No. 868,417.

PATENTED OCT. 15, 1907.

L. B. DORCAS & T. W. RYAN.

STOVE.

APPLICATION FILED MAR. 12, 1907.

Fig. 1.

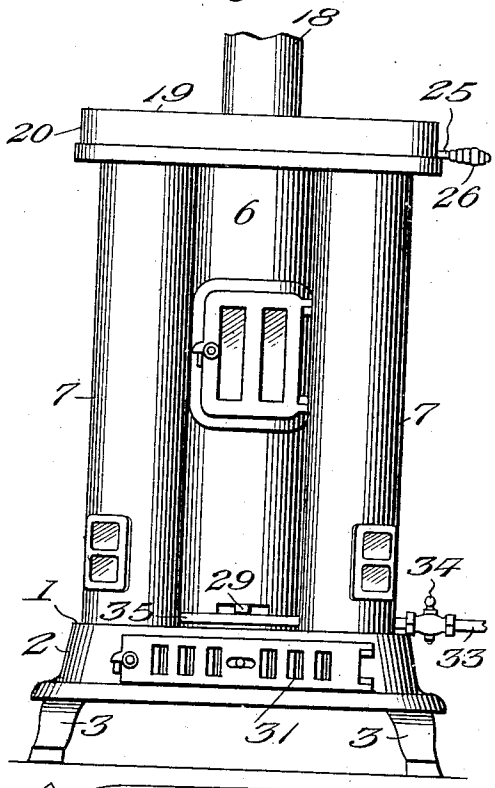
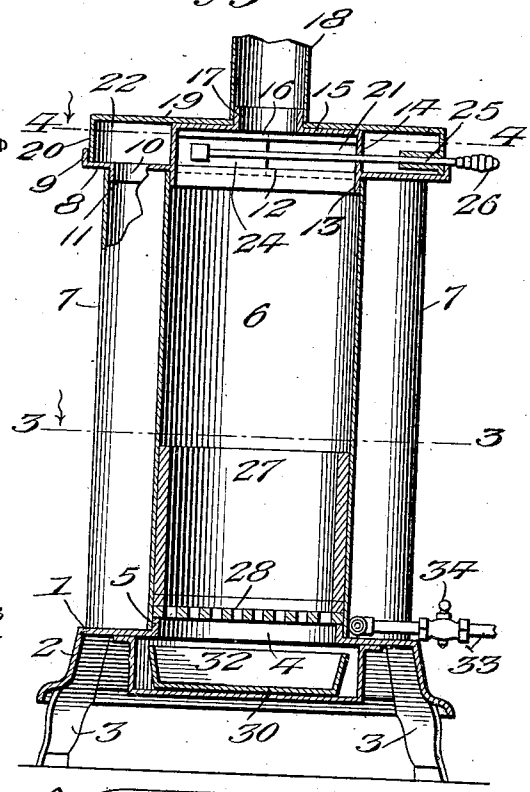


Fig. 2.



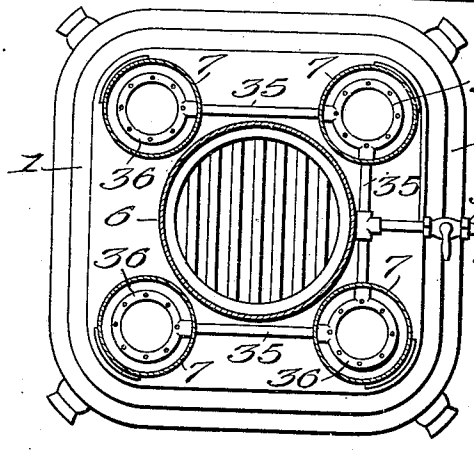


Fig. 3.

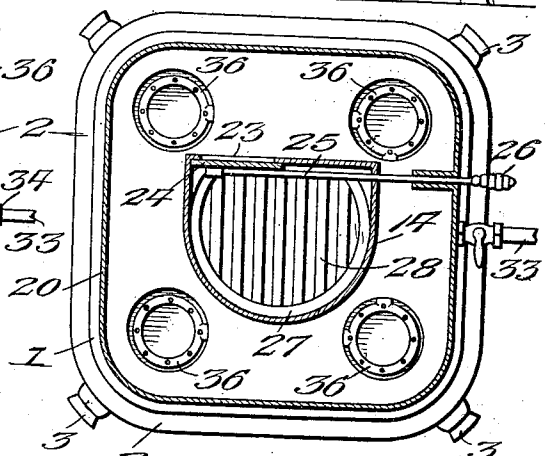


Fig. 4.

Witnesses

Edwin L. McKee

K. Allen

Inventors

Lewis B. Dorcas

Tazwell W. Ryan

By Victor J. Evans

Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LEWIS B. DORCAS AND TAZWELL W. RYAN, OF HENDRICKS, WEST VIRGINIA.

STOVE.

No. 868,417. Specification of Letters Patent. Patented Oct. 15, 1907.

Application filed March 12, 1907. Serial No. 362,027.

To all whom it may concern:

Be it known that we, LEWIS B. DORCAS and TAZWELL W. RYAN, citizens of the United States, residing at Hendricks, in the county of Tucker and State of West Virginia, have invented new and useful Improvements in Stoves, of which the following is a specification.

The invention relates to an improvement in stoves and particularly to a stove designed for the use of either a gaseous or solid fuel.

In certain localities, as through the natural gas regions the heating and cooking for domestic purposes is generally accomplished through the use of stoves specially prepared for the consumption of natural gas. As it frequently happens for one cause or another that the flow of the natural gas is interrupted, the stoves utilizing this fuel are, of course, valueless for the time being, and without other heating and cooking means than the stoves using natural gas an interruption in the supply of this fuel is decidedly disadvantageous.

