

(No Model.)

E. H. JEWETT.  
HEATER.

No. 402,162.

Patented Apr. 30, 1889.

Fig. 1-

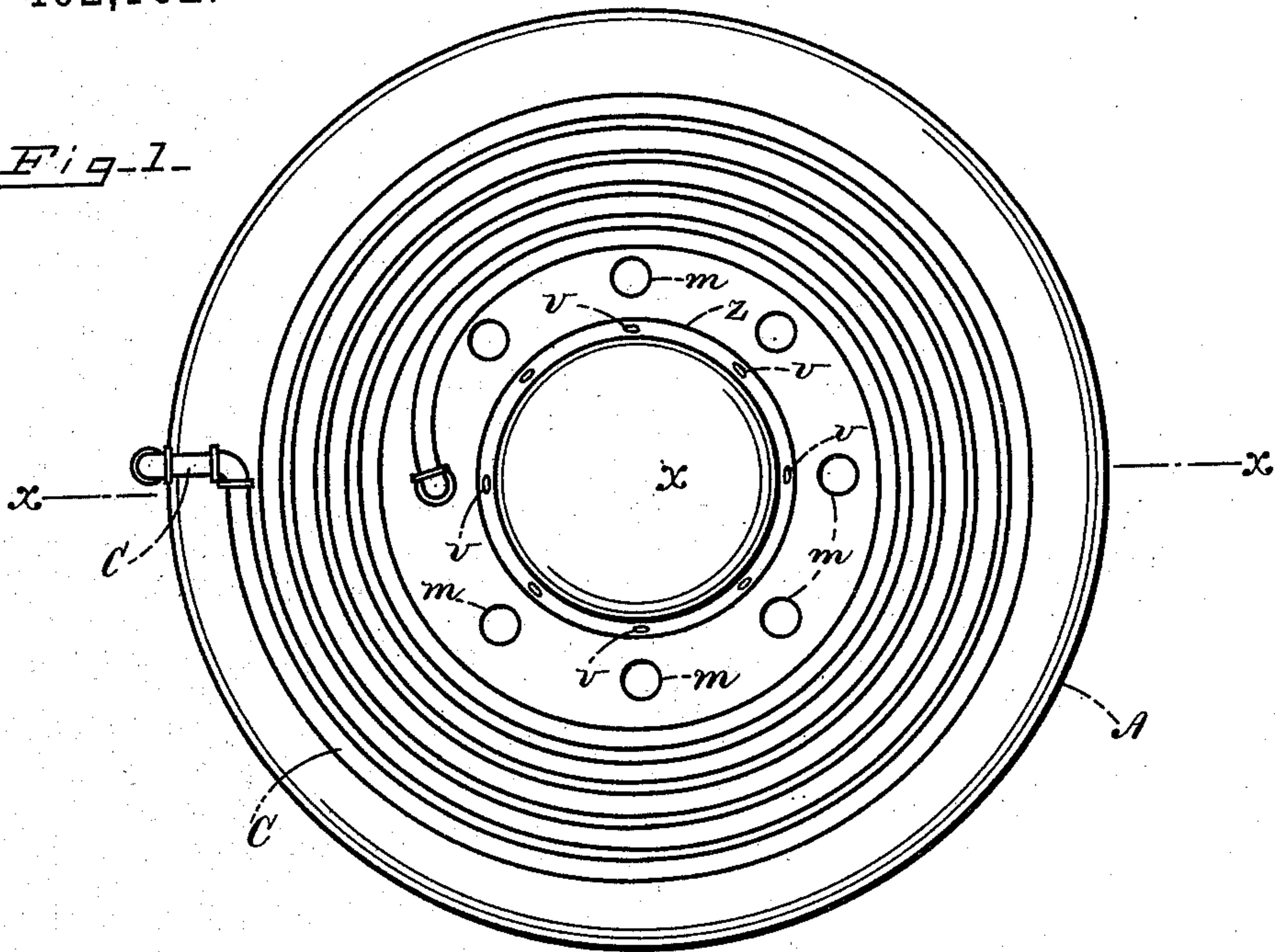
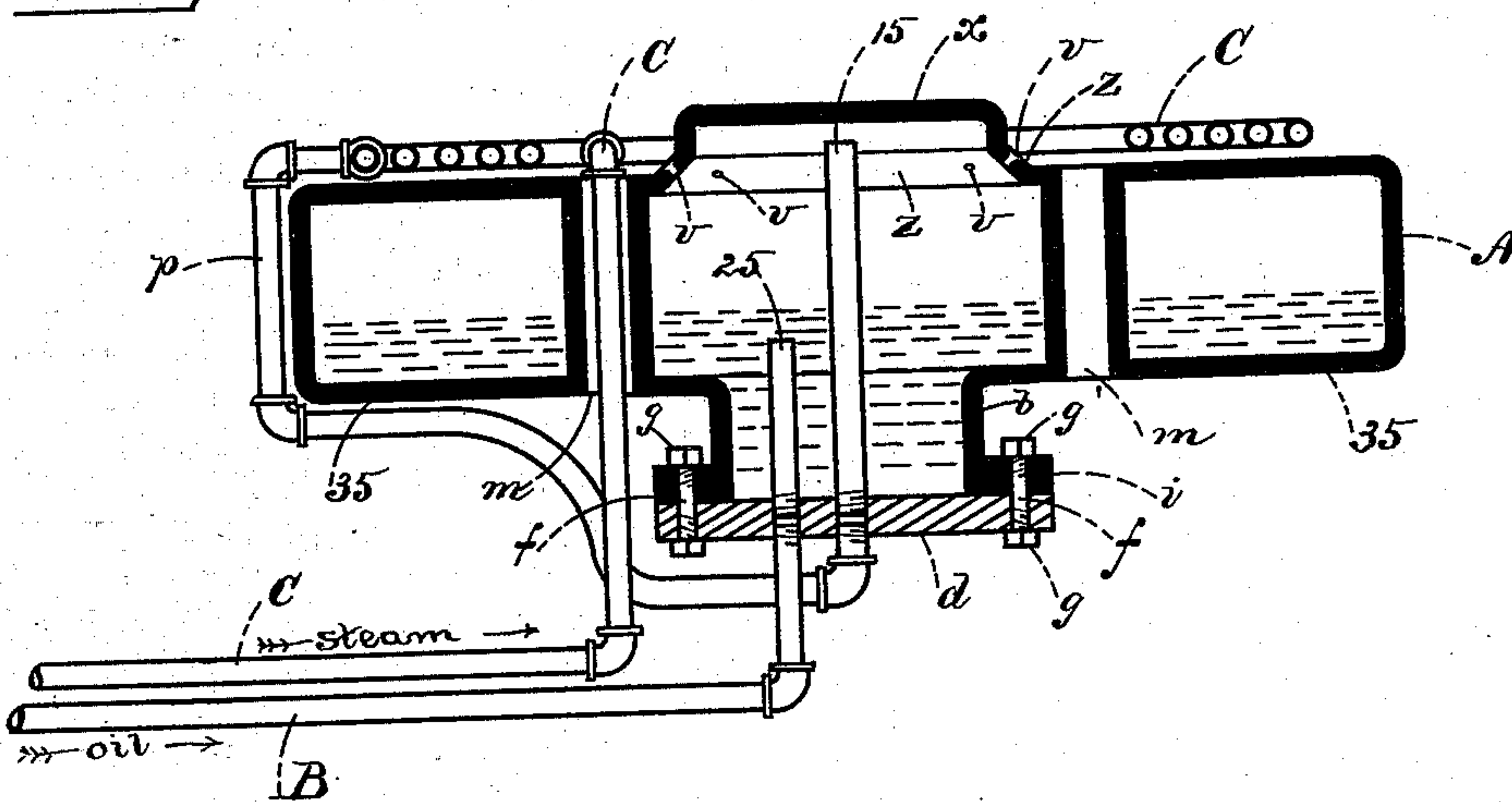


