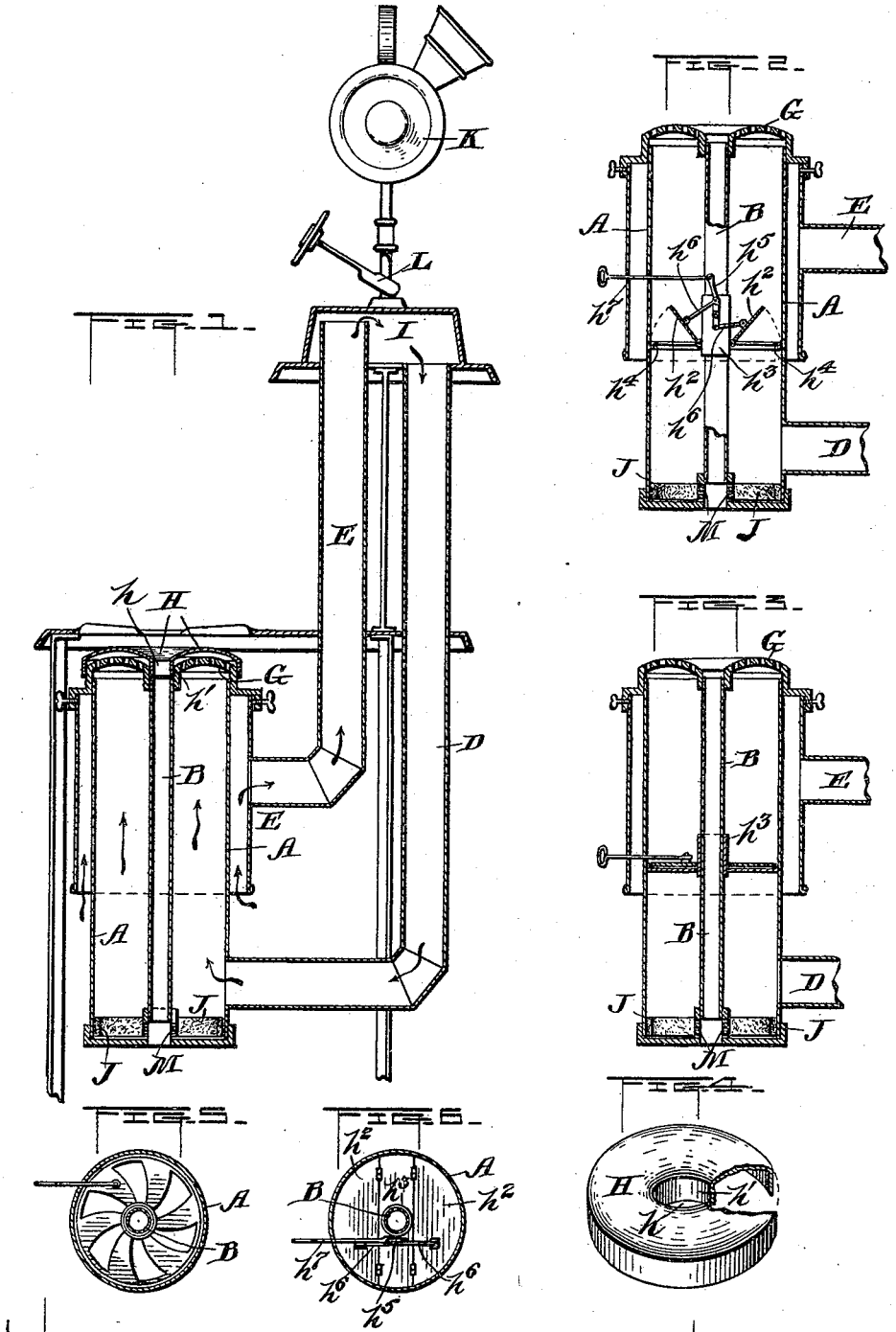
(No Model.)

A. SAYERS.

GASOLINE BURNER ATTACHMENT.

No. 493,186. Patented Mar. 7, 1893.



Witnesses:
Geverance.
C. Calver & Hines.

Inventor:
Amos Sayers.
by his Attorneys
Mason Fenwick & Lawrence.

UNITED STATES PATENT OFFICE.

ANNIE SAYERS, OF CHICAGO, ILLINOIS.

GASOLINE-BURNER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 493,186, dated March 7, 1893.

Application filed October 19, 1892. Serial No. 449,411. (No model.)

To all whom it may concern:

Be it known that I, ANNIE SAYERS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Gasoline-Burner Attachments; 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 a gas cut-off for gasoline stoves for preventing obnoxious odors coming into the room from the stove after the supply of oil from the reservoir has been cut off, and it consists in certain novel constructions, combinations and arrangements of parts as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical section through a gasoline stove with my invention applied to the burner thereof. Figs. 2 and 3 are vertical sections through the burner of a gasoline stove having modified forms of cut-off attachments applied in them. Fig. 4 is a perspective view of a cap form of cut off, shown applied in Fig. 1. Fig. 5 is a top view of a cut-off made in the form of a register, and Fig. 6 is a top view of a cut-off constructed in the form of lever operated valves.