It is the main object of the present invention, therefore, to construct a stove which is fully adapted for the consumption of natural gas or artificial gas, equally effective with any of the usual solid fuels, as wood, coke or coal, so that upon the interruption of the flow of the gaseous fuel the heating or cooking arrangements may be continued practically without interruption from the same stove by the use of other fuel.

The invention will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a view in front elevation of a stove constructed in accordance with my invention, Fig. 2 is a vertical section of the same, Fig. 3 a section on line 3—3 of Fig. 2, Fig. 4 a section on line 4—4 of Fig. 2.

Referring particularly to the drawings, my improved stove comprises a base plate 1 of any desired outline and preferably formed with a depending edge flange 2 which may be of ornamental contour and is provided with means for the removable attachment of the supporting legs 3. The base plate is formed with a central opening 4, the material of said plate being projected upward concentric to and adjacent the edge of the opening to provide a retaining flange 5.

The main combustion chamber of the stove comprises a cylindrical body 6 designed to overlie the opening 4 in the base plate, the interior diameter of said body being equal to the exterior diameter of the flange 5, so that said body or cylinder is adapted to snugly fit over the flange 5 and rest upon the base plate 1, as clearly shown in Fig. 2.

Burner tubes 7 are secured upon the base plate beyond the cylinder 6, said tubes being preferably arranged in diametrically opposed pairs equally spaced apart circumferentially of the cylinder. A head plate 8 is supported upon the upper ends of the tubes and cylinder, which elements are of equal lengths, said head plate comprising a plate conforming in size and shape to the base plate and formed with an upturned edge flange 9. The head plate is formed with openings 10 to register with the upper ends of the tubes 7, the edge of each of said openings having a depending flange 11 to fit within and bear snugly against the wall of the respective tubes. The head plate is also formed with a central opening 12 to register with the upper end of the cylinder, said opening having an edge flange 13 depending from the plate and fitting within the cylinder wall. The flange 13 is projected above the plate to provide a wall 14, the upper end of the wall being connected by a plate 15 centrally formed with an opening 16 having an upstanding annular edge flange 17, which is designed to fit snugly within an escape flue 18 for the products of combustion. A top plate or cover 19 overlies the head plate 10, being formed with a central opening to embrace the flange 17 and having a depending edge wall 20 to fit within the flange 9 of the head plate. The wall 14 thus divides the space between the head plate 8 and the stove top 19 into a central chamber 21 in open communication with the cylinder 6 and an annular chamber 22 in open communication with the respective burner tubes 7. It being desirable to provide communication between these chambers under certain uses of the stove, as will presently appear, I provide the wall 14 with an opening 23 and control the same through a sliding damper 24 connected to the operating rod 25 projecting through the wall 20 and provided beyond said wall with a handle 26. In order to provide for the convenient operation of the damper 24 the wall 14 is preferably formed as illustrated in Fig. 4, having a curved wall terminally connected by a straight or plain wall, the damper opening being formed in this latter wall.

A fire pot 27 is removably seated in the cylinder 6, the lower end of said pot bearing upon the upper edge of the flange 5, with the wall of the pot snugly fitting the wall of the cylinder. The fire pot is preferably provided with any desired form of grate 28 and with any well known shaking means 29 therefor. The ash box 30 is provided below the base plate, being secured to the latter concentric with and beyond the edge of the opening 4, said box having the vertical wall thereof interrupted for a portion of its length to communicate with an opening formed in the flange 2 of the base plate and normally closed by the usual door 31. An ash receiver or pan 32 is to be slidably movable within the ash box, as is usual in ordinary stove constructions.

The gas supply pipe 33, provided with the usual valve 34, is branched adjacent the cylinder 6 and connected by suitable piping 35 to burners 36 arranged in each tube 7.

As thus constructed the stove is adapted for use either as a solid fuel stove or gaseous fuel stove, it being

understood that in the use of solid fuel, such as coal, coke, or wood, the fuel is placed in the fire pot 27 and burned in the usual way, the products of combustion escaping through the flue 18. In the use of the stove for gaseous fuel the gas is admitted to the burners 36, the rod 25 being operated to open the damper 23 to permit escape of the products of combustion from the burner tubes through the flue 18.

The stove of the present invention is admirably adapted for the purpose designed, it being at once obvious that in the use of the stove for gaseous fuel, any interruption to the flow of the fuel, which under ordinary circumstances would preclude any effective use of the stove, will be compensated for as a fuel of other character may be introduced into the fire pot with the usual effect. It is, therefore, possible in the use of the present invention to avoid any disadvantages incident to the interruption of the flow of the gaseous fuel.

Having thus described the invention what is claimed as new, is:—

1. A stove having a central fuel receiving cylinder, a plurality of burner tubes arranged beyond the cylinder, a head plate supported upon the upper ends of the cylinder and tubes, a cover plate forming an inclosed space with the head plate, a wall dividing said space into a central chamber in communication with the cylinder and an annular chamber in communication with the burner tubes, a valved opening in said wall, and an escape flue having communication with the central chamber.

2. A stove having a central fuel receiving cylinder, a plurality of burner tubes arranged beyond the cylinder and in concentric relation therewith, a burner in each tube, a fire pot supported within the cylinder, a head plate supported upon the upper ends of the cylinder and tubes, a cover plate forming an inclosed space with the head plate, and a wall dividing said space into a central chamber in communication with the cylinder and an annular chamber in communication with the burner tubes, an escape flue, said central chamber being in communication with the escape flue, and means for controlling communication between the annular chamber and central chamber.

In testimony whereof, we affix our signatures in presence of two witnesses.

LEWIS B. DORCAS.
TAZWELL W. RYAN.

Witnesses:
WARREN CUNNINGHAM,
MITTIE A. PATTON.