

(No Model.)

2 Sheets—Sheet 1.

G. B. GAYLORD.
OIL STOVE.

No. 383,805.

Patented May 29, 1888.

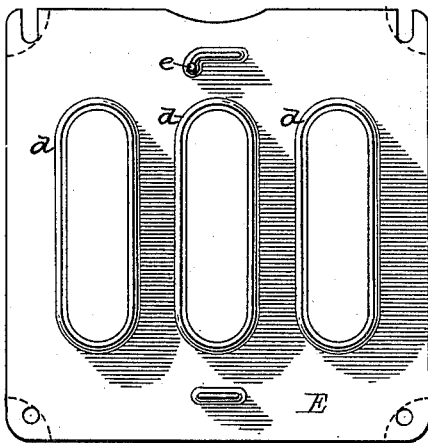
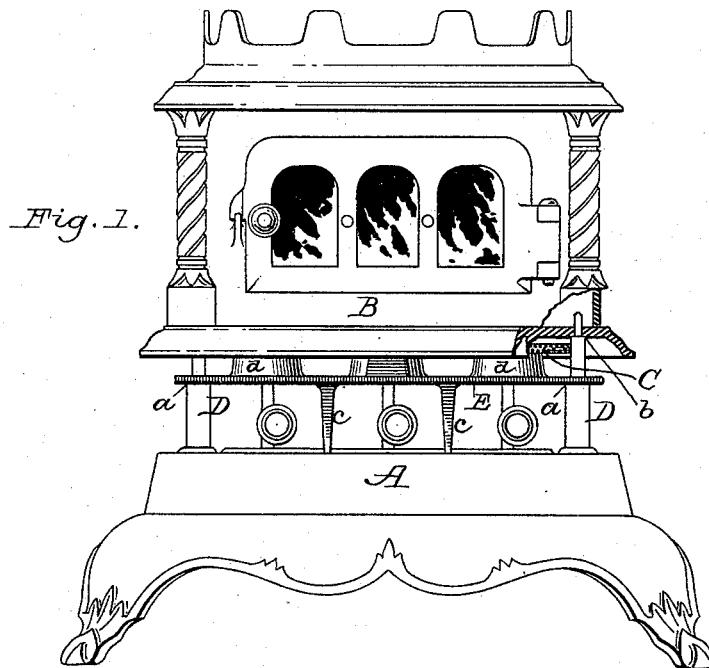


Fig. 2.

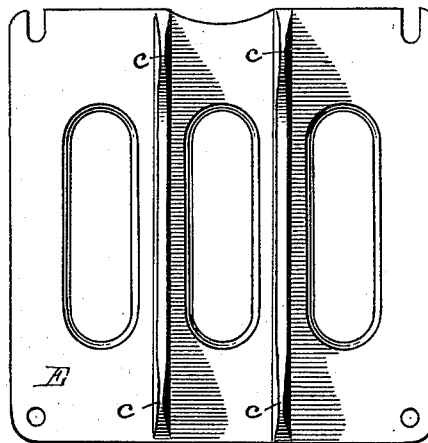


Fig. 3.

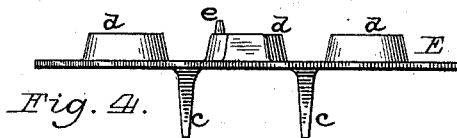


Fig. 4.

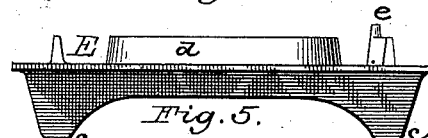


Fig. 5.

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 6.

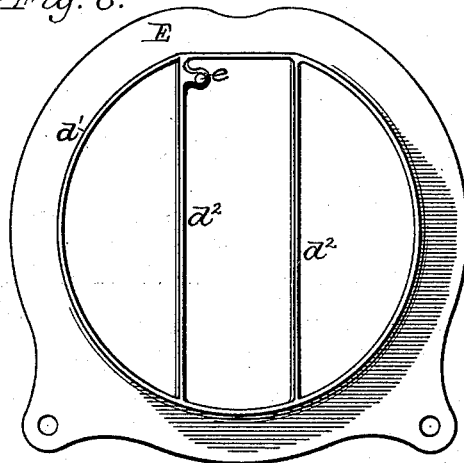


Fig. 7.

