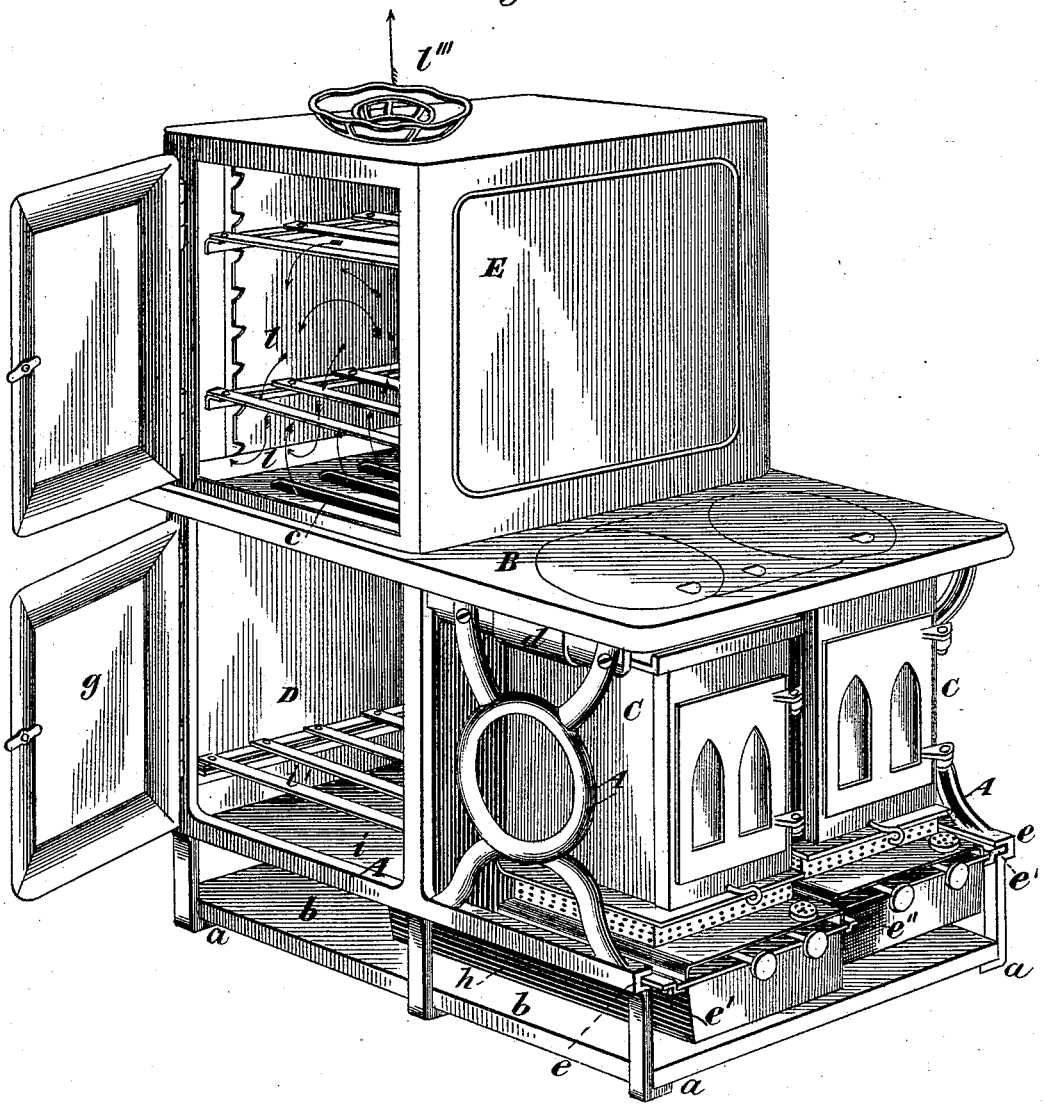
(No Model.) 3 Sheets—Sheet 1.

M. C. ARMOUR.

OIL STOVE.

No. 305,265. Patented Sept. 16, 1884.

Fig. 1.



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W. T. Cole.

Inventor:
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atty

(No Model.) 3 Sheets—Sheet 2.

M. C. ARMOUR

OIL STOVE.

