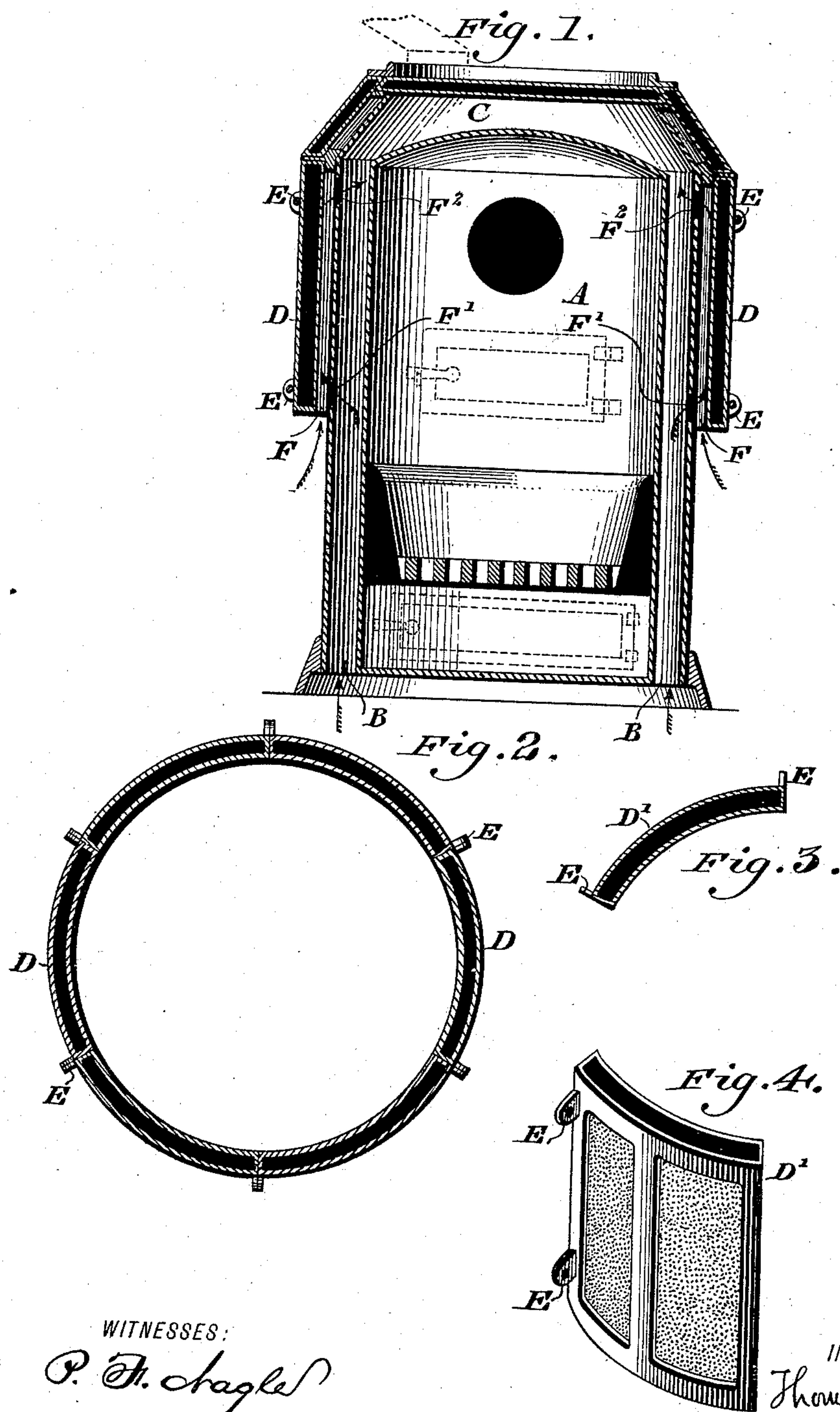


(No Model.)

T. W. JENKINS.
NON-CONDUCTING CASING FOR HEATERS, FLUES, PIPES, &c.
No. 474,639.

Patented May 10, 1892.



WITNESSES:

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NON-CONDUCTING CASING FOR HEATERS, FLUES, PIPES, &c.

SPECIFICATION forming part of Letters Patent No. 474,639, dated May 10, 1892.

Application filed April 29, 1891. Serial No. 390,896. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. JENKINS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Non-Conducting Casings for Heaters, Flues, Pipes, Boilers, &c., which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a casing for a heater, &c., the same being formed of hollow sectional plates which are filled with non-conducting material and provided with means of connection, thus providing an easily-applied, practical, and effective device for the purpose intended.

Figure 1 represents a vertical section of a heater embodying my invention. Fig. 2 represents a horizontal section thereof. Fig. 3 represents a horizontal section of a detached portion. Fig. 4 represents a perspective view of one of the sections of the casing.

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

Referring to the drawings, A designates a heater, the same having the cold-air passage B and the hot-air chamber C, as usual in such cases.

D designates the exterior casing, the same being formed of sections D' of hollow plates properly connected and producing chambers which are filled with non-conducting material. The sides or ends of the sections are provided with ears E, whereby the sections may be connected and sustained on the heater, it being seen that owing to the casing the heat is retained within the same and loss thereof by radiation prevented. The casing incloses the exterior wall of the cold-air passage B and is set out therefrom, forming the passage F, said wall having openings F' F² therein, thus forming communication between said passages B and F, whereby air from passage B enters the passage F through the opening F', so that the air in said passage F that may have been heated by the wall of the passage B is carried up through the opening F² into the hot-air chamber, and consequently conveyed away from the casing D, avoiding loss of such heat by radiation. The casing D in said Fig. 1 does not reach to the bottom of the heater, but its lower end is open, so that air may be admitted directly into the passage F.

It is evident that the invention is applicable to all tubular devices in which it is desirable to have the same incased or clad with non-conducting material.

As the plates are made in sections, the casing formed by the same may be readily built up, according to the shape of the heater, &c., to which it is to be applied.

The plates composing the casing may be solid or skeleton, a form of the latter being shown in Fig. 5.

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

1. A heater having a casing of non-heat-conducting material surrounding its exterior wall, forming a passage between the wall and the casing, the said wall having openings therein, whereby the chamber within the wall is in communication with the said passage, said parts being combined substantially as described.

2. A heater having a cold-air passage within an exterior wall, a casing of non-heat-conducting material surrounding said wall, forming a passage between it and the wall, the said wall having openings forming communications between the passages and the outer passage being open at the bottom, said parts being combined substantially as described.

3. A heater having chambered plates secured thereto and filled with non-heat-conducting material, said plates extending part way down the heater and having a chamber formed between the casing of the heater and the inner walls of the plates open at bottom for ingress of air, substantially as described.

4. A heater having a surrounding air-chamber with apertures in the upper part of the sides thereof, and a series of plates surrounding the upper part of the air-chamber and having chambers filled with non-conducting material, said chambered plates standing apart from the exterior wall of said air-chamber to form an air-ingress passage to the openings of said air-chamber, substantially as described.

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Witnesses:

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