R. M. G. PHILLIPS.

DOUBLE BURNER FLAT IRON HEATER FOR TWO IRONS.

APPLICATION FILED FEB. 27, 1914.

1,109,935.

Patented Sept. 8, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

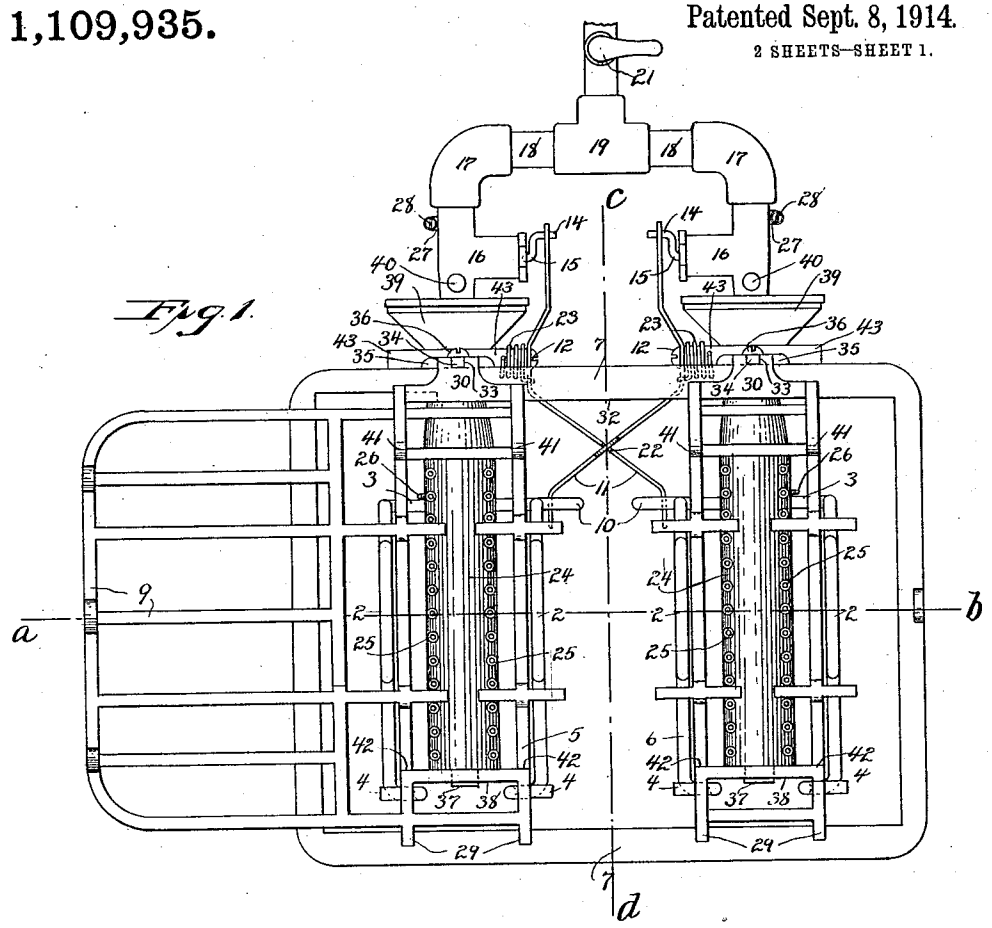
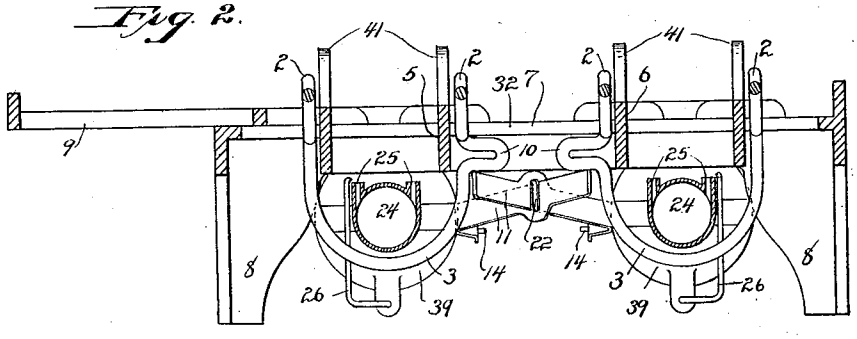


