

(No Model.)

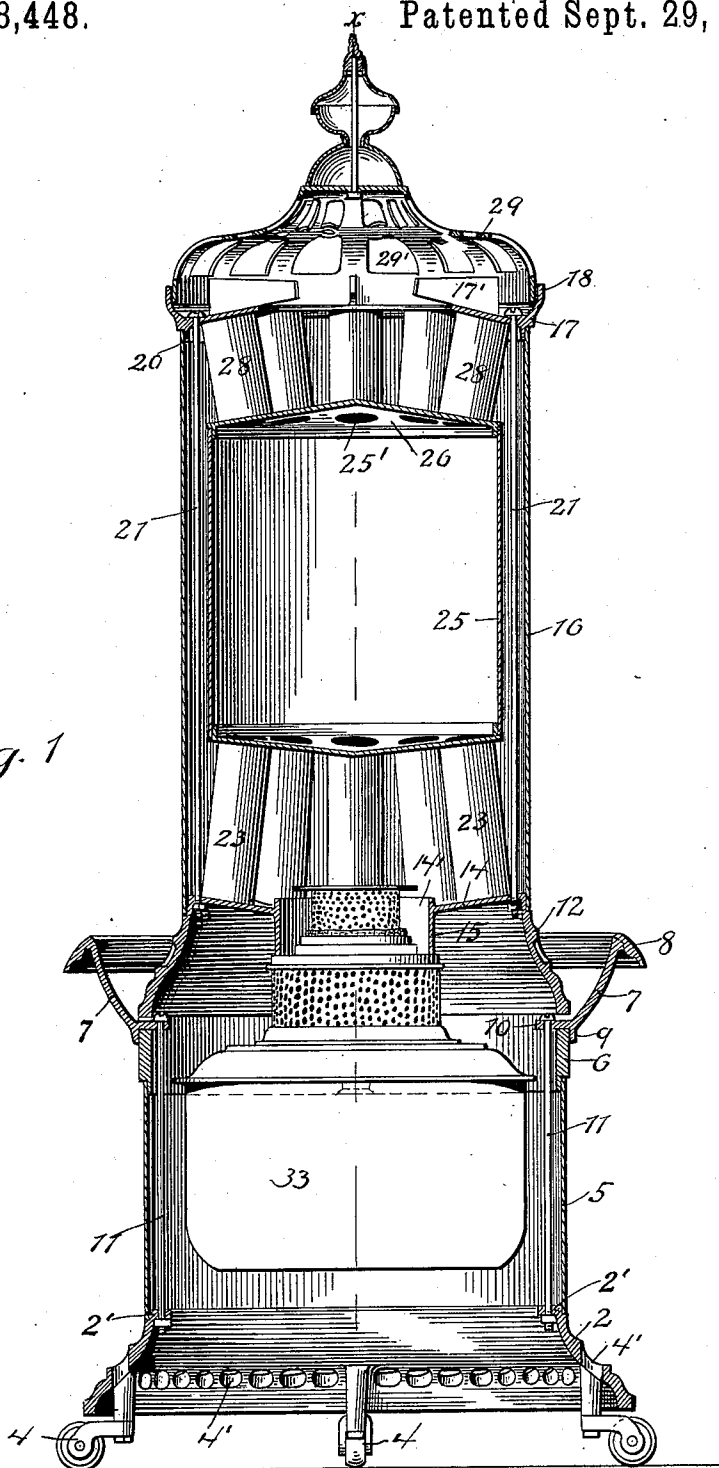
3 Sheets—Sheet 1.

A. A. KINNE.
OIL STOVE.

No. 568,448.

Patented Sept. 29, 1896.

Fig. 1



Witnesses
J. J. Jensen
Richard Paul,

Inventor:
A. A. Kinne.
By Paul & Kinney
Attys

(No Model.)