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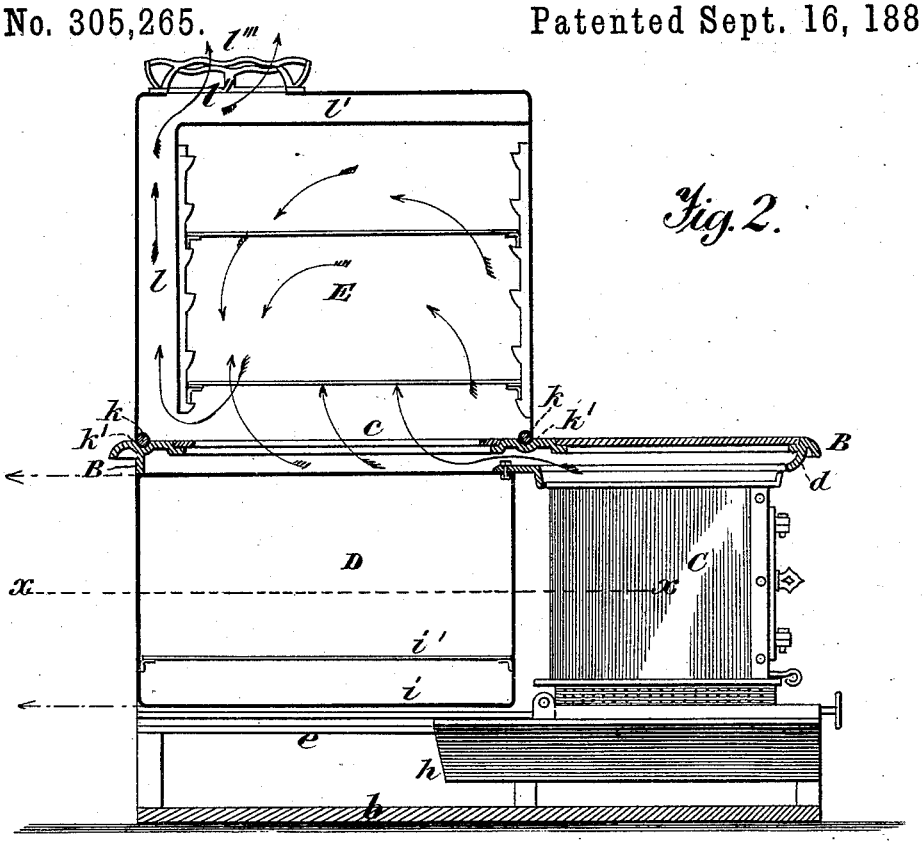

Fig. 2.

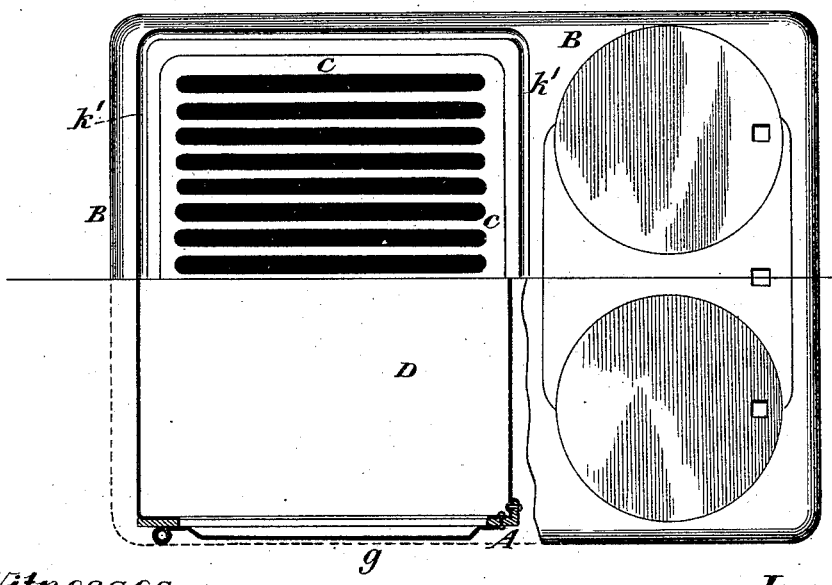

Fig. 3.

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(No Model.) 3 Sheets—Sheet 3.

M. C. ARMOUR.

OIL STOVE.

No. 305,265. Patented Sept. 16, 1884.

Fig. 4.

