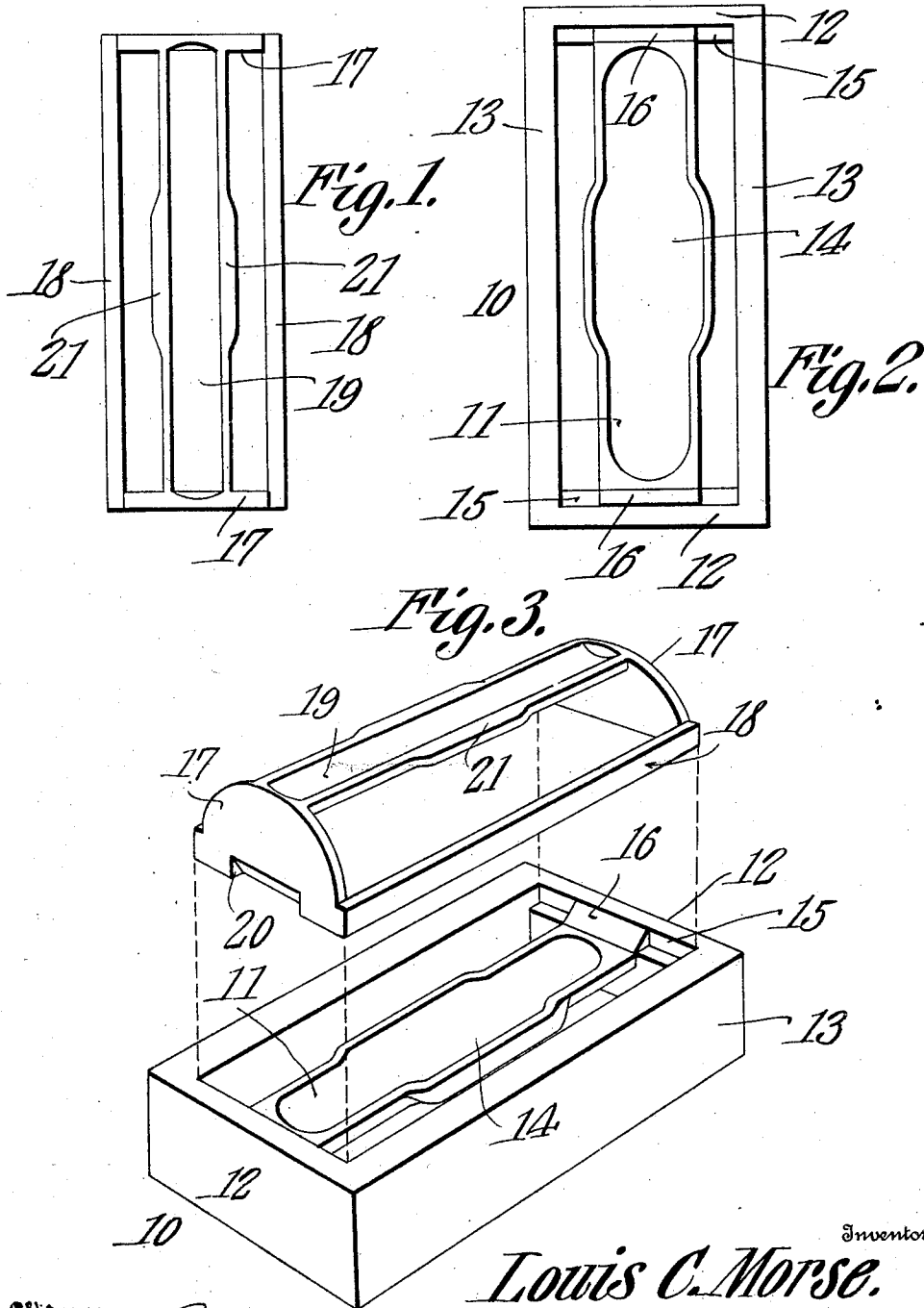


L. C. MORSE.
LIQUID FUEL BURNER.
APPLICATION FILED DEC. 14, 1908.

976,680

Patented Nov. 22, 1910.

