

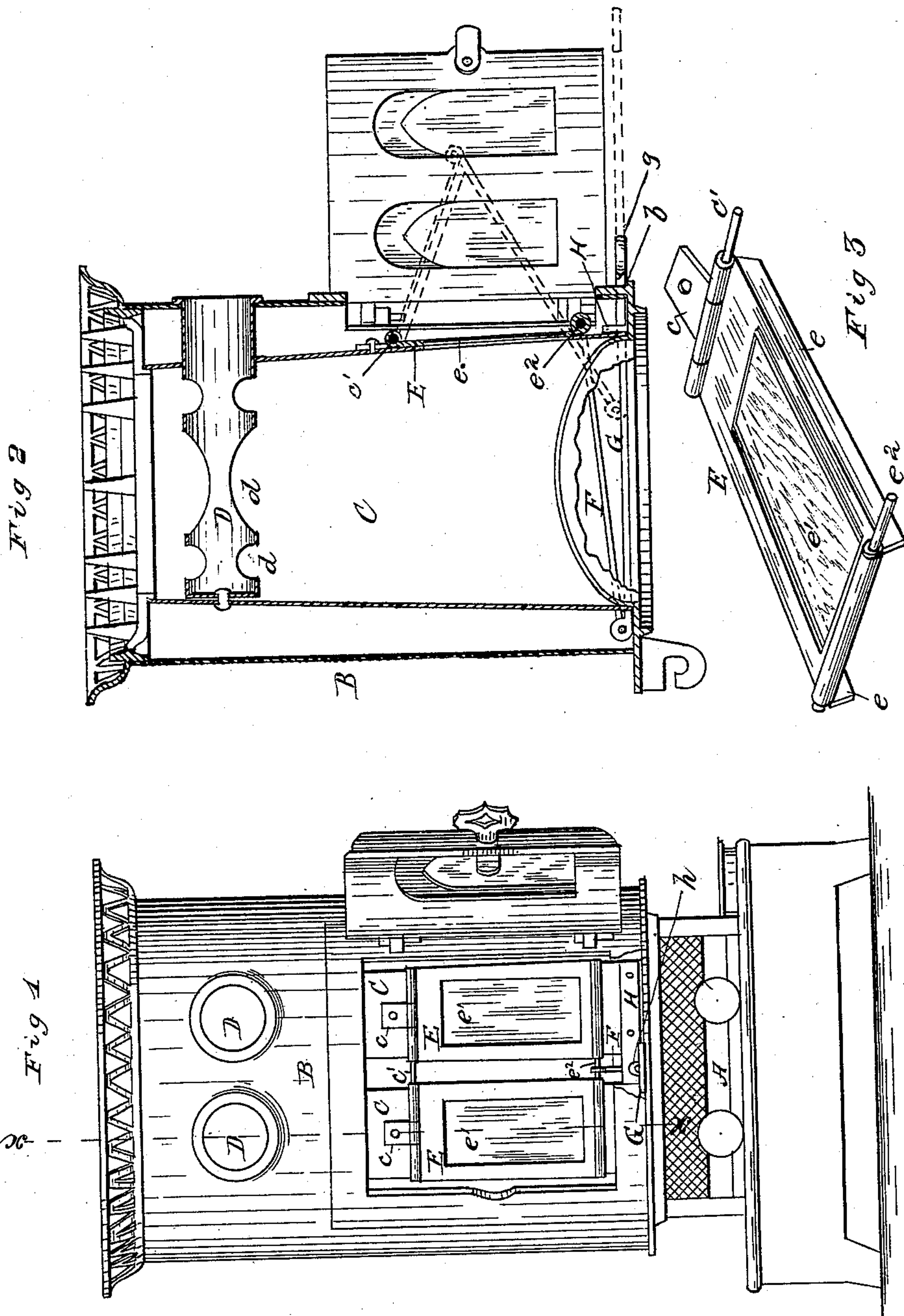
(No Model.)

F. SLOAN.

OIL STOVE.

No. 285,696

Patented Sept. 25, 1883.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 285,696, dated September 25, 1883.

Application filed December 5, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK SLOAN, a citizen of the United States, residing at the city of Chicago, in the county of Cook, in the State of Illinois, have invented certain new and useful Improvements in Oil-Stoves, which are fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is the front elevation of an oil-stove provided with my improvements, the door being open and the front of the drum below the door partly broken away. Fig. 2 is a section of the drum on the line *xx* in Fig. 1, the cone being partly broken away, so as to show the rods which raise and lower the chimney-fronts. Fig. 3 is a detailed perspective view of one of the hinged chimney-fronts.

The same letters denote the same parts in all the figures.

My invention relates to stoves for the burning of kerosene and similar substances; and it consists, partly, in tubes extending into the drum and chimneys of the stove for the insertion of soldering-irons or similar tools, and partly in hinged chimney-fronts, which can be lifted up, so as to afford free access to the burners, without moving the drum, and partly in the several devices and combinations of devices, which will be fully set forth hereinafter, and definitely pointed out in the claims.

In the drawings, A denotes the base or lamp of the stove, B the drum, and C the chimneys.

