No. 685,149. Patented Oct. 22, 1901.

J. KEITH.

APPARATUS FOR HEATING AND VENTILATING.

(Application filed May 28, 1901.)

(No Model.)

FIG. 2.

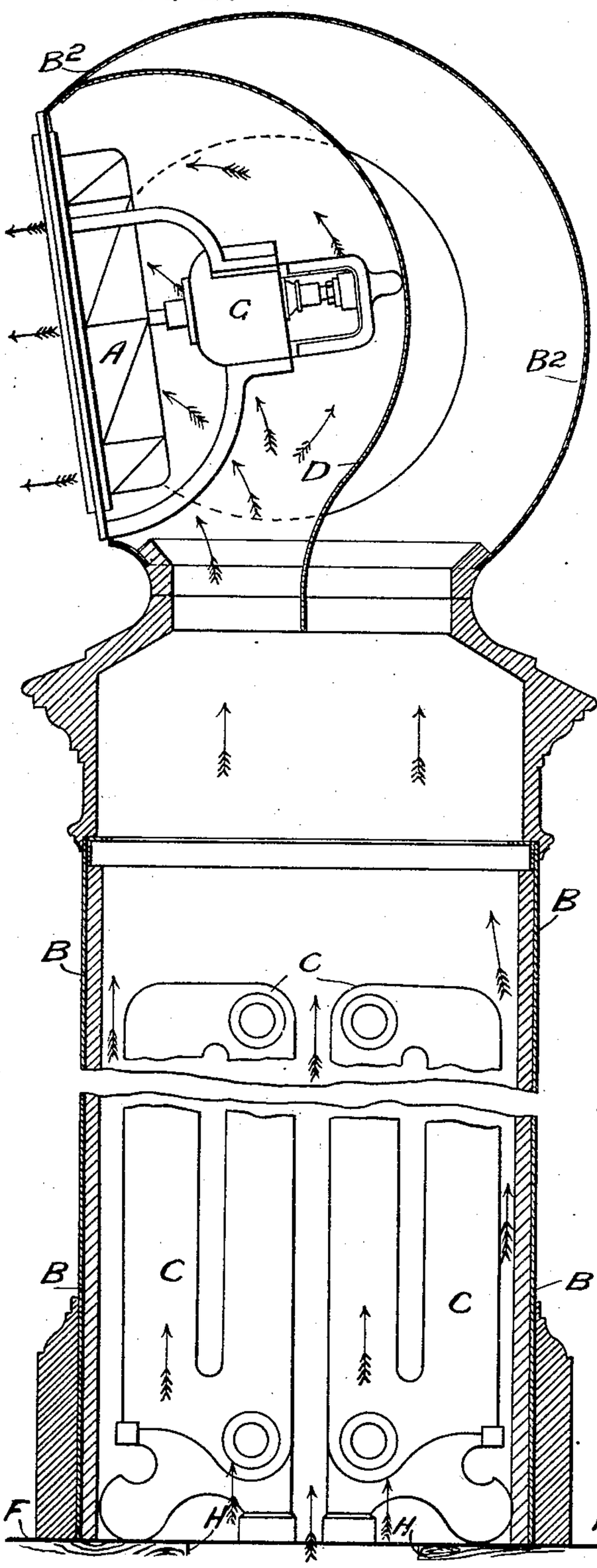
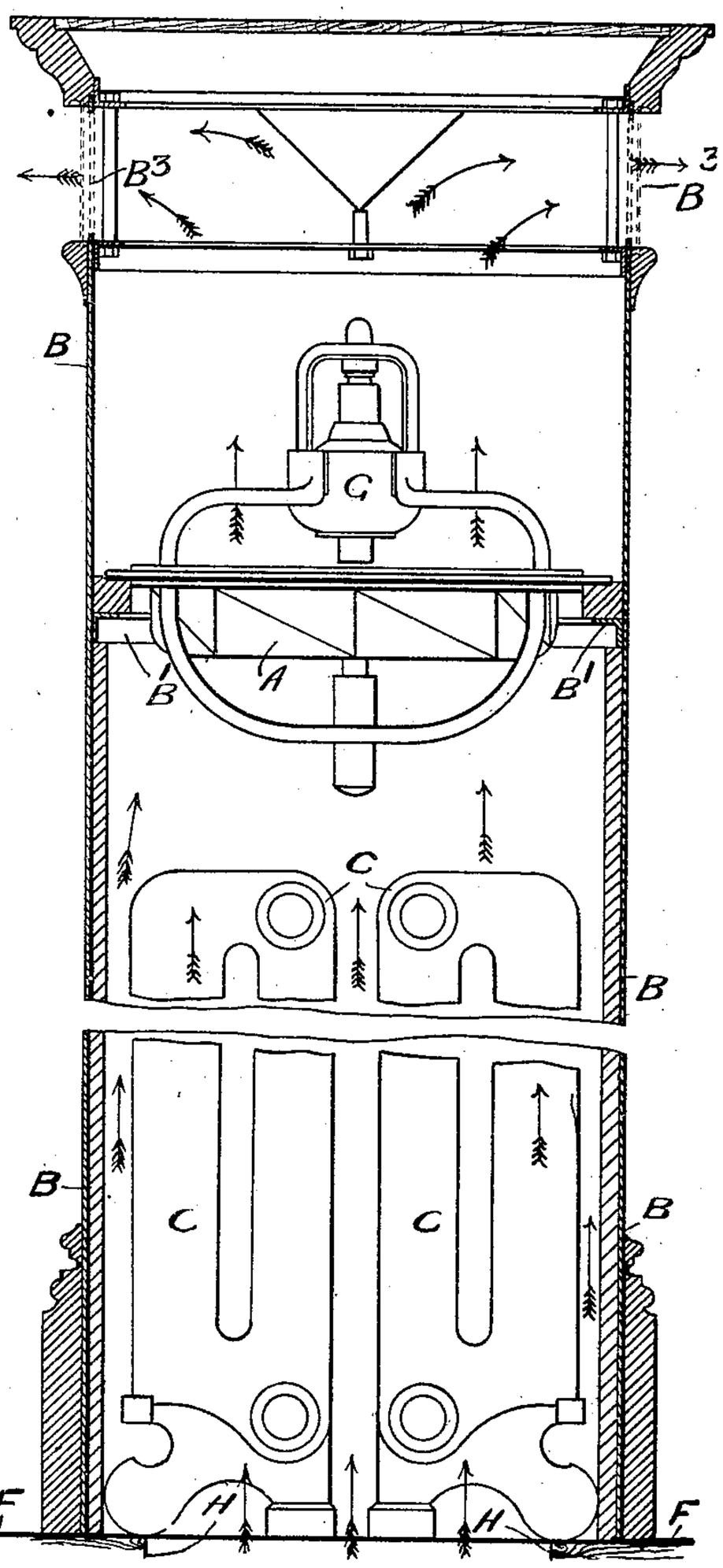


