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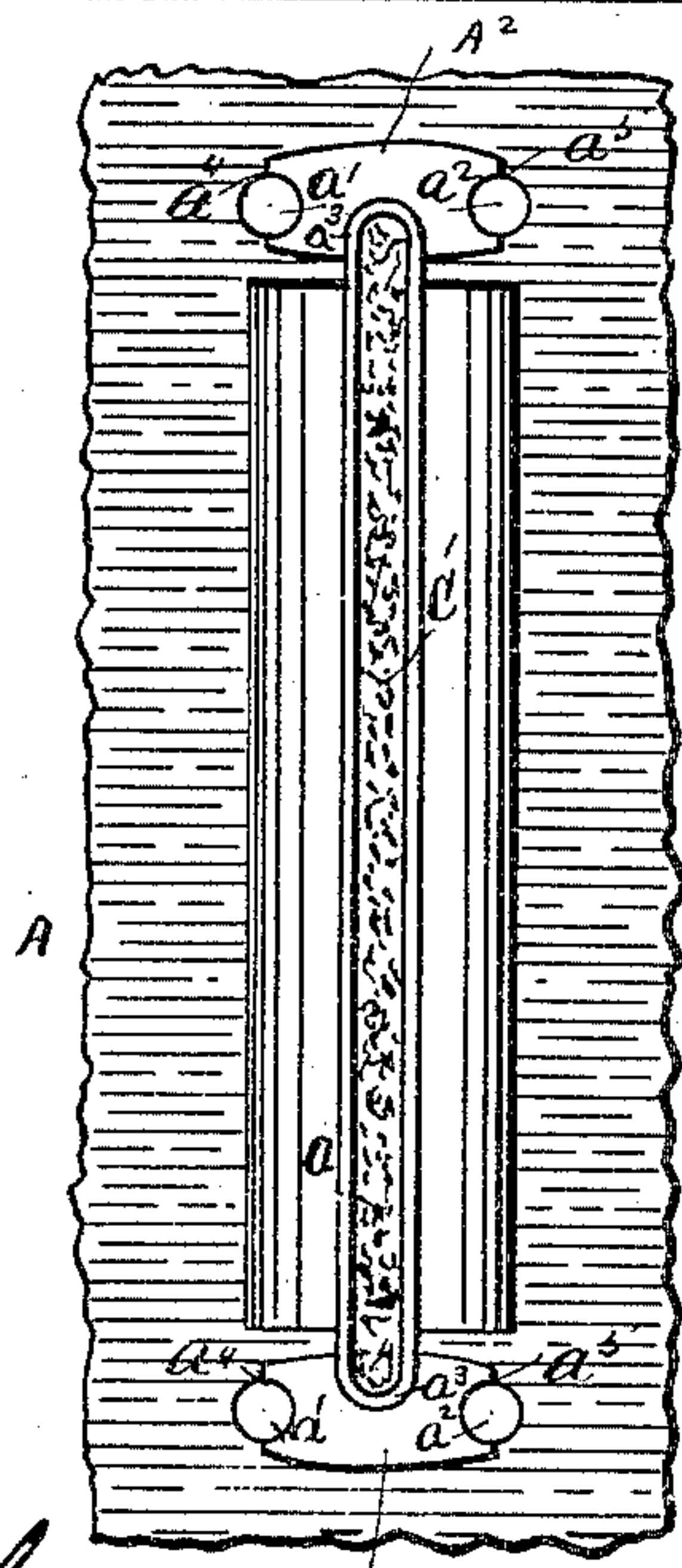