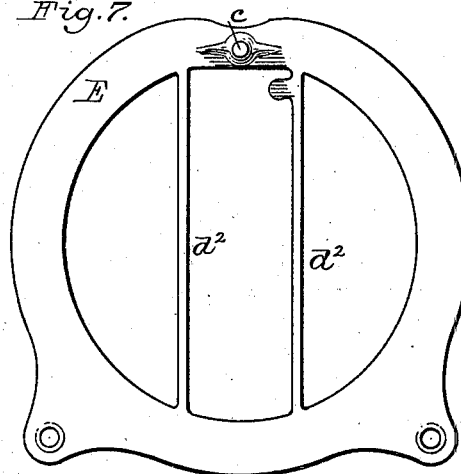


Fig. 8.

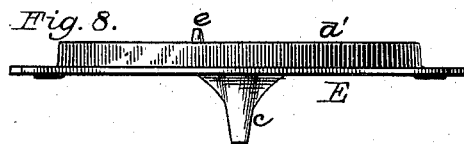


Fig. 9.

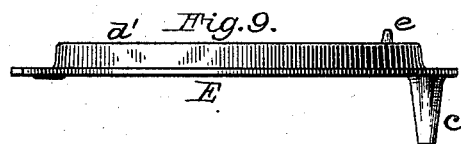


Fig. 10.

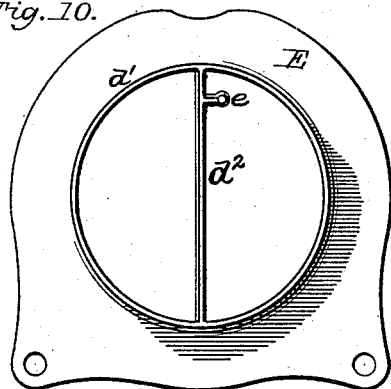
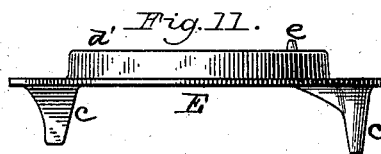


Fig. 11.



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UNITED STATES PATENT OFFICE.

GEORGE B. GAYLORD, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE FLORENCE MACHINE COMPANY, OF FLORENCE, MASSACHUSETTS.

OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 383,805, dated May 29, 1888.

Application filed November 10, 1885. Serial No. 182,323. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. GAYLORD, of the city and county of Providence, in the State of Rhode Island, have invented certain new and useful Improvements in Oil-Stoves; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part of the same, is a clear, true, and complete description of my invention.

My said improvements relate to that class of oil-stoves which embody an insulating-plate between the drum and reservoir and a perforated plate which rests upon a seat on top of said insulating-plate; and said improvements have been specially devised by me for use in connection with the well-known Florence stoves, which have four shouldered posts for supporting the insulating-plate, and also support a drum which is detachably hinged upon the two rear posts. It is well known that the perforated plate must be placed right side up in order to properly register its slots with the wick-tubes, and also to properly register with a close-fitting pendent flange on the cone-plate or the base-plate of the drum, and that said perforated plate can only be properly placed in working position when the insulating-plate is right side up. It is equally well known that novices in the use of such stoves are constantly liable to and do frequently reverse either or both of said plates, and thereafter, while realizing how imperfectly the stove operates, fail to locate and remedy the trouble without special instructions from experts. Provision has heretofore been made for assuring the right-side-up position of the perforated plate upon the insulating-plate, but only when the latter is also right side up; and the main object of my invention is to render it practically impossible for the insulating-plate to be placed wrong side up, and thus positively provide against the misadjustment of the perforated plate with relation to the two portions of the stove between which it is held. In stoves of this class the four supporting-posts are each provided with two annular shoulders, one of which enables the post to support one corner of the drum and the other shoulder supports one corner of the insulating-plate; and another important object of my invention is to render a plate-sup-

porting shoulder on the rear posts unnecessary, and to that extent economize in the cost of machining said rear posts; and, if desired, I can also similarly economize in machining the two front posts by relying on all the posts merely for supporting the drum, and then further utilizing them as braces or stops for confining the insulating-plate against lateral or horizontal displacement.