FIG. 1.



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UNITED STATES PATENT OFFICE.

JAMES KEITH, OF LONDON, ENGLAND.

APPARATUS FOR HEATING AND VENTILATING.

SPECIFICATION forming part of Letters Patent No. 685,149, dated October 22, 1901.

Application filed May 28, 1901. Serial No. 62,229. (No model.)

To all whom it may concern:

Be it known that I, JAMES KEITH, a citizen of the United Kingdom of Great Britain and Ireland, residing at 27 Farringdon avenue, London, England, have invented certain new and useful Improvements in Apparatus for Heating and Ventilating, (for which application for patent has been made in Great Britain, No. 20,239, dated November 10, 1900,) of which the following is a specification.

This invention relates to apparatus for heating and ventilating apartments of buildings; and it has for its object the provision of improved and efficient means whereby air suitably heated or cold air may be so directed into the apartments to be ventilated as to insure positive ventilation in volume in all states of the atmosphere and that without creating drafts in proximity to the floor or where they may be felt.

The improved apparatus comprises a tubular pillar which may rest on the floor-level and extend upward to any desired height short of the ceiling or may depend therefrom toward the floor or may take the form of a hollow column extending from floor to ceiling, but having enlarged lateral openings for the discharge of air which is heated by a radiator or radiators in its passage through the pillar or column.

The invention is illustrated by the accompanying drawings, in which—

Figures 1 and 2 are vertical sections of two forms of the heating and ventilating apparatus.

Referring to Fig. 1 of the drawings, a fan or blower A is fitted upon a shelf or partition B′ within the pillar or column B and is driven by an electric motor G or otherwise to draw or blow air through the pillar B from an air-shaft H at one end and impel it through the openings B^3 into the apartment to be ventilated either directly or against a domed or other cushion. Within the pillar is placed a hot-water or steam heating-radiator C or radiators, preferably of the circular type, for the purpose of suitably warming the air discharged into the apartment. The radiator C within the column B instead of being heated by steam or hot water may be warmed by gas-burners, or a separate form of radiator (suitable for warming the air by hot air or by gas-burners) may be substituted for the steam or hot-water heated form.

Referring to Fig. 2, the pillar B is formed with a hollow spherical head or dome B^2, which is preferably movable or fitted to turn, and in this head one or more lateral openings B^3 are formed, each fitted with a fan A to discharge into the apartment the air warmed in passing around the radiator C or radiators within the pillar B. The fan or fans A may be arranged to direct the air in a lateral and downward direction, the mouth of the lateral opening being suitably inclined for this purpose, especially when the apparatus is fitted in lofty apartments. In this form of apparatus baffle-plates, such as D, are preferably fitted within the dome D^2 to break up the flow of the air or prevent it from merely circulating in the dome.

The hollow pillars or columns, of which a number may be fitted within the apartment to be ventilated, may be formed of wood and lined with metal or made wholly or partly of metal, porcelain, or other material and suitably ornamented. The fan employed is preferably of the Blackman silent type, driven by an electric motor and secured upon a wooden seating within the pillar to deaden noise or lessen the transmission of sound.

In the operation of the apparatus fresh air is drawn from a shaft H through the roof or floor F, as the case may be, and through the space surrounding the radiator C within the pillar B and is delivered through the open end of the pillar B or from the fan or fans A in the direction of the arrows into the room at a temperature which may be so regulated by that of the radiator C or radiators and the velocity of the fan or fans A as to maintain a practically uniform temperature within the room in all weathers. The air of the room may thus be kept under a plenum or slight pressure, the vitiated air being drawn off by suitable extract-openings. Thus the fresh air may be blown against the flat ceiling or against the cushion referred to or from the fan or fans in the domed top B^2; but when the apparatus is inverted or depends from the roof the air may be blown downward, or the bottom end of the depending tube may be closed and the air discharged through enlarged lateral openings.

Having now described the invention, what I claim, and desire to secure by Letters Patent, is—

Apparatus for heating and ventilating apartments of buildings, comprising in combination, a hollow pillar or column through which air is drawn for ventilating purposes, a heated radiator therein, a dome or other shaped head in said column, a rotary fan or blower fitted within the domed head, a baffle or directing plate in the said head arranged in the course of the air from the column to the outlet to prevent the air from merely circulating in the dome, and lateral openings through which the air is forced by the fan, substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JAMES KEITH.

Witnesses:
WALLACE FAIRWEATHER,
JNO. ARMSTRONG, Jr.