

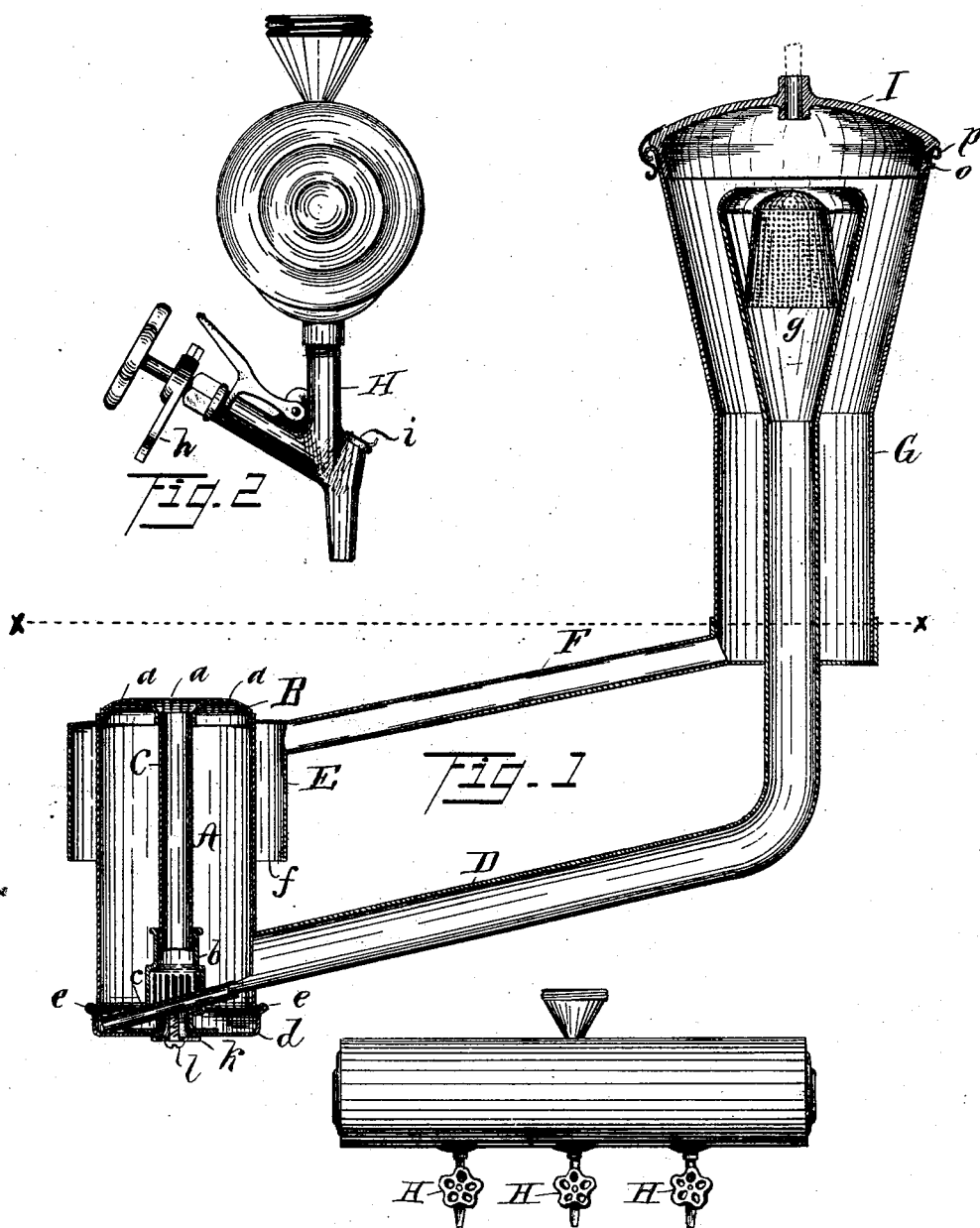
(No Model.)

3 Sheets—Sheet 1.

H. RUPPEL.
VAPOR STOVE.

No. 480,281.

Patented Aug. 9, 1892.



Witnesses.

C. H. Barton
W. E. Smith

Inventor.

H. Ruppel
By W. D. Burdick atty.

(No Model.)

