

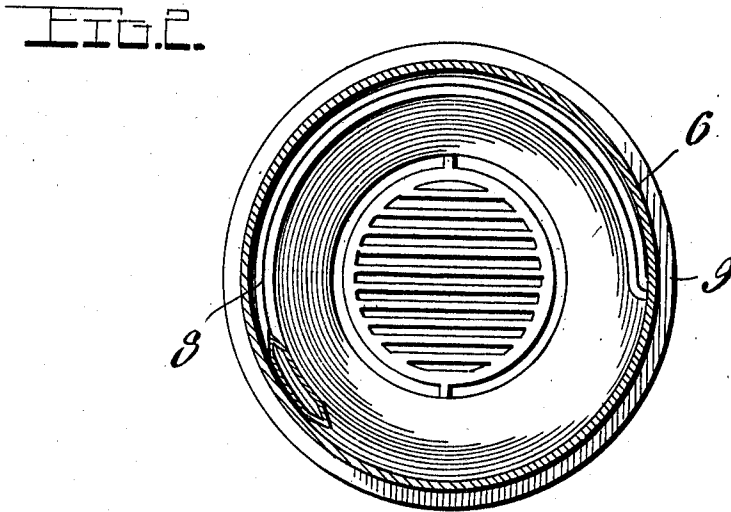
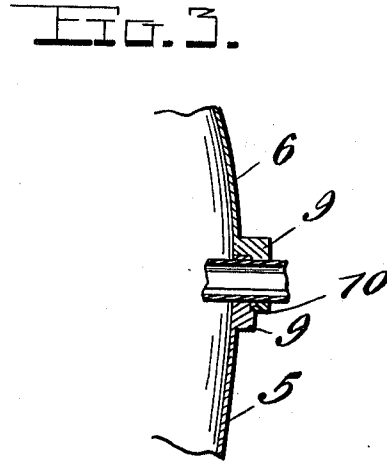
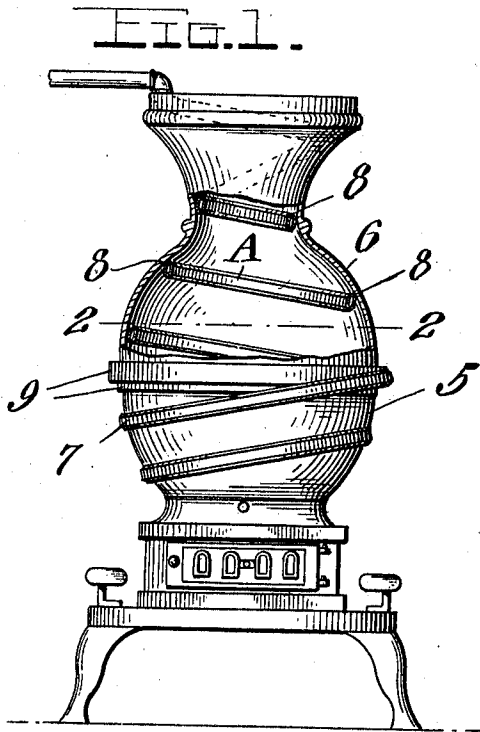
E. A. H. ROYER.

STOVE.

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993,716.

Patented May 30, 1911.



Witnesses

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STOVE.

993,716.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EMMANS A. H. ROYER, a citizen of the United States, residing at Millmont, in the county of Union and State of Pennsylvania, have invented certain new and useful Improvements in Stoves, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in heating stoves and has for its object to provide means for arranging an air conducting coil in the heating chamber of a stove whereby a constant supply of freshly heated air
15 may be secured for the heating of the various apartments of a dwelling.

A further object resides in the provision of an air conducting pipe coil coiled exteriorly and interiorly of the stove and means
20 for securing said coil in its proper position with relation to the stove.

With these and other objects in view, the invention consists of the novel features of construction, combination and arrangement
25 of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation partly in section of a heating stove constructed in accordance with my invention; Fig. 2 is an enlarged section taken on the line 2—2 of Fig. 1; and Fig. 3 is an enlarged detail section illustrating the manner of arranging the drum sections of a stove and passing the
35 coil therethrough.

