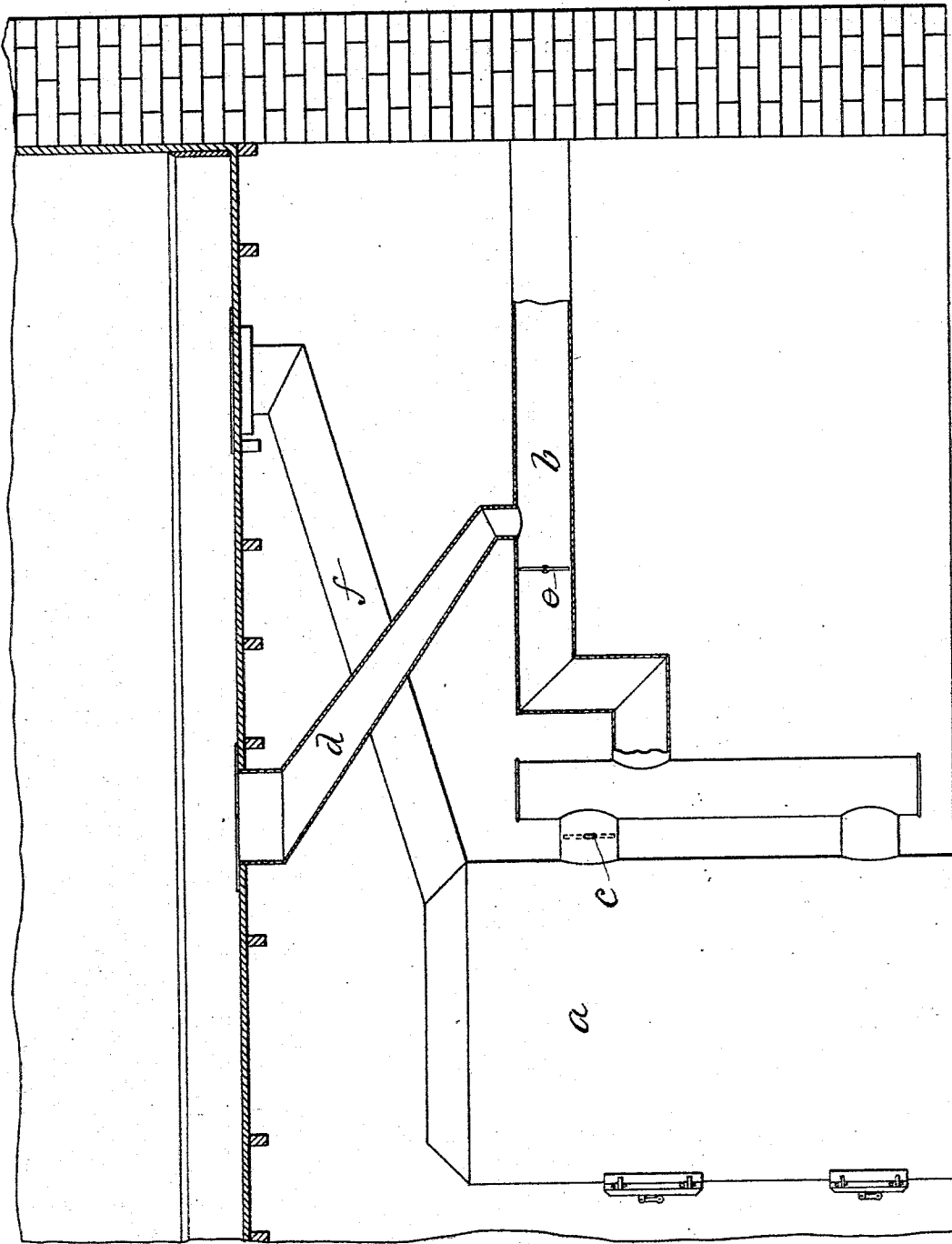


(No Model.)

G. H. MAYNARD.
VENTILATING AND HEATING APPARATUS.

No. 514,329.

Patented Feb. 6, 1894.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE H. MAYNARD, OF BOSTON, MASSACHUSETTS.

VENTILATING AND HEATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 514,329, dated February 6, 1894.

Application filed December 2, 1893. Serial No. 492,604. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. MAYNARD, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Ventilating and Heating Apparatus, of which the following is a specification.

This invention has relation to apparatus for ventilating and heating; and it has for its object the provision of an apparatus or system whereby a better circulation of air may be obtained in the apartments to be heated, and whereby the same may be more quickly heated and more perfectly ventilated.

To these ends the invention consists of a heater provided with a smoke flue to conduct the products of combustion therefrom, combined with a graduated or tapered cold-air flue leading downwardly from the room to be heated directly to and entering said smoke flue, a damper in the latter to the rear of and in proximity to the point where said cold air flue enters said smoke flue, and the usual damper for the heater, all as I will now proceed to more fully describe and claim.

The drawing (partially in section) represents my invention as it may be applied to and used in connection with a furnace, such as is commonly employed to heat dwellings.

In the drawing *a* designates the heater or furnace, and *b* is the smoke pipe leading therefrom through which the products of combustion are conducted to the chimney.

c is the usual damper for regulating the fire in the heater.

In accordance with my invention I provide a cold-air flue *d* leading from the room to be heated, and preferably from a register in or near the floor of such room, directly to and entering the smoke pipe *b* at a convenient point. The cold-air flue is graduated in size or made tapering in form, the smaller end entering the smoke-pipe and the larger connecting with the room register. This is an important feature of the invention.

e indicates a supplemental damper arranged in the smoke pipe just in rear of the point where the cold-air flue enters the former. This damper is provided for the purpose of regulating the action of the cold-air flue on the furnace.

The operation of the cold-air flue is to cause

a greatly increased current of air through the smoke pipe, and consequently an increased draft through the furnace, and while necessity remains for the use of the usual furnace damper *c* to regulate the fire in the furnace, the supplemental damper *e* becomes essential in order to regulate the action of the cold-air flue upon the current through the smoke-pipe and consequently its "pull" or draft upon the furnace.

With my invention the usual cold-air or check-draft may be dispensed with the cold-air flue and damper taking the place of such devices and serving the same purpose.

f designates a hot-air flue, leading from the furnace to the apartment to be heated. There may be, of course, as many of these hot-air flues as desired. The cold air being drawn from the room through the flue *d*, there is a corresponding tendency to cause the warm air to rush in through the flue *f*, and as a consequence a constant and strong circulation is kept up, the hot or warm air rising and the cold and impure air falling and being drawn off through the cold air tube.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

A ventilating and heating apparatus comprising in its construction a heater provided with a smoke-flue to conduct the products of combustion therefrom, a graduated or tapered cold-air flue leading downward from the room to be heated directly to and entering the smoke-flue, a damper in the latter located where the said cold-air flue enters said smoke-flue, the usual damper to regulate the fire in the heater, and the flue communicating with the heater and the room to be heated, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 21st day of November, A. D. 1893.

GEORGE H. MAYNARD.

Witnesses:

C. F. BROWN,

A. D. HARRISON.