

No. 742,470.

PATENTED OCT. 27, 1903.

F. B. MOORE.
HOUSE VENTILATING DEVICE.

APPLICATION FILED NOV. 10, 1902.

NO MODEL.

Fig. 1.

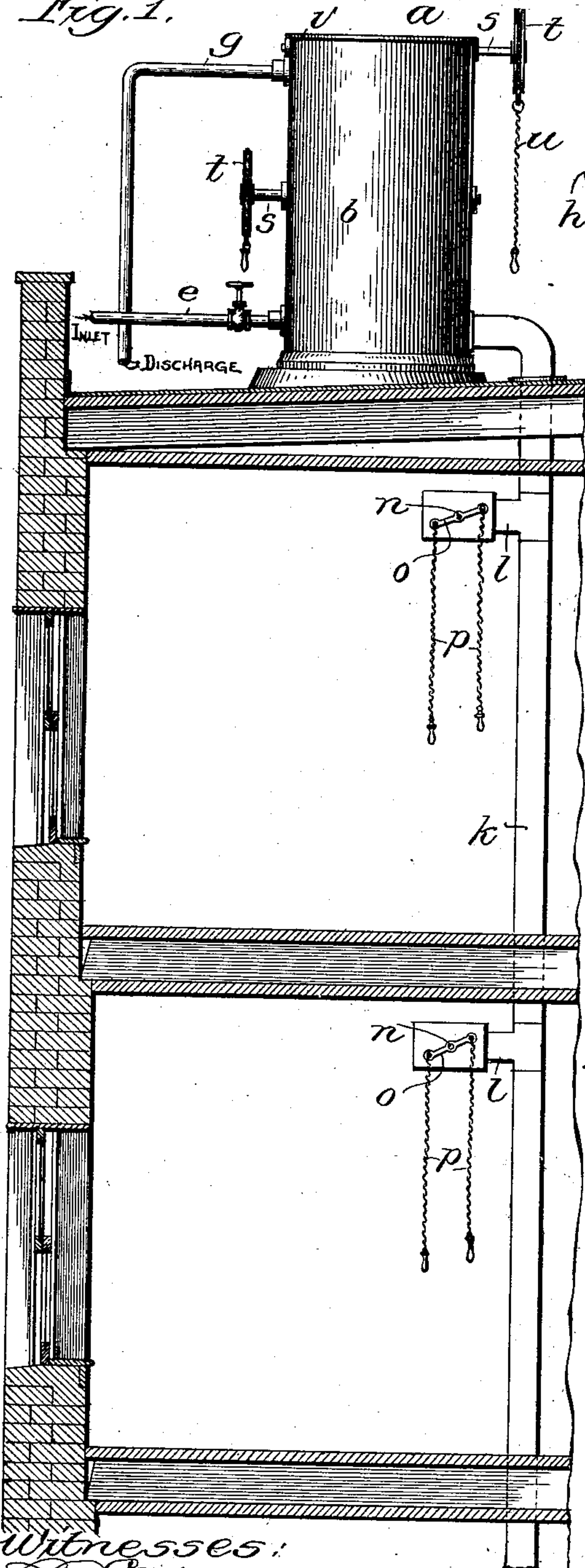


Fig. 2.