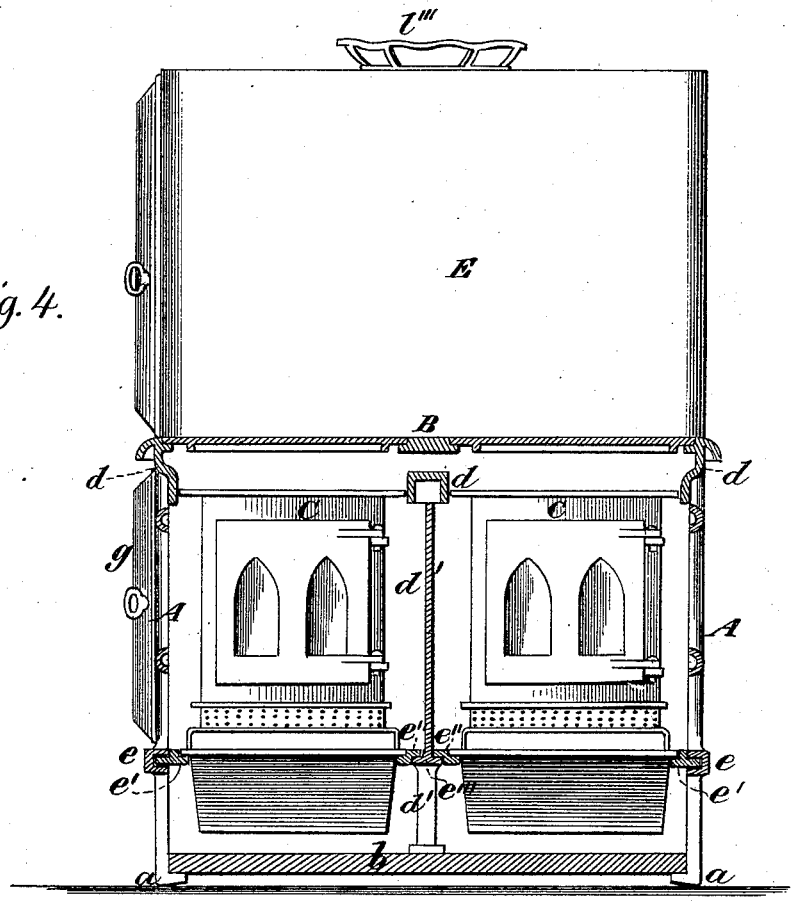
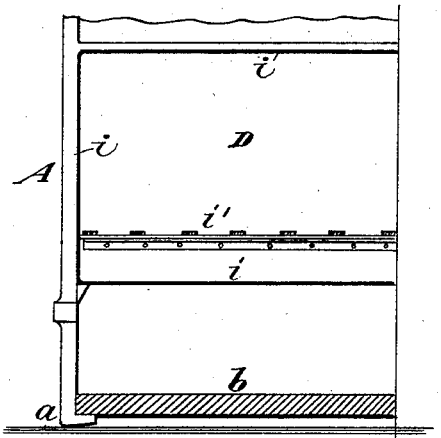


Fig. 5.



Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

MICHAEL C. ARMOUR, OF CHICAGO, ILLINOIS.

OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 305,265, dated September 16, 1884.

Application filed October 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL C. ARMOUR, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Oil-Stoves, also Applicable to Gas-Stoves, of which the following is a specification.

My invention relates to that class of oil or gas stoves in which the heat, after acting directly upon the vessels placed upon the top plate, passes into or around an oven or ovens to a suitable escape-aperture, heating the oven or ovens in its passage. The said class of stoves usually embrace a bake-oven and a warming-chamber, the former of which only is heated by the passage into and through it of the heat and products of combustion, the warming-chambers being heated entirely by radiation.

My present invention, which is an improvement upon the class of stoves referred to, consists, first, in an improved mode of arranging and holding the removable lamps in the space under the top plate, whereby the lamps may be withdrawn from the position in which they are used for heating to a position beyond the front limit of the stove, where they may still remain connected with their supports or be lifted therefrom, and thus entirely detached from the stove.

My invention also consists in providing a space for an extended oil-pot, and in employing an oil-pot of greater cubical capacity than has been heretofore used in this class of stoves, whereby less frequent attention to the supply of oil is required.

