

No. 650,137.

Patented May 22, 1900.

G. E. SHARPE.
SUMMER FRONT GAS GRATE.

(Application filed Dec. 12, 1898.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.

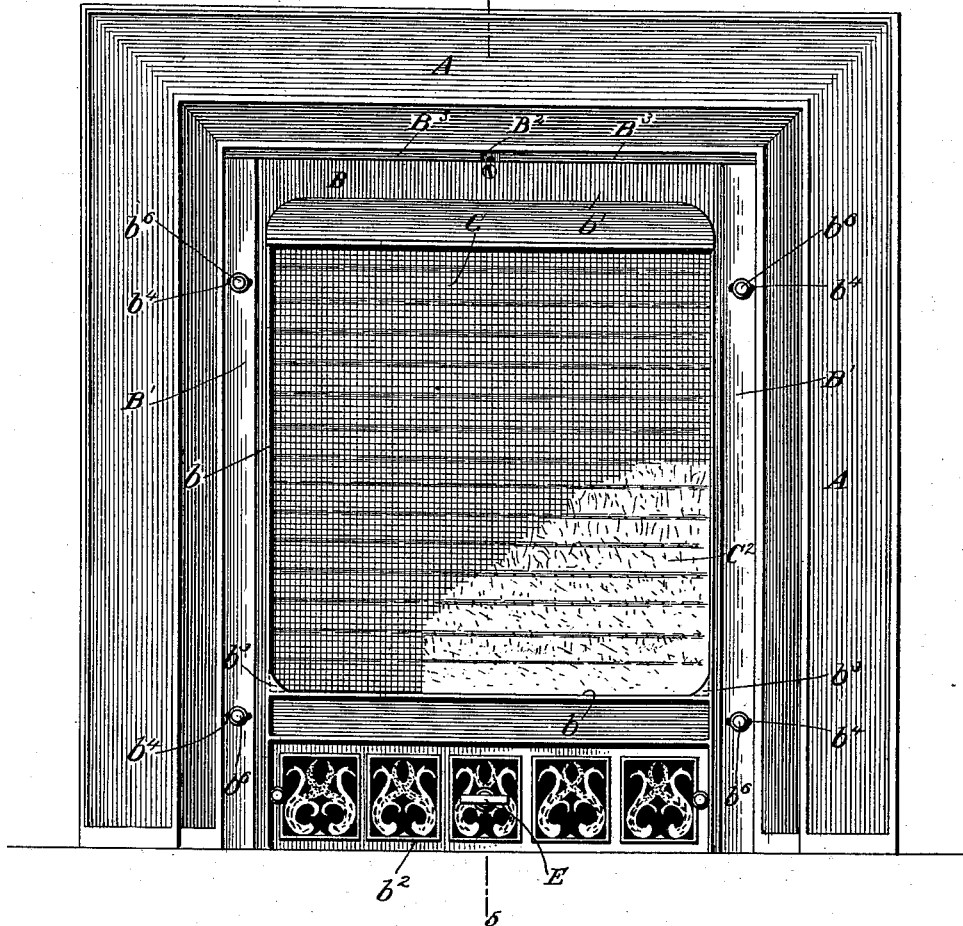
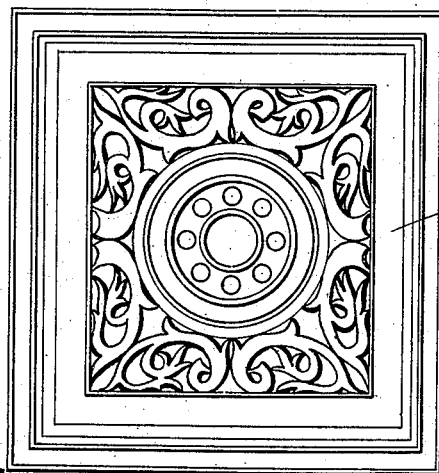


Fig. 2.



