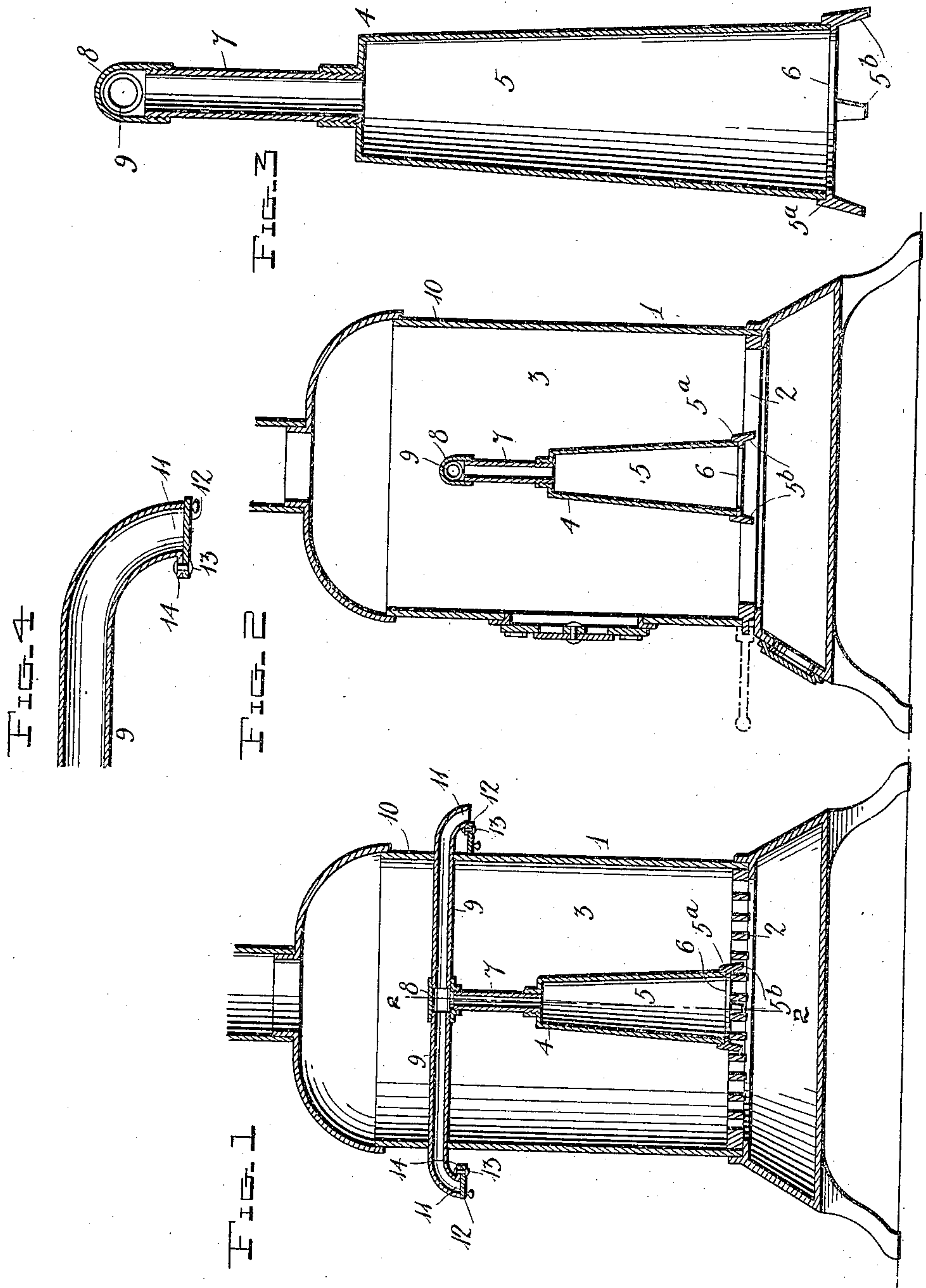


No. 816,412.

PATENTED MAR. 27, 1906.

S. W. WILT.
HOT AIR HEATER.

APPLICATION FILED JAN. 12, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL W. WILT, OF ALVADA, OHIO.