My invention also consists in an improved construction of warming-chamber and its arrangement with respect to the stove-frame, whereby it may be cheaply and conveniently attached thereto, and removed therefrom should said oven have become damaged by use, wear, or shipment.

My invention consists, further, in other details of construction and combinations of parts, as hereinafter particularly specified.

In the accompanying drawings, Figure 1 is a perspective view of my improved stove with the doors of the bake-oven and warming-chamber open. Fig. 2 is a vertical longitudinal section through the center of the stove. Fig. 3 shows a half-plan view of the top plate of the stove, the portable bake-oven being removed, and a half-sectional plan on the line X X of Fig. 2. Fig. 4 is a vertical transverse section through the center of that portion of the stove containing the lamps, the lamps being shown in full lines. Fig. 5 is a rear view of part of the lower portion of the stove, showing the mode of inserting the warming-chamber.

Similar letters of reference indicate similar parts in the respective figures.

A A are the outer cast frames of the stove, of any suitable or ornamental design. The lower edge of each frame is made L-shaped, as at *a*, to receive a board or boards, *b*, covering the entire base area of the stove.

B is the top plate of the stove, the front part of which is perforated, in the usual manner, to receive the ordinary movable section and covers, as shown. The rear part of said plate, or that portion which occupies the oven-space, is open and receives a central section, *c*, constructed in open-work, as shown in Figs. 1, 2, and 3, which section is removable. Below the top plate is a casting, *d*, bolted thereto, and which serves as a guide for the tops of the removable lamps C.

Near the lower edges of each of the side frames A, and extending from the front to the rear of the stove, is a longitudinal groove, *e*, in each of which rests a longitudinally-moving way, *e'*, which ways support one side of the lower part of each of the lamps C. The inner side of each lamp rests in a similar way, *e''*, supported on a ledge or rabbet, *e'''*, formed in the central casting, *d'*, the foot of which is secured to the board *b*. The casting *d'* extends upward between the two lamps C and unites with the central portion of the casting *d*. It is not necessary that the upper part of the casting or partition *d'* between the lamps should be used, but if used it is made preferably in open-work, so as to allow a free circulation of air between the two lamps, although, if desired, it may be solid. The ways *e'* and *e''*, which support the lower portions of the lamps, are adapted to slide in or out with the lamps, being united thereto in some suitable manner. As the ways extend back within the grooves

e e''' under the oven-space, when the lamps are drawn out beyond the front limit of the stove, a sufficient length of ways is still within the grooves to support the lamps and keep them from being entirely detached from the stove. The outward movement of the ways upon their supporting-ledges and the inward movement of the lamps may be limited by suitable devices, or the ways may be made to draw out entirely away from the front of the stove. As shown in Fig. 1, (detached view,) a bar, e^4, extends across the front, connecting the ways e' e'', and is furnished with a handle, e^5, enabling the ways and lamps to be drawn out together.

The lamps are of a construction shown in other patents issued to me, and need not here be specially described. When in position, the tops of the lamps are in a plane sufficiently below the under side of the top plate to allow the heat and products of combustion to take the direction shown by the arrows in Fig. 2.

The warming-chamber is shown by D. It is made of tin in the form of a box having all its sides closed except that opposite its door, which is represented by g and fastened to the frame A. The chamber is inserted within the frame A from the rear of the stove, and when so inserted is suitably bolted or attached to the frame. The chamber may, when desired, be removed by drawing it out after its bolts have been detached, as indicated by the arrows at the rear of Fig. 2. This feature of my invention—viz., the detachability of the warming-chamber—I consider of importance. Heretofore in stoves of this class the connection between the warming-chamber and other parts of the stove has been of a more permanent character, and as the warming-chamber, because of its exposed situation, is more liable to damage and wear than other parts of the stove, it is important that it shall be so arranged that it may be readily detached and another substituted when necessary. Heretofore in stoves of this class the same sheet of tin has served for one side of both the warming-chamber and bake-oven and another sheet for the backs thereof; but in my present invention the bake-oven and warming-chamber are entirely separate and distinct, being made of separate sheets of metal—a provision which is further rendered necessary by the fact that the bake-oven is, as hereinbefore stated, detachable.

