

(No Model.)

H. D. COGSWELL.

METHOD OF PRODUCING A COOL ATMOSPHERE IN ROOMS AND
APARTMENTS.

No. 272,653.

Patented Feb. 20, 1883.

Fig. 1.

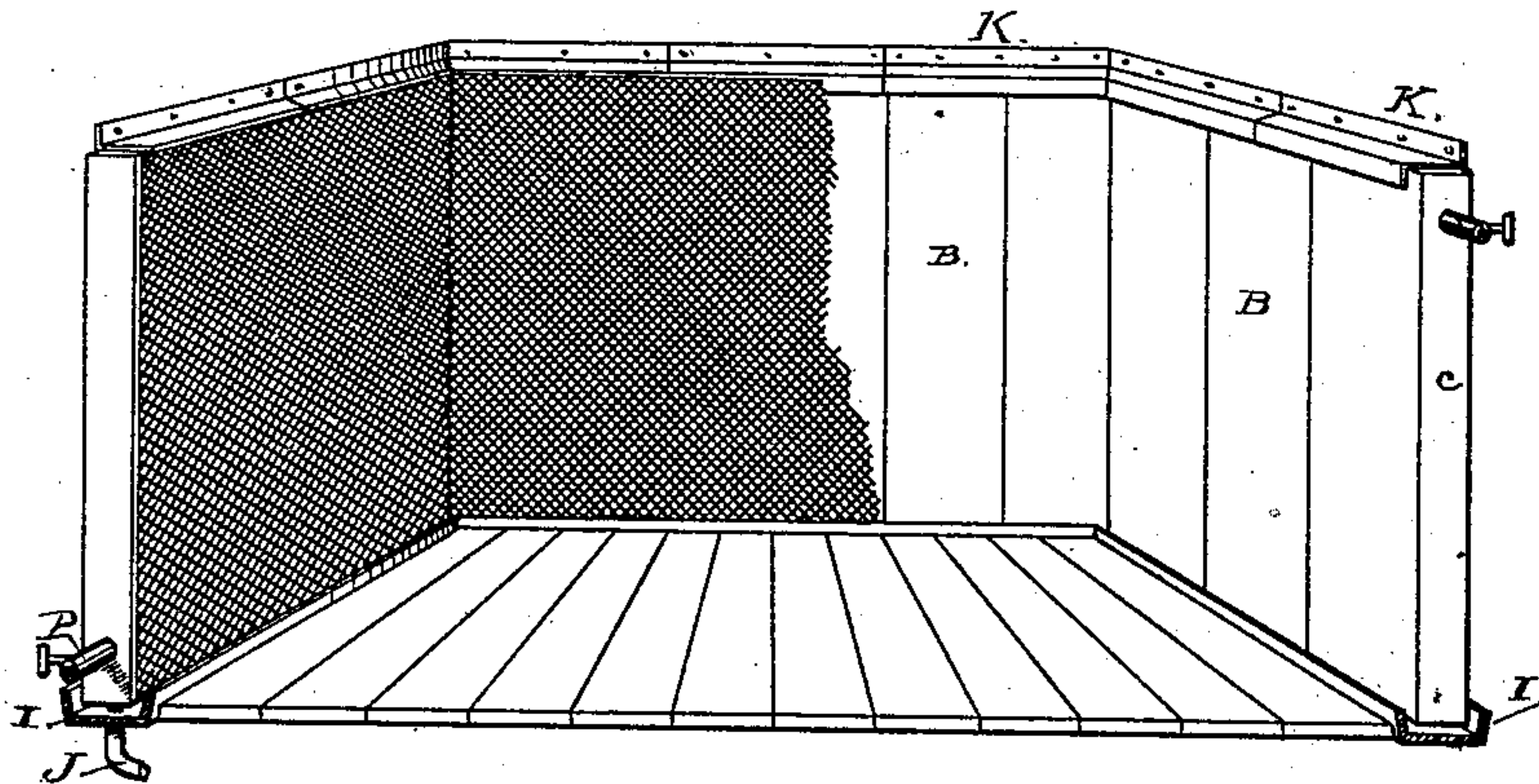


Fig. 2.