The gas cut-off is adapted to be applied to the burner of a gasoline stove of any description but is found especially adapted to that class of stoves known as the "New Process" vapor stove, and in which style of stove I have shown my invention applied. The construction and operation of this stove, briefly stated, are as follows:

The gasoline is admitted to the mixing chamber I from reservoir K through needle valve L and drips through tube D to the vapor chamber formed by cylinder A. The vapor rises to burner G and is there ignited at top of burner. Immediately after ignition takes place, at top of burner G, the vapor within the center tube B, which is admitted at M, also ignites and burns at the bottom of the tube and heats the barrel or cylinder A as well as the tube B. The heat thus generated causes a rise of air in the air tube E which passes into and cools in the vapor and air chamber I which causes it to descend through the vapor pipe D carrying the vapor with it; hence chamber A is filled with vapor-gas and air. When the supply of gasoline from the reservoir is shut off by the needle valve L, the flame at the top of the burner goes out owing to too great a supply of air for the amount of gas left in the chamber A which is being generated from the gasoline absorbed by the asbestus wick marked J at the lower part of the burner which catches all gasoline that reaches the chamber in its liquid state. This mixture of gas and air passes into the room and produces an intolerable odor as well as an unhealthy atmosphere. To prevent this offensive odor, I provide my gas cut-off which in Fig. 1 consists of a cap or cover H adapted to be applied on the top of the burner as shown in Fig. 1 and consists of a cylindrical metal cap having downwardly extending sides which conform to the shape of the top of the burner and is provided with a central passage h, which latter has a downwardly extending wall h' which conforms to the shape of the central tube B but a little smaller in diameter so as to fit snugly within the same, and the cover or cap is made so as to fit the circumference of the burner closely. When the supply of gasoline from the reservoir is cut off, the cut-off cap is applied and the disagreeable odors thereby prevented from escaping through the burner perforations, and the gaseous vapor caused to be consumed at the openings M at the lower end of the central tube B. The central tube being open at bottom and top and the cap H being centrally perforated permits of a free passage of air to supply the flame at M.

In Figs. 2 and 6 I have shown a modified form of gas cut off which consists of two semi circular valves or plates h^2, h^2 which exactly fit the interior of the burner while the inner ends of the valves surround and conform to the shape of the central tube B. A sleeve h^3 is slipped tightly upon the central tube B and the valves h^2 h^2 are hinged at their lower ends to the same, while the outer ends of the valves, when they are in a lowered or closed condition rest upon a circular support h^4 applied around and on the inner periphery of the burner. The valves are connected to a lever h^5 pivoted on the sleeve, by links h^6, and the upper end of the lever is connected to an op-

erating rod h^7 which passes horizontally through the outer case of the burner and is provided on its outer end with a suitable handle. It is obvious that by drawing the operating rod outward or pushing it inward, the valves will be closed or opened. In Figs. 3 and 5 I have shown a cut off made in the form of a register, and applied in the burner in such a manner that by drawing the operating rod outward or pushing it inward, the register will be opened or closed.

The utility and convenience of operation of my invention are very great and it can be applied to gasoline burners at a very slight cost and will effectually overcome the objection to gasoline or vapor stoves due to the disagreeable odors escaping from such stoves after the main burner has gone out.

What I claim as my invention is—

1. In combination with the burner of a gasoline stove having a central draft passage and a surrounding vapor passage and an auxiliary burner at the lower end of the draft passage, a cut off applied to the vapor passage, which cut-off when closed separates the draft passage from the vapor passage and prevents the escape of gas at the top of the burner after the flame from the main burner has gone out, and at the same time permits a free circulation of the air in the draft passage to support combustion at the auxiliary burner, thereby permitting the vapor remaining in the burner after the supply of vapor has been cut off, to be consumed, substantially as described.

2. A cut-off for that type of gasoline stoves having a central draft passage and a surrounding vapor passage and an auxiliary burner at the lower end of the draft passage, said cut-off comprising in its construction a cap or cover conforming to the shape of the top of the burner and provided with a central, open-ended tube, which, when the cut-off is applied to the burner, fits snugly the draft passage and separates said passage from the vapor passage near the top of the burner, thereby preventing the escape of gas from the vapor passage, and at the same time permitting a free circulation of air through the draft passage for the purpose of supporting combustion at the auxiliary burner at the lower end of said passage, substantially as described.

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

ANNIE SAYERS.

Witnesses:
C. E. HYDE,
EDWARD KENT.