HOT-AIR HEATER.

No. 816,412.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed January 12, 1905. Serial No. 240,820.

To all whom it may concern:

Be it known that I, SAMUEL W. WILT, a citizen of the United States, residing at Alvada, in the county of Seneca and State of Ohio, have invented certain new and useful Improvements in Hot-Air Heaters; and I do 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.

My invention relates to improvements in hot-air stoves or furnaces; and it consists of certain novel features of construction, combination, and arrangement of parts herein-after described and claimed.

The object of my invention is to provide a simple, durable, and comparatively inexpensive air-heating means which may be readily fitted to and used in either old or new stoves or furnaces of any description and which will greatly increase the heating capacity of the stove or furnace in which it is used.

The above and other objects, which will appear as the nature of my invention is better understood, are accomplished by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a vertical sectional view through a stove with my improved air-heating device mounted therein. Fig. 2 is a similar view taken on a plane at right angles to that of Fig. 1. Fig. 3 is a sectional view through the device, taken on the line 2 2 of Fig. 1; and Fig. 4 is a detail view of one end of one of the horizontal air-discharge pipes, showing the pivoted closure therefor.

Referring to the drawings by numeral, 1 denotes the fire-box, and 2 the grate-bars, of a heater 3, which may be a stove or furnace of any description, and 4 denotes my improved air-heating device, which is mounted within the fire-box of said heater.

The device 4 may be in the form of an attachment which may be readily applied to an old or new stove or furnace, or it may be built into the stove or furnace when the same is manufactured.

The heater 3 may be used for burning wood, coal, or any other kind of fuel, and the device 4, as illustrated in the drawings, is adapted to be supported upon the center of the grate, the lower portion of the device being surrounded and partially covered by the burning fuel.

The device 4 comprises a hollow drum or shell 5, which is preferably, but not neces-

sarily, of frusto-conical form and which has an open bottom 6. The latter is supported by an annular flanged ring 6^a, which has downwardly-projecting feet or lugs 6^b, adapted to enter between the grate-bars and hold the device firmly in place. Such feet or lugs while enabling the base-ring to be readily lifted from the grate secure the base-ring to the grate for rotation therewith when shaking down the ashes. Projecting vertically from the upper and small end of the drum 5 is an air-pipe 7, which has at its upper end a head or coupling 8, from which radiate one or more branch or discharge pipes 9, which project through the sides 10 of the stove or heater 3. Any desired number of these branch pipes 9 may be employed; but as shown in the drawings the head 8 is in the form of a T-coupling, so that there are but two of the horizontal pipes 9. As shown, each of the downturned ends 11 of the pipes 9 is provided with a closure 12 in the form of a horizontal swinging plate, which is pivoted by a bolt or rivet 13 upon a lug 14, provided upon one of the ends 11. This closure 12 is provided for the purpose of preventing dust from passing through the device when the grate 2 is raked or shaken.

The use and advantages of the device will be readily seen upon reference to the drawings. It will be seen that the air entering through the door of the ash pit or box will pass upwardly through the grate and into the hollow drum 5, where it will be thoroughly heated. It then passes upwardly through the pipes 7 and 9, where it is further heated, and is discharged out of the downturned ends 11 of said pipes 9, the covers 12 being normally in their open position. It will be further noted that the device greatly increases the heating capacity of the stove or furnace in which it is placed.

While I have shown and described the preferred embodiment of my invention, it will be understood that I do not wish to be limited to the precise construction herein set forth, since various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A stove having a rotary grate and an air-heating attachment, said attachment com-

prising the base-ring to bear on and removable from the grate and having the annular flange on its upper side and depending lugs to enter the spaces between the grate-bars
5 and cause said base-ring to rotate with the grate when shaking down the ashes, the drum having an open bottom detachably seated on the base-ring within the flange thereof, and
10 the air-pipe leading from the upper end of the drum and having a laterally-projecting

pipe extending through the wall of the stove and preventing the drum from rotating with the grate and the base-ring.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 15

SAMUEL W. WILT.

Witnesses:

WARREN P. DILLON,
ANSEL A. SCHUBERT.