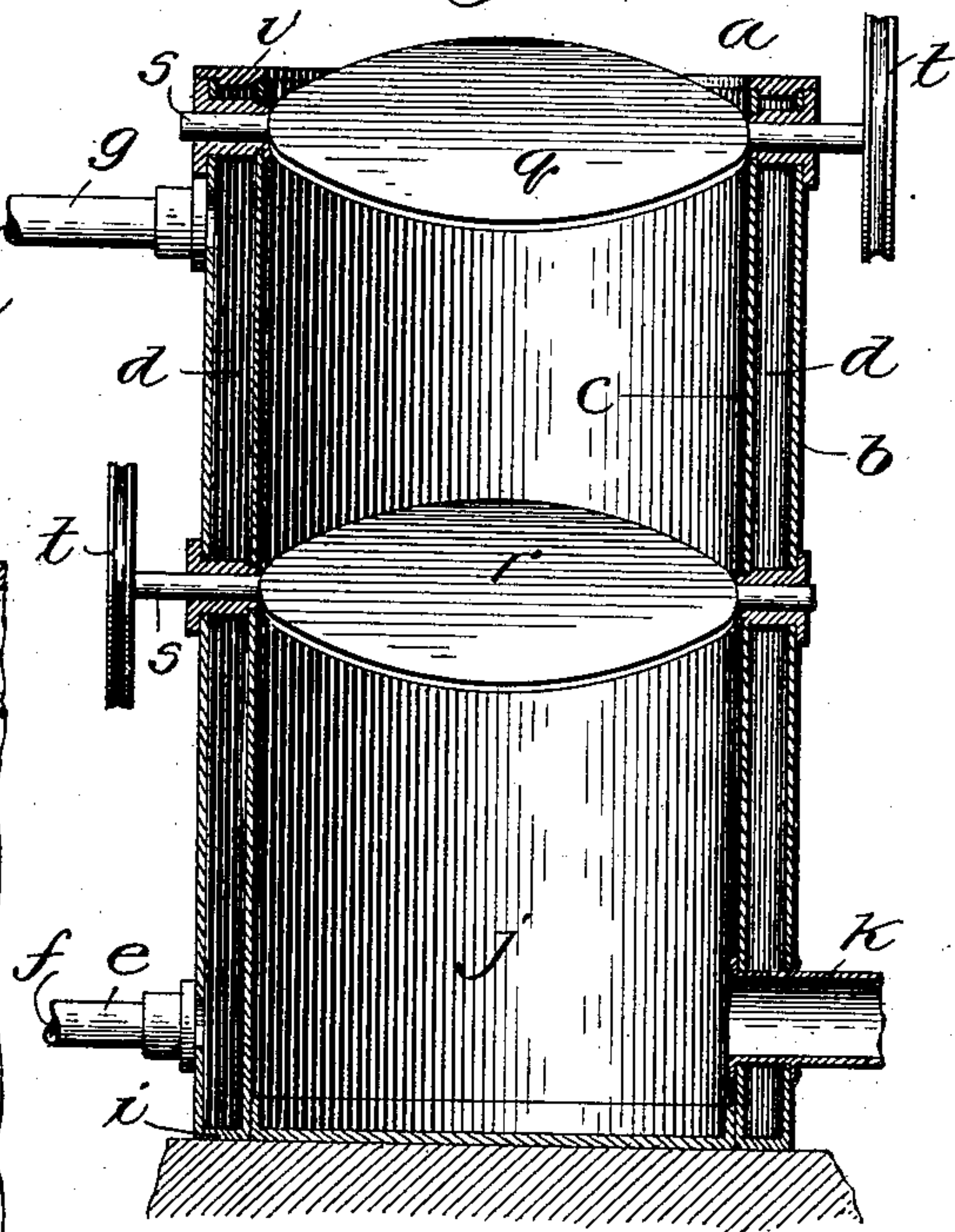
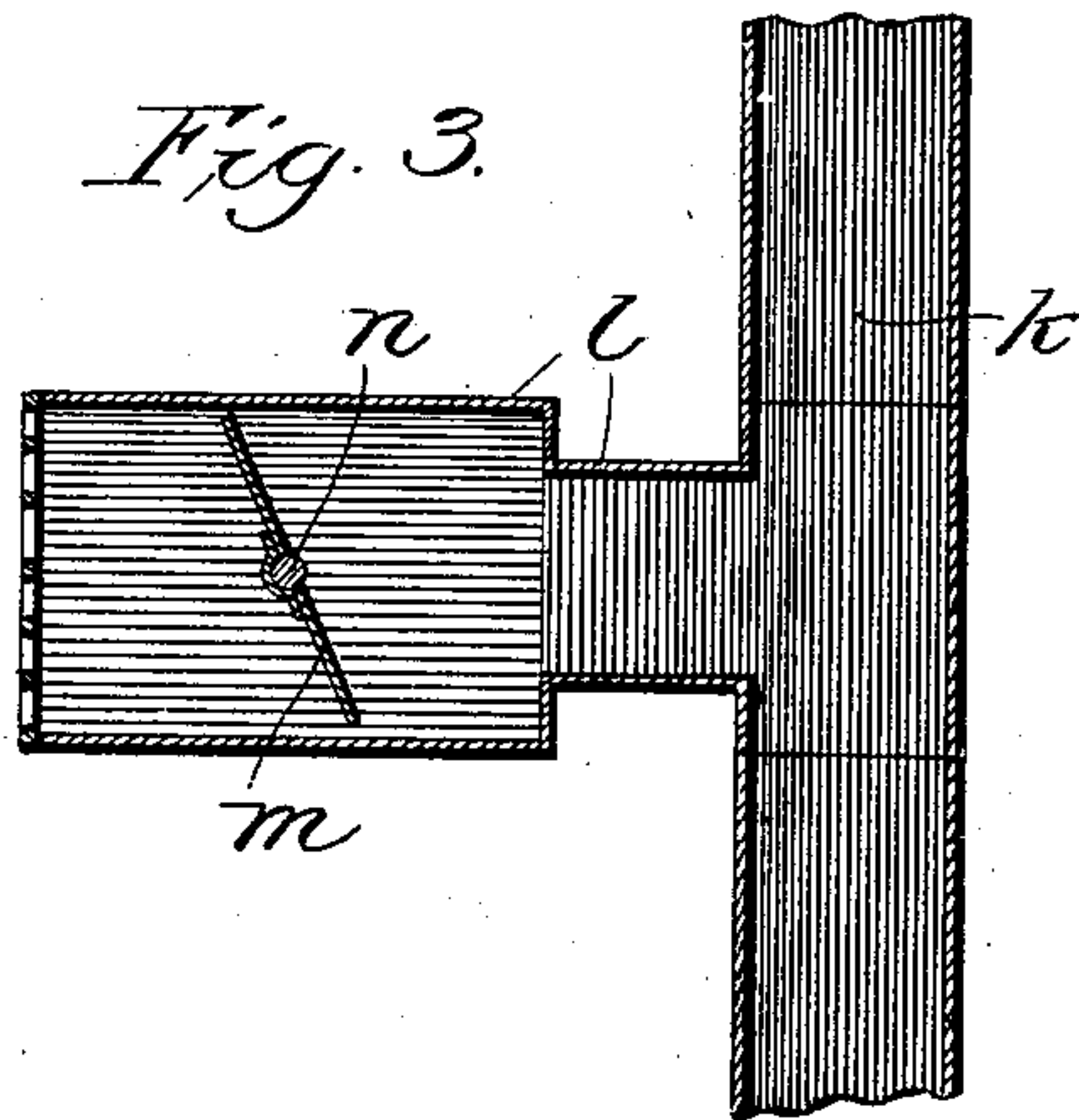


