

(No Model.)

G. BAVIER.

GAS HEATING ATTACHMENT FOR SOLID FUEL STOVES.

No. 512,268.

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Fig. 1.

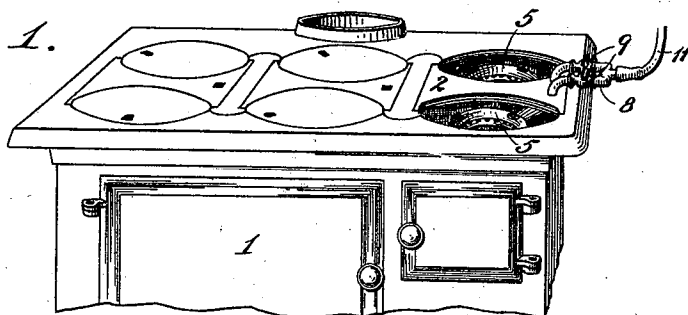


Fig. 2.

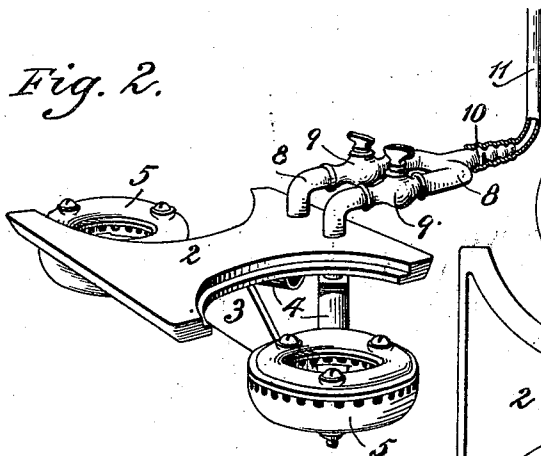


Fig. 3.

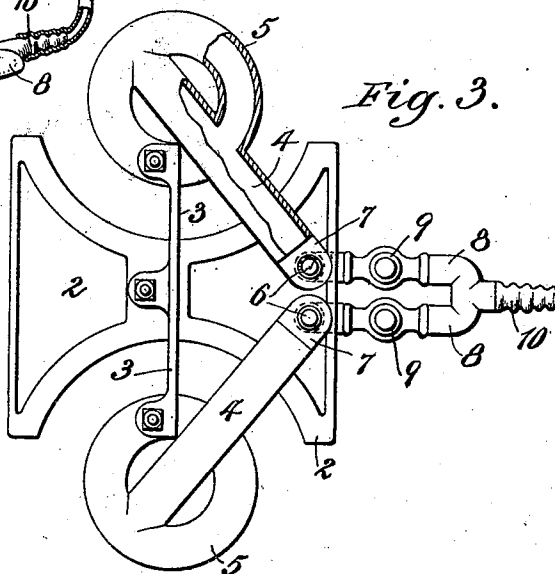
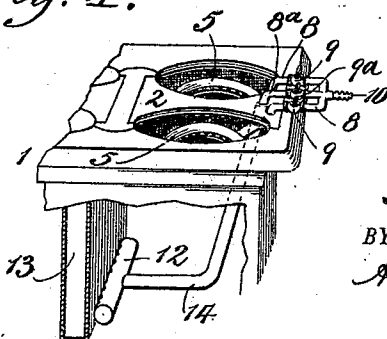


Fig. 4.



WITNESSES:

John M. Deemer
Timothy F. Dillond

INVENTOR

George Bavier

BY

Alvin K. Goodwin

ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE BAVIER, OF NEW YORK, N. Y.

GAS HEATING ATTACHMENT FOR SOLID-FUEL STOVES.

SPECIFICATION forming part of Letters Patent No. 512,268, dated January 9, 1894.

Application filed May 12, 1893. Serial No. 473,930. (No model.)

To all whom it may concern:

Be it known that I, GEORGE BAVIER, a citizen of the United States of America, residing at the city of New York, county and State of New York, have invented certain new and useful Improvements in Gas Heating Attachments for Solid-Fuel Stoves, of which the following is a specification.