Fig. 5 shows a vertical transverse sectional rear view of the warming-chamber and the manner in which the chamber is confined between the frames A A. Fig. 3 shows in horizontal transverse section the mode in which the front and sides are held by the frame A. Fig. 2 shows the mode of attaching the top of the warming-chamber to the casting d, and the relations existing between the chamber and the top plate, B. The bottom of the warming-chamber is in a plane above that of the ways e' e'', so that a space is left under the warming-chamber for the reception of the rear parts of the oil-pots, said rear portions being shown extended within the space, and indicated by h in Figs. 1 and 2. Independently of the provision made by the space under the warming-chamber for the reception of the extended or rear parts of the oil-pots, the space serves the useful purpose of admitting a free circulation of air to the rear of the burners, as well as to their fronts and sides. Above the solid bottom plate, i, of the warming-chamber is the ordinary grate, i', on which the utensils containing the articles to be warmed are placed.

E is the bake-oven, which consists of a tin box having a lower open side or bottom, and an open side in which the door is situated. The bottom edges of the oven are wired, as shown at k, Fig. 2, the wired portions resting in grooves or depressions k', formed in the top plate, B, of the stove. As before stated, the portion c of the top plate, B, which is within the oven-space is open and removable. The bake-oven is provided with a rear flue, l, which communicates with the top flue, l', leading to the escape-aperture l''. The escape-aperture is surrounded by the perforated and raised annular casting l''', so that on the placing of a vessel or utensil thereon the draft and work of combustion may not be affected.

It is evident that the construction here represented may be variously modified without departing from the substance of the invention.

The operation of the various parts of the stove hereinbefore described will be easily understood. It will be seen that the lamps C may be separately withdrawn from the space which they occupy under the top plate to a position beyond the front limit of the stove, and that they may, when so withdrawn, be used entirely independently of the stove for various purposes of heating or cooking, the lamps being complete in themselves, and adapted for use as independent heaters. The provision whereby a rearwardly-extended oil-pot may be used is an important feature in this invention, and will be readily appreciated. The detachability of the warming-chamber is also important, as also is the construction and arrangement of parts whereby the bake-oven is made conveniently removable from the stove.

I do not limit the several features of my invention to the exact mechanical construction hereinbefore described, as it is manifest that the same results may be accomplished by deviating more or less from the preferred construction which I have set forth; but,

Having described my invention, I claim—

1. In an oil or gas stove, the combination of a frame and lamps supported in sliding ways resting in the frame, substantially as set forth.

2. In an oil or gas stove, the combination, with the frame and lamps, of ways in which said lamps are supported, said ways being adapted to slide out with the lamps and support them in a position beyond the front limit of the stove, substantially as set forth.

3. In an oil or gas stove, the combination of a frame, lamps, and ways supporting said lamps, said ways being adapted to slide out from the frame with the lamps to a limited extent, a portion of said ways being supported within the frame when the lamps are withdrawn, substantially as set forth.

4. The combination, in an oil-stove, of sliding lamps having rearwardly-extended oil-pots, and sliding ways supporting said lamps, substantially as set forth.

5. In an oil-stove, a frame and sliding lamps having rearwardly-extended oil-pots, combined with a warming-chamber in the rear of said lamps, a space being provided below the warming-chamber for the reception of the rear portions of the oil-pots, substantially as set forth.

6. The combination, in an oil or gas stove, of lamps, a frame, and a warming-chamber separate from the oven and removably inserted within the frame in the rear of the lamps, a space being provided below the warming-chamber to serve as an air-space, and also to receive the rear portions of the oil-pots, said chamber being entire in itself, and capable of being readily detached or slid from the frame bodily, upon the removal of the devices connecting it with the frame, substantially as set forth.

7. In an oil or gas stove, a warming-chamber combined with the frame, substantially as described, whereby a space is provided below the chamber serving as an air-space, and also to receive the rearwardly-extended oil-pots of the lamps.

8. In an oil or gas stove, a frame and sliding lamps combined with a warming-chamber in the rear of said lamps, a space being provided below the warming-chamber to serve as an air-space, and also to receive the rear portions of the extended oil-pots, substantially as set forth.

9. The combination, in an oil or gas stove, of lamps, sliding ways supporting said lamps, and means for uniting the sliding ways, whereby they and the lamps may be slid together, substantially as set forth.

In testimony whereof I have hereunto set my hand and seal this 16th day of October, A. D. 1883.

MICHAEL C. ARMOUR. [L. S.]

Witnesses:
G. R. CUTLER,
E. C. CRAWFORD.