The main object of my invention is attained by providing the insulating-plate on its under side with one or more depending lugs, which render it impossible to improperly mount or seat the perforated plate thereon; and this, as well as the other objects stated, is attained by having said depending lugs of such length and so located that they will also serve as legs for supporting either the rear portion of said plate or wholly supporting it.

If the insulating-plate with my novel lugs be wrong side up, the perforated plate cannot be mounted or seated thereon at all; and if said lug or lugs serve as a leg or legs for the rear portion of the insulating-plate the latter cannot occupy a horizontal position on the stove unless right side up; and if my lugs be employed on an insulating-plate which is supported by the four corner-posts then the drum cannot be put in place unless the insulating-plate is right side up.

To more particularly describe my invention, I will refer to the accompanying drawings, in which—

Figure 1 illustrates in front view and partial section an oil-stove containing a well-known form of insulating-plate provided with my novel lugs. Fig. 2 is a top view of said plate detached. Fig. 3 is a bottom view of said plate. Figs. 4 and 5 are respectively front and side edge views of said plate. Figs. 6, 7, 8, and 9 illustrate, respectively, in top, bottom, front, and side edge views my improved insulating-plate in another form. Figs. 10 and 11 illustrate in top and side edge views my novel insulating-plate as arranged for a two-burner stove.

In Fig. 1 a stove is shown in which the base or reservoir A, drum B, perforated plate C, and corner-posts D are all as heretofore, it being understood that the drum is detachably hinged upon the rear posts in the usual man-

ner. The insulating-plate E on its upper or top surface is precisely as heretofore, and, as illustrated in Figs. 1 to 5, inclusive, it is adapted to a three-burner stove, and is arranged to be supported by the lower shoulders, *a*, of the corner-posts D, the upper shoulders, *b*, thereon serving as supports for the drum, as shown in Fig. 1. The novel feature is the one or more depending lugs *c* on the under side of the insulating-plate E. In a stove of any size one lug *c* will accomplish the main object of my invention, it being obvious that when such a plate is turned bottom up said lug will project upwardly and prevent the perforated plate from being seated thereon. In this three-burner plate two depending webs are used, as shown in Figs. 4 and 5, and each web affords two lugs *c*, which, if of proper length to take bearing on the top of the reservoir, will serve as supporting-legs for the plate, and hence all of the corner-posts may be without a plate-supporting shoulder, if desired, and said posts can then be relied upon solely for confining the plate horizontally in position, in which case said plate need have no post holes or slots, but may have its corners cut as indicated in dotted lines in Fig. 2, so that it can bear edgewise against the posts. In a four-burner stove the plate may also be provided with one or more of the novel lugs, according to whether a part or all of the possible stated advantages are desired, it being remembered that if a single lug be used, or more than one, at least one thereof must be so located that the perforated plate cannot lie flatly on the insulating-plate when bottom up and at the same time register with the wick-tubes, and that when said one or more lugs are to serve also as legs for the plate they should be so located as to properly support said plate, whether they co-operate with the front posts or are alone relied upon for that purpose. When serving as a support for the rear edge of an insulating-plate, it is obvious that said plate can only maintain a horizontal position when right side up. When said lugs do not serve as legs, the drum cannot be put in place, if the plate be bottom side up and supported by the corner posts; and hence it will be obvious that if these parts of the stove be detached, as is common and necessary in their use, and are then put together at all, they must be put together right and be at once fitted for effective service.