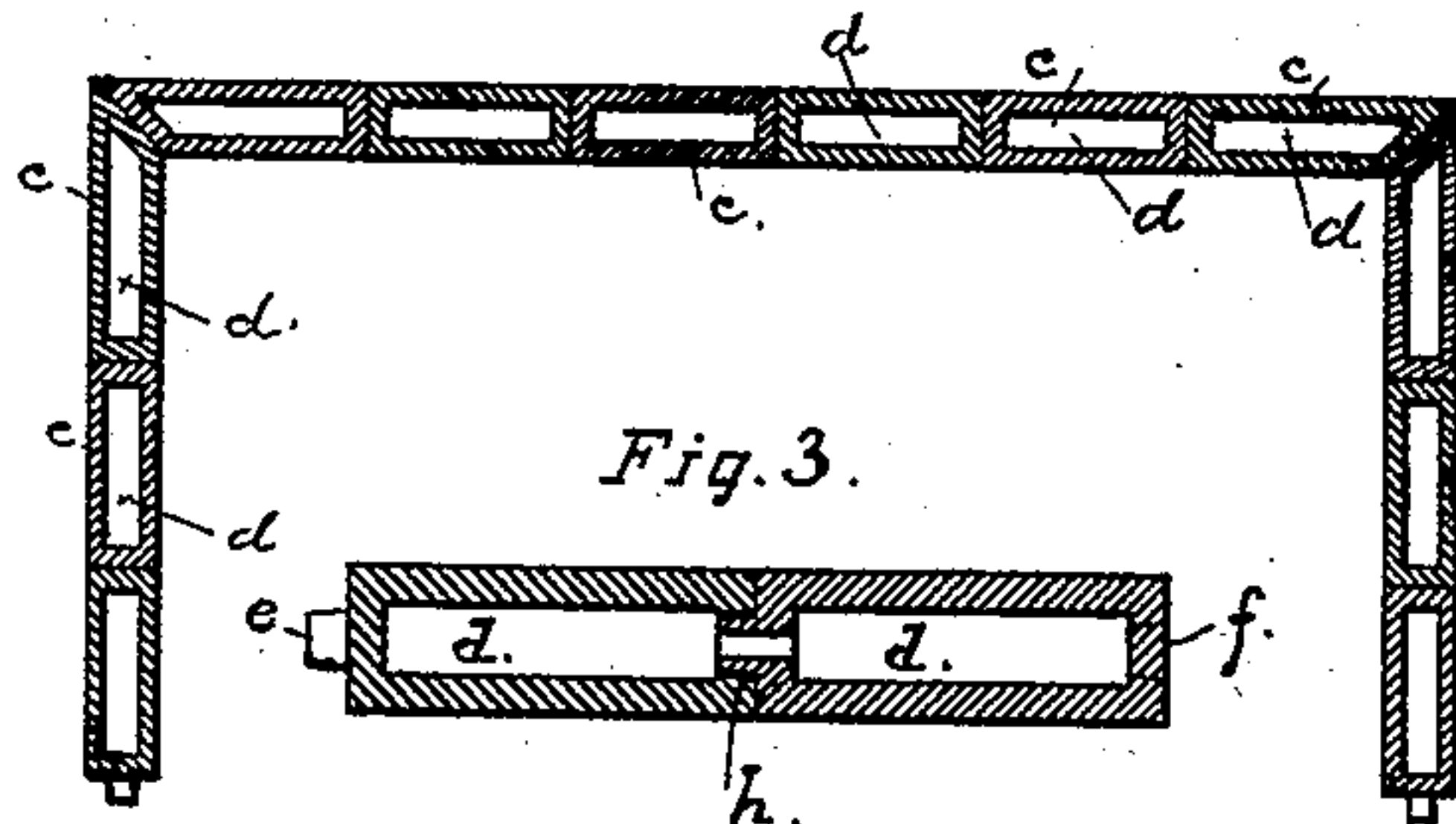


Fig. 3.

