination, with a radiator having an inclosing-case constructed to admit air to the interior, of an exterior housing or wall forming an air-space between it and said case, air-inlets to said air-space, and a fan for moving the air through the radiator, the construction being such that the air entering the air-space will circulate partially around the exte-

rior of the radiator-case, entering the same and being moved through the radiator by the fan, substantially as described.

3. The combination, with a radiator having a condensing-chamber in connection therewith and a case constructed to admit air to the interior and to emit it therefrom, of an inclosing-wall or housing forming an air-space between it and said case, air-inlets to said air-space, and a fan to move the air through the condensing-chamber and radiator, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

MILES C. HUYETT.

Witnesses:

N. S. WRIGHT,

M. B. O'DOHERTY.