Fig. 3.



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UNITED STATES PATENT OFFICE.

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HOUSE-VENTILATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 742,470, dated October 27, 1903.

Application filed November 10, 1902. Serial No. 130,704. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS B. MOORE, a citizen of the United States, residing at Metamora, in the county of Woodford and State of Illinois, have invented certain new and useful Improvements in House-Ventilating Devices, of which the following is a specification.

My invention relates to that class of house-ventilating devices having a cooling-tank provided with an outer chamber adapted to contain a cooling medium, an inner chamber extending therethrough, and air-pipe mechanism communicating with the inner air-chamber and extending downward therefrom to the room or rooms of the house to be ventilated thereby.

The principal object of my invention is to provide a simple, economical, and efficient house-ventilating device.

A further object of the invention is to provide a house-ventilating device having means for cooling and conducting air to the rooms to be ventilated and means for regulating the admission of air to such rooms.

A further object of the invention is to provide a ventilating device adapted to be arranged upon the roof of a house to receive relatively pure air at the desired elevation, cool it, and conduct it downward to the room or rooms to be ventilated and having means for regulating the admission of air to such rooms.

A further object of the invention is to provide a house-ventilating device adapted to be arranged at an elevation above the rooms to be ventilated to receive relatively pure air at such point of elevation and conduct it to such rooms and having means for maintaining a cooling medium at the initial inlet-point, whereby the relatively pure outer air is caused to pass by force of gravity from such inlet-point downward to the rooms to be ventilated.

Other and further objects of the invention will appear from an examination of the drawings and the following description and claims.

The invention consists in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a view in elevation of a house-ventilating de-

vice constructed in accordance with my improvements as applied to a house to be ventilated thereby; Fig. 2, a sectional elevation of the cooling-tank, and Fig. 3 a sectional elevation of a branch pipe and damper.

