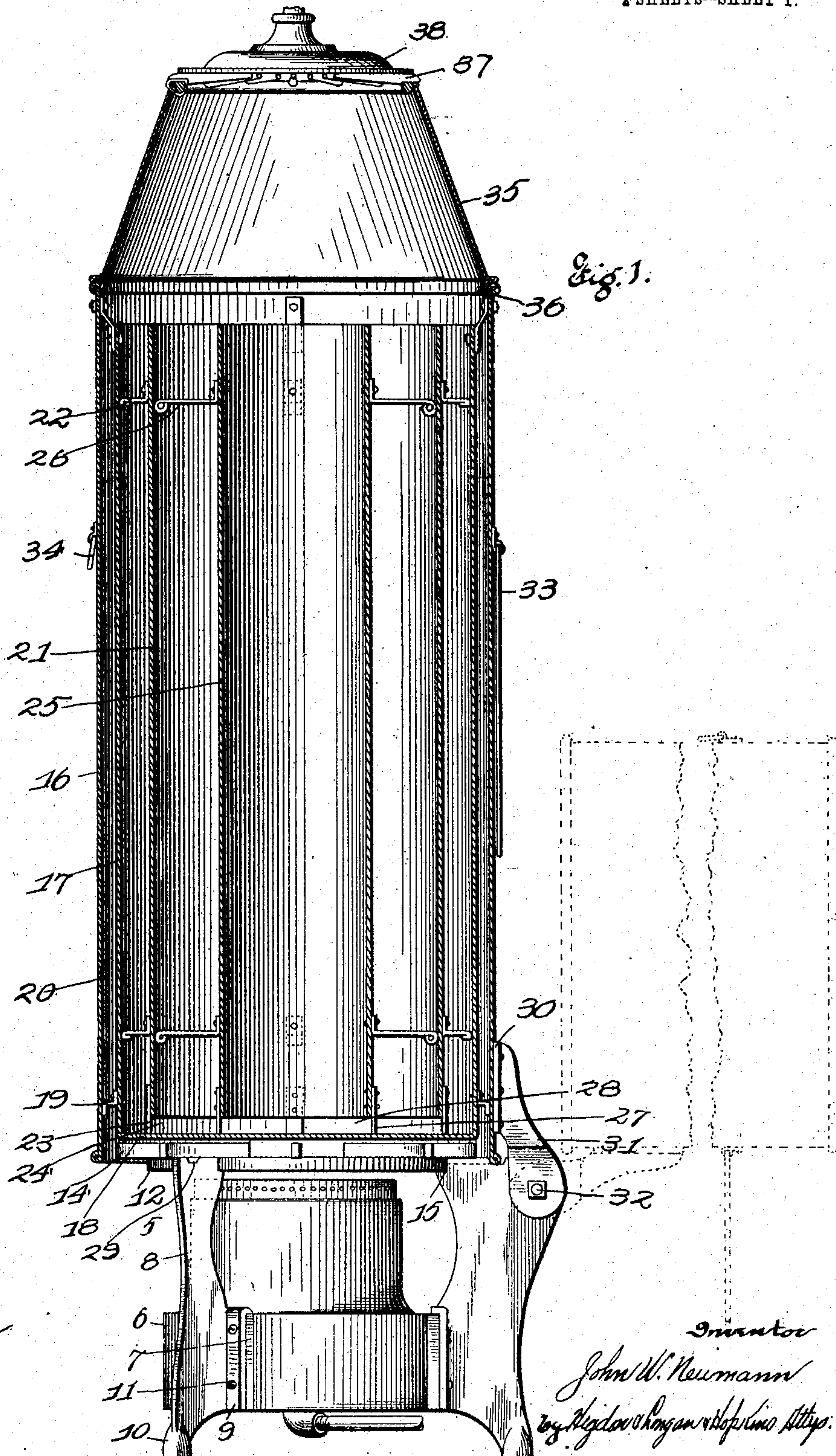


No. 796,347.

PATENTED AUG. 1, 1905.

