

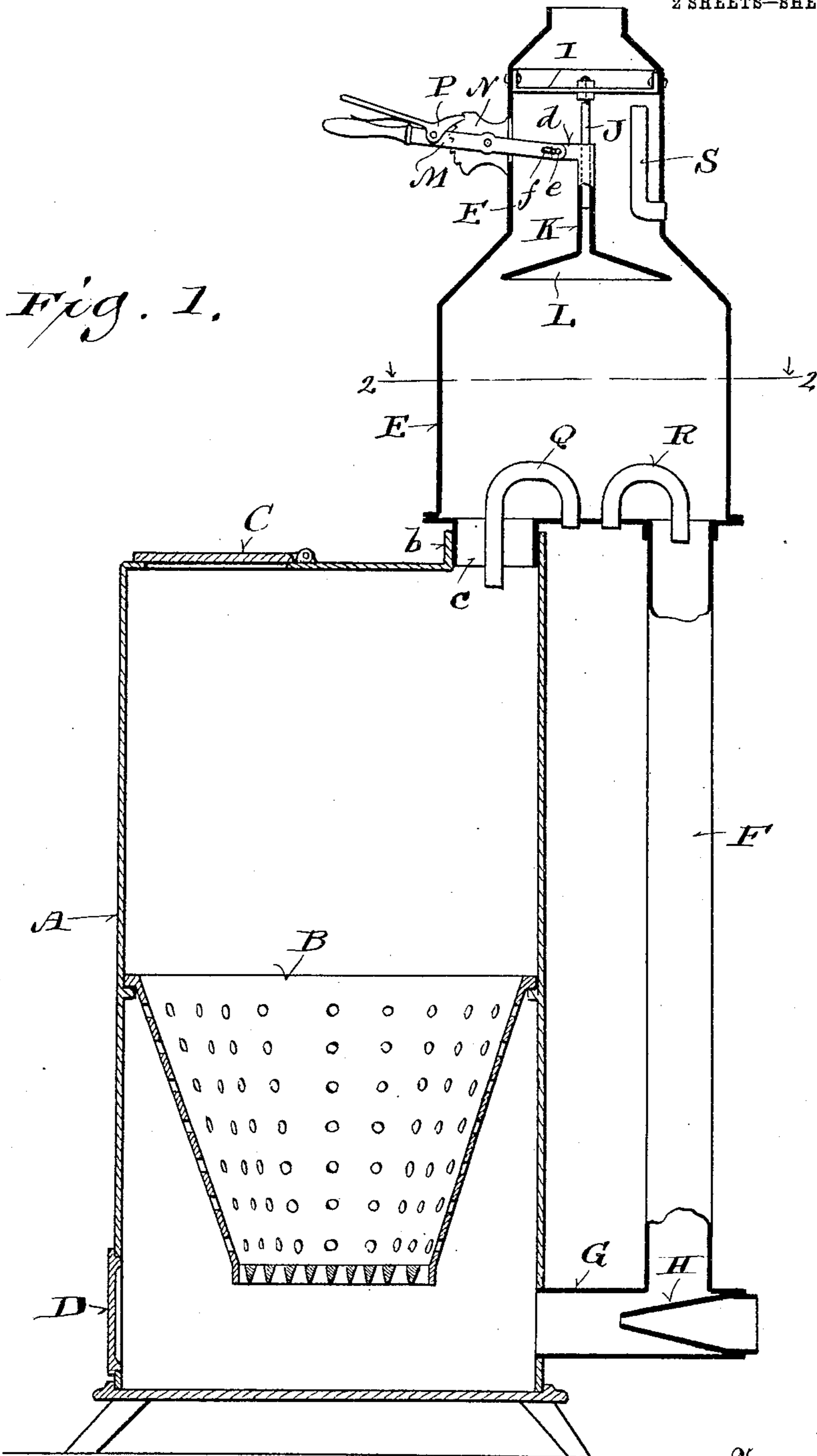
No. 778,639.

PATENTED DEC. 27, 1904.

N. W. DIMPSEY.
HEATER.

APPLICATION FILED JUNE 24, 1904.

