

(No Model.)

2 Sheets—Sheet 1.

F. KERNAN, Jr.

EVAPORATING PAN FOR HOT AIR FURNACES.

No. 385,716.

Patented July 10, 1888.

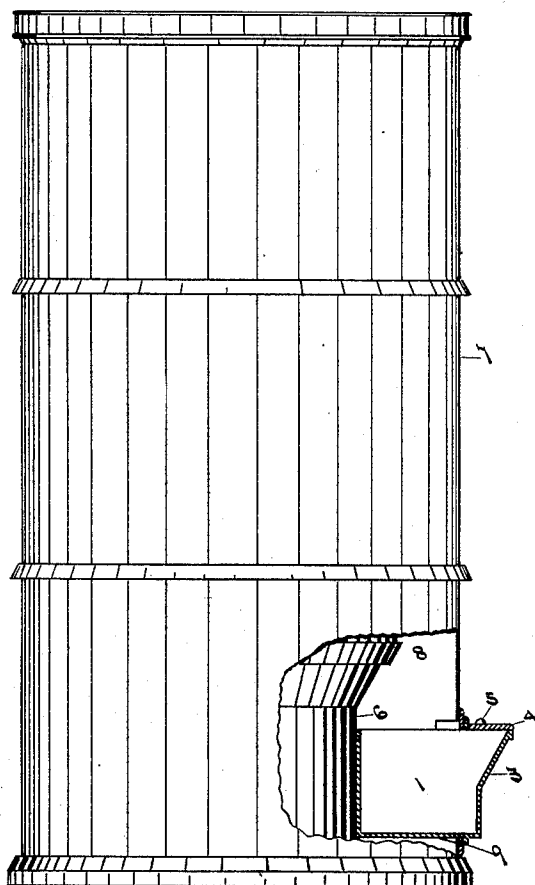


Fig. 1

WITNESSES:

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Edwin H. Wesley.

INVENTOR.

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(No Model.)

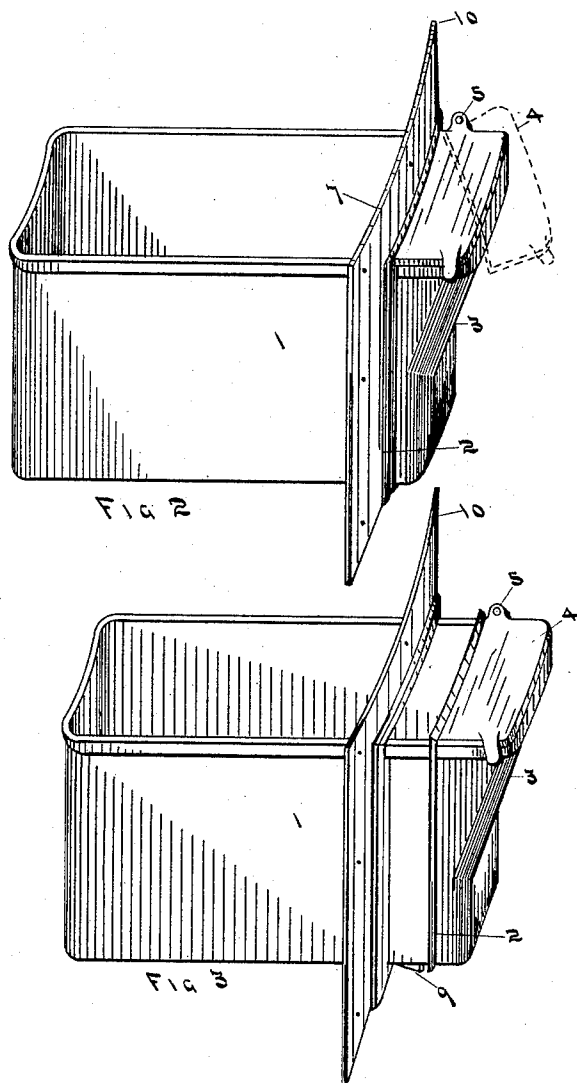
2 Sheets—Sheet 2.

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WITNESSES:

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# UNITED STATES PATENT OFFICE.