J. W. NEUMANN.
GAS, GASOLENE, AND OIL HEATING STOVE.
APPLICATION FILED JULY 16, 1904.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 2.

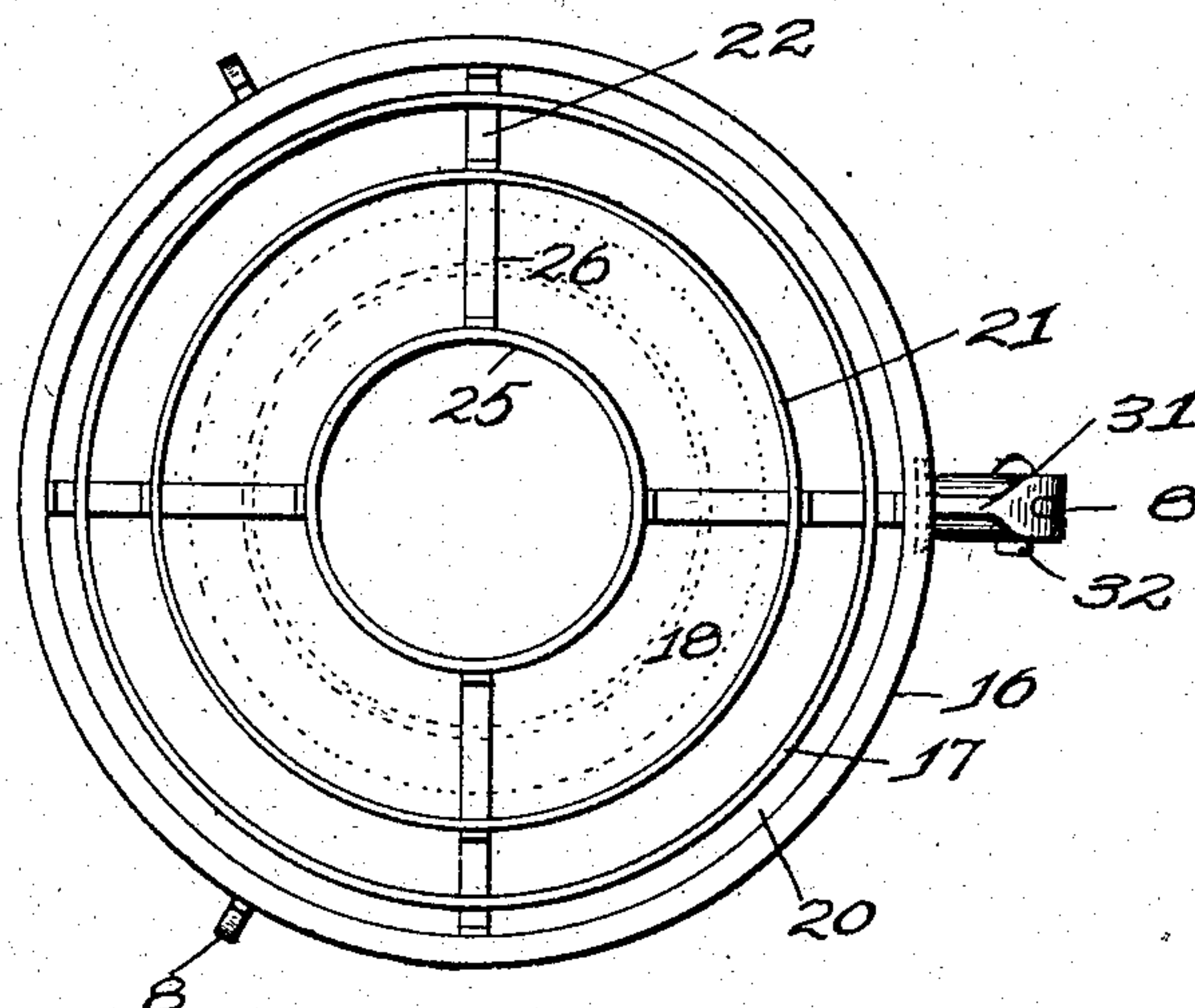
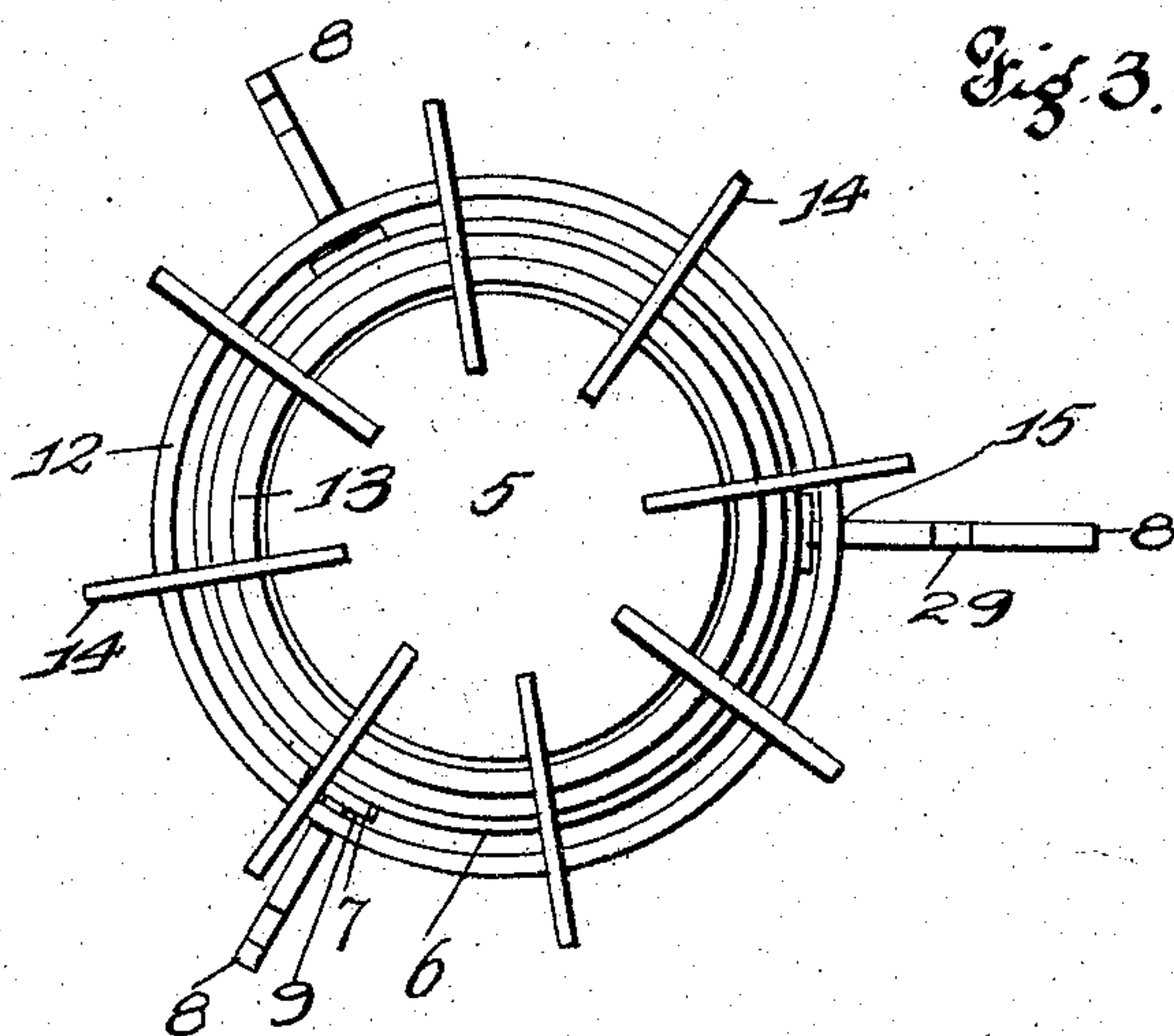


Fig. 3.



