

(No Model.)

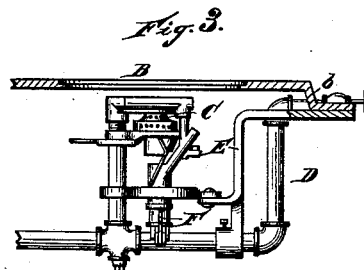
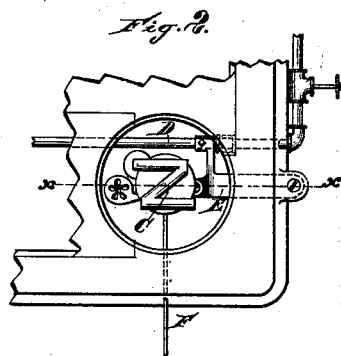
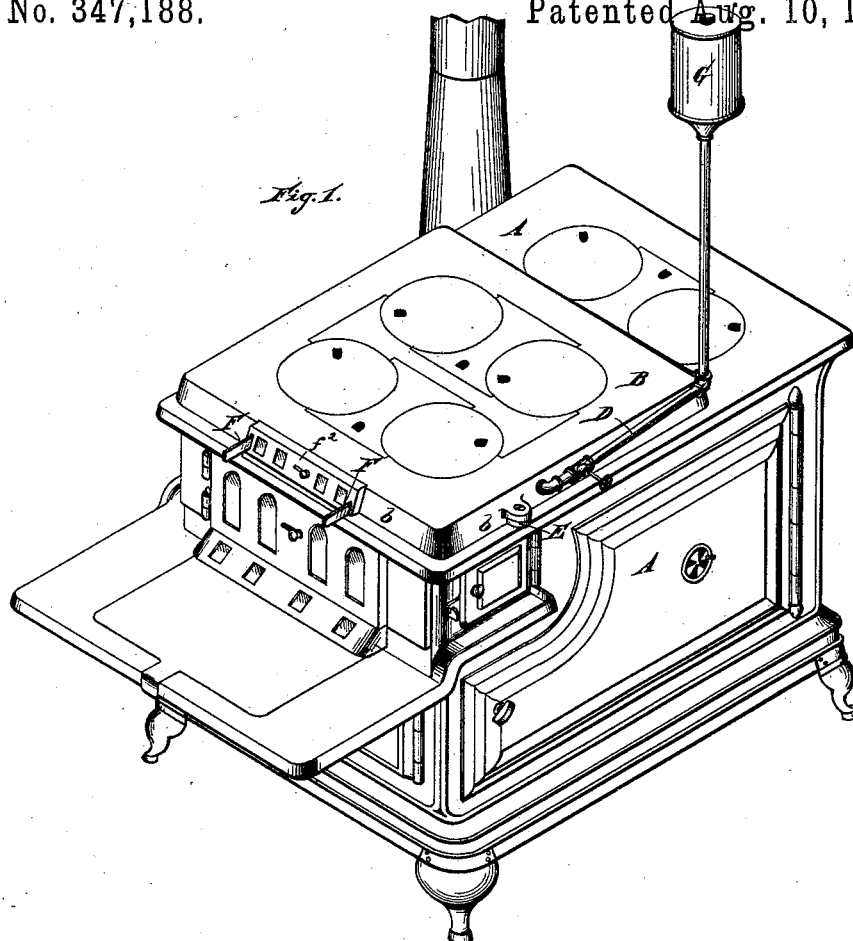
2 Sheets—Sheet 1.

H. McCONNELL.

VAPOR BURNING ATTACHMENT FOR STOVES.

No. 347,188.

Patented Aug. 10, 1886.



Attest,
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Samuel E. Thomas.