In Figs. 6 to 9, inclusive, I show a three-burner insulating-plate, having a single depending lug, *c*, at its rear under side, and it has post-holes at its front corners, as heretofore, for enabling its front side to be supported by posts in the usual manner, but the rear side is wholly supported by the depending lug, which therefore serves also as a leg. The two front corner-posts in their holes fully secure this plate against horizontal displacement; and hence the rear posts need have no shoulders for supporting the plate, nor need the latter have any contact with said posts.

In Figs. 10 and 11 I show a two-burner plate, having two lugs, *c*, one serving as a leg for supporting the rear side of the plate and the other a shorter one, and hence either or both serve to prevent a perforated plate from being seated thereon if the plate be wrong side up.

It is to be understood that the conical flanges *d* on top of the insulating-plate (shown in Figs. 2 to 5, inclusive) surrounding the slots for the wick-tubes are as heretofore and form no essential part of a plate embodying my invention, and it will be seen that the plates (Figs. 6 to 11, inclusive) have a single annular top flange, *d'*, which incloses a central space, within which all of the wick-tubes are located, and the edge of said flange and the bars *d''* serve as bearing-points or seat for the perforated plate, and while such a plate is not so fully interposed between the flames at the top of the wick-tubes and the reservoir as is the plate shown in Fig. 2, but little heat is radiated downwardly because of the cooling currents of air which pass upward through said central spaces while the stove is in service.

It will be seen that each insulating-plate has as an essential feature a seat on its upper side for the perforated plate, and that it is immaterial how this seat may be formed so long as it surrounds or incloses the central openings in the insulating-plate, and also so long as all of the bearing-surfaces which form said seat are in one horizontal plane, so that the perforated plate may be supported flatly thereon. In a plate of the form shown in Figs. 2 to 5, inclusive, the tops of the three conical flanges *d* afford the flat bearing-surfaces, which in the aggregate constitute the seat for the perforated plate, while in the forms shown in Figs. 6 to 11, inclusive, said seat is afforded by the flat bearing-surfaces at the top of the annular flange and its one or more cross-bars.

I have hereinbefore stated that provision has been heretofore made for assuring the proper and accurate location of the perforated plate on its seat at the top of the insulating-plate, the same consisting in a stud, *e*, on the top of the insulating-plate, which registers with a hole in the perforated plate, said stud and hole being so located with reference to the wick-tube slots in the perforated plate that the latter can only be seated after said stud is entered into its hole in the perforated plate. In practice these insulating-plates are generally composed of cast-iron or other metal, in which case the one or more lugs are cast integrally therewith; but when sheet metal is employed said lugs may be riveted thereto or made integral therewith by slitting the metal and turning portions thereof downward to form the lugs.

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

1. The insulating-plate for oil-stoves, provided on its upper side with a stud and with supporting-surfaces serving as a seat for a perforated plate, and also provided with one or more depending lugs on its under side, which

serve as legs for supporting said plate, and also prevent said plate from seating a perforated plate except when said insulating-plate is right side up, substantially as described.

5 2. In an oil-stove, the combination, with a reservoir and a perforated plate, of an insulating-plate having bearing-surfaces on its upper side adapted to flatly seat and support said perforated plate, and provided on its under
10 side with one or more depending lugs, substantially as described, whereby said insulating-plate when wrong side up is rendered incapable of flatly supporting or seating said perforated plate.

15 3. In an oil-stove, the combination, substantially as hereinbefore described, of the reservoir or base, the drum, the perforated plate, the corner-posts supporting said drum, and an insulating-plate confined against horizontal

displacement by said posts, and provided with 20 one or more depending lugs on its under side, which serve as legs for supporting said plate, and also for preventing the perforated plate from being seated on the wrong side of said insulating-plate.

25 4. The combination, substantially as hereinbefore described, with the drum, the reservoir, and the front supporting-posts, of an insulating-plate provided with a seat for a perforated plate on its upper side, and a depending lug 30 on its lower side, which serves as a supporting-leg for one side of said insulating-plate, and also prevents the under side of said plate from being used as a seat for the perforated plate.

GEORGE B. GAYLORD.

Witnesses:

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JOHN H. EVANS.