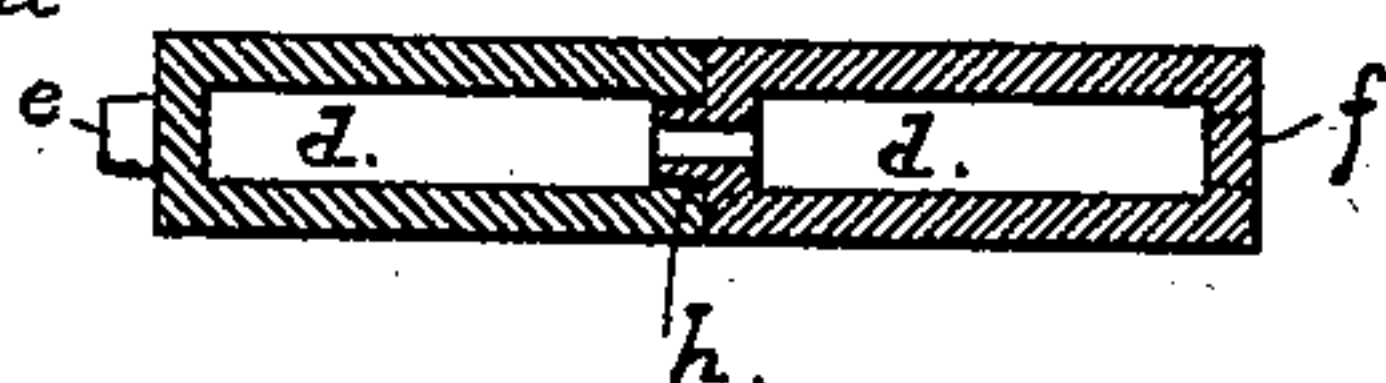


Fig. 5.

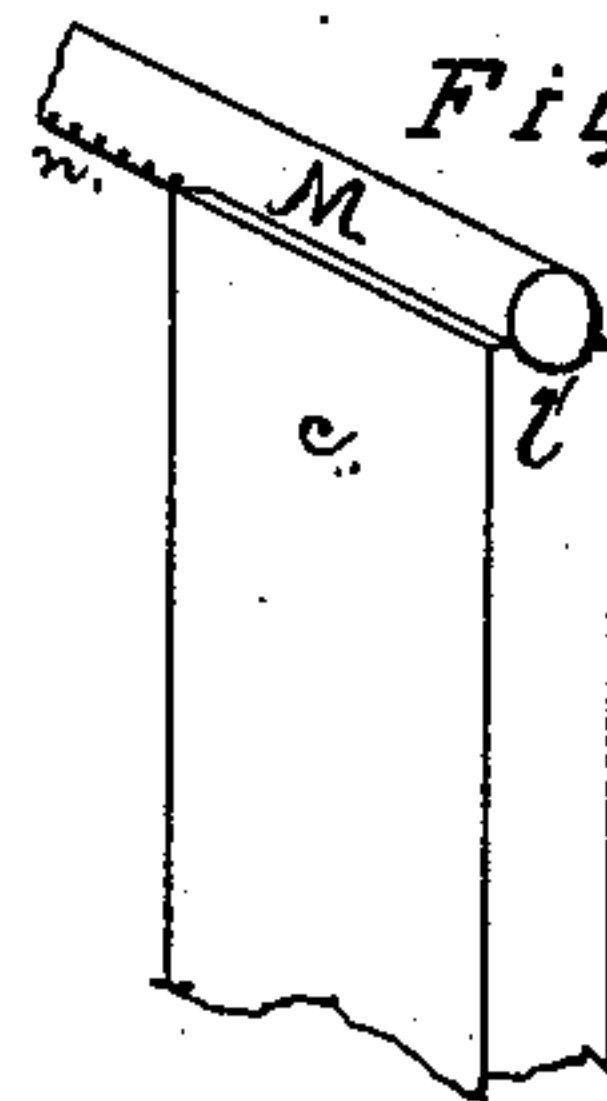
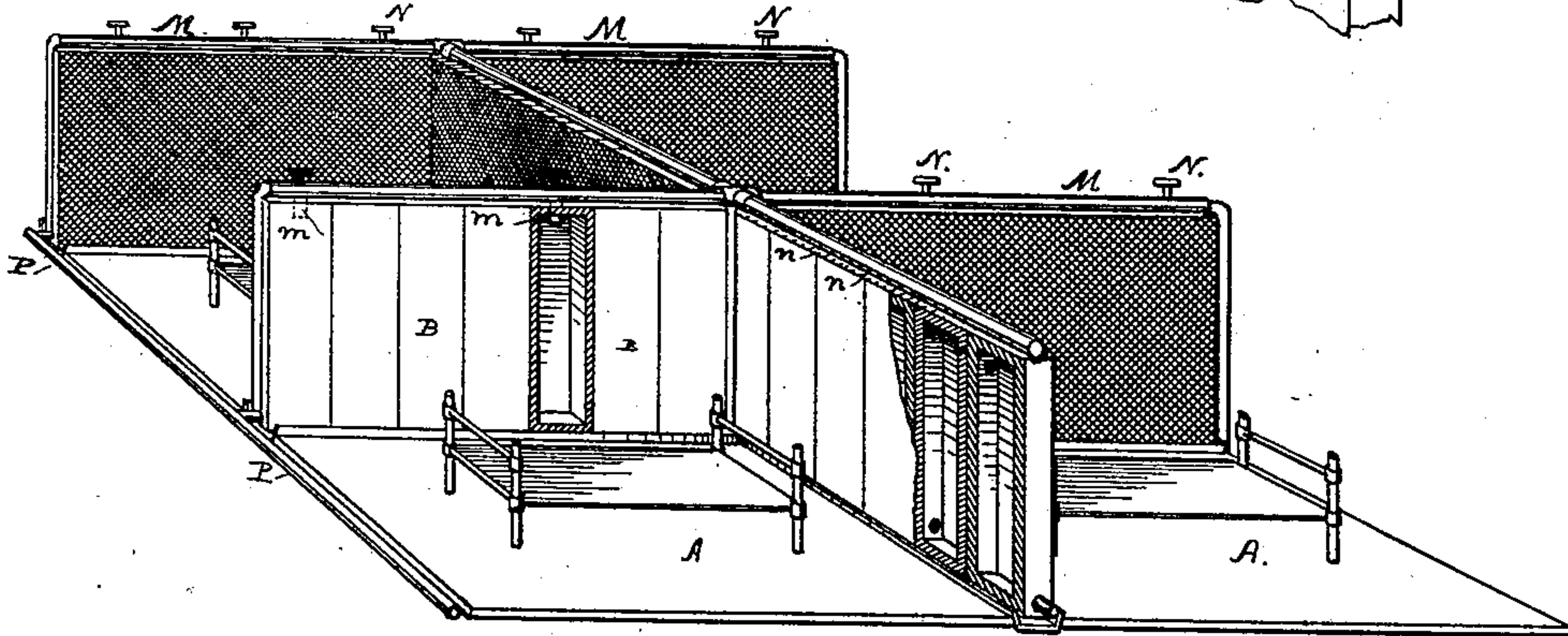


