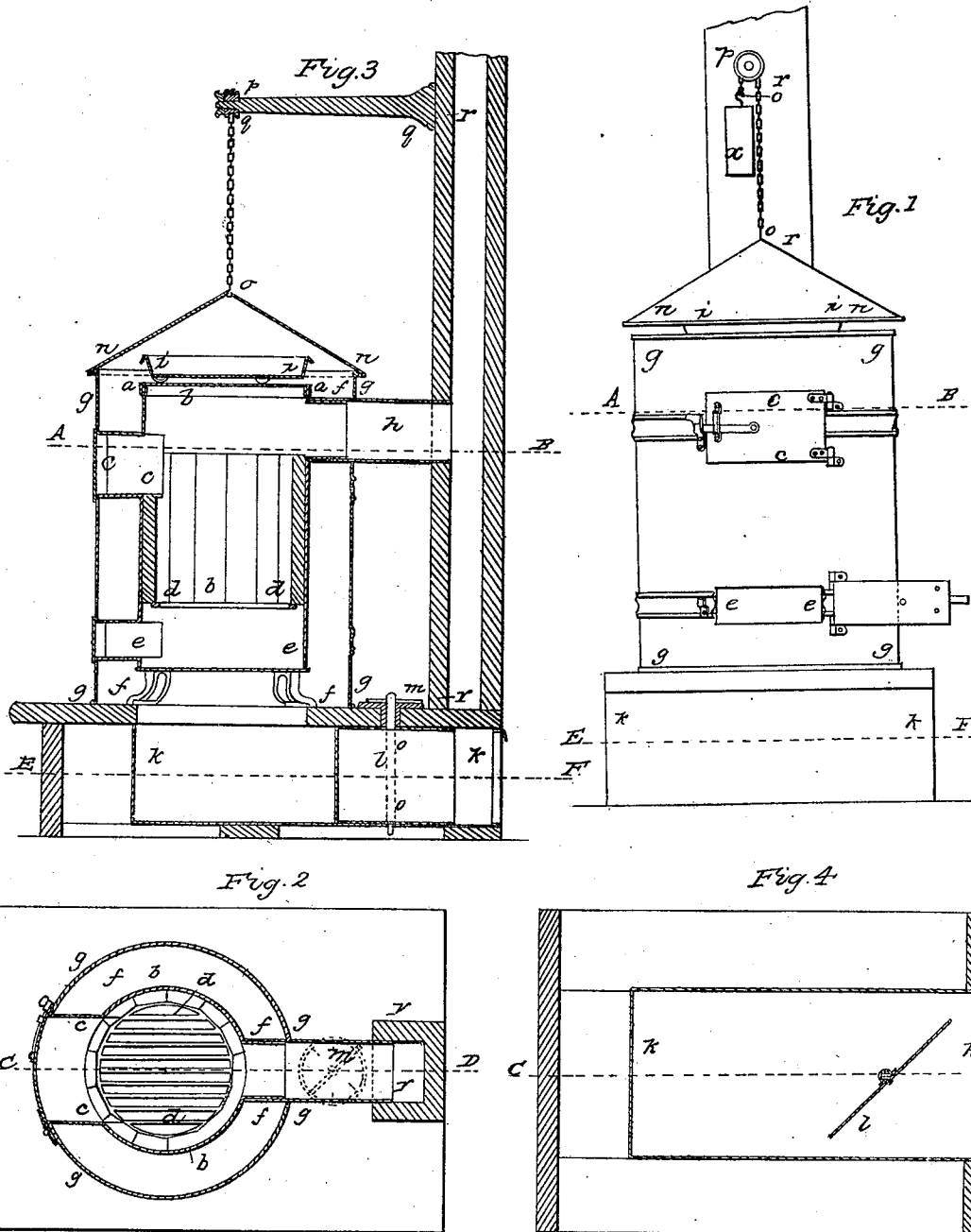


H. G. CLARK.
Heating Stove.

No. 5,704.

Patented Aug. 10, 1848.



UNITED STATES PATENT OFFICE.

HENRY G. CLARK, OF BOSTON, MASSACHUSETTS.

AIR-HEATING STOVE.

Specification of Letters Patent No. 5,704, dated August 10, 1848; Antedated February 10, 1848.

