

(No Model.)

2 Sheets—Sheet 1.

G. W. BILLINGS.
VAPORIZER FOR GASOLINE STOVES.

No. 523,302.

Patented July 17, 1894.

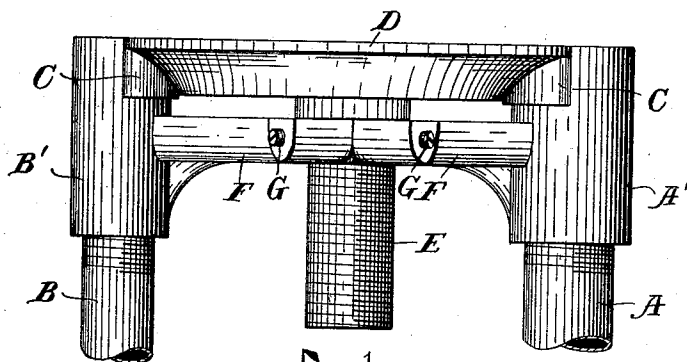


FIG. 1.

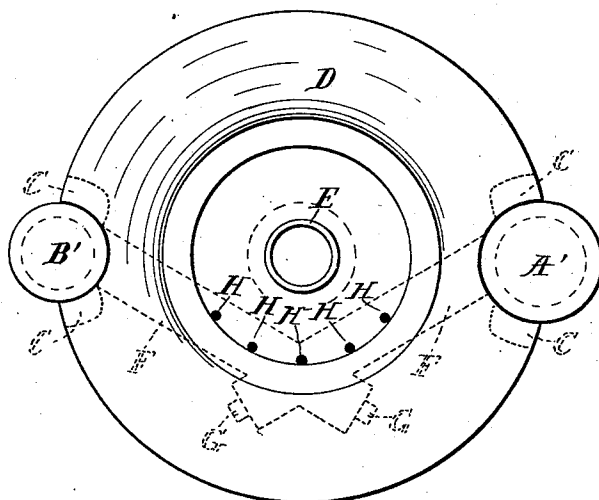


FIG. 2.

WITNESSES:

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INVENTOR

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2 Sheets—Sheet 2.

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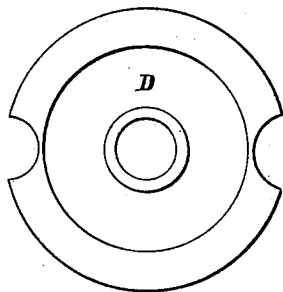


Fig. 5.

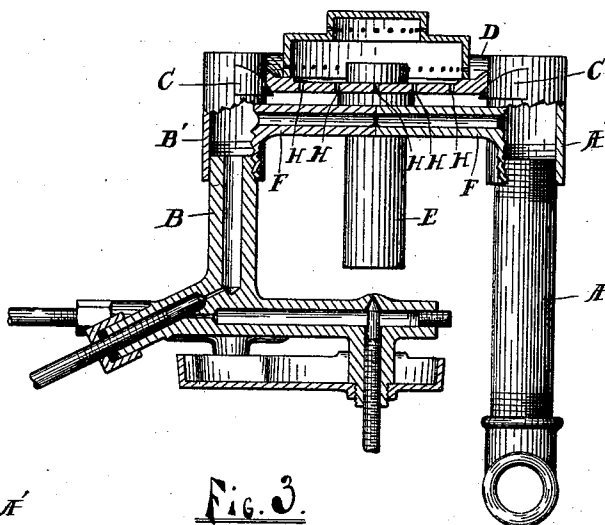


Fig. 3.

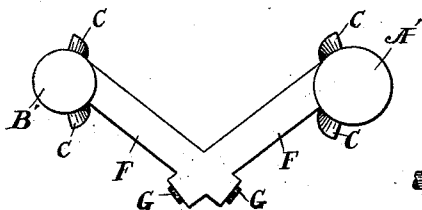


Fig. 6.