2 SHEETS—SHEET 1.



Witnesses
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N.E. Oliphant

Inventor
Nelson W. Dimpsey
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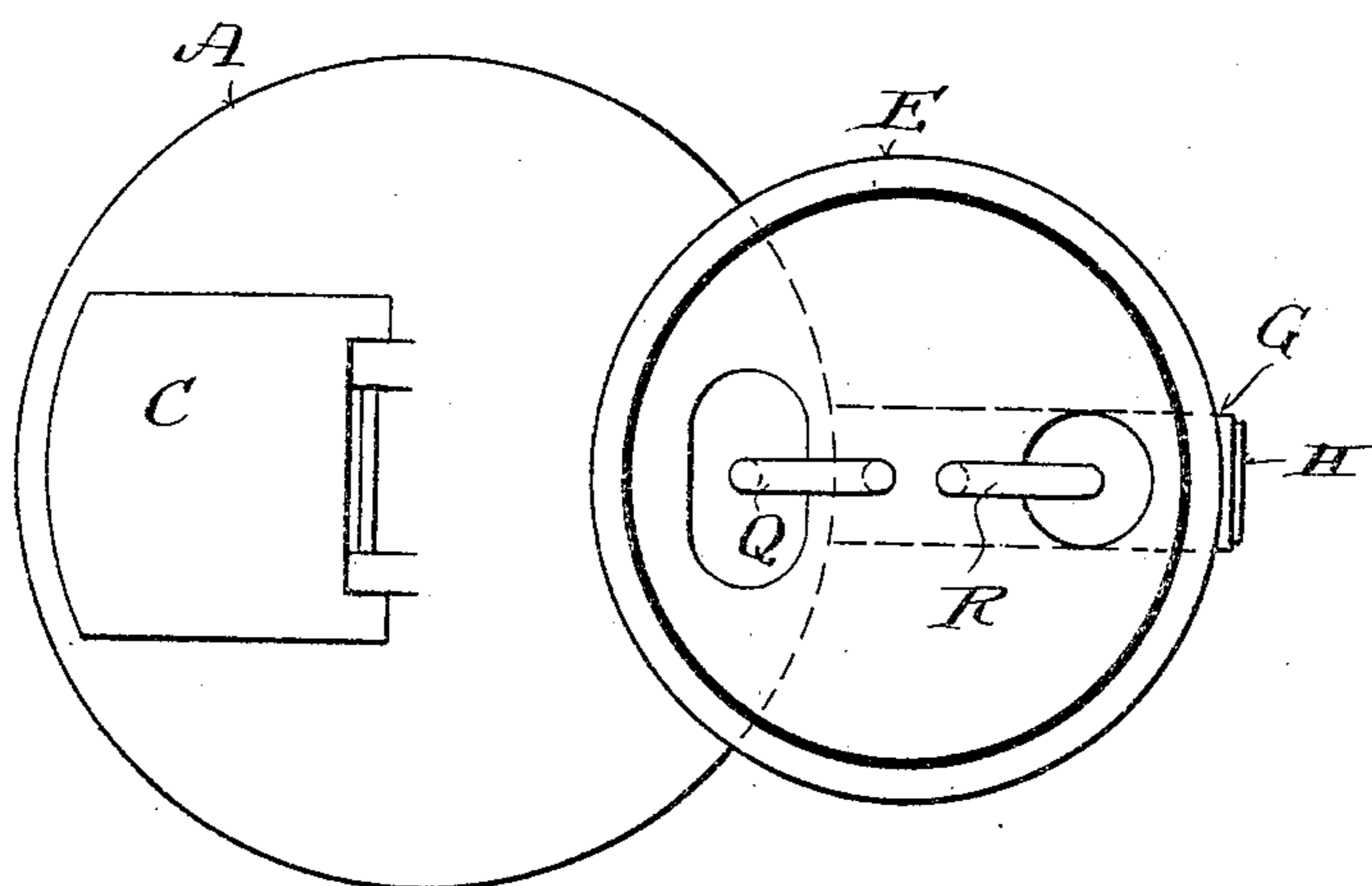
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2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

NELSON W. DIMPSEY, OF PORTAGE, WISCONSIN, ASSIGNOR OF ONE-HALF
TO JESSE M. RUSSELL, OF PORTAGE, WISCONSIN.

HEATER.

SPECIFICATION forming part of Letters Patent No. 778,639, dated December 27, 1904.