Witnesses
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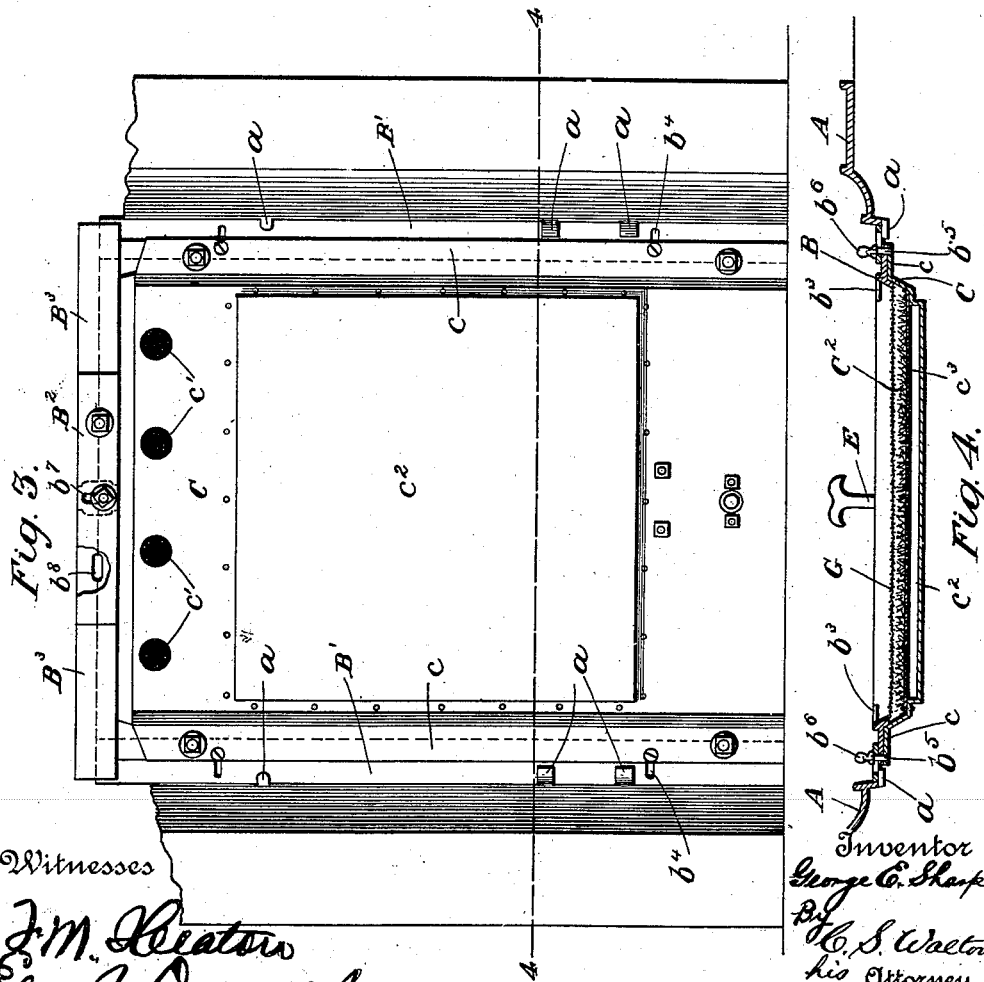
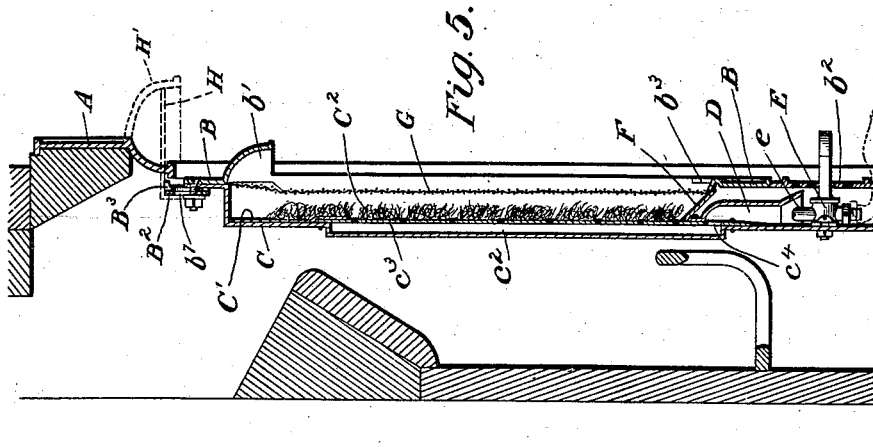
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Witnesses