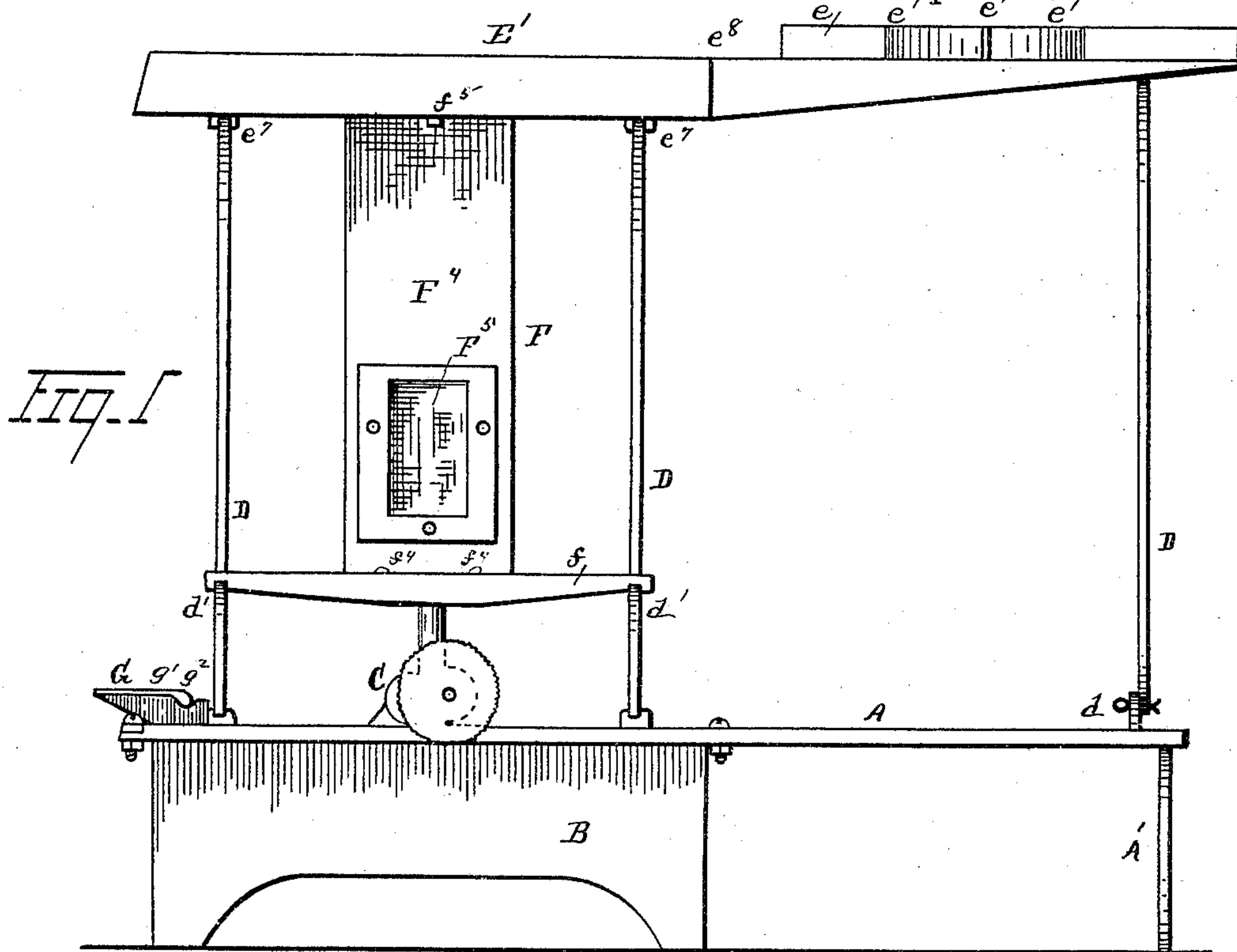
D. L. WHITTINGHAM.

