

F. E. WHITE & F. E. HOOPER.
 OIL STOVE.
 APPLICATION FILED JULY 10, 1917.

1,247,474.

Patented Nov. 20, 1917.
 2 SHEETS—SHEET 2.

Fig. 4.

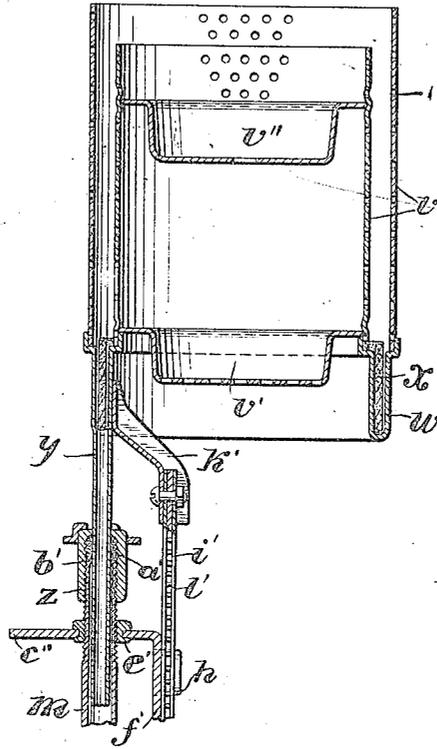


Fig. 6.

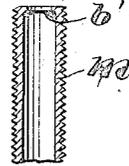


Fig. 5.

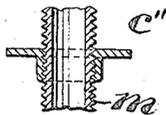
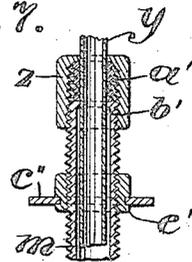


Fig. 7.



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OIL-STOVE.

1,247,474.

Specification of Letters Patent.

Patented Nov. 20, 1917.

Original application filed April 4, 1916, Serial No. 88,888. Divided and this application filed July 10, 1917. Serial No. 179,712.

To all whom it may concern:

Be it known that FRED E. WHITE and FREDERICK E. HOOPER, citizens of the United States, and residents of Gardner, Massachusetts, have invented certain new and useful Improvements in Oil-Stoves, of which the following is a specification.

This invention relates to oil stoves, and the application constitutes a division of an application filed by us April 4, 1916, No. 88,888 now Patent No. 1,240,522, granted September 18, 1917.

The invention is an oil stove of the type known as blue flame, in which kerosene oil is used as a fuel and is fed from a reservoir through a horizontal pipe line from which project vertical extensions supporting burners which are vertically movable to vary the level of the oil therein, the reservoir being of the maintained oil level type. The present application is directed particularly to the details of the mechanism for raising and lowering the burner bowls and maintaining an oil-tight connection in the movement.

In the accompanying drawing,

Figure 1 shows a partial view of the stove with the supporting and operating means partly in section and partly in elevation.

Fig. 2 is a view at right angles showing a section taken through the front of the stove.

Fig. 3 is a detail of the elevating means.

Fig. 4 is a section on line 4-4 of Fig. 1.

Figs. 5, 6 and 7 show details of the packing for effecting the oil-tight connection between the moving parts.

The top of the stove is made of sheet metal as shown at *a*, with ordinary gratings *e*, removably located in the usual openings in the stove top. The pipe line of ordinary construction is shown at *l*, having vertical extensions *m* to support the burners *w*. The combustion chamber is composed of concentric tubes *v*, perforated, and supported from the burner bowl, which has an initial lighting medium *x*, the burner bowl being supplied with oil through the tube *y*. This tube enters the top of the stand pipe *m* through an oil-tight connection shown especially in Figs. 5, 6 and 7. The pipe *y* fits within the pipe *m* and a nut *z* engages

the threaded end of the pipe *m*, providing a space between the upper end of the pipe and the nut for an asbestos packing *a'*. We apply the packing by threading the stand-pipe *m*, shown in Fig. 6, externally, and reducing its internal diameter as shown at *b'* so as to make a close fit for the tube *y*, clearance being provided beneath the flange *b'* between the inside of the pipe *m* and the exterior of the tube *y*. The packing in the form of a round cord of asbestos is inserted within the nut *z*, as shown in Fig. 7, and then the nut is forced down until the packing is closely compressed when it forms a perfect oil tight joint, a most important matter in oil stoves and particularly where the maintained level of oil is above the top of the stand pipe *m*. By this connection we absolutely prevent all leakage.

In order to give the up and down movement to the burner we utilize a bracket *c''* of sheet metal supported upon the threaded end of the pipe *m* as shown in Figs. 1, 2 and 4, this bracket being carried on the threaded end of the pipe *m*, through the medium of a turned down threaded flange *c'* formed by punching through the bracket and the adjustment of the parts may thus be effected. The bracket *c''* has a right angled extension paralleling the pipe *m*, shown at *f'* Fig. 2, and is bent a second time horizontally as at *g'* with an opening therethrough which encircles the pipe *m* and tends to strengthen the connection. The vertical extension *f'* has ears *h'* struck up out of the metal of the part and these ears form guides for a double metal part *i'* which bolted at its upper end to a bracket *k'* secured to the bowl.

Between the double portions of the part *i'* is inserted a toothed rack *l'* shown in Fig. 3 and this rack is provided with projections *m'*, which extend out through openings in the double wall of the part *i'* tending to hold the rack in place, requiring no further attaching means and also serving incidentally as stops to limit the upward and downward movement of the burner, these stops coming in contact with one of the ears *h'* of the part *f'*. Vertical movement is given the rack through a flat gear *n'* secured to

the end of an operating lever *o'* and supported in a long bearing *p'* and by the turning of the operating handle vertical movement is given the burner. The stove is provided with a front plate *q'* extending from side to side and this plate carries indicating devices so that the handle which has a pointer *s'* as it is rotated indicates what action is effected by its movement. The long bearing *p'* is preferably secured in place by a screw and nut clamping an extension thereof to the bracket *c''*.

In Fig. 4 the combustion chamber, it will be observed, is of very simple construction, being made of two concentric tubes *v* with a bottom section *v'* perforated, and an upper section *v''* having a central opening.

What we claim is:

1. In an oil stove, a vertically movable burner, an oil supply pipe supporting the same having a turned in end, and an oil-tight connection between the parts comprising a threaded nut fitting over the turned

in end of the standpipe, with a packing within the nut above the end of the standpipe, substantially as described. 25

2. In an oil stove, a standpipe for supplying oil, a vertically movable burner, and means for supporting the burner upon the standpipe comprising a bracket *k'* extending laterally from the inside of the burner bowl, a part carrying a rack depending from said bracket, and an operating handle supported from the standpipe carrying a pinion meshing with the rack to move the burner, substantially as described. 30 35

3. In an oil stove, a standpipe, a burner supported thereby, a bracket having ears in its vertical face, a vertically movable double part held by said ears, and a rack carried by said part and having projections serving to retain the rack in place and also as stops to limit the up and down movement of the burner, substantially as described. 40

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