3 Sheets—Sheet 2.

H. RUPPEL.
VAPOR STOVE.

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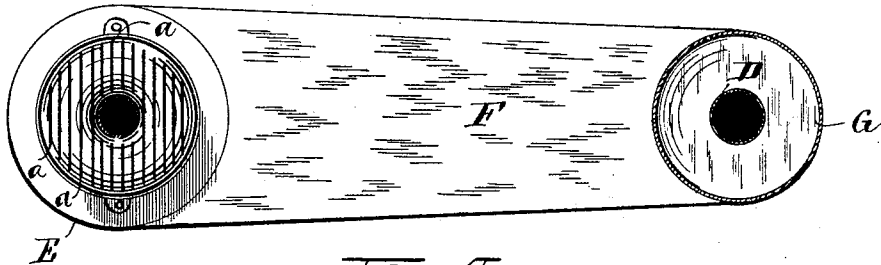


Fig. 4

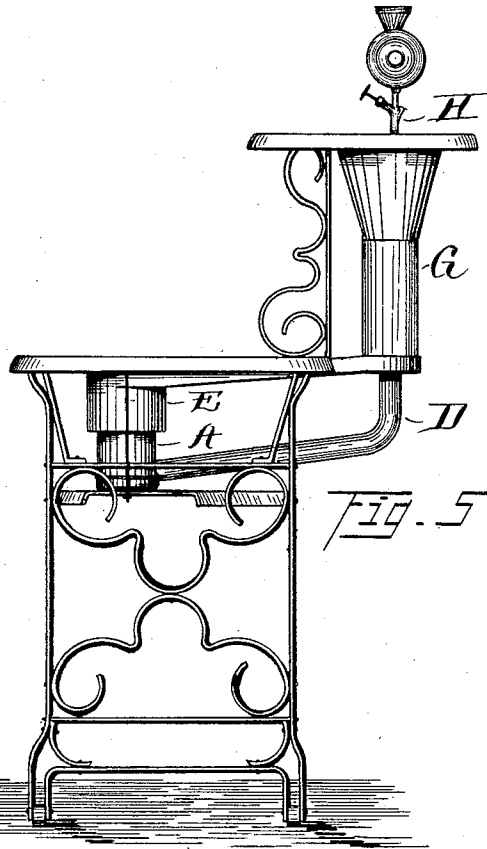


Fig. 5

Witnesses.
W. A. Biddle
Henry Ford

Inventor.
H. Ruppel
by W. H. Burdette
Att.

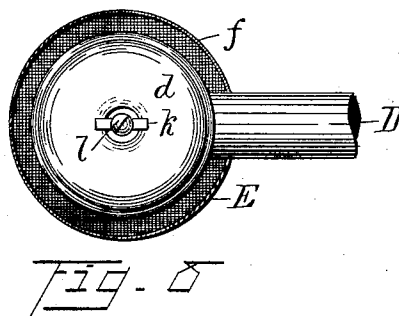
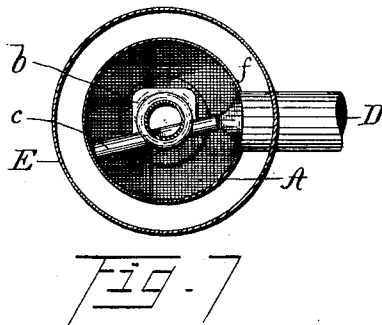
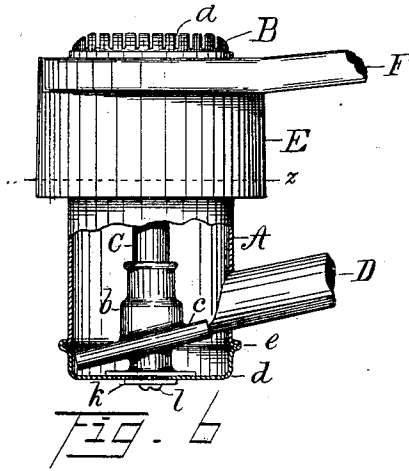
(No Model.)

3 Sheets—Sheet 3.

H. RUPPEL.
VAPOR STOVE.

No. 480,281.

Patented Aug. 9, 1892.



Witnesses.
Henry Ford
J. Shaw

Inventor.
H. Ruppel
By *W. A. Burroughs*
Atty.

UNITED STATES PATENT OFFICE.