Witnesses
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M. M. Brazill

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John W. Neumann
by Higdon & Longaw & Hopkins Attys.

UNITED STATES PATENT OFFICE.

JOHN W. NEUMANN, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO ST. LOUIS GAS HEATER COMPANY, A CORPORATION.

GAS, GASOLENE, AND OIL HEATING-STOVES.

No. 796,347.

Specification of Letters Patent.

Patented Aug. 1, 1905.

Application filed July 16, 1904. Serial No. 216,771.

To all whom it may concern:

Be it known that I, JOHN W. NEUMANN, a citizen of the United States, and a resident of St. Louis, Missouri, have invented certain new and useful Improvements in Gas, Gasolene, and Oil Heating-Stoves, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in gas, gasolene, and oil heating-stoves; and it consists of the novel features herein shown, described, and claimed.

In the drawings, Figure 1 is a vertical central section of a stove embodying the principles of my invention. Fig. 2 is a top plan view with the hood removed. Fig. 3 is a top plan view with the radiator removed.

Referring to the drawings in detail, the burner 5 is constructed as shown, described, and claimed in my companion application for gas-burners filed June 17, 1904, Serial No. 212,957; but it should be understood that any suitable gas, gasolene, or oil burner may be substituted for this burner. The base 6 of the burner is cylindrical, and three bosses 7 extend radially from the base to provide means of securing the legs to the burner. The legs 8 are flat webs formed integral with the attaching-plates 9 and have feet 10 for engagement with the floor or other foundation. The attaching-plates 9 are below the centers of the legs and are secured to the bosses 7 by the cap-screws 11. The legs 8 are arranged radially, as shown in Fig. 3, and the upper ends of the legs are level, so as to form a base for supporting the cooking-grate and the radiator. The cooking-grate comprises the outer ring 12, the inner ring 13, and the radial supporting-bars 14, extending upwardly, inwardly, and outwardly from the rings and connecting the rings, all the parts being cast integral. Notches 15 are formed at the upper inner corners of the legs 8 to receive the ring 12, so as to support the grate and to hold the grate from lateral motion. The rings 12 and 13 are above and outside of the gas-openings of the burner. The upper faces of the bars 14 of the grate are on a level and are intended to support kettles and other cooking utensils, so as to adapt the burner for use as a kitchen-stove.

The radiator comprises the jacket 16, the inner shell 17, mounted in the jacket, the baffle-plate 18, closing the lower end of the shell 17, the spacing-blocks 19 holding the shell 17 concentric to the jacket, thus forming the heating-chamber 20, the removable outer flue 21, the spacing-arms 22, secured to the flue and projecting radially outwardly to locate the flue concentric to the shell 17, the legs 23, extending downwardly to engage the baffle-plate 18 and form a passage 24 under the lower edge of the flue, the inner flue 25, the spacing-arms 26, attached to the inner flue and projecting radially outwardly to locate the inner flue concentric to the outer flue, and the feet 27, projecting downwardly and engaging the baffle-plate 18 and forming the passage 28 under the lower edge of the flue. The upper ends of the shell 17, the outer flue 21, and the inner flue 25 are on a level and slightly below the upper edge of the jacket 16, and the lower edge of the jacket 16 extends a short distance below the baffle-plate 18, said lower edge being wired to form a support for the radiator. Notches 29 are formed in the upper edges of the legs 8 to receive said wired lower edge of the jacket and hold the radiator concentric to the burner.

The baffle-plate 18 is immediately above the bars 14 of the grate. A hinge-plate 30 is secured to the jacket 16, and a hinge-arm 31, formed integral with the hinge-plate, is pivotally connected to the upper end of one of the legs 8 by the hinge-pin 32, so that the radiator may be tipped to a horizontal position, thus uncovering the grate.

