

Nov. 19, 1940.

A. L. BLAKESLEE

2,222,065

COMBINATION COMBUSTION AND ELECTRIC STOVE

Filed Aug. 16, 1937

2 Sheets-Sheet 1

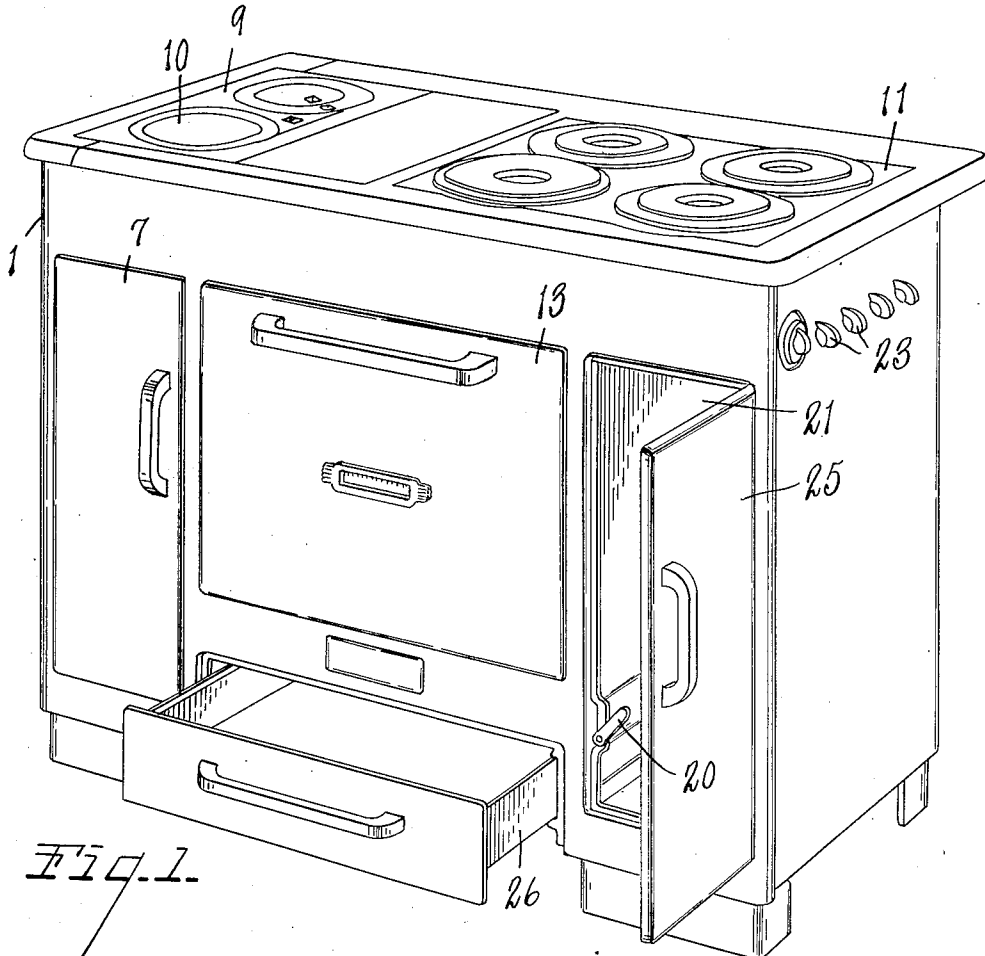


Fig. 1.

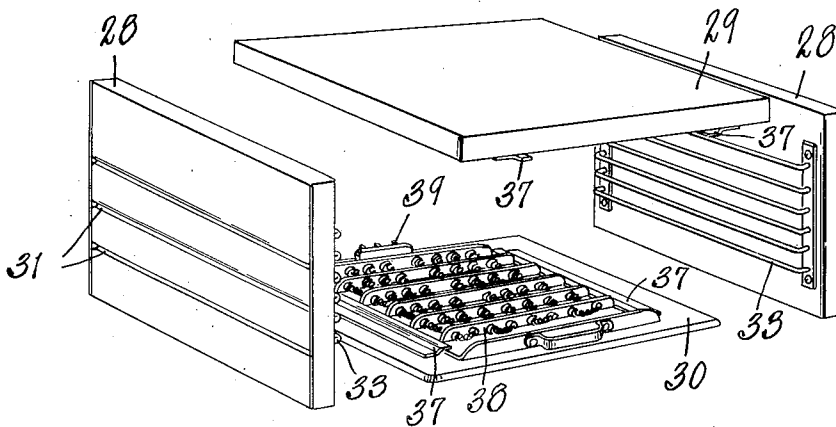


Fig. 3.