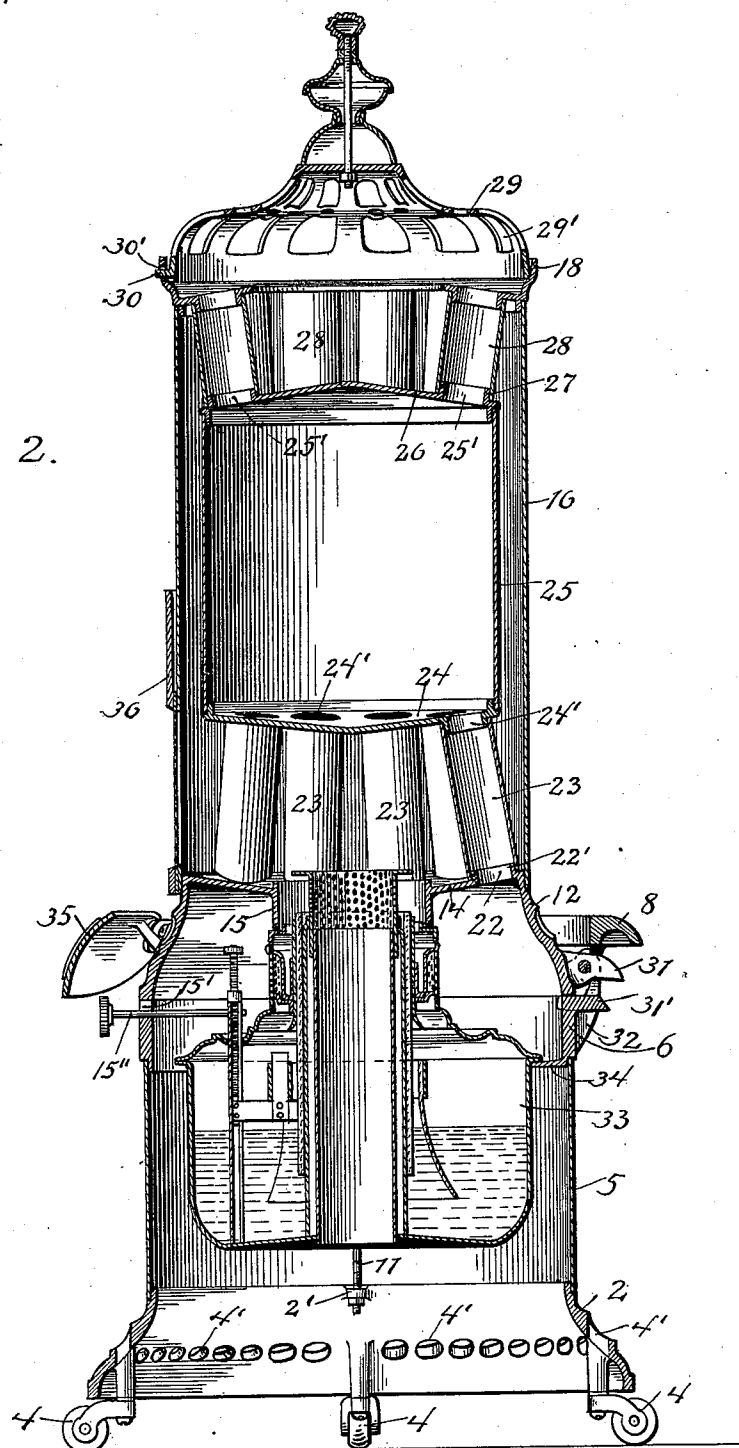
3 Sheets—Sheet 2.

A. A. KINNE.
OIL STOVE.

No. 568,448.

Patented Sept. 29, 1896.

Fig. 2.



Witnesses

J. J. Jensen
Richard Paul

Inventor:

Alfred A. Kinne

By *Paul Hawley* attys

(No Model.)

3 Sheets—Sheet 3.

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OIL STOVE.

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Fig. 3.