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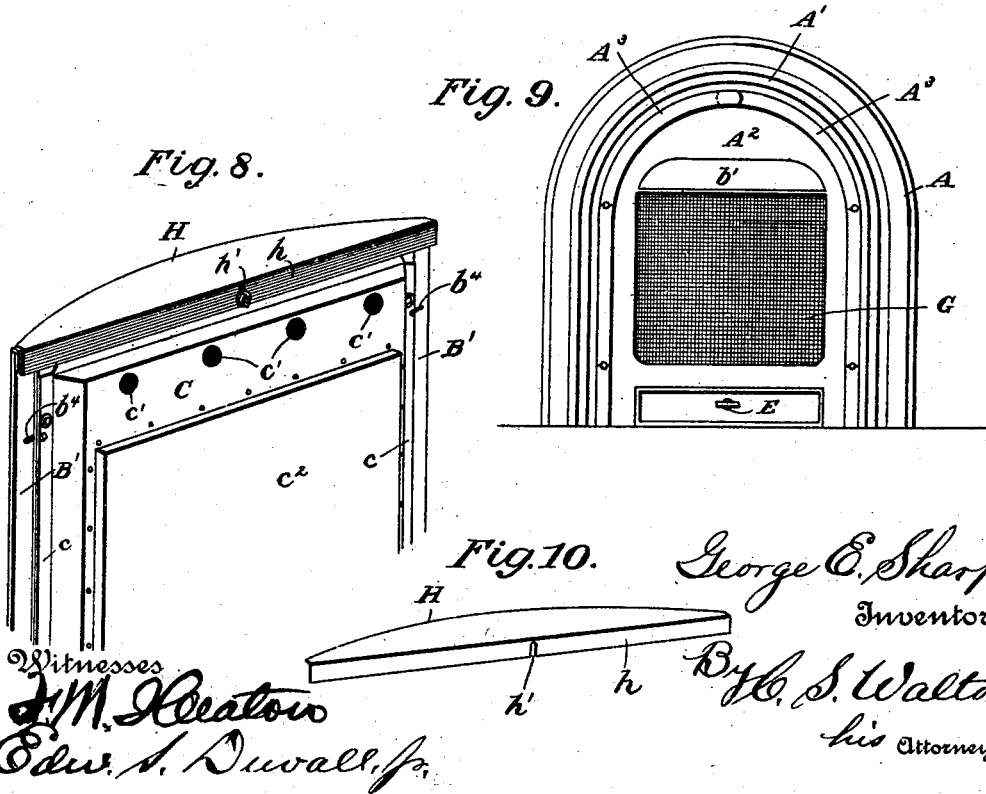
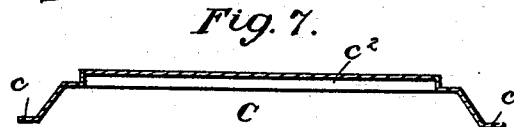
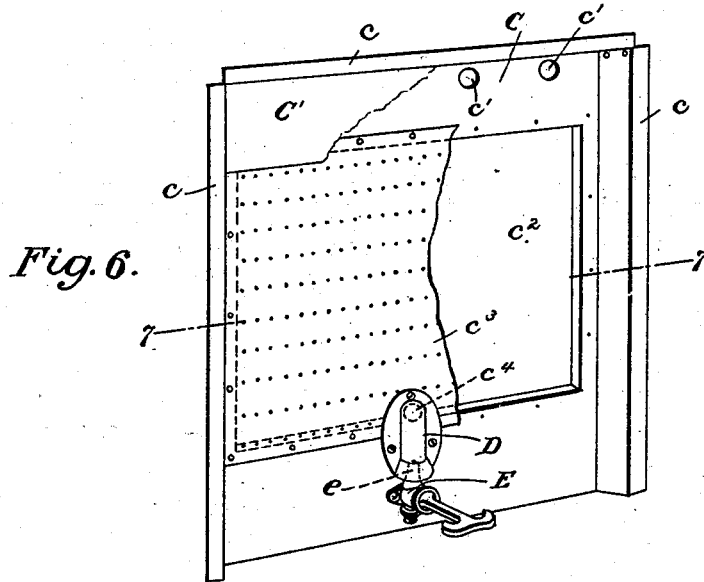
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SUMMER FRONT GAS GRATE.