Application filed June 24, 1904. Serial No. 213,972.

To all whom it may concern:

Be it known that I, NELSON W. DIMPSEY, a citizen of the United States, and a resident of Portage, in the county of Columbia and State of Wisconsin, have invented certain new and useful Improvements in Heaters; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to economize fuel; and it consists in a heater embodying the construction and arrangement of parts hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a vertical section view of a heater in accordance with my invention; and Fig. 2, a plan view of the same, partly in section, on the plane indicated by line 2 2 in Fig. 1.

Referring by letter to the drawings, A indicates a drum set on legs and containing a fire-pot B, the wall of which is perforated. The top of the drum is shown provided with a fuel-opening closed by a door C; but said opening and door may be otherwise located. Below the grate in the fire-pot the drum is provided with an ash-pit opening, and a door D for this opening is arranged in connection with said drum. Engaging a flange *b* around a top opening in the drum is another flange, *c*, around a bottom opening in a partly-conical chamber E, having an upper extension E' suitably contracted for union with a smoke-flue. Another flanged bottom opening of the chamber E is connected by a vertical pipe F with a horizontal pipe G, leading into the ash-pit portion of the drum A, and set in said horizontal pipe open to air is a nozzle H, the forward conically-contracted portion of which projects past said vertical pipe.

Suspended from a horizontal bar I in the upper extension E' of the chamber E is a central guide-rod J for a sleeve K, that extends upward from the center of a damper L, the play of this damper being within said chamber. An arm *d* of the sleeve K is shown provided with a lateral pin *e*, engaging a slot *f* longitudinally of a lever M in pivotal connection with a bracket N, attached to the out-

side of the chamber extension E', and this lever has play in a vertical slot of said chamber extension.. A spring-controlled latch P has pivotal connection with the bracket N and engages a segmental rack edge of said bracket to hold the damper L in adjusted position.

Bent pipes Q R of small diameter are shown extending through the bottom of the chamber E into the drum A and the vertical pipe F. Another pipe, S, of small diameter, is set in the upper contracted portion E' of chamber E to extend through the wall of same, the major portion of this pipe being vertical. When the heater is used for consumption of wood or anthracite coal, the pipes Q R S are not required.

In practice draft is regulated by adjustment of the damper L, and by the suction of air drawn in through the nozzle H some of said products of combustion, mainly heated air, are drawn down the vertical pipe F into the drum A to ascend again through the fire-pot, that is perforated to permit of said heated air having ready access to all portions of the fire. By means of the chamber E and pipes F G the radiating-surface is increased, and by warming the air supplied in a jet through the nozzle H to support combustion the whole mass of fuel in the perforated fire-pot is caused to burn evenly and be wholly consumed. If bituminous coal be utilized, the pipe Q will operate as a hot blast to supply air over the fire in order to cause combustion of smoke and gases. The pipe R will serve to increase the downdraft from the chamber E, and the pipe S will act as a vent to supply air above the damper L in order to prevent settling of soot and precipitation of creosote.

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

1. A heater consisting of a drum provided with door-closed fuel and ash openings, a perforated fire-pot in the drum, a chamber in communication with the upper portion of said drum, a damper adjustable to regulate draft through the chamber, a horizontal pipe lead-

ing into the aforesaid drum below the fire-
pot grate, an air-nozzle set in the horizontal
pipe, and a vertical pipe connecting said cham-
ber and horizontal pipe back of the nozzle-
5 outlet.

2. A heater consisting of a drum provided
with door-closed fuel and ash openings, a per-
forated fire-pot in the drum, a chamber in
communication with the upper portion of said
10 drum, a damper adjustable to regulate draft
through the chamber, a horizontal pipe lead-
ing into the aforesaid drum below the fire-
pot grate, an air-nozzle set in the horizontal

pipe, a vertical pipe connecting said chamber
and horizontal pipe back of the nozzle-outlet, 15
air-inlet pipes in the chamber leading into the
drum and vertical pipe, and a vent-pipe in an
extension of said chamber above the damper.

In testimony that I claim the foregoing I
have hereunto set my hand, at Portage, in the 20
county of Columbia and State of Wisconsin,
in the presence of two witnesses.

NELSON W. DIMPSEY.

Witnesses:

CHAS. B. RUSSELL,

F. G. VOMTMAN.