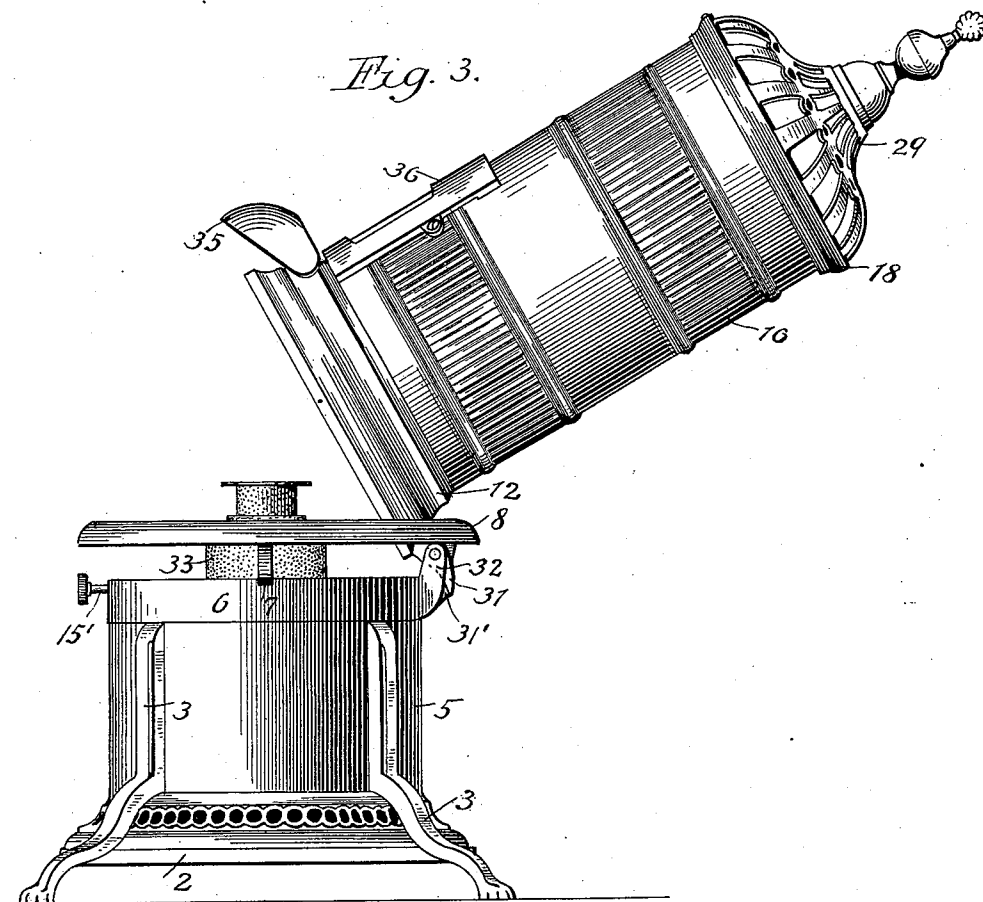
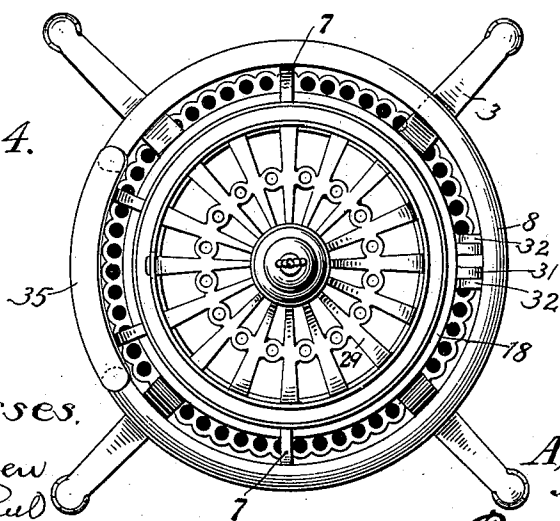


Fig. 4.



Witnesses.

J. Jessen
Richard Paul.

Inventor.

Alfred A. Kinne.

By Paul H. Hawley, atty.

UNITED STATES PATENT OFFICE.

ALFRED A. KINNE, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO MYRON M. KINNE.

OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 568,448, dated September 29, 1896.

Application filed January 15, 1895. Serial No. 534,957. (No model.)

To all whom it may concern:

Be it known that I, ALFRED A. KINNE, of the city of Minneapolis, county of Hennepin, State of Minnesota, have invented certain
5 new and useful Improvements in Oil-Stoves, of which the following is a specification.

My invention relates to oil-heaters, and the object I have in view is to provide a neat and ornamental stove that shall be cheap to man-
10 ufacture and have a very large heating capacity.

My invention consists generally in the constructions and combinations hereinafter described, and particularly pointed out in the
15 claims.

The invention will be more readily understood by reference to the accompanying drawings, forming part of this specification, in which—

20 Figure 1 is a vertical sectional view of a stove embodying my invention. Fig. 2 is a similar view on line *xx* of Fig. 1. Fig. 3 is a side view showing the upper part of the stove tipped back ready for lighting the lamp.
25 Fig. 4 is a top view of the stove.

In the drawings, 2 represents a ring or foot of cast metal supported upon legs or standards 3, as shown in Fig. 3, or upon casters 4, as shown in Fig. 1. When casters are used,
30 the stove may be rolled from place to place. The spreading legs form a firm support and prevent the stove from tipping when the upper portion is tilted back to light or remove the lamp. The foot or ring 2 may be orna-
35 mented in any suitable manner, and, as shown in Figs. 1 and 2, may be provided with a series of holes 4' and with lugs to which are secured the casters 4. Above the foot 2 and
40 thereof is the casing 5, composed, preferably, of sheet metal, and resting upon the upper edge of the casing 5 is a cast-metal ring 6. Resting upon the top of this metal ring 6 are the arms or brackets 7, having the orna-
45 mental ring 8 upon their outer ends and preferably extending nearly around the stove. The inner ends of the arms 7 are provided with a lug 9, which extends down over the outer edge of the metal ring 6, and with an
50 extension 10, which projects in over the upper edge of said ring. The extensions 10 are