To all whom it may concern:

Be it known that I, HENRY G. CLARK, of Boston, in the county of Suffolk and State of Massachusetts, doctor of medicine, have
5 invented certain new and useful Improvements in Double-Cylinder Hot-Air Stoves, and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full
10 and exact specification of the same, wherein I have set forth the nature and principles of my said improvement, by which my invention may be distinguished from others of a similar class, together with such parts or
15 combinations as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improvements.

Figure 1, is a front elevation. Fig. 2 is a
20 horizontal section taken in the plane of the line A—B, Fig. 1, the cap *a a* Fig. 3 being removed. Said Fig. 3 is a vertical section taken in the plane of the line C—D, Fig. 2, and Fig. 4 is a horizontal section taken in
25 the plane of the line F—F Fig. 3.

My design in devising my improvements above stated has been to provide a stove which shall be sufficient for ventilating purposes, by introducing a large supply of
30 warm air into a hall or apartment, and consequently permitting an equally large discharge of foul air, and thereby make a frequent change of the whole atmosphere of the room.

The principle or mode of construction which I have adopted for the main portion of my improved stove does not differ essentially from other double cylindrical stoves which have been used heretofore, saving in
40 the proportions of the several parts, especially the air chamber, which is much larger than any other; but I have added to and combined with the stove a conical distributor or regulator, which combination is entirely
45 new, and greatly enhances the value of such stoves.

In Fig. 3, *b b* is the fire chamber which is of a cylindrical shape and properly lined with soap stone or fire brick, having a supplying mouth *c c*, near its top, and a coarse grate *d d* just over the ash pit *e e*. There is a discharging flue *h* at the back of the fire chamber and an inclosing cap *a a*, before referred to, on top of which cap the water pan
55 *i i* is supported.

f f f f is the hot air chamber, which is

formed by inclosing the fire-chamber in a sheet or other iron cylinder *g g g g* concentric with the same, which is nearly or entirely open at the top. The diameter of
60 this cylinder should be, in my judgment, about once and a half that of the fire chamber *b b*.

k k is the cold air shaft, or channel, which communicates with the external atmosphere, and with the hot air chamber *f f f f*. This shaft may be of any shape but must have an area, in a transverse vertical section, at least equal to that of the base of the fire chamber *b b*. It is provided with a valve *l*
70 for regulating the admission of cold air, which valve is operated by an index or register arm *m* as will be readily understood by inspection of Figs. 2, 3, 4.

I now come to the description of the most
75 distinguishing feature of my improvements and upon which I shall rest my claim, that is the suspended conical distributor *n n* for distributing the hot air produced in the hot air chamber *f f f f*. This distributor is attached to one end of a chain *o o*, to the other end of which chain a balance weight is appended, the chain passing over a grooved pulley *p* on the end of the arm *q q*, projecting from the chimney breast *r r*. The distributor *n n* is hollow, and at its base is of the same diameter as the cylinder *g g g g*, and when the hot air from the chamber *f f f f* impinges upon the inner side of said distributor, it is made to pass in a direction
90 parallel with the inner face of the distributor and is diffused downward and laterally in every direction. By raising and lowering this distributor it will be evident, that the volume of warm air discharged
95 from the stove may be regulated according to desire, and the air may be confined in the hot air chamber until its temperature reaches the most desirable point.

There are various modifications which
100 may be made in the shape &c. of the distributors and in the mode of raising and lowering it, which I do not deem it essential to explain in detail, as they are such changes, as different manufacturers would make according to their various tastes and skill, and as I believe that the general idea or device of a regulator (vertically adjustable) which shall operate as a distributor, in combination with such a hot air stove as I have described, as above set forth, is entirely
110 original.

Having thus described my improvements,
I shall state my claim as follows:

What I claim as my invention, and desire
to have secured to me by Letters Patent, is—

- 5 The combination of a vertically adjustable conical regulator and distributor with the double cylinder hot air stove, all as herein above described.

In testimony that the foregoing is a true
description of my said improvements I have 10
hereto set my signature this twenty-fifth day
of July in the year 1848.

HENRY G. CLARK

Witnesses:

EZRA LINCOLN, Jr.,

LUTHER BRIGGS, Jr