(No Model.)

L. SCHAFFER.

VENTILATING OUTLET FOR REFRIGERATOR CHAMBERS.

No. 425,831. Patented Apr. 15, 1890.

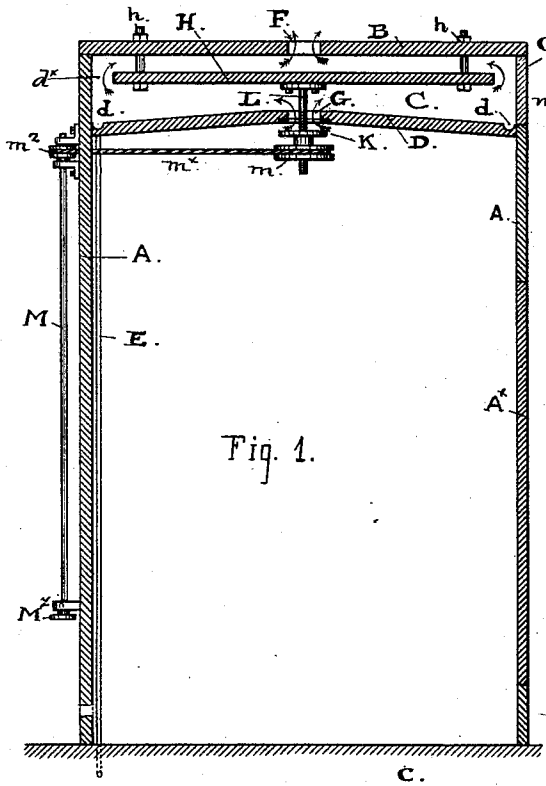


Fig. 1.

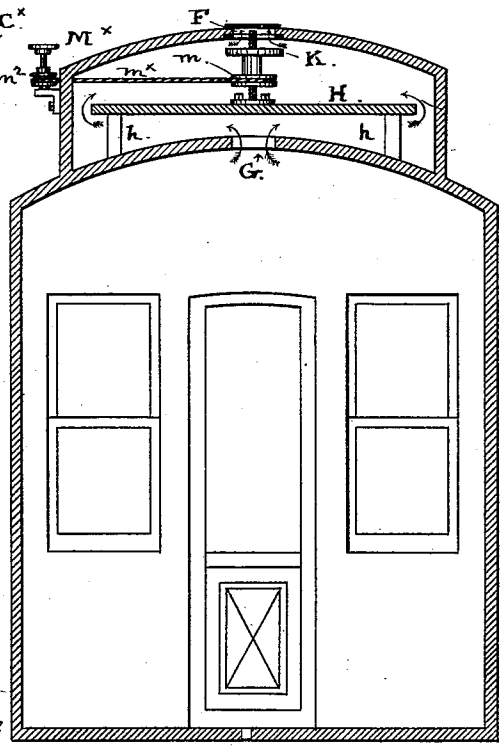


Fig. 3.

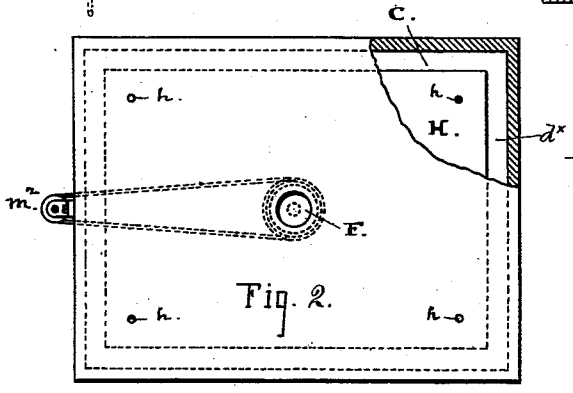
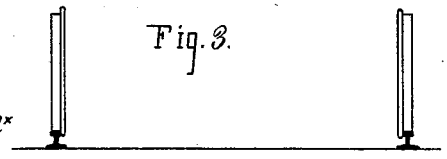


Fig. 2.



Witnesses:

Wm Mayer.

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his Att'ys.

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UNITED STATES PATENT OFFICE.

LOUIS SCHAFFER, OF OAKLAND, CALIFORNIA.

VENTILATING-OUTLET FOR REFRIGERATOR-CHAMBERS.

SPECIFICATION forming part of Letters Patent No. 425,831, dated April 15, 1890.

