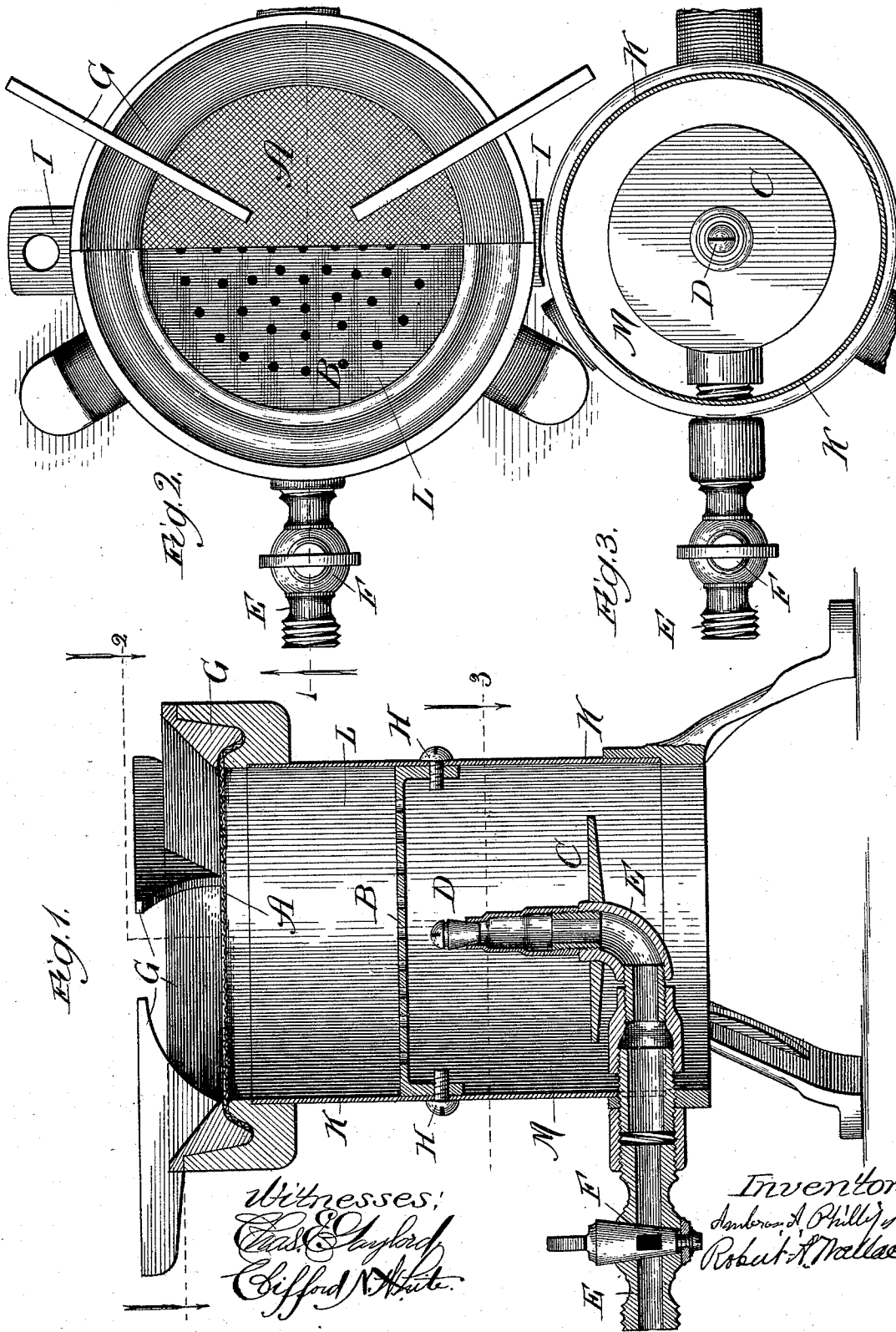


(No Model.)

A. A. PHILLIPS & R. A. WALLACE.
GAS STOVE.

No. 509,583.

Patented Nov. 28, 1893.



Witnesses:
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UNITED STATES PATENT OFFICE.

AMBROSE A. PHILLIPS AND ROBERT A. WALLACE, OF CHICAGO, ILLINOIS.

GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 509,583, dated November 28, 1893.

Application filed August 6, 1892. Serial No. 442,372. (No model.)

To all whom it may concern:

Be it known that we, AMBROSE A. PHILLIPS and ROBERT A. WALLACE, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Gas-Stoves; and we do hereby declare that the following is a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The object of our invention is economy in the use of natural or artificial gas in stoves for fuel purposes; second, to afford a greater amount of heat, from a less amount of gas. We attain the results by the mechanism illustrated in the accompanying specification and drawings in which—

Figure 1 is a vertical section view of our improved gas stove, taken on a line of Fig. 2. Fig. 2 is a broken plan view, taken on the irregular dotted line 2, of Fig. 1. Fig. 3 is a plan sectional view, taken on line 3 of Fig. 1. A represents the wire cloth on top of the shell or drum K and is held in position by the combination ring and tripod G, as shown in Fig. 1.

B represents the perforated plate with lugs cast projecting below through which suitable sized holes are drilled to admit of the screws, H H, which hold in position on the inside of the shell or drum K, as shown Fig. 1.

C represents the air plate, which is annular in form and smaller in diameter than the shell or drum K, so that the air will pass between the outer edge of the air plate, C, and the inner surface of the shell or drum K. It is held in position by the gas tip, D, and the elbow on the end of the supply pipe, E E, as shown in Fig. 1.

D represents the gas tip above the air plate C, through which the gas passes into the mixing chamber, M, as shown in Fig. 1.

E E represents the supply pipe and elbow that support the air plate, C, and the gas tip, D, through which the gas is supplied through the stove, as shown in Fig. 1.

F represents the stop cock for turning on or shutting off the supply of gas as shown in Fig. 1.

G represents the combination ring and tripod, which is used for holding in position the wire cloth, A, on top of the shell or drum, K, also to support the vessels placed on top of the stove as shown in Fig. 1.

H H represent the screws that hold the perforated plate, B, in position as shown in Fig. 1.

I I represent the lugs on the outside of the shell or drum, K, near the top for the purpose of holding the stove in position when a number of stoves are grouped together, as shown in Fig. 2.

K represents the shell or drum as shown in Fig. 1.

L and M represent the upper and lower chamber divided by the perforated plate, B, in which the air and gas mixes before being lighted, as shown in Fig. 1.

Having now described our invention, we will proceed to illustrate our claims.

The shell or drum, K, being straight on the interior, is divided into two separate chambers by the perforated plate, B, the upper chamber, L, being covered with the wire cloth, A, and the lower chamber, M, partly closed at the bottom by the air plate, C, leaving about two inches of space from the under side of the air plate, G, to the bottom of the shell or drum, K, through which the air from the surrounding atmosphere is drawn into the lower chamber, M, and there mixes with the gas and escapes from the gas tip, D. The gas and air mixing in the lower chamber, M, then passing through the perforated plate B, in the upper chamber, L, becomes more thoroughly mixed before reaching the point of combustion above the wire cloth, A, thereby making a much hotter and purer flame, and causing the shell or drum, K, and the perforated plate, B, to become heated, thereby causing the air and gas as it comes from the lower chamber, M, and passes through the perforated plate, B, into the upper chamber, L, to become super-heated, and by this process we save a proportionate amount of gas.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a gas stove the combination of a shell or drum, K, covered on top with a wire cloth, A, which is held in position by the ring and tripod, G, a perforated plate, B, in the center

of the shell or drum, K, held in position by the screws, H H, the annular air plate, C, near the bottom of the shell or drum, K, held in position between the gas tip, D, and the elbow
5 on the end of the supply pipe, E E, substantially as set forth and described.

2. In a gas stove comprising in combination the following elements: a shell or drum having a wire cloth over the top, and a perforated
10 plate in the center, and an annular air plate near the bottom, with a gas tip and an elbow

and supply pipe, a ring and tripod combined, substantially for the purposes set forth and described.

In testimony that we claim the foregoing 15 as our own we hereby affix our signatures in the presence of two witnesses.

AMBROSE A. PHILLIPS.
ROBERT A. WALLACE.

Witnesses:

E. C. HAMBURGER,
H. C. M. LANBENHEIM.