Fig. 4.



Witnesses:

Wm. Voigt
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Henry D. Cogswell
By his Atty., *Edward J. Gibson*

UNITED STATES PATENT OFFICE.

HENRY D. COGSWELL, OF SAN FRANCISCO, CALIFORNIA.

METHOD OF PRODUCING A COOL ATMOSPHERE IN ROOMS AND APARTMENTS.

SPECIFICATION forming part of Letters Patent No. 272,653, dated February 20, 1883.

Application filed October 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, HENRY D. COGSWELL, of the city and county of San Francisco, in the State of California, have devised and invented a new and useful Method of and Apparatus for Cooling Atmosphere in Rooms and Apartments; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings.

My invention relates to a means of producing and maintaining a low degree of temperature or cool condition of the atmosphere of rooms and apartments during seasons of heat. It is more especially applicable to sick-rooms, wards of hospitals, tenements, and like situations to reduce the heat therein during hot weather.

I form a wall or partition of a number of hollow panels made of unglazed earthenware or pottery, the hollow spaces of which are connected together by suitable tubes or inlet and outlet apertures, and in causing a stream or body of water to pass through and circulate within these hollow panels by making connection with them of a water-supply pipe, whereby the immediate atmosphere wherein the wall or partition of panels is set up has its temperature reduced by the percolation of the water through the panels and its evaporation on the outside, while the circulation of the water through the series of panels also acts to take up and carry off heat from the air in contact with such surfaces.

Referring to the accompanying drawings, Figure 1 shows the application of my invention to the sides of an apartment. Fig. 2 shows a horizontal section through the cooling-surfaces or partitions as arranged around three sides of an apartment. Fig. 3 is a detail view, showing the manner of coupling two hollow panels together. Fig. 4 shows the application to the ward of a hospital or similar situation. Fig. 5 shows the manner of securing and holding the panels in line and position by means of the horizontal pipe or bar of a supporting frame-work.

A may represent any room or place to be cooled.

