

J. A. FREY.
Oil-Stove.

No. 220,902.

Patented Oct. 21, 1879.

Fig. 1.

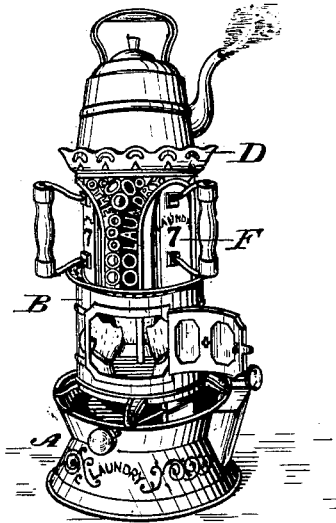
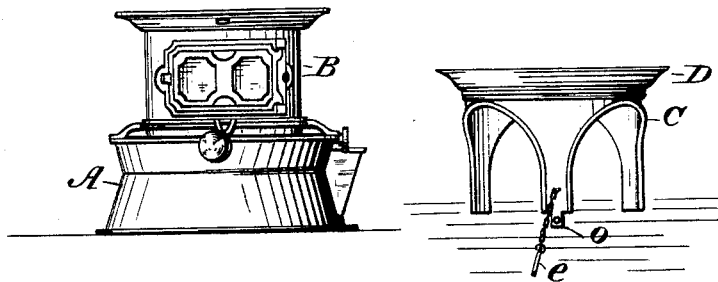


Fig. 2.



Witnesses:

Donn P. Twitchell.
William W. Dodge.

Inventor:

John A. Frey,
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Fig. 3.

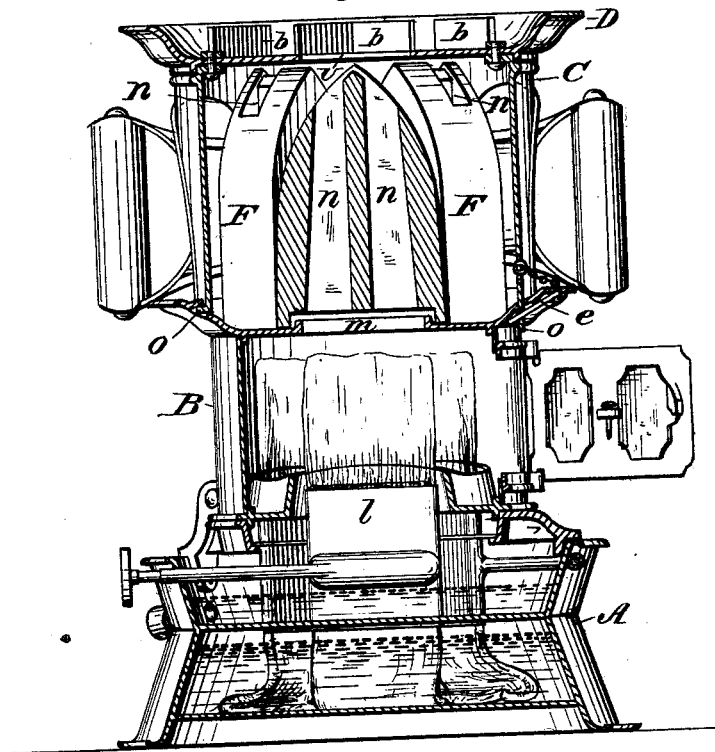
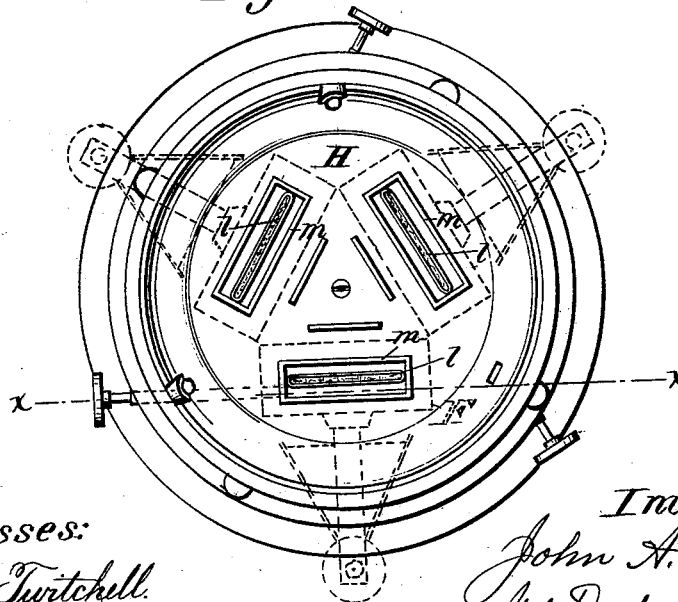


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN A. FREY, OF NEW YORK, N. Y.

IMPROVEMENT IN OIL-STOVES.

Specification forming part of Letters Patent No. **220,902**, dated October 21, 1879; application filed September 12, 1879.

To all whom it may concern:

Be it known that I, JOHN A. FREY, of New York, in the county of New York and State of New York, have invented certain Improvements in Coal-Oil and similar Stoves, of which the following is a specification.

My invention relates to that class of stoves known as "coal-oil" or "gas" stoves, the improvement being equally applicable to either kind; and the invention consists in novel construction of and addition to such stoves, whereby they are adapted to the heating of flat-irons, at the same time that they are used for cooking, or to be used for cooking alone, as hereinafter more fully set forth.