In the upper part of the drum I insert one or more horizontal tubes, D, extending from the front of the drum, through each one of the chimneys, to but not through the back wall of the same. The drum and chimneys are preferably made somewhat higher than usual for the purpose of affording room for these tubes without cramping the other parts of the stove. Each tube is open at the front end, and that part of it which is within the chimney has holes, *d*, in its upper and lower sides, so that the current of heated gases from the flame shall pass through the tubes. A soldering-iron or similar tool or rod inserted in one of these tubes can be conveniently and rapidly heated, being virtually supported in an open frame directly over the flame and in the line

of draft. The purpose of this device would be in great measure served by tubes extending from the front of the drum no farther than through the front wall of the chimney; but the construction which I have described is preferable, inasmuch as it gives a support and guide for the iron for its whole length.

In oil-stoves of the ordinary construction, in order to get at the burners it is necessary to lift the drum. In some, provision has been made for lighting by partly cutting away the fronts of the chimneys; but apertures cannot thus be made large enough for perfect convenience of lighting without impairing the draft of the stove. Moreover, where the chimneys are provided with transparent fronts for the purpose of watching the flame there has been hitherto no convenient way of cleaning these. I make provision for these objects by hinging the lower parts of the chimney-fronts to their chimneys, so that the fronts can be lifted up for lighting the burners or cleaning the fronts, and can be closed snugly during combustion.

Upon the front of each chimney, just above the top of the doorway, I rivet or otherwise suitably fasten a strip of sheet metal, *c*, whose lower edge is bent into a horizontal tube. A rod, *c'*, running through this tube, supports the movable front E, the upper edge of which is bent around the rod in continuation of the tube, that part of the edge which is opposite the strip *c* being cut away, as shown in Figs. 2 and 3 of the drawings. The movable front is thus hinged to the chimney, and may be swung up and away from it or down close against it. The chimney itself is cut away in front for the whole or nearly the whole of its width from just above the bottom to a point a little below the tubular part of the strip *c*. The movable front E is slightly longer than the aperture thus made in the chimney, and a little wider than the front of the chimney itself, and its vertical edges are bent so as to form flanges *e*, which overlap the sides of the chimney. The movable front can thus be made to fit on the chimney with a great degree of exactness, so that when it is closed the draft is practically as perfect as if the chimney were in one continuous piece. The middle part of the movable front may be cut away and its place sup-



plied by a pane of mica,  $e'$ , as shown in Figs. 1 and 3, the metal part being scarcely more than a frame for the mica. Where several chimneys are used, the movable fronts may all be set upon the same rod, the rod being hinged to all the chimneys, as shown in Fig. 1. The lower edge of each movable front is bent to form a tube similar to those on the upper edge, but extending continuously across the front. Through this tube or (where there are several chimneys) through the corresponding tubes of all the movable fronts passes a rod,  $e^2$ , which thus joins all the movable fronts at their lower edges, so that they will open and shut simultaneously.

On the rod  $e^2$  is hinged another rod, F, by means of an eye formed on the rod F, as shown in Fig. 2, or in any other convenient way. The point of hinging is as near the middle of the rod  $e^2$  as will consist of the extension of the rod F back within the drum without interference with the chimney. The length of the rod F is such that when the movable fronts are lifted up into a horizontal position the farther end of the rod will rest on the cone-plate, just within the drum, somewhat forward of the position shown by the dotted lines in Fig. 2.

To the farther end of the rod F is hinged by means of an eye on each rod and a connecting-bolt, or in any other convenient way, a horizontal rod, G, of such a length that when the chimney-fronts are closed, and both rods F and G are consequently farthest within the drum, the front end of G will project a little in front of the drum through the aperture  $b$ , so that the projecting part may be bent into a loop,  $g$ ; or any convenient form of handle may be attached to it. A strip of plate metal, H, may be fastened on the front of one of the chimneys, at the bottom, so as to project across the line of motion of the rod G, as shown in Fig. 1. An aperture,  $h$ , cut in this plate, will allow the rod to pass through, and the sides of the two apertures  $b$  and  $h$  will together constitute

a guide to keep the rod G in the right direction. The plate H will also operate as a stop to prevent the connected end of the rods G and F from coming too far forward. Both apertures  $b$  and  $h$  are made large enough vertically to allow the rod G a little play upward and downward. Consequently, when this rod is drawn out its weight will naturally depress the handle end, and so prevent it from automatically slipping backward, and thus closing the chimneys.

Obviously, with the construction I have described, the drawing out of the rod G by its handle will bring forward the rod F, and so push out and up the lower edges of the hinged chimney-fronts. The hinged fronts, being brought up into a horizontal position, will be held there by the weight of the rod G, as already explained, and there will be free access to the burners, and the inner side of the mica can be readily cleaned. When access to the burners is no longer needed, pushing in the rod G will necessarily draw back the rod F, which will draw downward and backward the lower edges of the removable fronts, and thus snugly close the chimneys.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an oil-stove, a removable front hinged at its upper margin to the chimney, a lifting-rod pivotally connected at its forward end with the hinged front, and a drawing-rod hinged at its inner end to the inner end of the lifting-rod, all in combination, substantially as and for the purpose described.

2. The chimneys C, in combination with movable fronts E, hinged thereto, and with means for rigidly connecting the movable fronts with each other below the points of hinging, substantially as and for the purpose described.

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