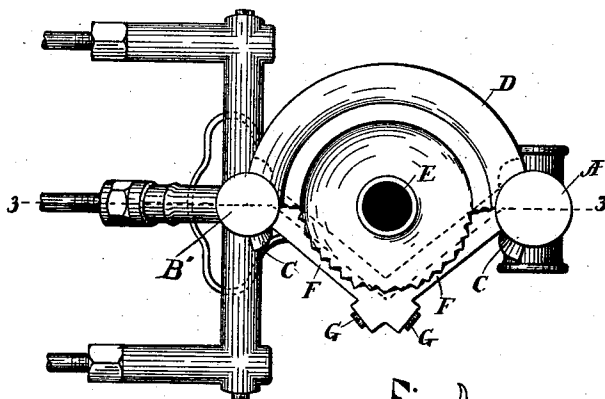


Fig. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE W. BILLINGS, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO THOMAS FRIANT, T. STEWART WHITE, THOMAS M. PECK, FELIX RANIVILLE, DANIEL MCCOY, McGEORGE BUNDY, JOSEPH J. TUCKER, AND LOIS A. GIDDINGS, OF SAME PLACE.

VAPORIZER FOR GASOLINE-STOVES.

SPECIFICATION forming part of Letters Patent No. 523,302, dated July 17, 1894.

Application filed August 19, 1893. Serial No. 483,507. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BILLINGS, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Vaporizers for Gasoline-Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in vaporizers for gasoline stoves, and its object is to provide the same with certain new and useful features, hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a device embodying my invention; Fig. 2 a plan view of the same. Fig. 3 is a side elevation of a complete burner broken away to show in vertical section on the line 3—3 of Fig. 4; Fig. 4 a plan view of the same; Fig. 5 a detail of the plate D; and Fig. 6 a detail plan of the vaporizing chamber and bosses.

Like letters refer to like parts in all of the figures.

A is the stand pipe to supply the gasoline. B the vapor pipe for passage of the vapor to the burners, and E the vertical pipe to convey the mixture of vapor and air to the burner, all as usually found in such devices.

A' and B' are the respective bosses into which the pipes A and B are screwed, said bosses near their upper ends are provided with projections, or ledges C, upon which rests a separate burner plate D, and near the middle, and at a distance below said plate said bosses are connected by an integral vaporizing chamber, or passage F, which has a flat upper surface parallel to and at a distance from the under surface of the plate D. Said chamber also has an angle near the middle, whereby it may be cast solid and bored out in opposite directions and closed with the plugs G as is usual in such chambers, when cast integral with the burner plate D.

In the burner plate D beneath the burner cap and directly above the vaporizing cham-

ber F, is a series of holes H, through which the combustible mixture escapes, which when lighted below said plate forms flames which impinge vertically upon the flat upper surface of said vaporizing chamber, and reflecting back also serve to heat the burner plate D, which by convection heats the bosses A' and B'.

By the described construction the flames are projected downward upon the flat upper surface of the vaporizing chamber, whereby it is more effectually heated, and at the same time the fuel must pass through the entire length of said chamber in passing from the stand-pipe to the vapor pipe, whereby heavier naphthas may be used, and as a further result of this construction I also find less tendency to oscillation of pressure in the device. I can also, cast the burner plate D of separate and cheaper material from that of the bosses and vaporizer, thus saving expense in construction, or repairs.

What I claim is—

1. In a vaporizer for gasoline stoves, in combination with a burner plate having a series of holes beneath the burner cap, for the escape of the combustible mixture, a vaporizing chamber opposite said openings, having a flat upper surface parallel to and at a distance from said burner plate, said chamber being also connected to the stand-pipe at one end, and to the vapor-pipe at the other end, substantially as described.

2. In a vaporizer for gasoline stoves, bosses to receive the stand-pipe and vapor-pipe, a vaporizer chamber connecting the same and integral therewith and having a flattened horizontal upper surface, a detached burner plate between the upper ends of said bosses and above and parallel to said chamber, and having openings opposite said chamber and ledges on said bosses to support said plate, substantially as described.

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

GEORGE W. BILLINGS.

Witnesses:

LUTHER V. MOULTON,
LOIS MOULTON.