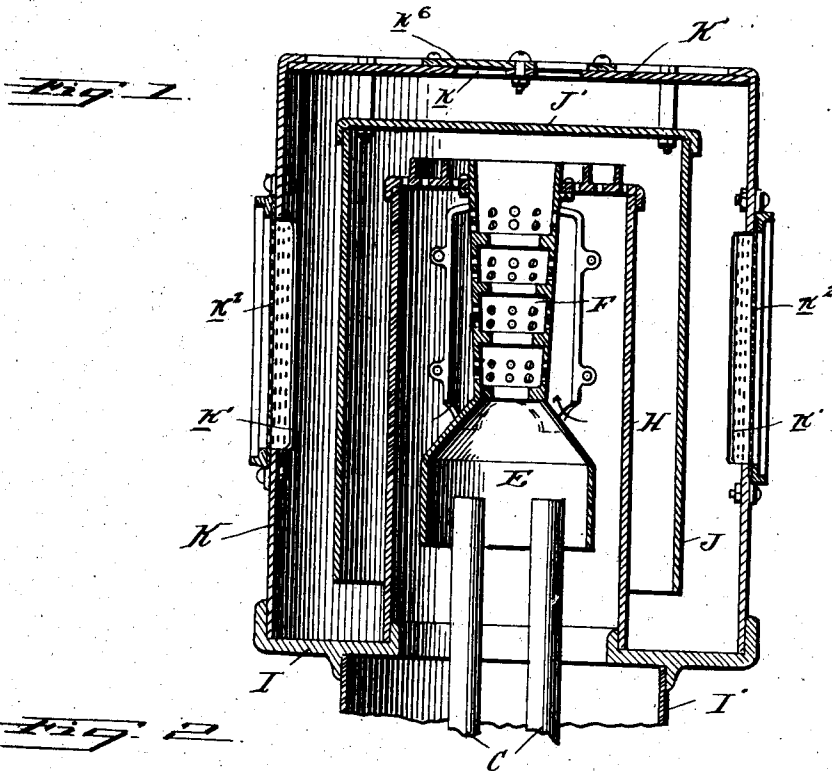
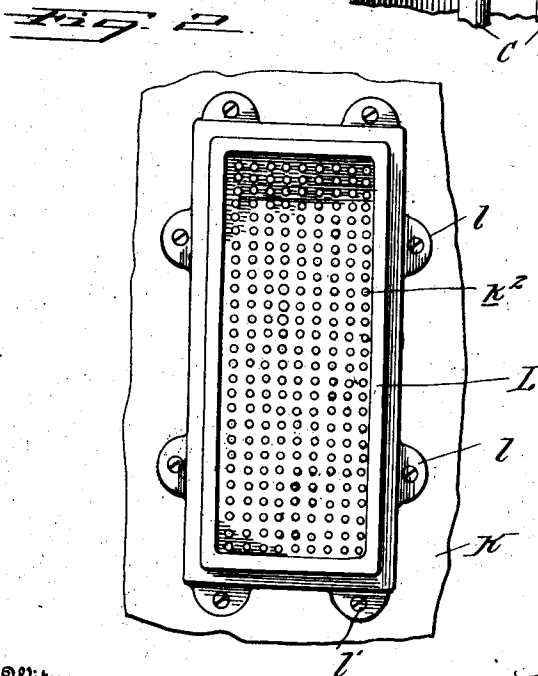
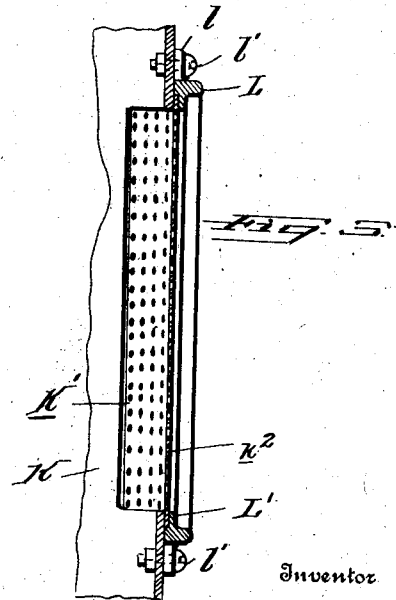


No. 834,228.

PATENTED OCT. 23, 1906.

V. W. BLANCHARD.
GAS HEATING APPARATUS.

APPLICATION FILED JAN. 22, 1906.



