No. 643,067. Patented Feb. 6, 1900.

F. A. Magee.

GAS BURNING ATTACHMENT FOR COAL COOKING STOVES OR RANGES.

(Application filed Aug. 18, 1899.)

WITNESSES

INVENTOR

Frank A. Magee
by his atty.
Charles B. Raymond

THE KORES PETERS CO., PRINTING, WASHINGTON, D.C.
F. A. Magee.

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THE NOYES PETERS CO., PHOTO-LITHO, WASHINGTON, D.C.
UNITED STATES PATENT OFFICE.

FRANK A. MAGEE, OF WENHAM, MASSACHUSETTS, ASSIGNOR TO THE MAGEE FURNACE COMPANY, OF BOSTON, MASSACHUSETTS.

GAS-BURNING ATTACHMENT FOR COAL COOKING STOVES OR RANGES.

SPECIFICATION forming part of Letters Patent No. 643,087, dated February 6, 1900.

Application filed August 18, 1899. Serial No. 727,697. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. MAGEE, a citizen of the United States, residing at Wenham, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Gas-Burning Attachments for Coal Cooking Stoves or Ranges, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in explanation thereof.

The invention relates especially to the following-described means for incorporating with an ordinary coal cooking stove or range a gas-burning attachment whereby the stove or range may be used either as a coal-stove or as a gas-stove, or both, as may be desired.

I will now describe the invention in detail in connection with the drawings, wherein—

Figure 1 is a view in plan of a cooking-stove provided with my invention, the two rear pot-hole covers being removed to show a burner applied to one and the gas-coupling in the other. Fig. 2 is a view in enlarged vertical section upon the dotted line 2-2 of Fig. 1. Fig. 3 is a view in enlarged elevation of the burner removed from the stove. Fig. 4 represents in enlarged section the burner removed from the stove, the pot-hole covered with its usual cover, and the coupling-nipple supply-pipe covered by a protecting-cap. Fig. 5 is a detail view showing the back plate of the stove prepared for receiving a gas-supply pipe.

The invention resides especially in a spider-plate burner A, adapted to be set in one of the usual pot-holes A' in the top plate A² of an ordinary coal or wood burning cooking stove or range, and which pot-hole when the stove is burning coal or wood is covered by the common type of stove-cover A³. The spider-plate burner has an exterior rim a, which preferably is continuous and which acts to suspend the burner in a flue of the stove below the pot-hole of the stove by resting upon the usual flange a' in the top plate about the pot-hole. This rim has the downwardly-extending arms a² integral therewith, which end at the outer edge of a burner-plate a³ and act to suspend or hold the plate in the flue-space A⁴ of the stove and also to provide the openings or passages a⁵ between the flue-space of the stove and a combustion-chamber A⁶ above the gas-burner and surrounded by the arms a² and rim a. The plate A is shaped to form a burner by having in it an annular recess a⁷, which in turn surrounds the annular wall a⁸, in the upper edge of which are radial recesses or grooves a⁹. This wall surrounds a gas-receiving chamber a¹⁰, which has a feed opening into it from below by means of a hole a¹¹. A flat metal plate a¹² of a size to cover the said wall a¹º is fastened to the plate a¹³ by screws a¹⁴, which pass through the plate and serve to hold a collar, hereinafter referred to, thereof.

The openings connecting the combustion-chamber A⁶ with the flue-space A⁴ are upon all sides of the spider-plate and provide means whereby there may be established a downward draft from the outer air and the combustion-chamber into the stove-flue. There may also extend from the rim a the narrow radial supports B, the upper surfaces of which are flush with the upper surfaces of the rim 75 and which act to support dishes over the burner and which are smaller than the diameter of the combustion-chamber.

I prefer to connect the burner with a source of gas-supply by means of a coupling C, having an ear c, by which it is adapted to be fastened to an oven or other flue-plate by a screw. This coupling has a passage c², one end of which is threaded to receive the end of a gas-supply pipe c³. The coupling also has a nipple c⁴ about its outlet c⁵ and a shoulder c⁶, which surrounds the nipple. The nipple is of a size to closely fit a hole c⁷ in the collar c⁸, fastened to the under side of the spider-plate burner A by screws c⁹. The collar serves to surround the nipple c⁸ and also confine a packing, preferably of asbestos, to the said plate A and in such a position as to bear against the top of the nipple when the spider-plate burner is placed on the coupling.

It will be seen that the spider-plate burner may be connected with the coupling and disconnected by being placed upon the nipple and upon the flange a' about the pot-hole.
about as a usual cover-plate would be put over a pot-hole and that it can be removed in the same manner. I mean by this that it is not necessary to turn the spider-plate burner with respect to the coupling or to do anything more than to place it upon the nipple for the purpose of connecting it with the gas-supply and to lift it from the nipple when it is desired to remove it and substitute the ordinary pot-hole cover.

When the spider-plate burner is not in use, the nipple-hole in the coupling is preferably covered by a metal cap, which fits over it and which also has a plug to enter the hole therein. (See Fig. 4.)

The gas-supply pipe extends from the end wall of the stove and has a cock in it for regulating the admission of gas to the burner and also the usual means for controlling the admission of air. The stove itself may be prepared for the reception of the gas-feed pipe by having formed in its end plate a hole, through which the pipe may be passed when desired and which hole, when a gas-burning attachment is not employed, is closed by a cover, pivoted to the plate above the hole to be turned or swung over it to close it.

Of course as many pot-holes of the stove or range may be equipped with the burner as may be desired. In the drawings I have shown two.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination in a gas-burning attachment of the character specified, of a plate A having depending arms, a burner-plate connecting the lower ends of said arms and a gas-burner contained in the cavity formed by the arms, its gas-openings being in substantially the plane of said burner-plate openings between the arms connecting the cavity with the flue-space of the stove and means for detachably connecting said attachment with a source of gas-supply, as and for the purposes described.

2. The gas-burner attachment having the rim α, the depending arms α², the plate α³ at the lower ends of the arms having an annular recess α⁴ about a wall α⁵, said wall having radial recesses or grooves α⁶, a chamber α⁷ surrounded by said wall, a plate α⁸ attached to said wall to cover said recesses, and a section of a coupling comprising a collar and a packing fastened to the under surface of the attachment about the inlet to the chamber.

3. The coal or wood range or stove having the gas-supply pipe α⁹ entering a flue-space thereof, a coupling C in said flue-space below a pot-hole connected with said pipe and having an upwardly-extending nipple surrounded by a shoulder, with a gas-burner attachment having a rim α to rest upon the top of the stove, a depressed section having a gas-burner and a section of a coupling to connect the burner with the nipple, the said attachment also having lateral openings between the combustion-chamber of the burner and the flue-space of the stove, as and for the purposes set forth.

4. The combination of a coal or wood stove or range having a gas-supply pipe α⁹ entering a flue-cavity thereof, and a coupling C in said flue-space below a pot-hole, said coupling being connected with said gas-supply pipe and having an upwardly-extending nipple and a shoulder surrounding the same, whereby it is adapted to receive a burner or a closing-cover, as and for the purposes set forth.

FRANK A. MAGEE.

Witnesses:
F. F. RAYMOND, 2d,
J. M. DOLAN.