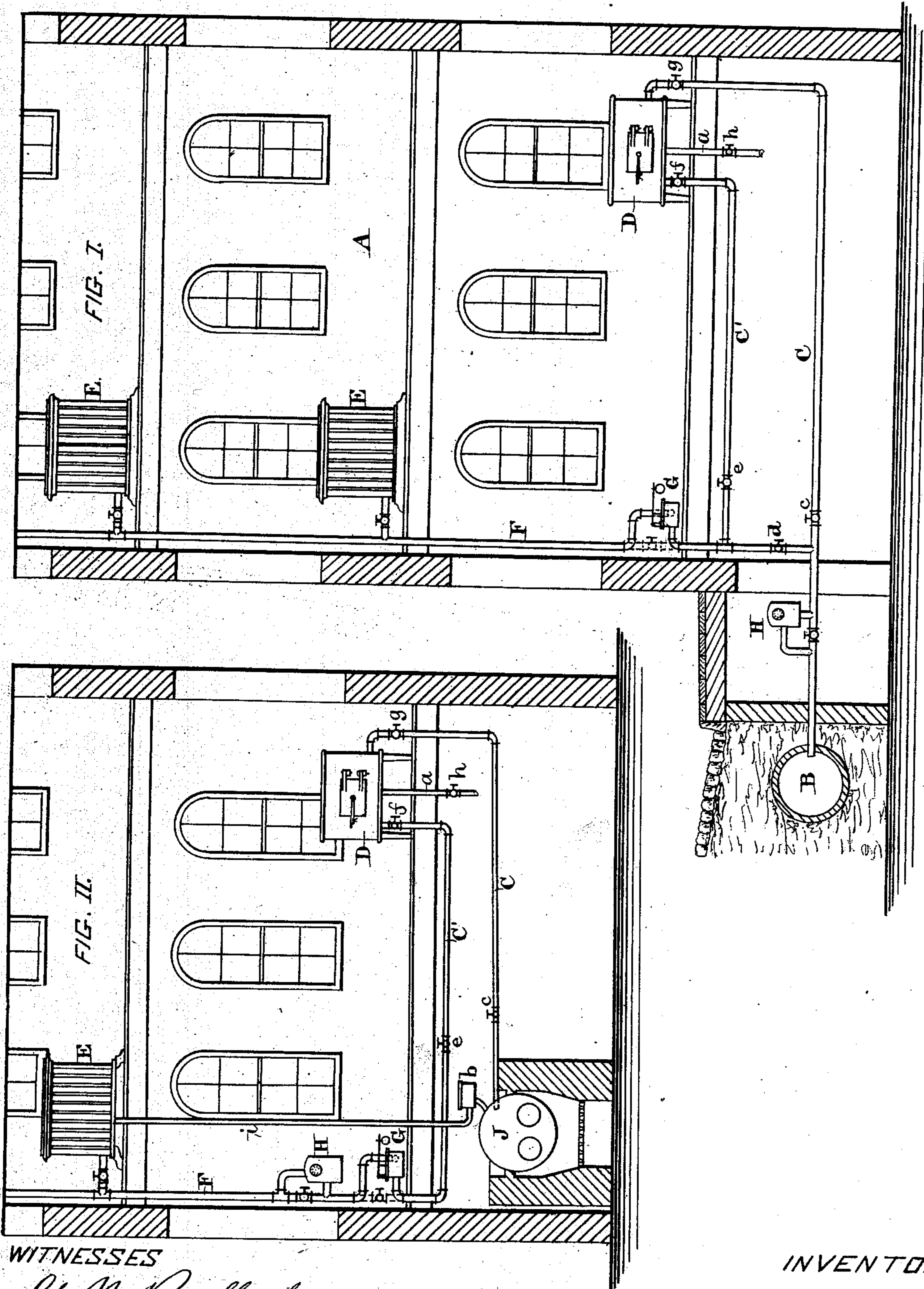


(No Model.)

J. ASHCROFT.

Method of Carrying Steam into and through Houses.
No. 237,083. Patented Feb. 1, 1881.

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WITNESSES

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METHOD OF CARRYING STEAM INTO AND THROUGH HOUSES.

SPECIFICATION forming part of Letters Patent No. 237,083, dated February 1, 1881.