FRANCIS KERNAN, JR., OF UTICA, NEW YORK, ASSIGNOR TO RUSSEL  
WHEELER, SON & CO., OF SAME PLACE.

## EVAPORATING-PAN FOR HOT-AIR FURNACES.

SPECIFICATION forming part of Letters Patent No. 385,716, dated July 10, 1888.

Application filed November 17, 1886. Serial No. 219,131. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS KERNAN, JR., of Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Evaporating-Pans for Hot-Air Furnaces; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to an improvement in an evaporating-pan connected with a hot air furnace; and it consists in the mechanism hereinafter pointed out and claimed.

In the accompanying drawings, Figure 1 represents a side view of an ordinary hot-air furnace inclosed, the broken line indicating a portion of the housing removed, showing the evaporating-pan in section. Fig. 2 represents a perspective view of the evaporating-pan, the dotted line representing the movement of the swinging door. Fig. 3 represents the same view as Fig. 1, with a swinging door closed.

Heretofore evaporating-pans have usually been employed so constructed as to require the pan to be drawn out or removed from the furnace, in order to fill the same with water. This is a serious objection, as the pans are necessarily heavy and cumbersome, requiring considerable strength to operate them. For this reason their use has been substantially abandoned, to the detriment of the furniture in houses heated with hot-air furnaces, and to the health of the occupants. In other cases stationary reservoirs or pans have been provided inside of the shell or casing for receiving water, requiring the operator to open doors to fill the reservoir or tank at great inconvenience. I overcome these several objections by providing evaporating-pan 1, open at the top, provided at the front with projecting flange 2, for lapping the opening in the wall or casing of the furnace, the flange or front forming an inclosure for the opening. On the front of the evaporating-pan I provide a projection, 3, open at the top, which forms a projecting lip extending beyond the periphery or contour of the furnace-inclosure, the lip being

open at the top for receiving and conducting the water into the evaporating-pan, and, indeed, forms a part of the pan. The top of the opening outside of the flange is opened or closed with swinging door 4, pivoted at 5 to an ear on the pan, and is opened or closed by swinging the same on the pivot, as shown in Fig. 2, thus enabling the operator of the furnace to fill the evaporating-pan with water without removing the same by opening the door pivoted on the projecting lip.

In the drawings, 6 represents an ordinary fire-pot. The evaporating-pan is held substantially horizontal by flange 2, surrounding the front of the evaporating-pan by its contact with the furnace-casing, by the employment of inclined catches 9, Fig. 3, on the under side of the pan. The spaces between the catches and the flange are sufficient to admit the furnace-casing, or the frame surrounding the opening in the furnace-casing between them. By this construction the evaporating-pan is held substantially horizontal, and care should be taken to so apportion the size of the pan as to prevent its coming in contact with the fire-pot. An air-space should be allowed between the end of the pan and the fire-pot.

7 represents the casing or furnace-jacket, forming air-space 8 between the jacket and the furnace proper to accommodate the movement of the heated air.

10 represents a frame surrounding the opening attached to the outer surface of the jacket or casing of the furnace, forming substantially a door frame.

The important feature of my invention consists in forming the evaporating pan in such manner as to be easily removable, and to be held, when in position, substantially horizontal, leaving an air-space between the fire pot and the back of the evaporating-pan, and rendering it impossible to bring the evaporating-pan in contact with the furnace, and to provide means for filling the evaporating pan with water without disturbing the pan itself.

Another advantage of my invention consists in obviating the necessity and expense of fitting doors in the jacket or casing of the furnace.

What I claim as new, and desire to secure by Letters Patent, is—

In a hot-air furnace having a casing surrounding the same, forming a hot-air space between the casing and the furnace, in combination with an evaporating pan having a flange  
5 surrounding the pan back from the front of same, the pan opening into the air-space and a portion extending outside of the casing, the inclined catches on the under side of the pan back of the flange, and the pivoted swinging

door over the pan outside the casing, as described.

In witness whereof I have affixed my signature in presence of two witnesses.

FRANCIS KERNAN, JR.

Witnesses:

EDWIN H. RISLEY,  
D. MCGUCKEN.