INVENTOR.
Arthur L. Blakeslee
BY *Earl T. Chappell*
ATTORNEYS

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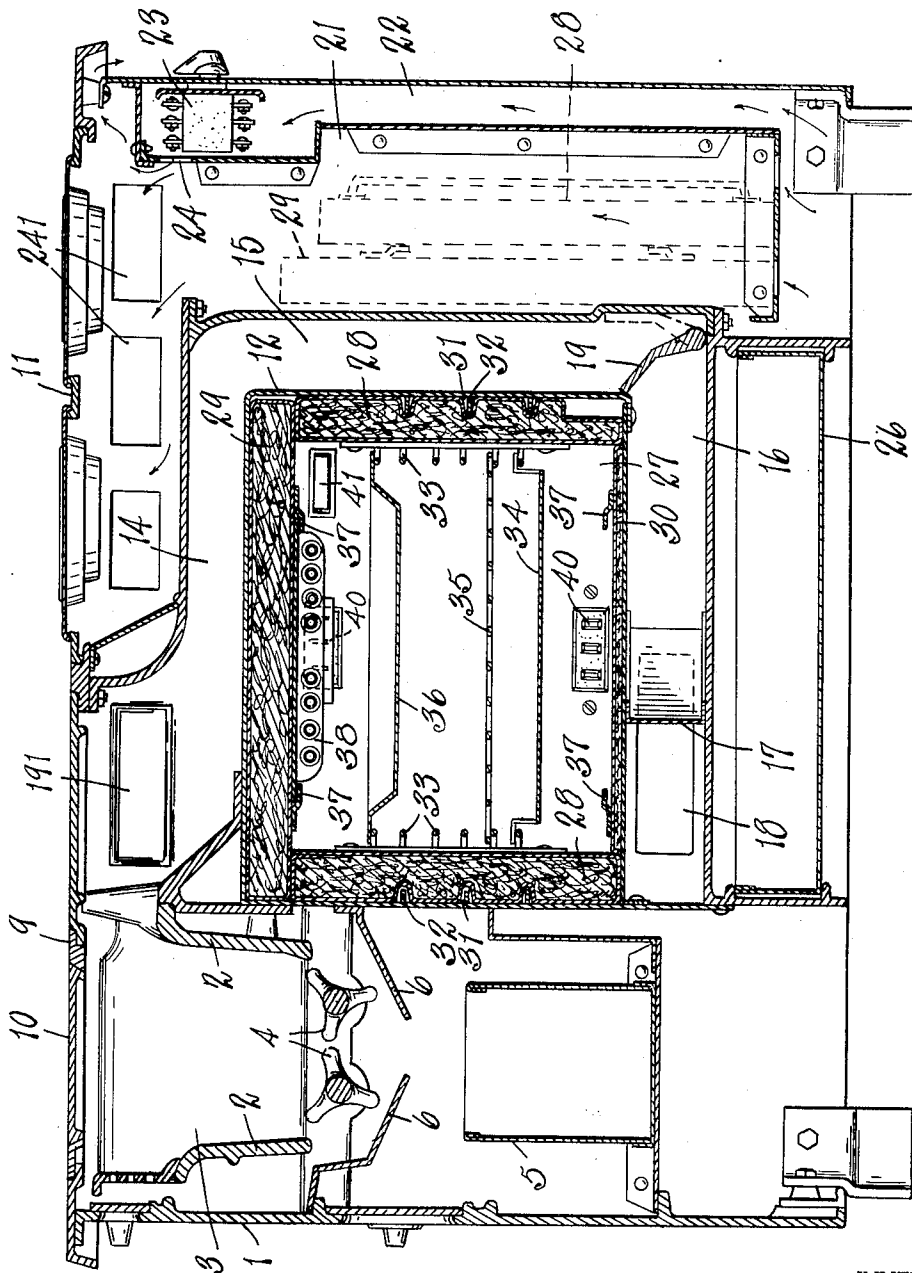


Fig. 2-

INVENTOR.
Arthur L. Blakeslee
BY
Earl & Chappell
ATTORNEYS

UNITED STATES PATENT OFFICE

2,222,065

COMBINATION COMBUSTION AND
ELECTRIC STOVE

Arthur L. Blakeslee, Kalamazoo, Mich., assignor
to Kalamazoo Stove & Furnace Company, a
corporation of Michigan

Application August 16, 1937, Serial No. 159,289

5 Claims. (Cl. 219—35)

The main objects of this invention are:

First, to provide a combination combustion and electric stove including an oven in which the oven may be readily adapted for an electric unit or heated from the combustion unit.