Inventor,
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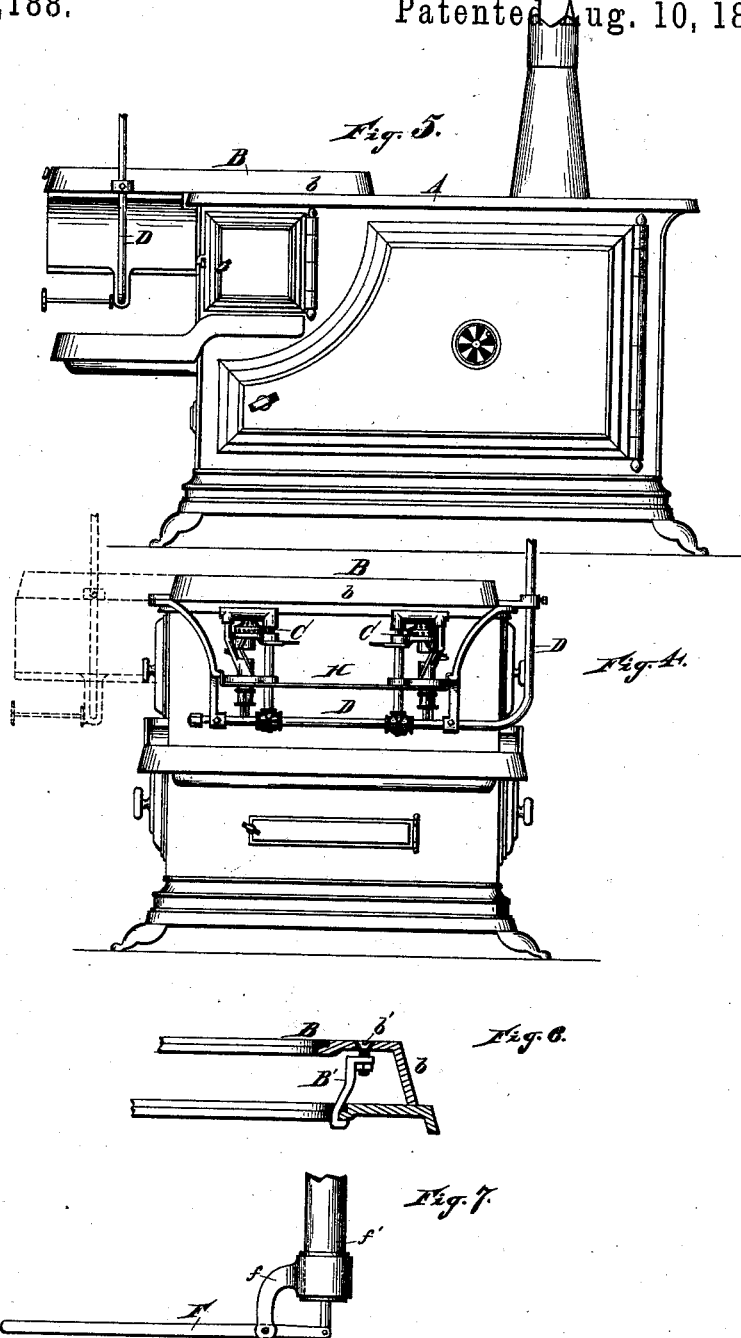
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WITNESSES

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UNITED STATES PATENT OFFICE.

HUGH McCONNELL, OF DETROIT, MICHIGAN, ASSIGNOR TO THE HOME GAS AND OIL STOVE COMPANY, OF SAME PLACE.

VAPOR-BURNING ATTACHMENT FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 347,188, dated August 10, 1886.

Application filed September 14, 1885. Serial No. 177,069. (No model.)

To all whom it may concern:

Be it known that I, HUGH McCONNELL, of Detroit, county of Wayne, State of Michigan, have invented a new and useful Improvement in Vapor-Burning Attachments for Stoves; and I 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 it, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to the combinations of devices and appliances hereinafter specified, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of an ordinary stove with my improvement applied thereto. Fig. 2 is a plan view of a part of the device with a lid removed. Fig. 3 is a sectional view showing the relation of the parts to the adjacent parts of the stove. Fig. 4 is a front view, and Fig. 5 a side view, illustrating a variation of the invention. Fig. 6 is a separate view illustrating the attachment whereby the oil stove mechanism is connected with the cooking-stove. Fig. 7 illustrates the needle-valve mechanism.

This invention is designed more particularly for the purpose of burning oil, but is adapted also for the burning of gasoline, constituting in the first instance an oil-vapor stove and in the latter a gasoline-vapor stove.

In carrying out my invention I will describe it first with respect to its location inside of the stove.

A represents an ordinary cooking stove of any construction.

B represents the top of my vapor-stove attachment. This top is in the nature of a frame-work similar to the top of a stove, having its own centers and lids. This frame-work has a downwardly-projecting flange, *b*, around its periphery, whereby it may rest upon the top of any ordinary cooking-stove.

B' represents a suitable clamp adapted to pass down through the ordinary lid or center opening in the stove below and engage the said stove, thereby holding the vapor-stove attachment in position. A stove bolt and nut, *b'*, serve to adjust this clamp and tighten it up.

C represents any suitable burner; D, the feeding pipe or pipes leading to the burners.

E is a suitable arm connected with the top B, which supports the burners and the adjacent pipe or pipes. These burners may be of any ordinary pattern. I prefer, however, to employ a lever instead of a screw-thread for opening and closing the needle-valve. Such a lever attachment is shown in Fig. 7, in which F is the lever, fulcrumed to an arm, *f*, which is in turn swiveled about the stem *f'* of the burner. It is thus apparent that the needle-valve may be opened or closed by raising or depressing the lever, and its point and the valve-seat kept clean by working the lever from side to side, thus turning the valve-spindle about its own axis. These levers F are represented in Fig. 1 as passing out through open-ended slots at both sides of the door *f*². The slots through which the levers pass admit of the necessary movement up and down to open and close the needle-valve and by opening the door between the two levers they may be given a sidewise motion for cleaning the point of the valve and its seat.