Application filed December 30, 1889. Serial No. 335,426. (No model.)

To all whom it may concern:

Be it known that I, LOUIS SCHAFFER, a citizen of the United States, residing in the city of Oakland, county of Alameda, and State of California, have invented certain new and useful Improvements in Ventilating-Outlets for Refrigerator-Chambers, of which the following is a specification.

My invention relates to an improved ventilating-outlet and draft-regulator for refrigerator-chambers, cold-storage rooms, and other similar compartments in which meats and other substances and articles of a perishable nature are kept for future consumption as food; and it consists in certain construction and combination of parts, producing a ventilating-outlet that has for its object to secure constant and effective circulation of air from the chamber or compartment and to bring the same under control, as hereinafter fully set forth.

The accompanying drawings, forming part of this specification, illustrate the manner in which I produce and apply the said improvement both to a stationary refrigerating-chamber, such as is arranged for butchers' use, and also to a refrigerator-car.

Figure 1 represents a cross-section in elevation of a refrigerating-chamber. Fig. 2 is a top view of the same chamber with a portion of the roof broken away at one corner to show interior construction, and Fig. 3 a vertical cross-section through a refrigerator-car to which my improvements are applied.

A indicates the sides or walls of a refrigerating-chamber or similar apartment of any suitable construction, and $A^{\times}$ the door at one side.

B is the roof or top, and D is a false ceiling or partition separating from the upper part of the chamber a space C. The partition D slants from the center outward to the four sides of the chamber, and has a gutter d at the bottom of the slope all round, with a conductor E leading to the outside.

In the center of the top B is an opening F, and under it in the center of the partition D is an opening G. Between the two openings and about in the middle of the space C is a deflecting board or plate H, so fixed in position that it cuts off direct communication of the interior of the chamber with the air outside through the outlets F G and causes the air to take a circuitous course. The plate stands clear of the surrounding sides, and a passage $d^{\times}$ is left all around the edges, through which the lower space and the upper space connect. The plate can be supported either from the roof by suspension-rods h h or upon the ceiling by short posts h' h'.

To one of the outlets is applied a damper, by which the circulation and outward flow of air can be regulated from the outside of the chamber.

The construction which I have employed for this regulator is a disk-valve K, movable upon a screw-threaded rod L, and an adjusting means consisting of a small sheave m on the disk, a cord belt $m^{\times}$, connecting the sheave with a sheave m^2 on the outside, and a shaft M, with a hand-wheel $M^{\times}$, the arrangement of these parts being illustrated in the figures of the drawings.

In Fig. 1 the valve is applied to the lower outlet and works inside the chamber from below, while in the construction represented in Fig. 3 the valve works in the space C against the upper outlet. This change in position is a matter of convenience only, as the results are the same in each case. The rod L is fixed in line with the center of the opening, and the valve has a screw-threaded sleeve working on the threaded part of the rod.

It should be mentioned that other mechanical devices to open and close the valve and to set it in different positions for reducing or increasing the circulation could be substituted for the pulleys and belts.

An opening at one or more sides of the compartment C, with a door $C^{\times}$ to close the same, affords access for washing out and cleaning the interior surfaces in order to remove the slime and accumulations resulting from the deposit of moisture on the walls and partitions. As the passage and outflow of air through this improved outlet is intended to take place slowly and continuously, and the exhalations and moisture taken up by the air in its upward flow will be deposited in the ventilating-compartment, it is necessary to keep the surfaces inside sweet and clean by washing out from time to time, and this is

readily done by turning a hose into the compartment, the water being carried off by the gutter and the conductor before mentioned.

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

1. The combination, with a compartment C, arranged above a refrigerating-chamber, having upper and lower walls provided with openings F and G, a horizontal partition H, located in said compartment C, with air-passages around its edges, and an adjustable valve K, controlling one of the openings in the walls of the compartment, as set forth.

2. The combination of a refrigerating room or chamber, the compartment C, arranged above said chamber, having upper and lower walls provided with openings F and G, the lower wall being sloped from the center outward and provided with the gutter *d*, a horizontal partition H, located in compartment C, with air-passages around its edge, and an adjustable valve K, controlling one of the openings in walls of the compartment, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

LOUIS SCHAFFER. [L. S.]

Witnesses:

CHAS. E. KELLY,

EDWARD E. OSBORN.