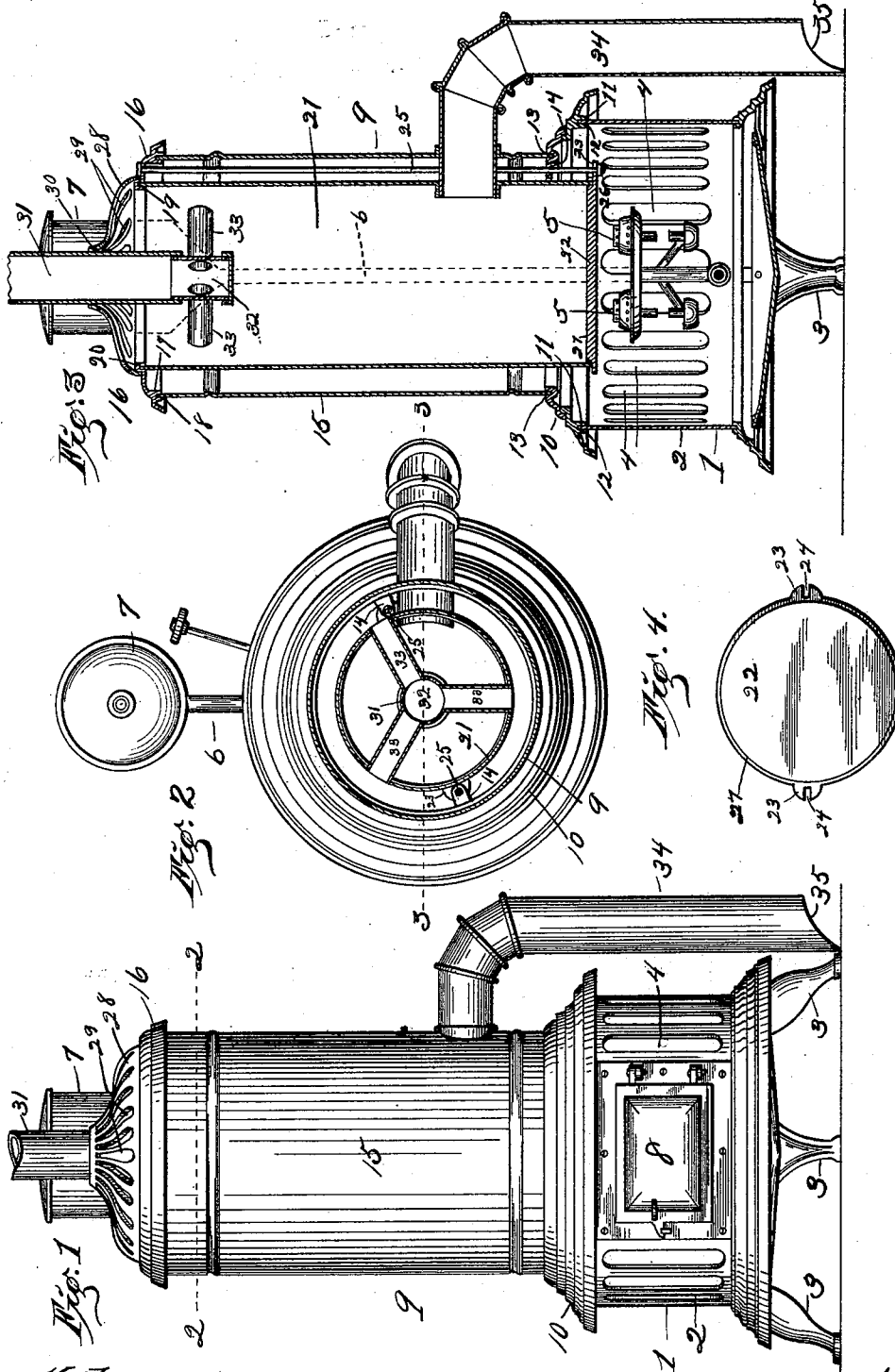


(No Model.)

W. E. ROBBINS.
ODORLESS GASOLINE HEATER.

Nó. 510,520.

Patented Dec. 12, 1893.



Witnesses:-

W. R. Smith.

Maud Fitzpatrick. By: Higdon & Higdon

Inventor:

William E. Robbins.

Attys.

UNITED STATES PATENT OFFICE.

WILLIAM E. ROBBINS, OF KANSAS CITY, MISSOURI.

ODORLESS GASOLINE-HEATER.

SPECIFICATION forming part of Letters Patent No. 510,520, dated December 12, 1893.

Application filed November 12, 1892. Serial No. 451,756. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. ROBBINS, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Odorless Gasoline-Heaters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in heating drums or radiators, designed especially for use upon gas or oil stoves or burners, but which may also be applied to other types of heaters.

The objects of my invention are to produce a heating drum or radiator for the purpose of utilizing the maximum of heat derived from the products of combustion, to heat cold air, introduced from below and near the floor, into the interior of the drum or radiator, and radiating from the upper end thereof, throughout the room, and also to conduct the products of combustion, entirely separated from the heated air, to the flue or chimney, thus preventing the offensive odor and smoke from the burning oil or vapor, escaping from the heater into the room.