(Application filed Dec. 12, 1898.)

(No Model.)

3 Sheets—Sheet 3.



UNITED STATES PATENT OFFICE.

GEORGE E. SHARPE, OF STEUBENVILLE, OHIO.

SUMMER-FRONT GAS-GRATE.

SPECIFICATION forming part of Letters Patent No. 650,137, dated May 22, 1900.

Application filed December 12, 1898. Serial No. 699,044. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. SHARPE, a citizen of the United States, residing at Steubenville, in the county of Jefferson and State of Ohio, have invented certain new and useful Improvements in Summer-Front Gas-Grates, of which the following is a specification.

My present invention relates to improvements in gas grates or stoves, and has particular reference to that class which is primarily designed to be placed in open fireplaces.

The principal object of this invention is to provide a gas-grate in the form of a combined burner and summer-front which may be readily adapted to close any ordinary fireplace with frames having square openings or circular tops and which will safeguard against contact of dresses or other movable objects with the flame.

A summer-front, as is well known, besides its other functions is designed to hide the coal-grate from view at certain seasons of the year. In addition to these my invention presents the advantages of a gas-grate which may be used in place of the hidden coal-grate at times when the temperature of the apartment is low enough to necessitate some heat.

With these and other objects and advantages in view the invention consists of certain novel and useful combinations and arrangements of parts, which are clearly described in the following specification, and particularly pointed out in the claims forming a part hereof.

In the drawings annexed hereto and forming a part of the specification, Figure 1 is a front elevation of my improved gas-grate constructed as a burner and summer-front with the front plate removed. Fig. 2 is a removable front plate used to close the front of the gas-grate. Fig. 3 is a rear elevation of Fig. 1 with parts broken away. Fig. 4 is a transverse sectional view on the line 4 4 of Fig. 3. Fig. 5 is a vertical sectional view on the line 5 5 of Fig. 1. Fig. 6 is a perspective view of the gas-grate proper with certain parts broken away to more clearly show the construction. Fig. 7 is a transverse sectional view on the line 7 7 of Fig. 6, the perforated plate of the gas-grate being removed. Fig. 8 is a rear perspective view of the gas-grate, showing a

strip or plate which may be secured to the top thereof where the combined gas-grate and summer-front are inserted in a fireplace having an upper projecting hood. Fig. 9 shows a modified form of gas-grate and summer-front designed for use in fireplaces having frames with circular tops. Fig. 10 is a detail view of the strip or plate which may be attached to the top of the gas-grate or summer-front.

Like letters of reference denote like parts throughout the several figures of the drawings.