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GAS HEATING APPARATUS.

No. 834,228.

Specification of Letters Patent.

Patented Oct. 23, 1906.

Application filed January 22, 1906. Serial No. 297,270.

To all whom it may concern:

Be it known that I, VIRGIL W. BLANCHARD, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Gas Heating Apparatus; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is an improvement in gas heating apparatus particularly designed for use in connection with gas-stoves of the kind illustrated in my application for gas heating-stoves, Serial No. 297,241, filed January 22, 1906; and this invention relates to the construction of the outer case of such stoves, and is designed to improve the extraneous appearance of the case and at the same time provide for lateral dissemination of the heat in a most advantageous manner all around the periphery of the stove, while protecting the heating-flues thereof from any sudden chilling or deflection of the heated gases by extraneous drafts in the apartment in which the stove is located.

The invention will be fully understood from the following description of the device illustrated in the accompanying drawings, in which—

Figure 1 is a vertical sectional view through a complete gas heating-stove having my improvement applied thereto. Fig. 2 is an enlarged front view of one of the ventilating-plates, and Fig. 3 is a vertical section thereof.

In the drawings, F designates a burner into which gaseous mixtures are supplied from tubes C, which discharge into a hood E on the lower end of the burner. This burner is suspended within a cylinder H, mounted on a base-plate I, supported on a cylinder I', mounted on a suitable base. (Not shown.)

The cylinder H is surrounded by a second cylinder J, the top of which is closed by a plate J', so that the products of combustion escaping from the burner are caused to descend between the cylinders H and J into the space between the cylinder J and the inclosing casing K, which is supported upon the base-plate I and extends above the plate J' and may have its upper end closed by the plate K', provided with an opening *k* (provided with a valve *k*^a) for the escape of some of the products of combustion above the plate J'.

The parts C, E, F, H, and J are preferably

constructed substantially as shown and described in my application above referred to, as the present invention relates to the construction of the outer casing and more particularly to the heat-escape outlets from said casing, which I will now describe.

In the side of the casing K are large openings *k'*, which are covered by plates *k*², of reticulated or perforated metal, each of which sheets is secured in position around an opening by means of a metal frame L, having lateral projecting lugs *l*, by which it can be fastened to the casing by rivets or bolts *l'*, as shown. The frame L corresponds in contour with the opening in the casing and has an inwardly-projecting flange *l'*, adapted to clamp the edges of the reticulated plate *k*², against the side walls of the casing, as shown more clearly in Fig. 3.

The casing K should be provided with openings *k'* on all sides, and as each opening is covered by reticulated plates *k*² there can be at no point a violent outrush of heated air from the side of the casing, but the heated air will be diffused uniformly through the apertures in the plates *k*² all around the side walls of the casing, and thus distributed in the most efficient manner around the stove, and such lateral diffusion of the hot air is greatly more advantageous for heating purposes than having it discharged entirely through the top of the casing through the valved apertures *k* therein; but even if some of the gases be allowed to escape from the upper part of the casing a large quantity of the hot gases nevertheless will escape through the perforated plates *k*². These plates and their frames, furthermore, impart a very ornamental appearance to the casing, and the plates are cheaper and more serviceable than mica or glass, which, moreover, would be useless for the purposes of these plates *k*², because mica or glass would not permit the passage and diffusion of the gases through the openings *k'*, which is the object of the present invention. The perforated or reticulated plates *k*², used as a substitute for mica and glass with the advantageous results above specified, I consider an important feature of the invention, and I do not wish to restrict myself to the particular form of the casing shown in the drawings.

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

1. The combination in a gas heating-stove

of a burner, a cylinder H surrounding the same and closed at its upper end, a second cylinder J enveloping the cylinder H, and a third cylinder or casing K surrounding the cylinder J and provided with a series of openings, said openings being closed by a like series of perforated metal plates, all arranged to operate substantially as and for the purpose described.

10 2. The combination of a gas heating-stove having an internal burner, a cylinder surrounding the burner, and a second cylinder rounding the first-mentioned cylinder and closed at its upper end; with a casing sur-

rounding the last-mentioned cylinder and 15 having an annular series of large openings in its side walls, perforated metal plates placed over the openings in the walls of the casing, and metallic frames secured exteriorly to the casing around the openings and retaining the 20 perforated plates in position.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

VIRGIL W. BLANCHARD.

In presence of—

JAMES R. MANSFIELD,
L. E. WITHAM.