Referring more particularly to the drawings 5 and 6 designate the lower and upper drum sections respectively of a stove. The lower section of course has the usual grate
40 and fire box therein, the other section serving as the heating chamber. A pipe coil 7 is disposed exteriorly upon the lower drum section 5, the end of said coil being open for the entrance of air. This pipe coil is substantially rectangular in cross section and is
45 formed with the beveled V-shaped diametrically opposed portions 8 which extend longitudinally the entire length of the coil. The drum sections are formed with the circum-
50 scribing flanges 9 which are adapted to engage and overlap as shown in Fig. 3, the flange of the upper section being seated upon a shoulder 10 formed on the lower section. These flanges are considerably thicker than
55 the body portion of the stove and through the same at one side of the stove the pipe

coil is extended. The upper coils of the pipe are arranged within the heating chamber of the stove as clearly shown at A in Fig. 1, said coils being disposed adjacent to the inner wall of the upper drum section 6. The
60 pipe coil is disposed through aligned openings in the overlapping flanges 9 of the drum sections, said openings being of similar shape to the cross sectional form of the
65 pipe coil. The air conducting pipe fits closely in said openings and is adapted to be secured therein against longitudinal movement. The upper extremity of the pipe coil
70 may be threaded so that a suitable coupling head can be engaged therewith and connected to a conducting flue whereby the heated air may be conducted to the various
apartments of a dwelling or other building.

In assembling the sections of the stove
75 and the coil, the upper portion of the coil is first placed within the upper drum section of the stove body, the remaining portion of the pipe being uncoiled. The upper drum section is now arranged upon the circum-
80 scribing flange 9 of the lower section, and the pipe of which the coil is formed is extended through the openings of the flanges 9, the lower portion of the coil being considerably less than the upper interior portion
85 thereof. It will of course be understood that the pipe is sufficiently flexible to allow the lower portion thereof to be loosely arranged in the upper drum section before it is placed in position. After the
90 stove has thus been assembled the lower portion of the pipe is coiled about the lower drum section as shown in Fig. 1.

From the above it will be seen that I have produced a very simple and efficient heating
95 device.

The pipe coil may be arranged in stoves of various forms and is not necessarily restricted in its use to the exact form and construction of the stove as shown in the
100 drawing. By arranging the air conducting coil exteriorly and interiorly of the drum or body of the stove a constant current of fresh pure air is at all times entering the lower open end of the pipe and is heated as it passes
105 through the upper coils which are disposed within the heating chamber.

In heating stoves as at present constructed, the air is retained in the heating chamber and the flues so long before it is supplied
110 to the rooms or compartments that it becomes very dry and contains in many in-

stances a large percentage of coal gas. By means of my improved heating coil, this objection is entirely eliminated and the air is at all times freshly heated and therefore healthful. Moreover, the device is extremely simple and may be constructed at a minimum cost. It also reduces to a considerable extent the expenditure of fuel and requires no additional attention whatever beyond that given to the stove.

Having thus described the invention what is claimed is:—

1. The combination with a stove having a sectional body drum consisting of upper and lower sections, of a heating coil, a portion of said coil being disposed exteriorly of the lower drum section and engaging closely thereupon, the lower end of said coil being open, the said coil extending into the stove body at the engaging portions of the drum sections to prevent circumferential movement of the upper drum section, the upper portion of said coil being disposed closely upon the inner wall of the upper drum section, said coil having longitudi-

nally extending oppositely inclined surfaces, and a heat-conducting pipe connected to the upper end of the coil.

2. The combination with a stove comprising upper and lower drum sections, having overlapping circumscribing flanges, the flange of the upper drum section being seated upon a shoulder formed in the flange of the lower section, said flanges having aligned openings therein, of an air conducting coil having a portion thereof disposed exteriorly about the lower drum section, the end of said coil being open, said coil extending through and secured in the openings in said flanges, the upper portion of said coil being arranged in the upper drum section and extending to the top thereof, and a conducting pipe adapted to be connected to the upper end of the coil.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

EMMANS A. H. ROYER.

Witnesses:

JOS. C. TRUTT,
ELIAS TRUTT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."