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UNITED STATES PATENT OFFICE.

THOMAS A. BRYAN, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE BRYAN MANUFACTURING COMPANY, OF SAME PLACE.

GAS-STOVE FOR HEATING.

SPECIFICATION forming part of Letters Patent No. 543,568, dated July 30, 1895.

Application filed May 31, 1894. Serial No. 512,992. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. BRYAN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Gas-Stoves for Heating, of which the following is a specification.

This invention relates to a gas-stove for heating rooms.

10 The object is to provide a stove which shall have combined with it means for producing a more perfect combustion of the gas and obtaining more heat and means for utilizing the light resulting from such combustion.

15 To this end I have provided a stove of improved construction.

The invention is illustrated in the accompanying drawings, in which—

20 Figure 1 is a front elevation of the stove. Fig. 2 is a vertical section of the stove. Fig. 3 is a horizontal section of the stove. Fig. 4 is a view of the burner-shell.

25 The stove-case comprises a base A, a back wall B, two end walls C, and a top plate D. An upper front plate E extends across near the top between the two end walls, and a horizontal divisor-plate F is fixed in position below the said top plate D and is in contact with the back wall B and between it and the said front plate E, and by this construction a heating-chamber G is formed in the top of the stove. The divisor-plate F does not make contact with the front plate E, but instead its front edge turns down, as at *a*, and a slot or longitudinal opening *b* separates the said turned-down edge and front plate, and this slot *b* extends across the entire front. The front is open below the front plate E and above a horizontal low curb *c*, extending crosswise above the base.

30 A horizontal bottom plate H separates the base from the upper part of the case. This plate has a longitudinal slot *d*, and an up-flange *e* is around the slot. The burner-pipes *f* project up through this slot, and a burner *g* is attached to each pipe. All the burner-pipes *f* lead from a union-pipe I, which extends horizontally across in front of the base A. A supply-pipe *j* receives the gas from any source and connects with the said union-pipe I. Each

burner-pipe has a cut-off cock *f'* to control the gas passing to the burner *g*.

Each and all the burners are inclosed in a shell L, which is broad at the bottom *k*, where it fits over or outside of the upflange *e*, broad at the top *m*, and provided with upwardly-projecting lips *o*, where the glass flues P are seated, and narrow at the center *n*, midway between said bottom and top. Thus each side of the shell has two inclines—an upper incline and a lower incline—which two meet at the narrow center.

The top plate of the shield has openings *l*, for a purpose hereinafter stated.

Air-inlets *q* are in the base below the bottom plate H and the air enters there and passes thence up through the slot *d* into the shell L, the air-draft being contracted at the narrow center *n*, and just above said center the air supplies the burner.

70 At one side of the shell L the upper incline has hinges *r*, and thus said incline forms and serves as a door S. By tilting this door on its hinges the burners *g* are exposed and a lighted match can readily be applied to light any one of the burners, or all of them, if desired, without disturbing the glass flues.

80 The glass flues P stand upright upon the top plate of the shell L, one glass being over each opening *l* therein and above a burner *g*. The upper end of each glass flue is inserted through an opening *t* in the divisor-plate F, so that the hot air which passes upward through the glass flues is delivered into the chamber G and after heating said chamber passes downward and escapes from said chamber through the open slot *b*. Thus this part of the heat is utilized by first heating the walls and top plate D of the chamber, which heat is radiated into the room, and, second, by the escape of the hot air from the open slot *b*.

95 The glass flues here described take the place of metal pipes, which have heretofore been used in heating-stoves. The glass gives the benefit to the room of such light or illumination as may result from the combustion of the gas.

A reflector-plate U stands vertically in the back of the stove between the back wall B and the glass flues P. This reflector serves

to throw forward the heated air made by the burners and glass flues and projects such heated air through the open front into the room.

5 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a gas stove, the combination, with a base, of a case seated thereon, said case comprising, top, bottom, back and end walls, the bottom being slotted longitudinally and provided with an up-flange around the slot, a bottomless shell fitting over said flange, the top of which is provided with openings, burners 10 in the shell, one for each opening in the top, a supply pipe communicating with all of the burners, and a glass tube from each opening in the shell to the upper portion of the case, substantially as set forth.

20 2. In a gas stove, the combination, with a base, of a case seated thereon, said case comprising top, bottom, back and end walls, the bottom being slotted longitudinally, a bottomless shell fitting over the slot, the top of which 25 is provided with openings and the sides being contracted toward each other at the central portion longitudinally of the shell, the upper portion of one of the sides of the shell being formed into a door, burners within the shell, 30 one for each opening, a supply pipe communicating with all of the burners, and a glass tube

from each burner to the top portion of the case, the lower end of the tube resting against the inclined portion of the shell, substantially as set forth. 35

3. In a gas stove, the combination, with an open front case the top of which is provided with a chamber, the bottom of the chamber being provided with openings and extending nearly to the front of the case, whereby a narrow opening is formed at the lower front portion of the chamber, the bottom of the case being slotted longitudinally, a bottomless shell over the slot, the top of which is provided with openings registering with the openings at the bottom of the chamber at the top of the case, 40 and the side walls are contracted toward each other at the central portion, longitudinally of the shell, burners within the shell, one for each opening, a supply pipe for the burners, 45 a glass tube fitting within the opening over each burner, with its lower end resting against the inclined portion of the shell, and having its upper end projecting through the opening in the bottom of the chamber at the bottom 50 of the case, substantially as set forth. 55

In testimony whereof I affix my signature in the presence of two witnesses.

THOMAS A. BRYAN.

Witnesses:

C. CALVERT HINES,
CHARLES B. MANN, Jr.