provided with openings to receive rods 11, which also pass through similar openings provided in the lugs 2' upon the upper edge of the foot 2, as shown in Fig. 1. When these
55 bolts or rods are in position and secured by the nuts at the lower ends thereof, the foot 2, the arms 7, and the parts between the foot and said arms will be held securely together. These parts that are thus secured together I
60 term the "base" of the stove. A ring 12, preferably of cast metal, having the disk 14, with a central opening 14' and an annular flange 15, to inclose the burner of the lamp hereinafter mentioned, is arranged upon said base.
65 The ring 6 is preferably provided at its upper edge with a slot 15' to receive the wick-stem 15" of the lamp. Above the ring 12 and resting on a shoulder provided in the upper edge thereof is a sheet-metal drum or casing
70 16, extending to the top of the stove, and resting upon the upper edge of this casing is a disk or casting 17, having the upwardly-extending flange 18 and the rim 20, which extends down over the inner surface of the cas-
75 ing 16 and aids in holding the disk 17 in position. The disk or casting 17 is provided with upwardly-extending wings 17' on the upper surface thereof, and is also provided near its outer edge with holes or openings through
80 which rods 21 pass, and through similar openings in the edge of the disk 14 below, and these rods when in position serve to hold the parts of the top together.

The disk 14 is provided with a series of
85 holes or openings 22, arranged around its outer edge, and each opening is preferably provided with an annular rib or flange 22', extending above the upper edge of the opening, as shown in Fig. 2. A series of short tubes 23 are pro-
90 vided, having one end adapted to be placed over the openings 22 and preferably inclined inwardly toward the center of the stove. Within the casing 16 is a chamber having a bottom formed of a disk 24, having a series
95 of openings corresponding to the number of tubes 23, the lower side of the disk being preferably provided with a rib or flange 24', extending around the edge of each opening, and over which the upper end of the tube is
100 placed. The disk 24 is provided with a shoulder to receive a sheet-metal drum 25. A

similar disk 26 is provided at the upper end of said drum 25, having a series of openings 25', provided with annular flanges 27 to receive the lower ends of the short tubes 28. The upper ends of the tubes 28 are inserted into openings provided in the part or disk 17 heretofore described. The tubes 28 differ from the tubes 23 in that they are a little shorter, preferably, and are inclined outwardly from the center of the stove. The drum 25 and the parts 26 and 24 form the heating-chamber of the stove.

Resting upon the disk 17 at the top of the stove is an ornamental cap or top 29, which may be of any desired shape and finished in any suitable manner, and which is provided with a series of openings or slots 29'. This top is also preferably provided with a lug 30, engaging a slot 30' in the part 18 to prevent the top falling off when the upper portion of the stove is tilted back, or it may be arranged to rest directly upon the disk, as shown in Fig. 1, so that it may be entirely removed at any time.

The ring 12 is provided at one side with the lugs 31, through which a pin or bolt passes, pivotally securing the same to similar lugs 32, provided on the ring 6, thereby forming a hinge upon which the upper part of the stove may be turned back when it is desired to light the lamp. The lamp 33 is supported upon arms or flanges 34, extending from the inner side of the casing 6. This lamp is of the ordinary central-draft construction, and I do not claim it, except as used in combination with the heater.

The ring 8, as before stated, does not extend entirely around the stove, but its circle is completed by a curved part 35, which is secured to the ring 12 above the wick-stem of the lamp. This part 35 serves not only to complete the ornamental ring 8, but also serves as a handle by which the upper part of the stove may be turned back when desired. This handle, being separated from the part immediately surrounding the lamp, does not get hot, and may be grasped at any time without danger of burning. An ornamental plate 36 is secured to the side of the casing or drum 16, upon which the name and date of manufacture may be placed. This plate may have a mica-filled opening through which the flame of the lamp may be observed.