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

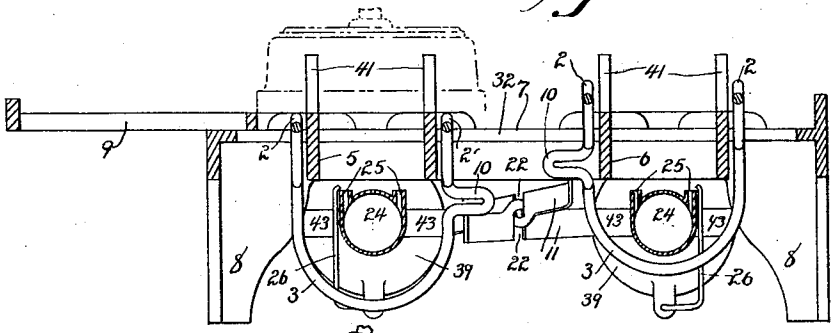


Fig. 4.

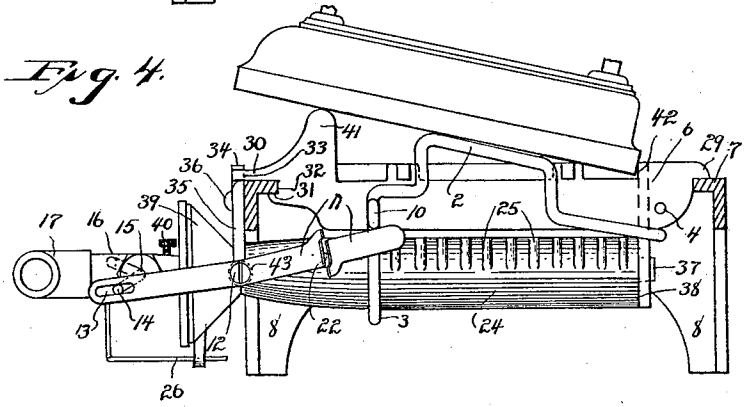


Fig. 10.

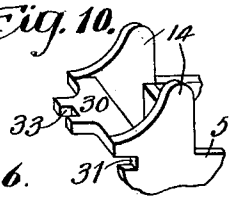


Fig. 5.

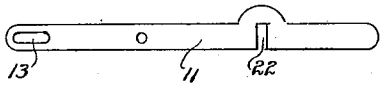


Fig. 6.

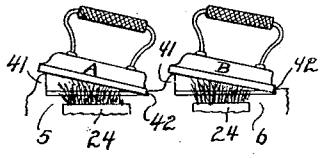


Fig. 7.

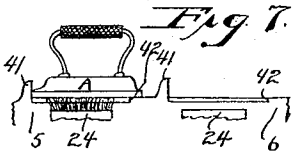


Fig. 8.

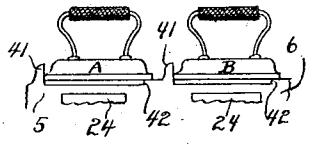
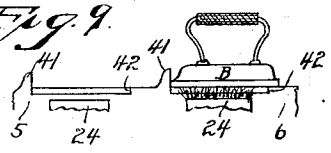


Fig. 9.



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UNITED STATES PATENT OFFICE.

ROSS M. G. PHILLIPS, OF WEST HAVEN, CONNECTICUT, ASSIGNOR TO THE SENTINEL AUTOMATIC GAS APPLIANCE CO., OF NEW HAVEN, CONNECTICUT, A CORPORATION.

DOUBLE-BURNER FLAT-IRON HEATER FOR TWO IRONS.

1,109,935. Specification of Letters Patent. Patented Sept. 8, 1914.