To the above purposes my invention consists in certain peculiar and novel features of construction and arrangement, as will be hereinafter specified and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1. represents a front elevation of a gasoline stove with my heating drum or radiator applied thereto in operative position. Fig. 2. represents a horizontal sectional view, taken on the line 2—2 of Fig. 1. Fig. 3. represents a vertical transverse sectional view of the stove and drum, taken on the line 3—3 of Fig. 2. Fig. 4. represents a plan view of the base or bottom plate of the inner cylinder of the drum.

1 designates a gasoline stove, comprising the cylindrical body-portion 2, supported upon suitable legs 3; the body portion being provided with apertures or slots 4, to admit air to the burners 5, in the usual or any preferred manner. These burners are connected through the medium of the pipe 6, to the oil tank 7, said pipe being also provided with

the usual valve to cut off or supply the burners with oil. A door 8, is also provided in the body-portion of the stove, to give access to the interior thereof.

The drum or radiator 9, consists of an annular casting 10, which is provided with the annular shoulder or flange 11, depending from its under side, which shoulder or flange is provided with the annular groove or recess 12, into which fits the upper end of the cylindrical body-portion of the stove. The upper side of the casting 10 is also provided with an annular groove or recess 13, and the inner margin of the casting is provided with the inwardly extending ears or lugs 14, diametrically opposite to each other, and each provided with a vertically extending aperture or opening. The body-portion 15 of the drum or radiator is of cylindrical form, and its lower end is inserted in the annular groove or recess 13 of the casting. A top casting 16 is also of circular form, and is provided with a depending annular shoulder 17, having a groove or recess 18 therein, which fits upon the upper end of the cylindrical body-portion 15 of the drum. The upper casting is further provided near its inner margin, and in its under side, with an annular groove 19, arranged concentrically to the groove 18, near the outer margin of said casting, and is also provided with an upwardly extending annular shoulder 20, at its inner margin. A cylinder 21, vertically and concentrically arranged within the body-portion 15, has its upper end fitted into the inner groove 19 of the top casting 16, and has its lower end projecting a suitable distance below the lower end of the body portion 15, and resting upon a base or supporting plate 22 which is provided with the diametrically opposite ears 23, in vertical alignment with and below the inwardly projecting ears 14 of the lower casting 10. These ears are provided with the notches or recesses 24 into which engage the lower ends of tie-bolts or rods 25, which extend vertically downward through the upper casting 16, ears 14 of lower casting and ears 23 of supporting plate 22, being provided with a head at its upper end resting or bearing upon the top casting, and its lower end with screw threads, engaged by retaining nuts 26 which bear against the lower side of

plate 22. The plate is further provided with a raised surface 27, circular in plan view which is adapted to fit closely the inner margin of the lower end of cylinder 21. It is to be understood
 5 that a circular flange or segmental flanges may also be used if desired to prevent any movement of the lower end of the cylinder 21. A cap or cover 28 also of circular form rests upon the upper side of the top casting 16,
 10 closely inclosing the upwardly extending and annular flange or shoulder thereof, and the cap or cover 28 is also provided with apertures 29 of ornamental configuration. The cap or cover is further provided with a central opening 30, through which vertically projects a flue pipe 31, one end of which is adapted to connect with the chimney or house flue, and the other end projects downward a short distance within the upper end of the
 20 inner cylinder 21 and engages the upper end of a short chamber or pipe 32, the opposite or lower end of which is closed. Radiating pipes 33 communicate with the interior of this chamber and also with the space between the outer
 25 and inner cylinders 15 and 21. The cylinders 15 and 21 are provided near their lower ends with radially aligned openings through which is inserted one end of an I shaped pipe 34. The inner end of this pipe communicates
 30 with the interior of cylinder 21, and the lower end rests upon the floor, being provided with the notch or recess 35 to admit air within the pipe.

From the above description, it will be seen,
 35 that the heat and products of combustion from the burner, first impinge upon the under side or surface of the supporting plate 22 which becomes highly heated, and are then deflected

into the space between the outer and inner cylinders, thus thoroughly heating the same, and enter the radially arranged pipes near the upper end of the inner cylinder 21, and flow into the chamber or pipe 32 and escape thence through flue pipe to the chimney. At the same time cold air enters the pipe 34 near its lower end and passes into the interior of the inner cylinder 21 and then becomes heated and rises and escapes through the apertured cap, and radiates throughout the room.

From the above description it will be seen
 50 that I have produced a cheap and efficient heating drum, and which can be applied conveniently to a great variety of stoves.

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

A heating drum or radiator, comprising an outer cylindrical body-portion, and an inner cylindrical body-portion, having a supporting base or bottom plate 22 provided with notched
 60 radial ears 23, an annular top casting 16 connecting the upper ends of the cylinders, and an annular casting 10 engaging the lower end of the outer cylinder, and having inwardly extending ears 14 provided with apertures, and
 65 tie-bolts 25 extending through the top-casting 16, the ears 14 of the lower casting, and the notches in the ears 23 of the supporting base plate, and nuts engaging the projecting ends of the tie-rods, substantially as set forth. 70

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

WILLIAM E. ROBBINS.

Witnesses:

MAUD FITZPATRICK,
 M. T. SMITH.