2 Sheets—Sheet 1.

## OIL STOVE.

No. 436,620.

Patented Sept. 16, 1890.



Witnesses

John Schuman A  
Charles F. Salow.

Inventor

Inventor  
David L. Whittingham  
By his Attorney  
Newell S. Wright.

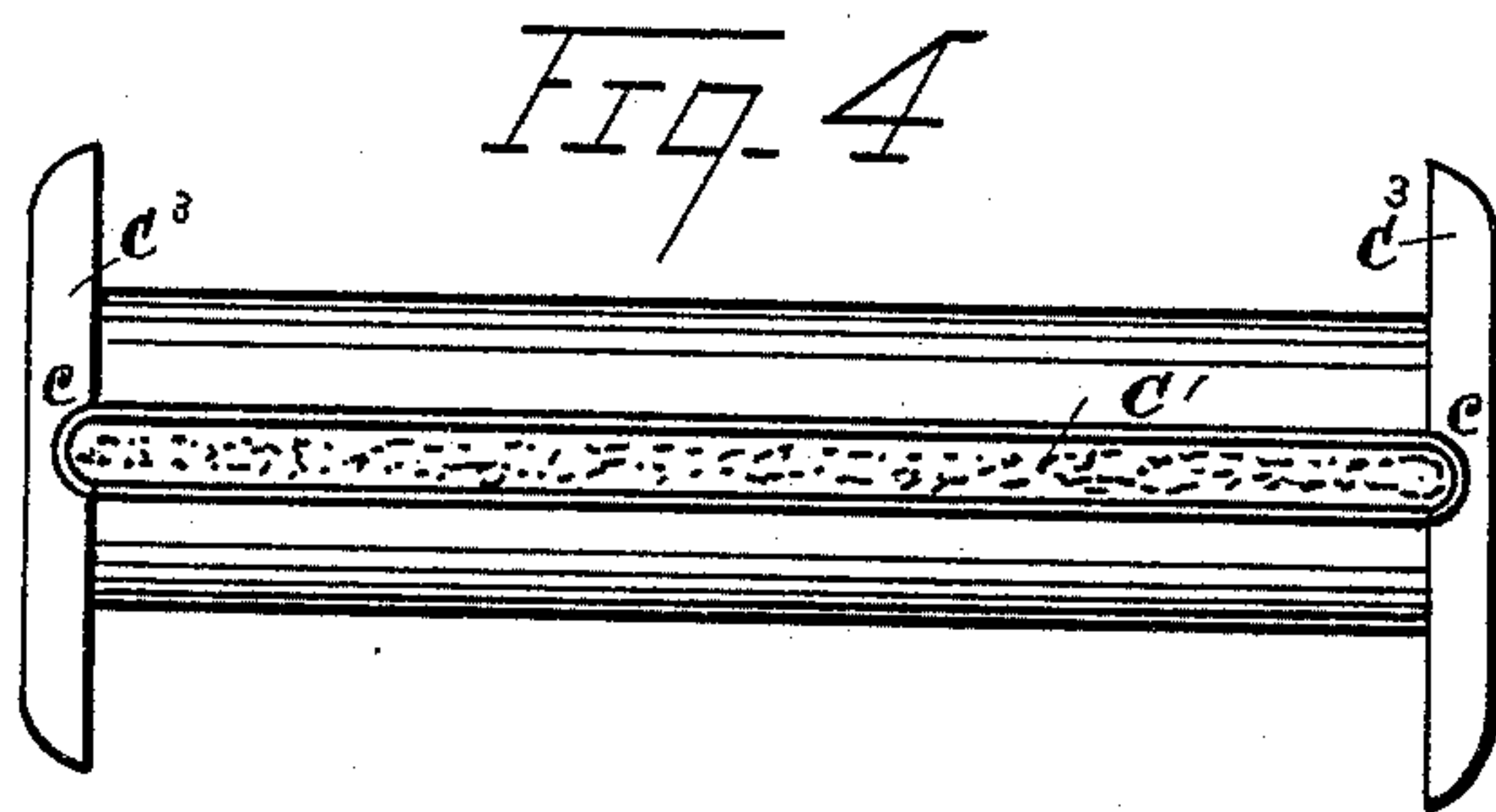
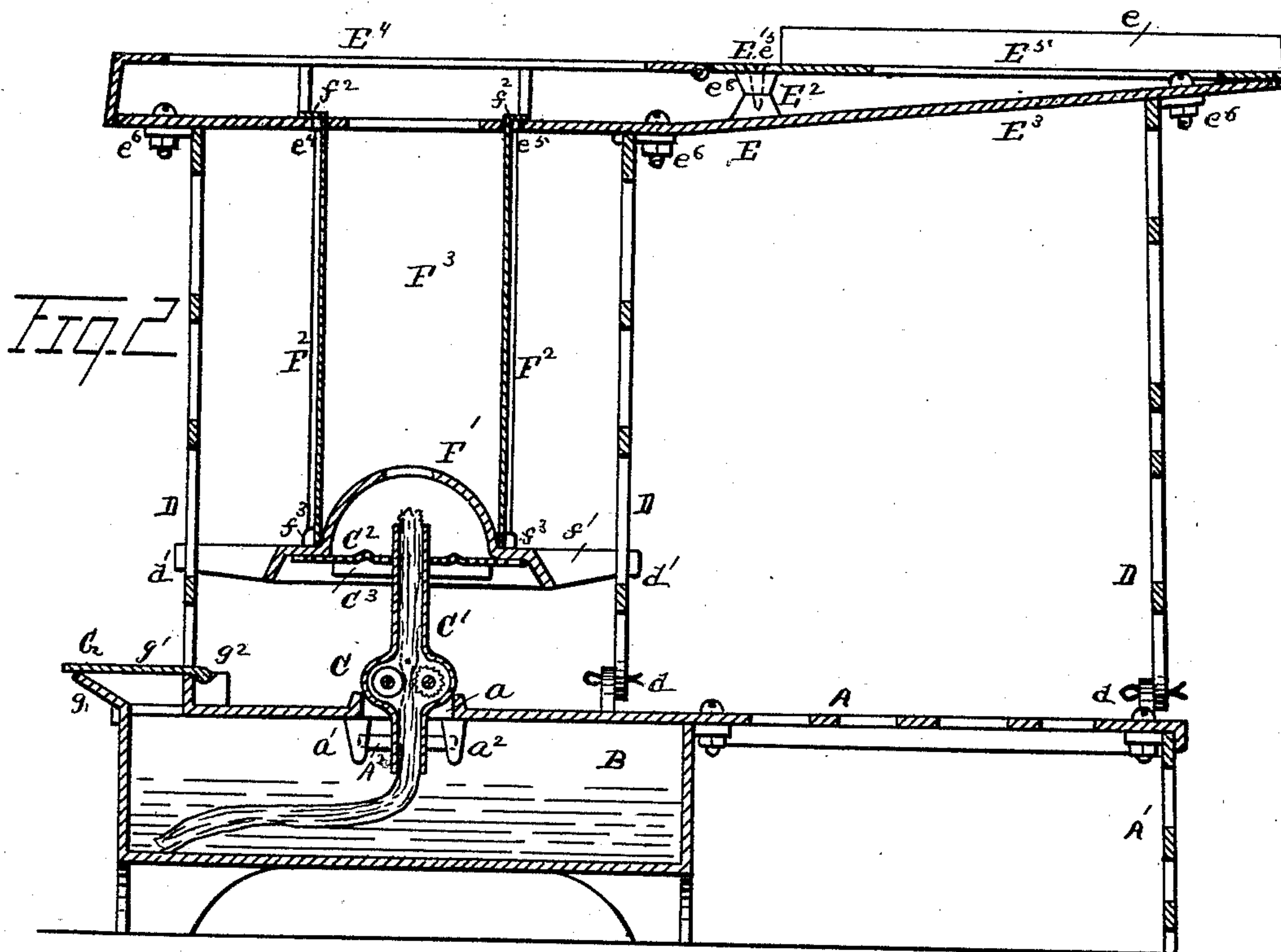
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2 Sheets—Sheet 2.