The object of my invention is to provide an inexpensive and efficient attachment embodying an auxiliary gas burner or burners for use with ordinary coal or wood burning stoves or ranges whereby such a stove may in a few moments be transformed into a gas heating stove, when the ordinary solid fuel fire is low or during warm weather when solid fuel fires are not required.

The invention comprises one or more gas burners held to a removable plate which is adapted for use at an opening of the stove top and in the preferred construction corresponds in form with the ordinary bridge or X piece which partly supports the stove lids. This removable plate carries gas burners and a gas feeding device therefor, and when a plurality of burners are used, independent gas cocks are provided to feed each burner separately, and the gas feeding device is also provided with a nozzle permitting attachment of a removable or flexible gas supply tube leading from any convenient illuminating burner or other source of supply. A gas heater for the ordinary water back of the stove or range is also provided.

Various novel details of construction contribute to the general utility and efficiency of the apparatus.

The invention will first be described and then will be particularly defined in the claims hereinafter set forth.

Reference is to be had to the accompanying drawings forming a part of this specification, and in which like numerals indicate corresponding parts in the several views.

Figure 1, is a perspective view of the upper portion of an ordinary coal or wood burning stove, with my attachment in position for use. Fig. 2 is a top perspective view of the attachment drawn to a larger scale. Fig. 3, is a bottom plan view of the attachment, partly broken away and in section; and Fig. 4, is a detail perspective view of the attach-

ment employing a water back heating burner with the pot hole burners.

The coal or wood burning stove or range 1, shown in part in Figs. 1 and 4, of the drawings, is but an example of the many styles of solid fuel stoves to which my invention is applicable. In the preferred construction of removable plate adapted to an opening of the stove top, I use such a plate in the form of a central bridge or X plate 2, which may be applied to the stove top when its ordinary central bridge is removed after first removing the pot hole covers. To this bridge plate 2, is suitably fastened a bracket 3, to which are held the outer parts or heads of the burners, which may have any ordinary or approved construction. I prefer, however, to use burners of the Bunsen type or those having gas and air mixing tubes 4, communicating with the flame heads 5. The gas nipples 6, pass through bracket plates 7, formed on the tubes 4, next their open rear ends, said nipples passing through the plate 2, to connect with the gas feeding device presently described, and also to give substantial support to the inner or rear ends of the burners from said plate. The gas discharge orifices of the nipples 6, faces the open rear ends of the mixing tubes whereat air is admitted with the gas, and both gas and air commingle in the tubes on their way to the heads 5, from which the burners flame hotly and directly at the centers of the pot holes of the stove. But one burner may be applied to serve at one pot hole but the two burners useful at either one or both pot holes are preferred in practice. More than two burners, may, however, be used to serve at corresponding pot holes or parts of the stove top.

I employ a gas or fluid fuel feeding device having peculiar relations to or with the bridge plate 2. This feeding device, when two burners are used, comprises a U shaped pipe, having two branches 8, 8, which are bent downward at their inner ends which connect in any approved way with short lengths of pipe to which the inner ends of the burner tubes 4, are fastened at and by the gas feeding nipples 6, to make a simple and substantial coupling of the burners and feeding device to the bridge plate. Separate screw nipples may be used and be passed through the

plate 2, and be screwed at opposite ends to and within the branch feed pipes 8, and the gas nipples 6, in fact, any approved mode of connecting the parts may be adopted. In each feed pipe 8, there is fitted a cock 9, controlling feed of gas to the burners 4, 4, individually or separately to allow either one or both of the burners to be used at pleasure. At the outer part or bend of the feeding device there is provided a nozzle 10, adapted to receive a removable or adjustable gas supply pipe 11, which may be ordinary rubber or fabric gas tubing and may connect at its farther end with an illuminating gas burner (not shown) or any other convenient source of fluid fuel supply.