Second, to provide a structure having these advantages with means for effectively insulating the oven when electrically heated, the insulating means being removable to adapt the same for effective combustion heating.

Third, to provide a combination stove of this character with means for storing the oven insulating panels.

Fourth, to provide a structure having these advantages which is compact and attractive in appearance.

Objects pertaining to details and economies of my invention will definitely appear from the description to follow. The invention is defined in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, in which:

Fig. 1 is a front elevation of my improved combination combustion and electric stove with the storage chamber door open and the storage drawer partially withdrawn.

Fig. 2 is a vertical end to end section, the oven heat unit being conventionally shown mounted on the top insulating panel of the oven.

Fig. 3 is an exploded view of the oven lining panels removed from the oven, the oven heating unit being shown in position on the bottom panel.

Referring to the drawings, the housing designated generally by the numeral 1 is of suitable design and structure to receive and support the various parts of the stove and has housed therein a combustion unit designated generally by the numeral 2. In this illustration the combustion unit is designed for solid fuel and is provided with a suitable fire box 3, grate 4 and ash receptacle 5 arranged below the downwardly and inwardly inclined ash directing plates 6. The ash pan or receptacle 5 is accessible through the door 7.

The solid fuel cooking top unit 9 above the combustion unit is provided with suitable lids shown at 10. At the other end of the stove I provide an electric top unit 11 and centrally of the stove I provide an oven 12. The oven is provided with a door 13. The oven may be heated from the combustion unit and for this purpose I provide oven heating flues having a top reach or portion 14, a vertical reach or portion 15, and a bottom reach or portion 16, the latter being

provided with a baffle 17 to prevent the products of combustion passing directly to the flue opening 18. This oven heating flue is controlled by a damper 19 arranged at the bottom or vertical reach 15 thereof. A handpiece 20 is provided for manipulating the damper. A damper 191 is provided for a check and to provide for direct delivery to the smoke flue. When the dampers 19 and 191 are closed the flues on three sides of the oven provide a dead air or insulating space while the solid fuel unit also serves as an insulating space.

At the side of the vertical reach of the oven heating flue I provide a storage chamber 21 and at the outer side of this is an air circulating flue or space 22. Both this air circulating space or flue and the storage space are open at the bottom for the admission of air thereto, the switches designated generally by the numeral 23 for controlling the electric open top unit being arranged in the upper portion of this flue which is open at the top as indicated at 24 for the escape of air so that a cooling flow of air is provided for the switches. The switches being enclosed or housed do not become unduly heated from the open top heating elements. Openings 241 are provided in the rear of the stove for the escape of air. The storage chamber is provided with a door 25.

The drawer 26 is arranged below the oven and designed to receive utensils or part of the insulating panels now to be described.

It will be appreciated that when the oven is heated from the combustion unit it is desirable that the walls shall be such as to effectively transmit the heat from the flue to the oven. When it is desired to convert the oven to an electric oven it is desirable for the sake of economy to insulate the oven walls. To this end I provide removable insulating or liner panels consisting of the side panels 28, 28a, a top panel 29 and the bottom panel 30. The back wall 27 of the oven is suitably insulated. These panels are suitably chambered to receive heat insulating material indicated at 30. In assembling, the side panels 28 are inserted with their ends in abutting relation to the back wall of the oven, and the top panel 29 inserted and supported upon the upper edges of the side panels. For economy of space the bottom panel 30 is relatively thin.

In the embodiment illustrated, the side panels are provided with horizontal grooves 31 positioned and proportioned to receive the shelf ledges 32 on the oven side walls. The side panels

are also provided on their inner sides with supporting rails 33 for the baffle 34, the rack 35, and the drip or broiler pan 36. These may be adjusted and arranged as desired.