Figure 1 is a perspective view of a stove embodying my improvements, and arranged to heat the flat-irons and cook at the same time. Fig. 2 is a side elevation of the same, with the attachment detached. Fig. 3 is a vertical section on the line *x x* of Fig. 4, and Fig. 4 is a top-plan view of the stove with the attachment removed.

Various forms of apparatus have been devised for heating flat-irons by means of a lamp or gas flame; but these devices are not adapted to be used as cook-stoves; and hence it has been necessary to provide two separate devices, one for cooking, and the other specially for heating the flat-irons.

The object of my present invention is to produce a portable stove that can be used for both these purposes at once, or for either alone, as may be desired, and so that, when not required for heating the flat-irons, the attachment may be removed, and the stove then used for cooking in its ordinary condition.

In order to accomplish these results, I take any of the usual coal-oil or gas stoves used for cooking and apply to the top of it a secondary body, C, so constructed as to permit the flat-irons to be readily inserted through openings in its sides, and at the same time support on its top the cooking-vessels ordinarily used with this class of stoves.

In the drawings, I have represented my improvements as applied to the coal-oil stove known as the "Summer Queen." A representing the base, in which is the oil-reservoir, covered by an open pan for containing water, and through which project a series of wick-tubes,

l, surrounded by an annular case or body, B, upon the top of which the cooking-vessels are supported, this form of stove being well-known, and therefore not requiring further description, except as to certain details, by which it is specially adapted to the purpose mentioned, and which will be hereinafter described.

I construct a secondary case or body, C, as shown in Fig. 2, corresponding in diameter to the body B, or very nearly so, and of such a height as to permit openings to be formed in its sides of proper size to admit of a flat-iron being inserted through them and set upon the top of the lower body, B, as represented in Figs. 1 and 3. At its upper end this body C is provided with a flange, D, the same as the ordinary or lower body, B, is, and a series of vertical projections, *b*, to support whatever style of cooking utensil may be placed thereon. The top of both this and the body B are closed by a transverse plate or diaphragm, and each of these are provided with holes corresponding in number and location to the wick-tubes below.

As shown in Fig. 4, the wick-tubes *l* are located equidistant in a circle, the three there shown thus forming a triangle of such a size as to permit each of its sides to be occupied by one of the flat-irons, as represented by the dotted lines in Fig. 4 and as shown in Figs. 1 and 3.

The upper case or body, C, is provided with two points or lateral projections, *a*, which hook into holes in the flange of the body B, as shown at the left-hand side of Fig. 3, and on its opposite side it has a vertical projection or tongue, *o*, which fits into a corresponding hole, and is secured by a pin, *e*, by which means this upper body is securely fastened upon the body B, and in such a manner that by simply withdrawing the pin *e* it can be at once detached and set aside when not required for use.

Any other style or means of fastening the body C in place may be used—such, for instance, as a spring-catch, a button arranged to engage in a notch or over a projection on the part *o*, or any similar means, it only being necessary that it shall be held secure when in place, and be capable of being readily detached.

The flat-irons F to be used with this appa-

ratus are made as represented in Fig. 3—that is, they are made with two channels, *n*, extending through them from end to end to secure a large heating-surface, said channels being more or less contracted at their upper ends. At their lower ends these flat-irons *F* are provided with a recess slightly larger than the two channels, to fit over a projecting lip, *m*, which surrounds the openings in the top of the body *B*, upon which the irons rest, as shown in Fig. 3.

By this construction and arrangement, it will be seen that the flat-irons are each brought directly over the flame below, and that the channels *n* thus form flues, which conduct the heat and products of combustion directly upward through the flat-irons, and through the openings in the top of the upper case or body, *C*, against the bottom of any vessel that may be set thereon, and that thus the stove is adapted to both heat the irons and perform its cooking operations at the same time, with nearly or quite as much efficiency as though the irons were not there. An extra flat-iron should always be provided, so that when one is removed for use its place can be at once supplied, thus preventing the heat from escaping through the holes in the top of the lower plate into the upper case, and which, if permitted, might soil or blacken the face of the other flat-irons.

When the ironing has been completed, the upper case or body, *C*, will be detached, and, with the flat-irons, be set aside, when the stove can be used for cooking in the ordinary manner.

It is obvious that this improvement may be applied to all stoves of this general class, whether they be heated by a lamp or a gas flame, or by the vapors produced by volatilizing hydrocarbon oils, or any similar material.

It is also obvious that they may be made to heat any number of flat-irons required, it only being necessary, in order to secure the best results, that the burners shall be so arranged as to accommodate the greatest practicable number of flat-irons in a given space, and that the latter shall be placed directly over the burners, in order not only that they shall be quickly and thoroughly heated, but also serve to conduct the heat directly to the cooking utensils placed upon the upper case or body, *C*.

Thus, by a very small addition to the ordinary coal-oil or gas cook-stove, I provide a means for heating flat-irons without detracting from its capacity for cooking, thus saving the cost and trouble of a separate flat-iron heater.

Having thus described my invention, what I claim is—

1. In combination with a portable cook-stove, substantially such as described, an auxiliary body or case, *C*, adapted to support cooking utensils and receive flat-irons to be heated, substantially as shown and described.

2. In combination with a coal-oil or similar cook-stove, the flat-irons *F*, provided with one or more vertical flues, and the detachable case or body *C*, constructed and arranged to operate substantially as and for the purposes set forth.

3. In combination with a coal-oil or similar heater, the flat-iron *F*, provided with the two vertical flues *n n*, and the auxiliary case *C*, arranged to support cooking utensils, substantially as set forth.

JOHN A. FREY.

Witnesses:

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I. H. VONDELL.