2 SHEETS—SHEET 1.



Witnesses

E. H. Hunt
M. A. Schumier

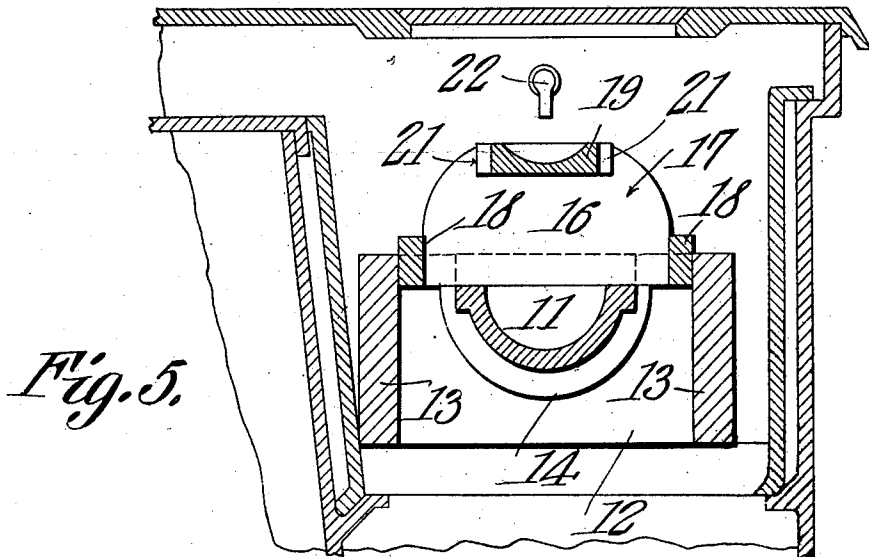
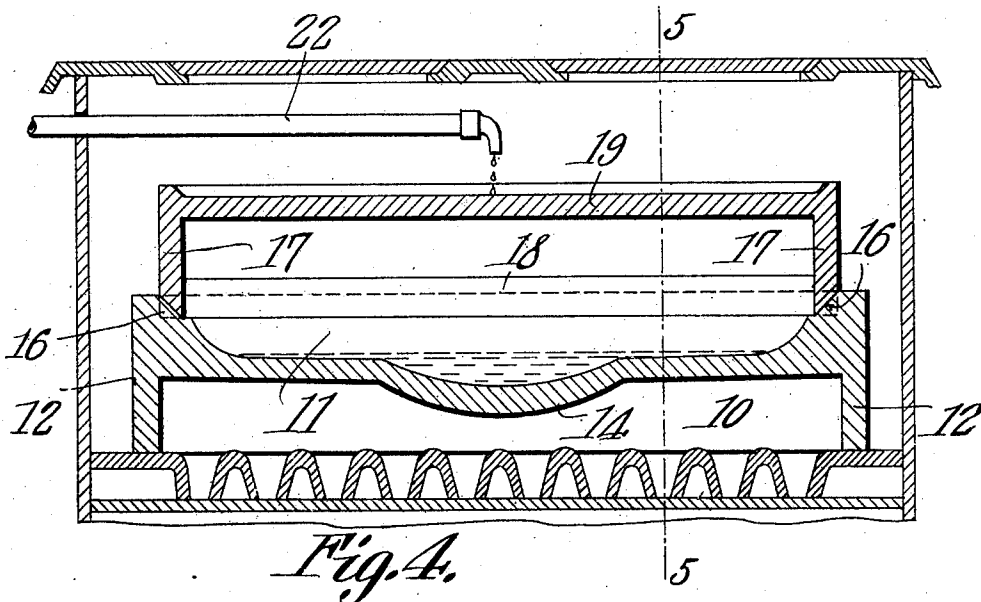
Inventor

Louis C. Morse.

By

C. A. Snow & Co.

Attorneys



Witnesses

E. J. Hunt

Maschiner

Inventor

Louis C. Morse.

By *Chas. H. Snow*

Attorney

UNITED STATES PATENT OFFICE.

LOUIS C. MORSE, OF MUSKOGEE, OKLAHOMA, ASSIGNOR TO BERT E. DRAKE, OF MUSKOGEE, OKLAHOMA.

LIQUID-FUEL BURNER.

976,680.

Specification of Letters Patent.

Patented Nov. 22, 1910.

Application filed December 14, 1909. Serial No. 533,072.

To all whom it may concern:

Be it known that I, LOUIS C. MORSE, a citizen of the United States, residing at Muskogee, in the county of Muskogee and State of Oklahoma, have invented a new and useful Liquid-Fuel Burner, of which the following is a specification.

This invention relates to liquid fuel burners of that class in which the oil is burned in an open pan or tray, and it is the object of the invention to provide a burner of the kind stated which is simple in structure, and which can be applied to any ordinary stove or range.

The invention also has for its object to provide a burner in which air is mixed in proper proportion with the vapor generated, to produce perfect combustion.

With the herein stated objects in view, the invention consists in a novel construction and arrangement of parts to be hereinafter described and claimed, reference being had to the accompanying drawings forming a part of this specification, in which drawings—

Figures 1 and 2 are plan views of the two parts which constitute the burner. Fig. 3 is a perspective view of said parts separated. Fig. 4 is a central longitudinal section of the parts assembled within the stove or range. Fig. 5 is a transverse section on the line 5—5 of Fig. 4.

