(No Model.)

S. M. STEVENS.

COOKING STOVE.

No. 494,350. Patented Mar. 28, 1893.

Fig. 1.

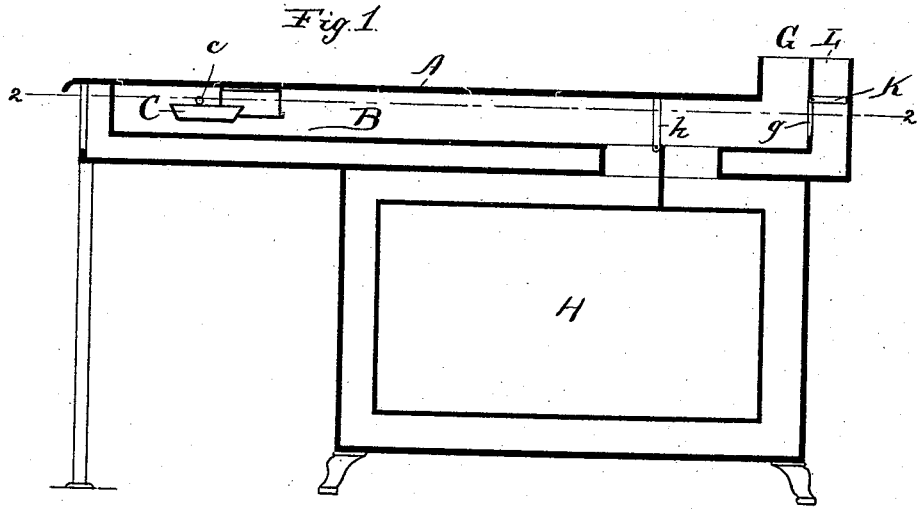


Fig. 3.

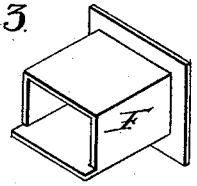


Fig. 2.

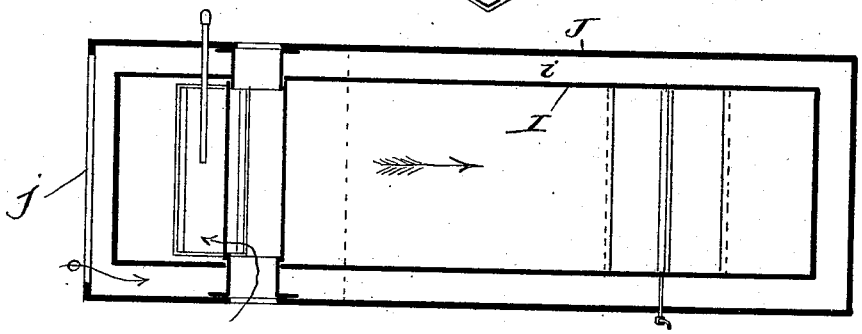


Fig. 5.

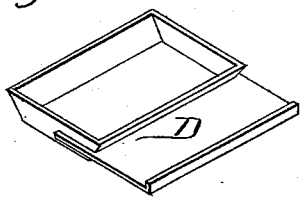
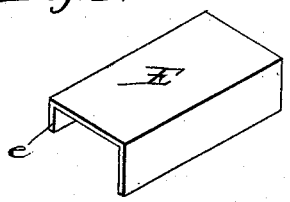


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

SIDNEY M. STEVENS, OF DE KALB, ILLINOIS.

COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 494,350, dated March 28, 1893.

Application filed December 16, 1891. Serial No. 415,229. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY M. STEVENS, a citizen of the United States, residing at De Kalb, in the county of De Kalb and State of Illinois, have invented a new and useful Improvement in Cooking-Stoves, of which the following is a specification.

This invention relates to improvements upon cooking stoves adapted to use petroleum as fuel.