Application filed May 22, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN ASHCROFT, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Methods of Carrying Steam Into and Through Houses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, and in which—

Figure I represents a section of a house, sidewalk in front, and of a portion of the street, showing a street steam-main with the pipe-connections from it, to and through the house, with a steam-stove, radiators, steam-reducing valve, and steam-meter, with the necessary valves, all appropriately placed within the house. Fig. II represents a section of a house where the steam is taken from a boiler therein instead of from a street steam-main.

The object of my invention is to provide a convenient manner in which steam may be conveyed to and through a house for both heating and cooking purposes, whereby the same steam may be used for both purposes, and in so doing to lessen the number and quantity of pipe-connections, valves, and meters.

The nature of my invention consists in conducting the steam from a street steam main or boiler by a system of pipe-connections, by means of which the steam is carried through steam-stove, and then to and through pipes and a reducing-valve to heat-radiators throughout the house, and in the details of construction thereof.

In both drawings, A represents a house; B, a street-main; C, a steam-pipe leading therefrom or from a special boiler, J, into the house and to a steam-stove, D. C' is a pipe leading from the stove to a pipe, F, which leads up through the house to heat radiators E E. In Fig. I the pipe F is continued down, and connects with the pipe C between the stove. A meter, H, is connected with the pipe C, being located on an elbow-pipe entering it at two points, between which, on the pipe C, a valve

is placed, by which means the meter may or not be used, as desired. In Fig. II this meter is placed in a similar manner in connection with the pipe F, instead of the pipe C. A reducing-valve, G, is shown in both figures connected with the pipe F by similar means and with a like valve, so that it can be used or not, as desired. The difference in the location of the meter in the two figures is simply a matter of practical convenience or desirability. The pipes C, C', and F are provided with valves *c, g, e, f, and d*, by which the course of the steam, either through the stove or directly to the radiators, may be determined and regulated.

In Fig. II a return-pipe, *i*, with a trap, *b*, to the boiler from the radiator, is shown, the purpose of which is to convey the products of condensation; and from the stove D a pipe, *a*, with valve *h*, is indicated, which pipe may be continued to the main or boiler and be steam-trapped. Valves are also placed in the connections from the pipe F to the radiators.

The great advantage of this method of carrying steam into a dwelling grows out of the fact that a much greater pressure of steam is needed upon the stove than in the radiators. If separate connections were to be made to each, separate meters would be required.

By carrying the steam through the stove to the radiators it is made to serve a double purpose, viz: first, it is used at a comparatively high pressure for culinary purposes; and, secondly, after sending it through a reducing-valve, for heating purposes. I thus secure economy and convenience both in the construction of the apparatus and in the use of the steam.

It might be found desirable or necessary in some cases to meter the condensation of the steam in the stove. If so, such a meter could be connected with the waste-pipe *a*, leading from the stove, and then using a steam-meter applied to the pipe F, as shown in Fig. II; but it is believed that if the condensation is to be metered at all it would be better to locate it where the steam-meter is shown in Fig. I.

It will be seen that by closing either of the valves *e* and *f* in pipe C' and *c* and *g* in pipe C and opening valve *d* in pipe F the stove will be cut off from the steam-circuit, and by

opening the valves between the points of connection between the elbow-pipes on the pipes C and F, or either of them, the steam will flow through the latter pipes, and the meter or reducing-valve may either or both be disused.

I am aware that in cars heated by steam the steam has been carried from radiator to radiator, and that steam has also been carried from a steam-generator through a stove used for heating printers' plates to a moisture-stopping device; but my invention has no reference to either, but is confined to mechanical arrangements for carrying steam into dwellings, as described.

I do not confine myself to the particular arrangement of pipes or valves shown in the drawings; but

I claim as new and my invention—

1. Steam-pipe connections from a street steam main or boiler to a steam cooking-stove and radiators in a house, arranged so that the

steam is carried to and through the steam-stove to the heat-radiators, substantially as described.

2. Steam-pipe connections from a street steam main or boiler to a steam cooking-stove and radiators in a house, provided with a steam-reducing valve located between the stove and radiators.

3. The method, substantially as described, of carrying steam from a street steam main or boiler into a house for heating and cooking purposes, whereby the steam is introduced into the stove at the full pressure on the main or boiler and subsequently reduced before it is conveyed to the radiators.

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

JOHN ASHCROFT.

Witnesses:

J. C. WALL,

G. W. BALLOCH.