Application filed February 27, 1914. Serial No. 821,598.

To all whom it may concern:

Be it known that I, Ross M. G. PHILLIPS, a citizen of the United States, residing at West Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Double-Burner Flat-Iron Heaters for Two Irons; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1 a plan view of a double-burner flat-iron heater for two irons, constructed in accordance with my invention. Fig. 2 a view thereof in vertical longitudinal section on the line *a—b* of Fig. 1, showing the upstanding valve-operating members in their elevated positions. Fig. 3 a view on the same line, showing the extinguishment of the right hand burner by the depression of the left hand valve-operating member by placing a flat-iron (indicated by broken lines) over the left hand burner. Fig. 4 a vertical transverse section on the line *c—d* of Fig. 1, showing the flat-iron in its tilted or clearance position, in which it clears the valve-operating member of the right hand burner so as to avoid the closing of the valve of the left hand burner. Fig. 5 a detached or developed view of one of the valve levers as it appears prior to being bent into shape. Fig. 6 a schematic view, showing the initial concurrent heating of two flat-irons A and B by temporarily heating them in their tilted or clearance positions over the burners to avoid the operation of the valve-operating members. Fig. 7 a similar view showing the iron A let down from its tilted to its horizontal position for the extinguishment of the burner under the iron B which it may be assumed has been removed for use. Fig. 8 a similar view, showing the restoration to the heater of the iron B which may now be supposed to be cold, whereby the iron A now supposed to be heated, has had the burner under it extinguished. Fig. 9 a similar view indicating the removal of the heated iron A, whereby the burner of the cold iron B is lighted. Fig. 10 is a broken perspective view of the rear end of one of the burner-frames.

My invention relates to an improvement in that class of gas-burning flat-iron heaters in which the valves are automatically operated by the weight of the irons, the object being to produce a simple and convenient device constructed with particular reference to economy of time and gas.

With these ends in view, my invention consists in a gas-burning flat-iron heater having certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

In carrying out my invention as herein shown, I employ two cradle-like valve-operating members corresponding to each other in form, arrangement and function, arranged side by side and each formed from a single piece of heavy wire and each consisting of two up-standing flat-iron arms 2, a depending bow or yoke 3 uniting the rear ends of the said arms, and pintles 4 extending toward each other and bent inward from their forward ends.

The said valve-operating members are pivotally mounted by their said pintles 4 in the forward ends of skeleton burner-frames 5 and 6 corresponding to each other and transversely mounted side by side in an oblong heater-frame 7 having legs 8 at its corners. As shown, the left hand burner-frame 5, is provided with an integral grill 9 overhanging the left hand end of the heater-frame 7 and providing for the convenient support of an iron.

Normally the inclined flat-iron arms 2 of the said cradle-like valve-operating members project above the horizontal plane of the two burner-frames 5 and 6 into position to be engaged and depressed by the flat-irons A and B. For supporting the inclined arms 2 in their elevated operating positions, the said yokes 3 are bent to form inwardly projecting lateral arms 10 (Fig. 3) respectively resting upon the forward ends of two crossed operating-levers 11 rocking upon screw-studs 12 and having their respective rear ends formed with slots 13 for the reception of the cranked outer ends 14 of the

stems 15 of gas-valves 16 the details of which are not shown. The said valves 16 are connected by elbows 17, and short sections 18 with a T-coupling 19 receiving a gas-cock 21, of any ordinary make. The said levers 11 are formed near their forward ends with vertical slots 22 which permit them to be crossed, whereby they are adapted to be operated independently of each other.

