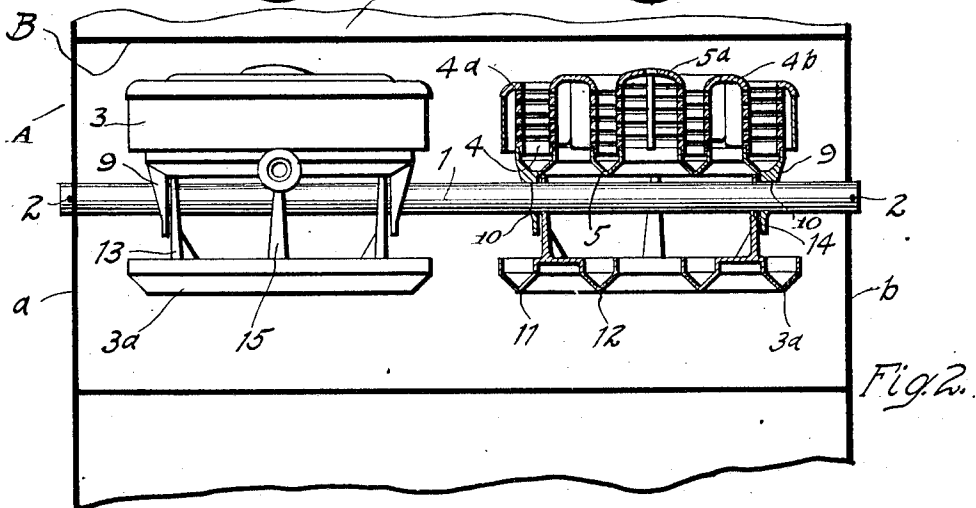
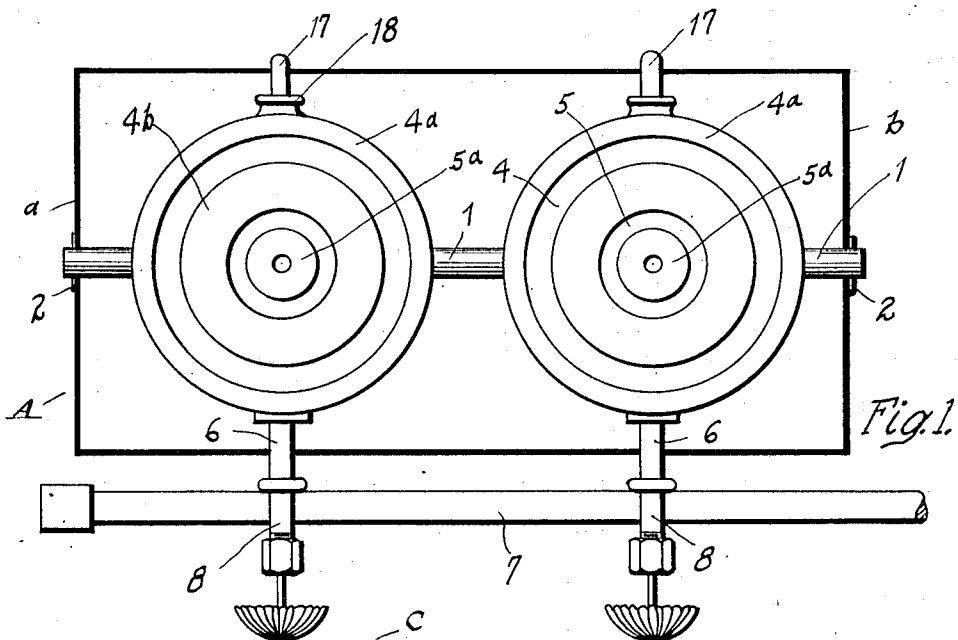


A. G. SHERMAN.
BURNER SUPPORTER.
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1,048,359.

Patented Dec. 24, 1912.



WITNESSES

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ALVIN G. SHERMAN, OF DETROIT, MICHIGAN, ASSIGNOR TO THE DETROIT VAPOR STOVE COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

BURNER-SUPPORTER.

1,048,359.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALVIN G. SHERMAN, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Burner-Supporters, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to means for supporting hydro-carbon burners upon stoves and has for its object an efficient means for stringing any number of burners upon a single rod and also hanging a starting burner from the main burner. Among its chief advantages is its manifest simplicity and its economy. It is very important in this art that the construction be as cheap as possible and yet efficient. It is to this end that this invention is directed.

In the drawings:—Figure 1, is a horizontal section of the stove with a top plan of the burners supported upon the stove. Fig. 2, is a vertical elevation of a part of the stove, showing the burners, one as a side elevation and the other as a vertical section.

A, is the shell of the stove which is of any conventional form.

B, is the top of the stove and C, is the back of the stove. Just under the top B, the burners are supported.