B are the cooling-surfaces, which I apply and set up around the sides of the room, substantially in the following manner: I first form hollow panels *c c* of porous earthenware or pot-

tery of the desired height to which I propose to carry the surface B, and of suitable thickness to give a hollow space or chamber, *d*, and to be sufficiently strong to resist breakage in handling and setting up. Into and from this hollow space *d*, I provide inlet and outlet openings *e f* in such position or relation that when two panels are set together edge to edge the outlet of one panel shall coincide with the inlet of the next one, and communication is had between the two spaces *d d*. A simple construction of these panels is shown in Figs. 2 and 3 of the drawings, where several panels joined together are seen in horizontal section. A projecting nipple or short tube, *e*, is formed around the aperture at one edge of the panel, of a size and length to fit into and be received by a recess or socket around the aperture *f* in the adjacent edge of the next panel. Suitable packing, *h*, can be placed in this socket, and when the two panels are set together a close joint will be produced at the apertures that connect one space *d* with another. Each panel will then be formed with a tube at one side or edge and a socket on the opposite side, so that the panels may be employed in any required number and will be interchangeable. I prefer to place one of these apertures at the top and the other at the bottom of the panel, so that the circulation of the water through the hollow spaces *d* shall take place regularly from top to bottom of one and from bottom to top of the other, and so on throughout the series. These panels I set upright around one or more sides of the apartment or place to be cooled, or else in the form of a partition, through the center thereof, or in a position at a distance from the wall so that both sides of the panels can be utilized for cooling-surfaces. At and along the bottom of this wall or partition I place a shallow trough or gutter, I, having connection with a waste pipe, J, for the purpose of catching the drippings from the outer surfaces of the panels and leading them away. Short legs or projections can be formed on the bottom edge of the panels to raise them slightly above the surface of the trough and allow the water to run off from beneath them. The trough I should have a slight pitch or inclination toward the point of discharge. To hold this partition or set of panels in the required upright position, I make use of small angle-

plates K, which I secure to the walls of the apartment so that the edge of the plate projects over the top of the panel; or when the panels are set out clear of a wall or other surface where such fastening could not be employed I make the panel with a shallow groove, *l*, along its top or upper edge, in which I lay a top rail or bar, M, having suitable upright supports or standards secured at intervals to the floor, so as to form a light frame-work to keep the panels in proper position. This rail M may form the water-supply pipe to lead water to the panels, as shown in Fig. 4, in which case short tubes or nipples *m* will project from the pipe M into the hollow spaces *d d*. At these points suitable stop valves or cocks, N, can be placed to regulate the supply of water to any number or set of panels. In this construction, when additional cooling effect or action might be desirable, the pipes M can be perforated or pierced at intervals with minute punctures *n n*, so that a number of fine jets or streams of water can be applied to the outside surface of the panels and allowed to flow down to the bottom, where any excess left after evaporation on the surface will be caught in the trough I. The last panel in any set or number set up to give an evaporating and cooling surface is connected with a waste-pipe, P, so that the water can circulate through the several hollow spaces *d d* with greater or less rapidity, according to the size of the inlet and discharge openings provided. Where these panels are exposed to breakage they can be protected by covering their surfaces with a wire screen, substantially after the manner shown in the drawings, Figs. 1 and 4. In applying these porous surfaces to the sides of a room or against a partition they could be made of a simple flat plate or panel having the water applied and directed against its rear or back surface by the use of the perforated pipe before described, and thus

caused to be taken up and absorbed by the pores of this surface in sufficient quantity to pass through and evaporate on the outer side or surface presented to the atmosphere to be cooled.

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

1. A cooling-wall for use in rooms, formed of hollow panels of earthenware constructed in separate pieces or parts and built together in a continuous wall, having inlet and outlet pipes connecting the several pieces, the whole being mounted in a receiving-trough, I, and provided with a water supply and exit, substantially as set forth.

2. A wall, partition, or upright surface constructed of separately-formed hollow panels of unglazed earthenware built upon each other, connected together by inlet and outlet apertures, in combination with a water-supply pipe or conductor, substantially as hereinbefore described, for the purposes set forth.

3. A cooling-brick for use in a wall to be placed in rooms or apartments, formed of unglazed clay, having the central hollow or opening, *d*, an inlet-opening, *f*, and a projecting outlet-opening, *e*, adapted to fit in the opening *f* of a companion brick, substantially as set forth.

4. In combination with the set or number of upright panels *c*, having spaces *d d* and inlet and outlet apertures *e f*, for connecting one space with another, as described, the water-supply pipe M, having distributing tubes or nozzles N, and forming the means of supporting the said panels in line and position, substantially in the manner set forth.

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Witnesses:

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