HENRY RUPPEL, OF CLEVELAND, OHIO, ASSIGNOR TO THE DANGLER STOVE AND MANUFACTURING COMPANY.

VAPOR-STOVE.

SPECIFICATION forming part of Letters Patent No. 480,281, dated August 9, 1892.

Application filed September 23, 1891. Serial No. 406,592. (No model.)

To all whom it may concern:

Be it known that I, HENRY RUPPEL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Vapor-Stove, of which the following is a full, clear, and complete description.

The nature of my invention relates to the burners and generating device of the stove and to the valves in connection with the tank, also to the form of the tank, as hereinafter fully described.

That the invention may be seen and fully understood by others reference will be had to the following specification and annexed drawings, forming part thereof.

Figure 1 is a vertical longitudinal section of my improved burner and generator. Fig. 2 is an end view of the tank and connecting-valve. Fig. 3 is a reduced side view of the tank. Fig. 4 is a cross-section on dotted line *x x*, Fig. 1. Fig. 5 is an end view of the stove without the oven and oven-burner. Fig. 6 is a view of one of the burners with a portion of one of the tubes broken away. Fig. 7 is a cross-section on line *z z*, Fig. 6; and Fig. 8 is a view of the under side of the burner.

Similar letters designate similar parts in the drawings and specification.

As shown in Figs. 1 and 6, the burner is constructed with a cylinder A, having a cover B, sawed as shown at *a a a*, Figs. 1 and 4. A tube C extends down through the center of the cylinder A and terminates at the lower end in a square chamber *b*, one side of which is sawed, as shown in Fig. 1. In contact with this chamber on the opposite side from the sawed portion is a tube *c*, in open connection with the generating-tube D. The lower terminal of the cylinder A is closed, except in the center, which is left in open connection with the chamber *b* and tube C, the cross-piece *k* simply spanning the opening to hold the screw *l*. The bottom *d* of the cylinder A is of one piece pressed or struck up, as shown, and connected with the main portion of the cylinder, as shown at *e*, Fig. 1. By this construction any overflow of gasoline that may be retained within the cylinder, all leakage being prevented. A drum E circumscribes the

cylinder A, allowing an annular chamber *f* entirely around the upper portion of the cylinder. This annular chamber is open at the bottom and closed at the top, as shown, and is in open connection with a rectangular flat tube or conductor F. The conductor F is in open connection with an annular chamber G, surrounding the generating-tube D. Thus the hot air is carried from the burner through the flat tube or conductor F to the annular chamber G, surrounding the generating-tube, and materially aiding in the vaporization. The gasoline is not allowed to run from the tank into the burner, the valves H, Figs. 2, 3, and 5, being so adjusted as to permit the gasoline to drip on the cap of the perforated thimble *g*, Fig. 1. This, aided by the hot air from the burner, causes the generation of the vapor. It will be noted that the chamber G completely incloses the upper portion of the generating-tube, thus causing a uniform circulation of heat around the tube. The heavy gasoline not vaporized passes down the tube and is vaporized in the tube *c* by the intense heat impinged thereon through the slots in the chamber *b*.

The valves used in connection with my improved vapor-stove are substantially of the form shown in Fig. 2, having a stop *h* arranged thereon for the purpose of adjusting the flow of gasoline. They are also provided with an opening *i* for the purpose of cleaning the valve. There is an individual valve for each burner, as shown in Fig. 3. Therefore if one valve is out of order the utility of the others is not affected. This also gives a direct pressure from the tank for each burner. The tank, being long and shallow, gives an even drip to the gasoline when the tank is full and when partially full. The cap I, covering the upper part of the hot-air chamber G and in which the stem of the valve rests, is removable, as shown in Fig. 1. A lug *o* is cast on the cap. This lug passes through a hole in the casing of the chamber below the bead *p*. A spring-latch *r* laps over the bead on the opposite side.

What I claim, and desire to secure by Letters Patent, is—

A vapor-burner composed of a cylinder

having a sawed cap thereon, with a hole in the center thereof, and a tube C, in open relation to said hole and passing down through the center of said cylinder, in conjoint operation
5 with a rectangular sawed chamber *b* and tube *c*, in combination with the generating-tube D, generator *g*, and the tank, arranged substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY RUPPEL.

Witnesses:

L. T. GRISWOLD,
A. E. GILBERT.