5 The top and bottom panels are provided with slides 37 adapted to selectively receive the electric heating unit 38 which is shown conventionally. This heating unit is provided with contact plugs 39 while the back wall of the oven is provided with sockets 40 adapted to receive these
10 contact plugs. The electrical connections for the oven sockets are not illustrated. The back wall is also preferably provided with a vent 41.

In Fig. 2 I have indicated by dotted lines part
15 of the oven panels arranged in the storage chamber. I have not attempted to illustrate all of these panels in stored position or any of them in the drawer 26. The parts are proportioned, however, so that the panels may be received in
20 the storage chamber and in this drawer.

I have illustrated and described my improvements in a very practical embodiment thereof although it will be understood that I have not
25 attempted to show parts in proportion and certain parts are shown conventionally.

I have not attempted to illustrate other adaptations of my invention as it is believed that this disclosure will enable those skilled in the art to embody or adapt my invention as may be
30 desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A combination solid fuel and electric stove
35 comprising a housing, a solid fuel unit at one end thereof, an electric unit at the opposite end thereof, and a centrally disposed oven having heat transmitting walls, there being a solid fuel oven heating flue communicating with said first named
40 unit comprising a top reach above the oven, a vertical reach at the side of the oven opposite the solid fuel unit, and a bottom reach beneath the oven, a smoke flue damper for the top reach, a damper for said oven heating flue disposed at the
45 bottom of the vertical reach thereof, shelf ledges on the side walls of said oven, removable heat insulating top, bottom and side panels for said oven, the side panels having horizontal grooves positioned to receive the shelf ledges on the oven
50 side walls and being provided with shelf ledges on their inner sides, the top panel being disposed upon the upper edges of said side panels, the bottom panel being disposed between the side panels, the top and bottom panels being provided
55 with supporting slides for an electric unit, and an electric heating unit selectively engageable with said slides on said top and bottom panels and provided with contact plugs engageable with coating sockets in either adjusted position.

60 2. A combination combustion and electric stove comprising a housing, a combustion unit, and an oven at the side thereof having heat transmitting walls, an oven heating flue communicating with said combustion unit comprising a
65 top reach above the oven, a vertical reach at the

side of the oven opposite the combustion unit, and a bottom reach beneath the oven, a damper for said oven heating flue constituting said flue a dead air insulating space for the oven when closed, shelf ledges on the side walls of said oven, 5 removable heat insulating top, bottom and side panels for said oven, the side panels having horizontal grooves positioned to receive the shelf ledges on the oven side walls and being provided with shelf ledges on their inner sides, the top 10 panel being disposed upon the upper edges of said side panels, the bottom panel being disposed between the side panels, certain of said panels being provided with supports for an electric unit, and an electric heating unit selectively engage- 15 able with said supports.

3. A combination combustion and electric stove comprising a housing, a combustion unit, and an oven at the side thereof having heat transmitting walls, an oven heating flue communicating with
20 said combustion unit comprising a top reach above the oven, a vertical reach at the side of the oven opposite the combustion unit, and a bottom reach beneath the oven, a damper for said oven heating flue disposed between said vertical and bottom reaches and constituting the flue a dead air insulating space for the oven when closed, removable heat insulating top, bottom and side panels for said oven, the top panel being
30 disposed upon the upper edges of said side panels, certain of said panels being provided with supporting slides for an electric unit, and an electric heating unit selectively engageable with said slides.

4. A combination combustion and electric stove
35 comprising a housing, a combustion unit, and an oven at the side thereof having heat transmitting walls, an oven heating flue communicating with said combustion unit comprising a top reach above the oven, a vertical reach at the side of the oven opposite the combustion unit, and a
40 bottom reach beneath the oven, a damper for said oven heating flue, said housing having a storage chamber at the side of the vertical reach of said flue and a storage drawer below the oven, 45 removable heat insulating top, bottom and side panels for said oven, the top and bottom panels being provided with supporting means for an electric unit, and an electric heating unit selectively engageable with said means on said top 50 and bottom panels.

5. A combination combustion and electric stove comprising a combustion unit, an oven operatively associated therewith and having heat transmitting walls, removable heat insulating top, bottom and side panels for said oven, the top panel being disposed upon the upper edges of said side panels, the bottom panel being disposed between the side panels, and an electric heating unit removably mounted within the oven when the insulating panels are in position therein, said top and bottom panels having slides for selectively receiving said removable unit.

ARTHUR L. BLAKESLEE.