In constructing a house-ventilating device in accordance with my improvements I provide a cooling-tank *a* and mount it preferably upon the roof of the house to be ventilated, as shown in Fig. 1. This tank is provided with an outer casing *b* and inner casing *c*, which form between them an outer cooling-chamber *d*, adapted to receive and maintain a suitable cooling medium, such as water, at the desired elevation. An inlet-pipe *e* is arranged at the lower portion of the tank thus formed and provided with a passage *f*, communicating with the cooling-chamber and with a suitable source of fluid-supply. An outlet-pipe *g* is arranged at the upper portion of the tank and provided with a passage *h*, communicating with the cooling outer chamber. A suitable tank-bottom *i* is provided, which closes the lower end of the chamber formed in the casings or walls of the tank and also forms the bottom of the air-chamber *j*, which is of such size as to receive and maintain the air within the cooling-tank a sufficient length of time to permit it to become cooled before passing downward by the force of gravity through ventilating-pipe mechanism *k* to the room or rooms to be ventilated and cooled.

To admit and regulate the admission of air to the respective rooms, the main ventilating-pipe is provided with a branch pipe *l* for each room, in which is arranged a suitable damper *m*, rotatably mounted upon a shaft *n*, which extends through the walls of such branch pipe and on the outer end of which are mounted suitable levers *o*, provided with chains *p* for moving the damper to the desired open or closed position. In order to regulate the admission of air to the air-chamber within the water jacket or tank, dampers *q* and *r* are movably mounted therein upon shafts *s s*, each of which is provided with a pulley *t* and a suitable chain or cord *u*, by means of which such dampers may be readily operated. By this arrangement it will be readily understood that the water jacket or tank being arranged upon the roof of the

house at the desired elevation above the rooms to be ventilated at once cools the supply of air at the desired elevation, and thus causes it to pass by force of gravity downward to the rooms to be ventilated, and that relatively pure air may be thus cooled and furnished in the desired quantities to maintain a suitable temperature and a supply of fresh air to such rooms.

10 I claim—

1. In an apparatus of the class described, the combination of a cooling-tank provided with an outer cooling-chamber and an inner air-chamber encircled thereby, arranged above the rooms to be ventilated, damper mechanism arranged in the air-chamber of such tank, air-pipe mechanism communicating with the inner air-chamber of the tank and extending downward therefrom to the rooms of a house to be ventilated thereby and provided with an outlet-opening for each of such rooms, a damper for each of such outlet-openings, and means for admitting a cooling medium to the outer chamber of the tank, substantially as described.

2. In an apparatus of the class described, the combination of a cooling-tank having a water-chamber therein and provided with an inner wall forming an air-chamber encircled by the water-chamber all arranged above the rooms to be ventilated, a plurality of dampers arranged one above the other in the air-chamber of such tank, pipe mechanism provided with inlet and outlet openings communicating with the water-chamber, and pipe mechanism communicating with the air-chamber and extending downward therefrom to the rooms of the house to be ventilated, substantially as described.

3. In an apparatus of the class described, the combination of a ventilating-tank having a water-chamber therein and provided with an inner wall forming an air-chamber encircled by the water-chamber all arranged outside of and above the rooms to be ventilated, a plurality of dampers arranged one above the other in the air-chamber of such tank, pipe mechanism provided with inlet and outlet openings communicating with the water-chamber, pipe mechanism communicating with the air-chamber and extending downward therefrom to the rooms of the house to be ventilated, a branch pipe for each of such rooms, and damper mechanism arranged in each of such branch pipes, substantially as described.

4. In an apparatus of the class described, the combination of a cooling-tank comprising an outer and inner casing provided with a cooling-chamber therebetween and having an inner air-chamber encircled thereby arranged outside of and above the rooms to be ventilated, an inlet-pipe for such water-chamber communicating with a suitable source of water-supply, an outlet-pipe provided with a passage communicating with the upper portion of the water-chamber, pipe mechanism communicating with the lower portion of the air-chamber and extending downward to the rooms to be ventilated thereby, a branch pipe for each of such rooms, a damper mounted in each of such branch pipes, and damper mechanism arranged in the air-chamber of the cooling-tank, substantially as described.

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Witnesses:

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