In the drawings, 10 denotes the base of the burner, said base being a rectangular box-like structure open at the top and bottom, so that air may pass therethrough. The four walls of the base inclose an open pan 11, the latter being formed integral with, and extending between the end walls 12 of the base, and spaced throughout its entire length from the side walls 13 thereof. The top of the pan is located a short distance below the plane of the top of the base, and midway between its ends, it is increased in width and depth as indicated at 14.

The top edges of the end walls 12 are rabbeted as indicated at 15, the depth of the rabbets being the same as the distance between the top of the pan 11 and the top of the base. In each rabbet is a lug 16 having the same width as that of the pan 11 at the ends thereof, and extending along the latter. The lug has a beveled surface which extends from the top of the end wall 12 to the adjacent end of the pan.

The parts thus far described are cast in a single piece, and serve as a base or support for the burner proper.

The burner proper comprises a rectangular open frame suitably dimensioned so as to fit snugly within the base 10, and consisting of substantially semi-circular end walls 17, connected at their lower ends by side walls 18, and at the top by a trough 19, these parts being all cast in a single piece. The lower edges of the end walls 17 seat in the rabbets 15, and have beveled notches 20 to receive the lugs 16. The burner is thus located in the upper portion of the base 10, and it fits snugly therein so that the air passing through the base will not pass around the outside of the burner. The air passes through the base between the walls 13 thereof and the pan 11, and there is a space between the walls 18 and the trough 19, so that the air passing through the base may pass to the trough.

The pan 11 is located beneath the trough 19 so as to receive the overflow from the latter. The wall of the trough 19, midway between its ends, is widened on top as indicated at 21, this widened portion coinciding with the enlarged portion 14 of the pan 11.

In use, the base 10 and the burner proper are assembled and placed within the fire pot of the stove as shown in Figs. 4 and 5, the base being supported on the grate. The oil supply pipe 22 enters the stove or range at any convenient point, and has its discharge end located so that the oil drops into the trough 19 midway between its ends. After a sufficient quantity of oil has been allowed to run into said trough, the oil is ignited. The burning oil heats the walls of the trough, and the oil which thereafter drops into the trough, is at once vaporized upon coming into contact with the heated walls. The air flowing through the burner mixes with this vapor and produces a combustible gas. All surplus oil drops into the pan 11 in which it will be vaporized in the same manner as the oil in the trough 19, this vapor being also mixed with air, whereby a combustible gas is produced which burns with the gas generated by the trough 19. The open formation of the base and the frame which supports the trough 19, assures an abundant supply of air to both pans.

The burner herein described is efficient in operation, and by reason of its simplicity in

structure, it can be easily and cheaply manufactured, the entire structure consisting of only two parts which are readily assembled, and placed in position for use in any ordinary stove or range, no especially constructed stove or range being necessary.

What is claimed is:

1. A liquid fuel burner comprising a hollow base open at the top and bottom, a pan inclosed by the base, and spaced from opposite walls thereof, the spaces between said walls and the pan forming air passages, a frame mounted on the base above the pan, and a trough carried by said frame, said trough being located above the aforesaid pan, and the frame being open above the aforesaid air passages.

2. A liquid fuel burner comprising a hollow base consisting of side and end walls, a pan extending between the end walls, and spaced from the side walls, a frame mounted on the base above the pan, said frame being closed at its ends, and open at its sides in line with the spaces between the aforesaid pan and side walls of the base, and a trough extending between the ends of the frame, said trough being located above the pan.

3. A liquid fuel burner comprising a hollow base consisting of side and end walls, a pan extending between the end walls, and spaced from the side walls, a frame fitting in the base above the pan, said frame comprising end and side walls, and a trough extending between the end walls of said frame, and spaced from the side walls thereof, said

trough being located above the aforesaid pan.

4. A liquid fuel burner comprising a hollow base consisting of side and end walls, the top edges of the end walls being rabbeted, a pan extending between the end walls, and spaced from the side walls, an open frame fitting in the base above the pan, and comprising end and side walls, the end walls of said frame seating in the rabbet, and a trough extending between said end walls of the frame, and spaced from the side walls thereof, said trough being located above the aforesaid pan.

5. A liquid fuel burner comprising a hollow base consisting of side and end walls, the upper edges of the end walls being rabbeted, lugs in the rabbets, a pan extending between the end walls, and spaced from the side walls, an open frame fitting in the base above the pan, said frame comprising side and end walls, the end walls of said frame seating in the rabbet, and having notches to receive the lugs, and a trough extending between the end walls of the frame, and spaced from the side walls thereof, said trough being located above the aforesaid pan.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

LOUIS C. MORSE.

Witnesses:

THOS. DUNCAN.

HARRY P. MOSELEY.