I specially mention the laterally projecting arrangement of the gas feeding device relatively to the bridge plate 2, and to the stove or range to which the attachment is adjusted, as two distinct and important advantages are thereby attained; first, the laterally projecting feeding device serves as a most convenient lifter by which the entire attachment may be grasped by hand and applied to or removed from the stove top without soiling the hands or using a separate implement for this purpose; and, secondly, the lateral projection of the feeding device removes its nozzle 10, so far from the direct or radiated heat of or from the burners and stove body, as to entirely avoid burning of the gas supply tube 11, while at the same time providing for most convenient attachment of this tube to the apparatus. These advantages are secured irrespective of the number of burners used, that is to say, whether the attachment has but one or two or more than two burners.

In Fig. 4, of the drawings is shown a modified form of the attachment which besides the two burners 5, 5, at the stove pot holes, and as a further improvement, is provided with a third burner 12, which ranges alongside the ordinary water back 13, of the stove and has a gas and air mixing tube 14, which connects with an intermediate or third branch 8^a, of the gas feeding device which thus has with the other branches 8, 8, to the pot hole burners, three branches or divisions, the one 8^a, having its own cock 9^a. All three branches connect with the bend or cross tube which carries the nozzle 10, to receive the gas supply tube. The orifices of the burner 12, face the water back thereby causing the flame from this burner to impinge directly against it and quickly heat the water therein, and also in a hot water boiler connected thereto in any approved manner. The burner 12, may alone be used to obtain a supply of hot water in the connected boiler, or either or both of the pot hole burners, may be used, or all three burners may be used, at pleasure.

The bridge plate 2, is flush at the top with the top of the stove or range when applied thereto, and does not in the least interfere with the safe and convenient use of cooking vessels at the pot holes of the stove.

I claim as my invention—

1. A gas heating attachment for solid fuel stoves, comprising a removable part or plate adapted for use at an opening of the stove top, and one or more gas burners and a gas feeding device held to said plate, said feeding device having a nozzle adapted to receive a gas supply tube, substantially as described.

2. A gas heating attachment for solid fuel stoves, comprising a removable part or plate adapted for use at an opening of the stove top, and one or more burners and a gas feeding device held to said plate, said gas feeding device projecting laterally to form a lifter and having a nozzle receiving and protecting a gas supply tube, substantially as described.

3. A gas heating attachment for solid fuel stoves, comprising a removable part or plate adapted for use at an opening of the stove top, a plurality of burners held to said plate, and a gas feeding device held to the plate and having independent cocks controlling feed of gas to each burner separately and also provided with a nozzle receiving a gas supply tube, substantially as described.

4. A gas heating attachment for solid fuel stoves, comprising a removable part or plate adapted for use at an opening of the stove top, one or more burners held to said plate, and having a gas nipple, a mixing tube and a flame head, and a gas feeding device, also held to the plate, and having a nozzle adapted to receive a gas supply tube, substantially as described.

5. A gas heating attachment for solid fuel stoves, comprising a removable part or plate adapted for use at an opening of the stove top, a burner held to said plate and adapted to flame at the stove water back, and a gas feeding device for said burner held to the removable plate, substantially as described.

6. A gas heating attachment for solid fuel stoves, comprising a removable part or plate adapted for use at an opening of the stove top, a burner or burners held to said plate and adapted to flame at the ordinary pot holes of the stove top, a burner held to said plate and adapted to flame at the stove water back, and a gas feeding device for said burners held to the removable plate, substantially as described.

7. A gas heating attachment for solid fuel stoves, comprising a bridge plate 2, and burners 4, 5, 6, and a gas feeding device 8, 9, 10, held to said bridge plate, substantially as described.

8. A gas heating attachment for solid fuel stoves, comprising a bridge plate 2, burners 4, 5, 6, and 12, tube 14, held thereto, and a gas feeding device also held to the plate and comprising tubes 8, 8, 8^a, with cocks 9, 9, 9^a, and a nozzle 10, substantially as described.

GEORGE BAVIER.

Witnesses:

ALBERT J. DOTY,
C. E. WHITNEY.