Fig. 2-



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# UNITED STATES PATENT OFFICE.

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## HEATER.

SPECIFICATION forming part of Letters Patent No. 402,162, dated April 30, 1889.

Application filed July 7, 1888. Serial No. 279,268. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN H. JEWETT, of Medford, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Heaters, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of my improved heater, and Fig. 2 a vertical transverse section taken on line  $x x$  in Fig. 1.

Like letters and figures of reference indicate corresponding parts in both figures of the drawings.

My invention relates to that class of heaters in which petroleum or other similar hydrocarbon oil is employed for fuel; and it consists in certain novel features, as hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the body or tank of the heater, B the oil-supply pipe, and C the steam-supply pipe.

The body A consists of a circular metallic tank having a central raised portion,  $x$ , provided with an inclined wall,  $z$ , in which is formed a series of small holes or openings,  $v$ . The under side of the body is extended centrally downward at  $b$ , and is closed by a plate,  $d$ , secured by bolts  $f$  and nuts  $g$  to an annular flange,  $i$ , on said body. A series of vertical air-tubes,  $m$ , extend upward through the body A around the central portion,  $x$ , said tubes being open to the outer air at the top and bottom of said body.

The steam-pipe C leads from any suitable supply of steam, and is passed upward through an opening,  $m$ , and coiled on the top of the body A around the central portion,  $x$ ; thence it passes downward at  $p$  over the side of the body and centrally upward through the plate  $d$ , being extended so that its mouth 15 opens within the central portion,  $x$ , above the burners  $v$ .

The oil-pipe B leads from a suitable supply and passes upward through the plate  $d$ , its mouth 25 opening within the tank above the bottom 35 thereof.

In the use of my improvement the tank is supplied with oil through the pipe B. Steam heated to a high degree of temperature is then admitted to the body through the steam-pipe C, which heats the oil and causes the same to be rapidly volatilized. The coils of pipe C on the body A also serve to heat the oil. The gas thrown off by the heated oil mingles with the steam from the pipe C and passes through the holes  $v$ , where it may be readily ignited. By extending the pipe C into the raised portion  $x$  the oil is prevented from being siphoned into said pipe, as frequently happens in heaters of this description where the steam is admitted directly into the body of oil and an additional jet of steam is forced into a pipe containing the gas thus generated to carry it to the burner.

Having thus explained my invention, what I claim is—

1. In a heater of the character described, the combination of a hollow body adapted to contain oil and provided in its top with a raised central portion having an inclined wall provided with a series of burner-holes, a series of vertical tubes extending through said body around said central portion, an oil-pipe opening into said body from the bottom thereof, and a steam-pipe passing upward through one of said vertical tubes, said pipe being coiled on the top of said body, extending down the side thereof and upward through the bottom of said body and opening into the raised portion thereof above the burner-openings, substantially as set forth.

2. In a heater of the character described, the combination of the body A, provided with the tubes  $m$  and raised portion  $x$ , having the inclined wall  $z$ , the burner-holes  $v$  in said wall, the oil-pipe B, opening into said body through the bottom thereof, and the steam-pipe C, passing through one of said tubes and coiled on the top of said body, said pipe opening into the raised portion of said body above the burner-openings thereof, substantially as specified.

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Witnesses:

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