In the drawings the main burner and also a starting burner are shown, although my invention comprehends supporting means both for a main burner which is used with light hydro-carbon and also supporting means adapted to suspend both a main burner and a starting burner for use when heavy hydro-carbons are burned. A cylindrical rod 1 is supported by the side walls *a* and *b* of the shell of the stove by being passed through circular holes therein. Cotter pins 2 are passed through holes in the rod after it has been secured in place and thereby hold the rod from lengthwise movement. Before these pins are inserted the burners are strung upon the rod. The burner 3 is the main and upper burner and comprises a pair of open channels 4 and 5 into which the hydro-carbon to be used as fuel is introduced by the feed pipe 6 that connects with

the feed main 7. The rings 4^a 4^b and 5^a are stacked so that they form air spaces between each pair through which the air necessary for combustion may be drawn. The rings form two combustion chambers, one for each channel. They are cast so that they fit on and are supported by the channels. Valves 8 control the flow of fuel into each burner. Depending lugs 9 are cast integral with each main burner and are perforated centrally as at 10 so that the perforations are in axial alinement, although somewhat spaced from each other.

The starting burner is cast as an integral piece and comprises a pair of open channels 11 and 12 in concentric arrangement and adapted to substantially register with the channels above. This starting burner is provided with a pair of up-raised ears 13 which are perforated as at 14, the perforations being arranged to register with each other and with the perforations 10 of the lugs 9, while the tops of the ears 13 contact the bottom of the upper burner. A quarter of the way around the casting from each ear 13, a supporting leg 15 forms part of the casting. These supporting legs are of a length to contact the main burner. From the above specific description I do not wish it understood that my invention is only applicable to the form of burners herewith described, but it may be used in burners of quite different description.

If only light hydro-carbon is to be used in the burner, the starting burner may be done away with, in which event I screw the feed pipes 6 to the main burners 3. I then pass the rod 1 through the holes in the walls *a* and *b* and then through the perforations 10 of the lugs 9. Inasmuch as the burners are so connected up with the feed pipes 6 which are fixed with reference to the stove shell, the burners are located so that they cannot shift along the rod, nor turn upon the rod. The cotter pins 2 are then inserted in the perforations in the rods and they hold the rod with respect to the stove shell. It is, therefore, obvious that the rod 1 serves to support the burners on the rod. This form of construction does away with the old method of using a pair of bars passing on opposite sides of the burners and bolted to the burner at these sides. It does away with an extra supporting bar and several bolts for each burner and affords a support-

ing member that is removable without unscrewing numerous nuts and removing many bolts.

If a heavy form of hydro-carbon is to be used as a fuel, a starting burner is necessary and these starting burners, already described, may be readily strung upon the rod 1 by passing the rod through the holes 14 in the up-raised ears 13 which, as before mentioned, are made to register with the holes 10. The supporting legs 15 contact the bottom of the upper burner 3 and thereby prevent the lower burner from tipping. It is also to be noted that the up-raised ears 13 are each on the inside of the adjacent lug 9 and almost contact this ear, so that this prevents the lower burner from shifting, while the supporting leg 15 prevents it from swinging upon the rod 1. The starting burner feed pipes 17 simply rest in a neck-like part 18 of the casting so that they may be removed by merely pulling them out.

What I claim is:—

1. The combination with a stove shell, of a burner provided with depending perforated lugs, the said lugs being located opposite each other substantially on a median line of the burner, a rod slidable through the perforated lugs and securable to the stove shell and a fixed supply pipe connecting with the burner at one side of the rod so as to hold the burner from tipping on the rod, substantially as described.

2. The combination with a stove shell provided with apertures, of a burner provided with depending perforated lugs, the said lugs being located opposite each other substantially on a median line of the burner, a rod slidable through the said apertures in the stove shell and the perforated lugs, a supply pipe connecting with the burner at one side of the rod so as to hold the burner

from tipping on the rod, and means for securing the rod from endwise movement when it has been put into place, substantially as described.

3. The combination with a stove shell of a burner provided with depending perforated lugs, a starting burner located under said burner and provided with a pair of perforated upraised ears, a leg attached to the starting burner and adapted to contact the upper burner so as to prevent the starting burner from swinging, a rod passed through the perforations of the depending lugs and upraised ears and securable to the stove shell, and means for preventing the first mentioned burner from swinging on the rod, substantially as described.

4. The combination with a stove shell, provided with apertures, of a burner provided with depending perforated lugs, a starting burner located under said burner and provided with perforated upraised ears, said upraised ears being located, in each instance, so as to come on the inside of the depending lugs and substantially in contact with said lugs, a pair of upraised legs on said starting burner adapted to contact the first mentioned burner, thereby preventing the starting burner swinging, a rod passed through the perforations of the lugs and ears and through the apertures in the stove shell, means for securing said rod from endwise movement with respect to the stove shell, and means for preventing the first mentioned burner from swinging on the rod, substantially as described.

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

ALVIN G. SHERMAN.

Witnesses:

STUART C. BARNES,
VIRGINIA C. SPRATT.