When it is desired to use the stove, the hinged upper portion is turned back to the position indicated in Fig. 3 and the lamp lighted. The hinged portion is then shut down, and the circular wick, usually used in lamps of this construction, may be readily raised or lowered by means of the wick-stem 15". The heat from the flame of the lamp will warm the pipes 23 and the bottom of the heating-chamber, so that the air will begin to circulate up around the lamp and through these pipes within a short time after the lamp is lighted. The air as it becomes heated will pass through the heating-chamber and

through the pipes upon the upper side thereof, and thence through the openings provided in the ornamental top 29. As fast as the air is warmed and passes up through the stove cool fresh air will pass in from beneath. It will be noted that by providing the series of tubes or flues 23 below the heating-chamber and also the tubes above the chamber I secure a very large heating-surface in addition to that of the heating-chamber itself. As the stove becomes warm a certain amount of heat will be radiated from the casing 16 in addition to the heated air that passes out of the top of the stove. Whenever it is desired to remove the lamp, the hinged portion is turned back and the lamp and fount lifted entirely out of the base, as the wick-stem does not interfere as in other stoves.

The stove may be made of any desired size and an oil reservoir or fount provided that will contain oil enough to keep the lamp burning for a long time.

The space between the drum or casing 16 and the drum 25 is very small, so that the heat therein will be communicated quickly to the air of the room and to the air passing through the interior drum. The comparatively great size of the inner drum insures retardation of air, so that the same becomes very hot before being passed out of the top of the stove through the openings provided in the removable top 29.

The lug 31 is preferably provided with an extension which strikes the lug 31', provided on the ring 6, which acts as a stop to prevent the hinged upper portion of the stove from being tilted back too far when it is desired to remove or light the lamp. Instead of this lug I may provide a short chain and hook (not shown) on the base to hook into an eye provided on the hinged upper portion to prevent the same from tipping back beyond a certain desired point.

While I have shown my invention used in connection with an oil-burner only, I do not limit myself to this use alone, as a gasolene or other burner might be arranged within the base for furnishing a supply of heat.

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

1. The combination, in an oil-stove, of a base, the burner within said base, the tilting drum resting upon said base, the incomplete ring carried by said base, and the part 35 carried by said drum and arranged to complete said ring, substantially as described.

2. The combination, in an oil-stove, with a base, of a drum hinged thereon, a lamp supported and removably arranged within said base and provided with a wick-stem extending outside of said base, an incomplete ring 8 carried by said base and extending partially around said hinged drum, and a curved part 35 carried by said drum and arranged to fill the space between the ends of said incomplete ring 8 and to form a handle whereby

said drum may be turned back on its hinges to permit access to said lamp or burner, substantially as described.

3. The combination, in an oil-stove, of a
 5 base, a lamp or burner supported within said
 base, a drum arranged thereon, the lower por-
 tion of said drum consisting of a ring 12
 hinged upon the base and disk 14 formed in-
 10 tegrally therewith, said disk being provided
 with a central flanged opening to receive the
 burner of the lamp, and also provided with a
 series of openings around said central open-
 ing, a heating-chamber arranged within said
 15 drum above said burner, a narrow space be-
 ing provided between the vertical walls of
 said heating-chamber and the outer wall of
 said drum, the bottom of said heating-cham-
 ber being provided with a series of openings
 20 corresponding to the openings in said disk
 14, a series of inwardly-inclined flues con-
 necting the openings in the bottom of said
 heating-chamber with the corresponding
 openings in said disk 14, the top of said heat-
 ing-chamber being also provided with a series
 25 of similar openings, a disk 17 arranged at the
 top of said drum and provided with a series
 of openings corresponding to the openings in
 the top of said heating-chamber, and a series
 30 of outwardly-inclined flues connecting the
 openings in the top of said heating-chamber
 with the openings in said disk 17, and a top

29 forming a supplemental chamber above
 said disk 17.

4. The combination, with the base, open at
 top and bottom, and the lamp supported in
 35 said base, of the ring 12 hinged upon said
 base and provided with the disk portion 14
 having the series of openings 22 the central
 opening, and the ring-flange 15, said flange
 15 being arranged to surround the lamp- 40
 burner, when in position for use, the drum
 or casing 16 supported upon said ring 12, and
 provided near its upper end with a disk hav-
 ing a central opening, and a series of other
 openings, the top 29 arranged upon the cas- 45
 ing 16 and provided with the openings 29', a
 drum 25 arranged in the casing 16, a space
 being provided between the walls of the drum
 25 and the casing 16, and the two series of
 tubes extending respectively from openings 50
 in the top and bottom of the drum 25 to the
 openings in the disks 17 and 14, all of the
 parts above the ring 12 being adapted to be
 turned back with said ring for the purpose of
 exposing the lamp. 55

In testimony whereof I have hereunto set
 my hand this 5th day of December, A. D. 1894.

ALFRED A. KINNE.

In presence of—

C. G. HAWLEY,
 RICHARD PAUL.