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# UNITED STATES PATENT OFFICE.

DAVID L. WHITTINGHAM, OF DETROIT, MICHIGAN, ASSIGNOR TO CHARLES WHITTINGHAM AND FRANK A. JOHNSON, BOTH OF SAME PLACE.

## OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 436,620, dated September 16, 1890.

Application filed November 20, 1889. Serial No. 330,957. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID L. WHITTINGHAM, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Oil-Stoves; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in oil-stoves; and it consists of the combinations of devices and appliances, as more fully hereinafter specified, and pointed out in the claims, and as more particularly illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation embodying my invention. Fig. 2 is a vertical longitudinal section. Fig. 3 is an inverted partial plan showing the manner of connecting the wick-tube with the base. Fig. 4 is a plan view of the wick-tube with the perforated plate removed.

The object of my invention is to provide an oil-stove simple in construction and operation, economical in its manufacture, and of superior efficiency.

I carry out my invention as follows:

A represents the base, which I prefer to support by the oil-reservoir B at one end and by any suitable leg A' at the opposite end.

C is the burner, which I construct with a wick-tube C', passed through said base, as shown, the base being constructed with a slot at a for that purpose, which slot at the extremities is constructed to closely embrace the said wick-tube and aid in supporting it in an upright position. Adjacent to the extremities of said slot the base is also constructed with lugs a' a<sup>2</sup>, upon each pair of which a brace-arm A<sup>2</sup> is secured, said arm engaging the wick-tube and serving to hold it firmly in a vertical position. This arm may be constructed, therefore, with a recess a<sup>3</sup> to receive the end of the wick-tube, and also with recesses a<sup>4</sup> and a<sup>5</sup> to receive the lugs a' a<sup>2</sup>, respectively. Each arm A<sup>2</sup> may be

forced into position between the inclined inner surfaces of each pair of lugs after the wick-tube is located in place, and when thus seated the arm may readily be soldered in position. This arrangement is simple and economical and will effectually hold the tube in proper position.

C<sup>2</sup> is the customary perforated plate usually employed upon burners. I prefer to support it upon the wick-tube by means of cross-arms C<sup>3</sup>, engaged upon the extremities of the tube in suitable position. To this end each of said cross-arms may be recessed, as shown at c, to embrace the end of the tube upon which it may be soldered. In this manner the perforated plate is supported free from the base, leaving nothing to obstruct the ready cleaning of the base adjacent to the burner. This feature (the readiness with which the parts adjacent to the burner may be cleaned) will be appreciated by the user, and forms an important improvement over analogous devices now in use.

D represents a series of standards, some of them having a jointed engagement with the base, as shown at d, and engaged at the top with an intermediate plate E, upon which is secured a top plate E', the said plates E and E' forming between them a flue E<sup>2</sup>. The plate E is preferably inclined upward at one end, as shown at E<sup>3</sup>, to direct the flame as desired, and also to contract and close the flue at the outer extremity of the said plates. The upper plate is provided with orifices E<sup>4</sup> and E<sup>5</sup>, whereat the heat may be applied to a suitable cooking utensil. At the orifice E<sup>5</sup>, I prefer to arrange bars or ribs e longitudinal with the upper plate to serve as rests for the cooking utensil and to facilitate in the direction of the flame to the end of the flue, and thus more effectually throw it about the cooking utensil. On the margins of the upper plate adjacent to the orifice E<sup>5</sup>, I also prefer to provide radial ribs e' to facilitate a suitable spreading of the flame.