By crossing the operating-levers 11, as described, the right-hand valve-operating member is connected with the left-hand valve 16 while the left-hand valve-operating member is connected with the right-hand valve 16. Helical springs 23 connected with the respective levers 11 exert a constant effort to maintain the valve-operating members in their elevated positions of readiness to be operated by the flat-irons A and B in which position of the said valve-operating members the valves 16 are opened to admit gas to long gas-burners 24 corresponding to each other, extending from front to rear and located centrally below the respective burner-frames 5 and 6. The burners 24 may be of any approved construction. As shown, each is provided along each edge with a series of nipples 25. Each burner is also provided with a pilot-light tube 26 extending rearwardly from it to the inlet ends of the respective gas-valves 16 which are provided with pilot-light nipples 27 furnished with regulating screws 28. Each of the burner-frames 5 and 6 is provided at its forward end with a horizontally arranged pair of suspension lugs 29 resting upon the forward side of the heater-frame 7 and at its rear end with a horizontal suspension flange 30 resting upon the rear side of the said frame and overhanging the same. The rear end of each burner-frame is also formed with two assembling-notches 31 located directly below its flange 30 and receiving the forward edge 32 of the rear side of the frame 7 as shown in Fig. 4. The overhanging ends of the flanges 30 are formed with notches 33 receiving positioning-lugs 34 at the extreme upper ends of up-standing arms 35 cast integral with the rear ends of the burners 24, for suspending the rear ends thereof from the heater-frame 7 to which the said flanges are secured by means of screws 36. The forward ends of the burners 24 are provided with assembling-studs 37 entering flanges 38 depending from the forward ends of the respective burner-frames 5 and 6. At its rear end each burner 24 has a conical mixing-chamber 39 cast integral with it and receiving the outlet ends of the gas-valves 16, the said outlet ends of the gas-valves being furnished with regulating-screws 40.

The gas-valves 16 aforesaid may be of any approved construction, as an instance of which I may refer to the valve disclosed in my co-pending application filed February 21st, 1914, Serial No. 820,151.

In case I employ for my improved heater such a valve as shown in my aforesaid application, the springs 23 herein shown will be dispensed with, since the function of these springs is to turn the valve-stems 15 to maintain the valves 16 normally open as well as to maintain the valve-operating members in their normally elevated positions above the plane of the burner-frames 5 and 6.

Each of the burner-frames 5 and 6 is provided at its rear end with a pair of flat-iron supporting-arms 41 separated from each other by the width of the frames and extending upward above their horizontal planes sufficiently to support the flat-irons A and B in the tilted positions in which they are shown in Figs. 4 and 6, whereby they clear the inclined flat-iron arms 2 of the pivotal valve-operating members as shown in Fig. 4, the heels of the flat-irons being supported at such times by flat-iron abutments 42 formed at the forward ends of the burner-frames. The arms 41 and abutments 42 provide for the concurrent initial heating of both irons by permitting the same to be placed over the burners without operating the valve-operating members to close either of the two valves. It is intended to use the arms 41 and abutments 42 only for the concurrent initial heating of the flat-irons, but of course they may be used at other times, if desired.

As shown, each burner is furnished at its rear end with a pair of integral alined hubs 43 receiving the screw-studs 12 of the levers 11 and supporting the helical springs 23. By providing each burner with two of these hubs 43, the burners may be used interchangeably.

My improved flat-iron heater may be used in a variety of ways according to the personal fancy and convenience of the user. While it is not limited to any particular mode of use, it may be used to excellent advantage as illustrated in schematic Figs. 6 to 9 inclusive. For the concurrent initial heating of the flat-irons A and B, they are placed in their tilted positions as shown in Fig. 6 upon the heater, upon which, however, they will be arranged side by side instead of end to end as shown in the said schematic view. The gas will now be turned on at the cock 21, and flowing freely through both valves 16 will be lighted at both burners 24. The flat-irons being thus supported in tilted positions, neither of the cradle-like valve-operating members will be disturbed. Now when the irons are heated, one of them, say the iron B, will be removed and put into use and the iron A lowered from its tilted position into its horizontal position, as shown in schematic Fig. 7. As the iron A