The object of the invention is, first, to improve the operation of this class of stoves, and to obtain the greatest benefit possible from the fuel consumed, and second, to adapt the stove to both summer and winter use.

The nature of the improvements which form the invention, I have fully illustrated in the accompanying drawings, in which

Figure 1 is a longitudinal vertical section of my improved stove, and Fig. 2 is a horizontal section thereof on the line 2—2 of Fig. 1. Figs. 3, 4 and 5 are details in perspective of portions of the stove.

In said drawings A represents the top of the stove, B the combustion or fire chamber thereof, and C a burner pan suspended or supported in said chamber and adapted to hold a shallow body of petroleum or other liquid fuel which may be admitted through the supply pipe *c*. The air which supports combustion is admitted at the rear of the pan through the conduit formed by the plate D, cover E and short pipes F. The first of these is preferably cast upon or attached to the pan C as seen at Fig. 5. The cover E shown at Fig. 4 is three sided and is positioned upon the plate D with its vertical member *e* resting upon the pan at some distance in front of the rear edge of the latter as shown, and the pipes F extend from the open space formed between the plate and the cover E through the side walls of the stove. Registers may be applied to the pipes F if desired. By this construction, the air is admitted from one or both sides of the stove in any volume requisite, and as it approaches the pan it is deflected by the side *e* down upon the fuel, its course being indicated in the drawings by the plain arrows. The flame from the pan is shut off from direct access to the smoke outlet G, and is compelled to pass in front of and under the pan as illustrated in the drawings, its course being shown by the feathered arrows. The parts D and E serve this purpose well as they fill the space between the rear side of the pan and the cover A. By giving the flame this circuitous course, the pan is very effectually heated so that the fuel is volatilized as soon as it reaches the pan. The cover A is of course provided in the usual manner with openings for cooking vessels, which receive heat from the flame as it passes through the chamber B. When the oven H is to be used, the damper *h* is raised to the position shown in the drawings, so as to intercept the flame and cause it to pass around the oven. When this damper is lowered, the flame passes direct to the outlet G.

To adapt the stove to both winter and summer use, I provide the combustion chamber with double vertical and bottom walls I J, forming air channels *i*, and admit the air to such channels at the front of the stove, as for instance at the opening *j* in the outer wall, and give it exit at the rear of the stove either into the room in which the stove is located, or into the outlet G as the temperature of the room may render desirable. The air passing between these inner and outer walls is indicated by the arrows with circles, and becomes warmed as it travels, and if the room be cold the air may be utilized to heat it by lowering the damper K to close the opening *g* leading into the smoke flue, thus giving the air exit at L into the room. Or if the room is sufficiently heated, the air from space *i* may be turned into the smoke flue by positioning damper K as shown at Fig. 1. In both cases this feature of the stove tends to promote comfort in its use by covering parts of the stove liable to become excessively heated, and in warm weather it not only prevents the giving out into the room of much of the heat, but improves the ventilation and carries off a portion at least of the odors from the cooking.

I claim—

1. The combination in a stove having a combustion chamber B, of a burner pan suspended in said chamber, and an air inlet at the rear of said pan, said conduit acting to

shut off the passage of the flame from the pan to the smoke flue, and compelling it to pass around and under the pan, substantially as set forth.

2. The combination in a stove of a combustion chamber B, a burner pan C suspended therein and receiving air from its rear side, and means for closing the space between the rear of the pan and the top of the chamber against the flame, whereby the flame is compelled to pass around and under the pan, substantially as set forth.

3. The combination in a petroleum stove of a combustion chamber B, a burner pan C and an air conduit at the rear of the pan formed of plate D, cover E and pipe or pipes F, substantially as specified.

4. The combination in a petroleum stove, of a combustion chamber B, a burner pan C, and an air conduit at the rear of the pan formed of plate D, cover E and pipe or pipes F, said pan being suspended in the chamber and said air conduit shutting off the flame from direct passage to the smoke flue, substantially as specified.

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