F denotes the chimney, the construction of which forms a special feature of my invention. To this end F' is the cone at the base of the chimney, which I design to make of a piece of cast metal, and provided with arms



$f f'$ , supported upon the two adjacent standards D. Said standards may simply be provided with suitable shoulders at  $d'$ , upon which the extremities of said arms may freely rest. The sides  $F^2$  of the chimney consist each of a piece of metal provided with a flange  $f^2$  at its upper edge. The sides are inserted in elongated orifices at  $e^4 e^5$  in the plate E, the flanges thereof resting upon the said plate, as shown. Lugs  $f^3$  upon a supporting-flange of the cone serve to hold the lower edges of the sides in place. The ends of the chimney may consist of metal plates  $F^3$  and  $F^4$ , flanged to engage the margins of the sides  $F^2$ , and by which they are held from inward displacement. Lugs  $f^4$  upon the cone and similar lugs  $f^5$  upon the under surface of the plate E serve to hold the end pieces from outward displacement. The cone and end pieces are set up before the plate E is tightly engaged with the standards D. When said plate is firmly engaged upon the standards, it is evident that its pressure upon the end pieces will securely hold them and the cone firmly in position. The side pieces may then be inserted to complete the chimney. The advantages of this construction are evident. The entire chimney may very readily be taken to pieces for cleaning or for removing any obstruction. One end plate  $F^4$ , I prefer to provide with a removable piece of mica  $F^5$ . The upper plate  $E'$  is provided with flanges to rest over the plate E. The two plates may be united by a single screw, as at  $e^5$ . So, also, each of the standards D may be united to the plate E by a single screw  $e^6$ , the plate being provided with lugs  $e^7$ , engaging the standards to prevent their turning. While I do not confine myself to this particular manner of uniting the plate E with the standards and with the top plate, yet it is evident the means described are exceedingly simple and economical. No drilling of holes is required, as all may be cast in the various parts, as demanded. The various parts may, any of them, be readily removed and replaced, as desired.

G is a filling-chute. Instead of being made in the usual way, I design to construct it with an inclined way  $g$  and with a detachable cover  $g'$ , simply resting in suitable sockets at  $g^2$ , serving to hold it in place, and permitting its being thrown over out of the way for filling without the employment of a hinge.

To facilitate access to the chimney, I design also to construct the top plate  $E'$  in two parts, hinged together, as shown at  $e^8$ , so that the

part over the chimney can readily be thrown back.

What I claim as my invention is—

1. In an oil-stove, the combination, with the base A, provided with lugs  $a' a^2$  upon its under surface, of the wick-tube inserted therein and a brace-arm engaging said lugs and said wick-tube at each end thereof, substantially as and in the manner described.

2. In an oil-stove, the combination, with the base, the wick-tube fixed thereto, and a perforated plate surrounding the tube, of arms independent of the base, said arms recessed intermediate their ends to embrace the ends of the wick-tube and secured thereto, forming supports for the perforated plate, substantially as set forth.

3. In an oil-stove, a plate, standards supporting the plate, a chimney having detachable side and end walls, and a cone supported upon said standards, substantially as set forth.

4. In an oil-stove, a plate, standards supporting the plate, a cone, supports for the cone resting upon the standards, and detachable side and end walls of a chimney engaged at their upper ends with the plate and at their lower ends with the cone and its supports and held in place by said plate and supports, substantially as set forth.

5. In an oil-stove, a chimney formed by detachable side and end walls, a base-support, and a top support for holding the walls in assembled adjustment, one of the chimney-walls having a mica window formed therein, substantially as set forth.

6. In an oil-stove, the combination of the base, the oil-reservoir, the burner, the standards engaged with the base, the plate E, engaged upon said standards, a hinged plate  $E'$ , engaged upon the plate E, forming a flue  $E^2$ , a chimney, constructed as described, engaged upon said standards, and said plate E, substantially as described.

7. In an oil-stove, a plate, standards supporting the plate, a chimney, and a cone supported upon the adjacent standards, said chimney and cone held in place by the pressure of said plate thereupon, substantially as set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

DAVID L. WHITTINGHAM.

Witnesses:

N. S. WRIGHT,

CHAS. F. SALOW.