The radiator-leg 33 is pivotally connected to the radiator near its upper end, said leg being substantially the same length as the legs 8, so that when the radiator is tipped to a horizontal position the leg 33 will support the upper and outer end of the radiator, as shown in dotted lines in Fig. 1. A handle 34 is attached to the opposite side of the radiator from the leg 33, to be used in manipulating the radiator from its vertical to its horizontal position, and vice versa. A hood 35 is inverted-funnel-shaped and has a flange 36 to engage within the upper end of the jacket 16 to form a cover for the radiator, and a second grate 37 fits within the opening of the upper end of the hood. A second cover 38 is mounted upon the grate, principally for ornamental

purposes and to retard the draft, there being passages around the edges of the cover through the grate, so as to spread the heat and products of combustion.

When desired, the cover 38 may be removed and the grate 37 used for heating water and the like.

When the stove is in operation, the flame from the burner will strike the baffle-plate 18 and spread radially, and the heat will pass upwardly outside of the shell 17 and inside of the jacket 16, through the heating-chamber 20, and then upwardly through the hood. Cold air will pass downwardly through the inner flue 25 and through the outer flue 21 and pass through the openings 28 and 24 and upwardly inside of the shell 17, said air being highly heated as it passes upwardly. In this manner I get the benefit of the radiation not only outwardly from the jacket 16, but inwardly from the shell 17.

I desire to call especial attention to the fact that I have provided means of mounting the burner, mounting the cooking-grate above the burner, so that the burner may be used for domestic purposes, and mounting the radiator removably above the burner, so that the burner may be used for heating purposes.

I call especial attention to the fact that I secure a larger heating-surface than has ever before been produced in the same space with the same expense and that by the same means I draw the cold air from the bottom of the room, pass it over the heating-surfaces, and discharge it again into the room highly heated, that the stove is simple and economical and possesses many obvious advantages over the stoves heretofore made along this line.

I claim—

1. In a heating-stove: the cylindrical base 6, the three bosses 7 extending radially from the base; the three legs 8; the attaching-plates 9 formed integral with the legs and secured to the bosses; the burner extending upwardly from the base 6; said legs 8 extending to a point above the burner; and forming a base for supporting the cooking-grate and radiator; there being notches 15 at the upper inner corners of the legs; the cooking-grate supported in said notches; and the radiator hinged to one of the legs; said radiator comprising a

jacket; an inner shell mounted in the jacket; a baffle-plate closing the lower end of the inner shell a removable outer flue within the inner shell; there being a passage under the flue; an inner flue mounted within the outer flue; there being a passage under the inner flue; a hood connected to the jacket and closing the upper end of the jacket, and having a central discharge-opening; a grate in this discharge-opening; and a baffle-plate upon the grate; substantially as specified.

2. In a heating-stove: a suitable base, and a radiator hinged to the base; said radiator comprising the jacket 16; the inner shell 17 mounted in the jacket; the baffle-plate 18 closing the lower end of the shell 17; the spacing-blocks 19 holding the shell 17 concentric to the jacket, thus forming the heating-chamber 20; the removable outer flue 21; the spacing-arms 22 secured to the flue and projecting radially outwardly to locate the flue concentric to the shell 17; the legs 23 extending downwardly to engage the baffle-plate 18 and form a passage 24 under the lower edge of the flue; the inner flue 25; the spacing-arms 26 attached to the inner flue and projecting radially outwardly to locate the inner flue concentric to the outer flue; and the feet 27 projecting downwardly and engaging the baffle-plate 18 and forming the passage 28 under the lower edge of the flue; substantially as specified.

3. In a heating-stove: a suitable base, and a radiator hinged to the base; said radiator comprising a jacket; an inner shell mounted in the jacket; a baffle-plate closing the lower end of the inner shell; a removable outer flue within the inner shell; there being a passage under the flue; an inner flue mounted within the outer flue; there being a passage under the inner flue; a hood connected to the jacket and closing the upper end of the jacket, and having a central discharge-opening; a grate in this discharge-opening; and a baffle-plate upon the grate; substantially as specified.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

JOHN W. NEUMANN.

Witnesses:

M. M. BRAZILL,

ALFRED A. EICKS.