G represents the tank whereby gasoline or kerosene is fed to the burners.

It will be observed that this device is adapted to be placed upon any ordinary stove, since it simply rests flatly upon the flat top of the stove. It has its own centers and lids, and therefore does not have to be in any way adapted to the particular stove upon which it is used. It is only necessary to remove the lids and centers beneath it from the ordinary stove. This device possesses the advantage of requiring no change whatever in the cooking-stove. It also leaves the stove in the same general condition and appearance as before it is attached, and it utilizes the flues and pipe of the stove for drawing off any vapor or smoke that may be generated.

I will now describe the device slightly modified, so as to be located upon the stove with its burners standing outside of the cooking-stove. This modification is illustrated in Figs. 4 and 5. The top B is similar to that shown in Fig. 1; but the device, instead of being located entirely upon the top of the stove, is caused to project about half-way over the front of the stove, and is clamped to the stove the same as

above described. This location of the top B brings the burners into a position outside and in front of the stove. H is a platform, located beneath the burners and preferably above the feeding pipe or pipes. This serves to shield the pipes from heating, and also to reflect or reverberate the heat upward against the cooking utensils on the top B. This construction I prefer to that shown in Fig. 1. The altitude of the top B above the level of the stove forms an ample flue between the upper surface of the top B and the top of the stove, so that smoke or heat from the burners is caused to pass up through the said flues and be drawn away by the stove-pipe of the stove. This construction also is preferable, because it leaves a much larger free space upon the top of the cooking-stove, and I have ascertained in using the device that the heat from the burners is quite effectual throughout the top of the cooking-stove, and this additional space back of the vapor attachment can be utilized for heating water or for warming purposes. In this form of the device the levers F would project out directly in front of the opening or platform H; or, if desired, the ordinary screw-valve might be employed. It will be apparent upon inspection of this device shown in Figs. 4 and 5 that the burners need not be out over the hearth of the stove; but, on the contrary, should the location of the reservoir or any other contingency render it necessary or desirable, the device might be attached to the top of any stove, so that the burners should project out at the side, instead of out over the hearth, and without any change whatever in the attachment itself, as shown by dotted lines in Fig. 4.

I have described this device as applicable to the use of oil or gasoline. The application of the device as first described, with the burners within the stove, would be more applicable to oil alone, because of the liability to explosion above mentioned; but the device shown in Figs. 4 and 5 is well adapted for either oil or gasoline, since, by reason of the burners being outside the stove-body, the danger of an accumulation of vapor within the stove is not met with in this construction, these vapors either being carried forward and up the flue by the natural draft, or else they would settle beneath into the room, and not accumulate within the stove.

When the device is made to project over the side of the stove, with the burners located outside, I prefer, also, to employ a depending flange, *b*, in order to form a draft-flue above

the stove proper and beneath the top of the oil-stove attachment, since the products of combustion are thereby brought more directly against the cooking utensils; but this construction is not absolutely essential.

What I therefore claim, broadly, is—

1. The combination of a cooking-stove, a frame-work detachably secured to and projecting beyond the stove-top, and one or more burners depending from said frame-work in a position outside the stove body, substantially as described.

2. The combination of a cooking-stove, a frame-work detachably secured to and projecting beyond the stove-top, said frame-work being flanged to form a flue-space between it and the top of the stove, and burners located beneath the projecting part of said flanged frame-work, substantially as described.

3. The combination, with a cooking-stove, of a frame-work having flanged sides and provided with removable lids, said frame-work being detachably secured to the top of the stove, a burner or burners and a feed pipe or pipes depending from said frame-work, and a supply-reservoir for oil or gasoline, substantially as described.

4. The combination of a cooking-stove, a frame-work detachably secured to and projecting beyond the top of said stove, burners located beneath the projecting portion of said frame-work, a feed pipe or pipes, and a platform, H, located above the horizontal portion of said pipes, substantially as described.

5. The combination of a cooking-stove, a flanged frame-work detachably secured to the stove-top, a burner or burners depending from said frame-work, a feed pipe or pipes also depending from said frame-work, and a platform located beneath the burners and above the feed-pipes, substantially as described.

6. The combination, with a cooking-stove and a vapor-burner-supporting frame-work placed on the stove-top, of a clamp, *B'*, adapted to be engaged in one of the lid-openings of the stove, and a nut and vertical screw-bolt, *b'*, adjustably connecting said clamp to the under side of the burner-supporting frame-work, substantially as described.

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

HUGH McCONNELL.

Witnesses:

N. S. WRIGHT,
M. B. O'DOHERTY.