is lowered, it depresses the left-hand valve-operating member which in turn operates the lever 11 connected therewith in closing the valve 16 of the right-hand burner which is thus extinguished without extinguishing the burner 24 under the remaining iron A as shown in schematic Fig. 7, this being due to the crossing of the levers 11 so that they operate the opposite valves. Now when it is desired to re-heat the iron B, it is set down upon the right-hand burner-frame 6 with the effect of depressing the valve-operating member thereof, whereby the lever 11 with which it is connected, at once operates to shut the left-hand valve 16 and thus cut off the supply of gas from the left-hand burner 24. The two flat-irons are now in position to extinguish both burners, leaving only their pilot-light lighted, this condition being shown by Fig. 8. The heated iron A is now removed and put into use, whereby the spring 23 of the right-hand lever 11 is allowed to act to open the right-hand valve 16, turning the gas into the right-hand burner where it will be lighted from the pilot-light thereof as shown by schematic Fig. 9. The cycle is repeated, beginning with Fig. 7 rather than with Fig. 6, which represents the concurrent heating of both irons to save time.

I claim—

1. In a double-burner flat-iron heater, the combination with two burners, of valves therefor, valve-operating members normally standing above the plane of the burners for operation by flat-irons when the same are placed over the burners, and operating connections between the said members and valves, the valve of one burner being connected with the valve-operating member of the other burner, and vice versa, for the cross-control of the burners.

2. In a double-burner flat-iron heater, the combination with two burners, of valves therefor, valve-operating members normally standing above the plane of the burners for operation by flat-irons when the same are placed over the burners, and two operating-levers connecting the said members and valves and crossed for the cross operation of the valves by the flat-irons.

3. In a double-burner flat-iron heater, the combination with two burners, of valves therefor, pivotal valve-operating members having flat-iron arms normally extending above the burners for operation by flat-irons, and crossed connections between the said members and valves for the cross control of the valves by flat-irons.

4. In a double-burner flat-iron heater, the combination with two burner-frames placed side by side, of burners located beneath the respective frames, normally open valves connected with the said burners, valve-operating members normally standing above the plane of the burner-frames, and crossed connections between the said members and valves for the cross operation of the latter by flat-irons.

5. In a double-burner flat-iron heater, the combination with two burner-frames placed side by side, of burners located beneath the said frames, pivotal valve-operating members normally extending above the plane of the burner-frames, and two crossed valve-operating members connecting the said members with the respective valves for the cross control of the latter by the former.

6. In a double-burner flat-iron heater, the combination with two burner-frames, of burners respectively located below the same, cradle-like valve-operating members pivotally mounted in the respective burner-frames and normally extending above the plane thereof, and crossed connections between the said members and valves for the cross operation of the latter.

7. In a double-burner flat-iron heater, the combination with two burner-frames, of two burners respectively located below the same, valves therefor, valve-operating members normally standing above the plane of the burner-frames, crossed connections between the said members and valves for the cross control of the latter, and springs for normally holding the burner-frames in their elevated positions and the valves in their open positions.

8. In a double-burner flat-iron heater, the combination with two burner-frames, of burners therefor, normally open gas-valves for the respective burners, valve-operating members normally standing above the burner-frames, and crossed operating-levers for the cross connection of the said valves and operating members.

9. In a double-burner flat-iron heater, the combination with two burners, of valves therefor, valve-operating members normally standing above the burners for operation by the flat-irons, crossed operating connections between the said members and valves, and means for supporting the flat-irons in tilted positions, whereby the operation of the said members is suspended.

10. In a double-burner flat-iron heater, the combination with two burner-frames provided at their rear ends with one or more flat-iron supporting arms extending above the plane of the burner-frames, burners for the said frames, valves for the said burners, movable valve-operating members normally standing above the plane of the frames, and crossed connections between the said members and valves.

11. In a double-burner flat-iron heater, the combination with two burner-flames placed side by side, burners therefor, valves for the said burners, movable valve-operating members normally extending above the

respective burner-frames, crossed connections between the said members and valves for the cross control of the latter, and means extending above the plane of the burner-frames for supporting the irons in tilted positions for suspending the operation of the said members and permitting both valves to be open at the same time.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

ROSS M. G. PHILLIPS.

Witnesses:
FREDERIC C. EARLE,
M. P. NICHOLS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."