A represents the frame usually surrounding the fireplaces of coal-grates, and, as shown in Figs. 1 and 9, they may be either rectangular or curvilinear. In the practice of my invention I may secure or form on these frames, integral therewith and at suitable intervals, the lugs or keepers *a* to retain the summer-front and gas-grate in position. These lugs occur on the rear edges of the frame-opening. B represents a plate or casting having the functions of a summer-front, and formed therein is an opening *b*, which may be of any preferred shape, but which is here shown as rectangular. At the top and overhanging this opening is a hood *b'*, which extends across from side to side. At the foot of this summer-front plate is a removable door *b²*, which permits access to the valve E and certain other parts of the gas-grate or stove, to be described farther on. As is obvious, this summer-front plate B may be ornamental or plain. At each lower corner of the rectangular opening *b* is formed a keeper *b³*. These keepers are designed to retain in place a removable front plate W. This plate closes the front of the summer-front plate and may be plain or of open-work and may be ornamented in any style to enhance the beauty of the summer-front.

As the openings of all fireplaces are not of equal size, but may vary several inches, I have provided means for adapting my summer-front gas-grate to any size or shape of opening. I secure on each side of the plate or casting B and on the front face thereof the adjustable wings *B' B'*. These wings are slotted at suitable distances from the top and bottom, as at *b⁴ b⁴*, and through these slots extend the pins or studs *b⁵*, which are secured

immovably to the plate or casting B. They are screw-threaded on their outer ends to receive clamping-knobs b^6 . These slots, being horizontal, as shown, permit the lateral adjustment of the wings B' to close the openings at either side of the summer-front plate B, where it is not as wide as that of the fireplace-opening. To close any opening at the top, I provide a plate B^2 , secured to the top of the summer-front plate by bolt and nut passing through a vertical slot b^7 to permit vertical adjustment, and secured to this plate by bolts and nuts passing through horizontal slots b^8 are extension-plates B^3 . These extension-plates, where they meet centrally, are cut away to form a sort of slot conforming to slot b^7 in the plate B^2 .

To the rear face of the summer-front plate B may be secured by bolts or connected in any convenient manner the gas grate or stove proper. This gas grate or stove may be of any suitable construction, or it may be as shown in the drawings. As there illustrated it consists of a pan-shaped plate C, formed, preferably, of one piece of seamless sheet metal, the top and sides of which are provided with flanges c , by which the pan may be secured to the summer-front plate B. In the plate, near the top thereof, is cut a series of flue openings or holes c' to carry off the products of combustion. This pan C has a dished or sunken portion c^2 , which may be pressed therein, as shown in Figs. 5, 6, and 7 of the drawings, to form a reservoir or chamber when the perforated plate c^3 is secured in position. This dished portion is shown as rectangular and is covered by the perforated plate, which is riveted to the pan C. The plate c^3 has an opening c^4 located at the bottom thereof and in a central position, and over this opening is secured a hood-shaped plate D, which forms an air and gas mixer, leading to the reservoir c^2 . Secured to the pan C in any suitable manner is a gas-valve E, whose nipple e projects a certain distance into the hood of the air and gas mixer, the lower part of which is flared somewhat to admit air with the gas. The two commingle before entering the reservoir. The lower part of this valve has a tube or pipe connection whereby it may be connected with a source of gas-supply. (Not shown.) This valve or mixer is more particularly referred to in my application, Serial No. 693,410, filed October 13, 1898. To prevent deterioration of the plate C, I cover the same with a sheet of asbestos paper C' . This prevents rusting and increases durability of the fire-surface. Between the perforations in the plate c^3 , which are left exposed and are here shown in parallel lines, I coat the surface with asbestos C^2 in the fibrous state. This asbestos may also coat the entire visible front of the gas grate or stove, and the object is too well known to require explanation.

To finish the appearance of the gas-stove, I may insert a strip F between the asbestos-

coated grate and the summer-front plate to serve as a kind of false bottom and hide the mixer from view.

Interposed between the gas-grate and the summer-front plate B and covering the opening in the latter is a sheet or web of foraminous material G, preferably woven wire of fine mesh. This foraminous web serves to prevent the escape into the room of gas or noxious odors arising from the burning gas, and aside from this its principal object it serves as a guard to prevent dresses or other moving objects from coming into contact with the flame.

By constructing the body of the gas-grate as shown with the reservoir pressed therefrom no gas can possibly escape from the back of the same. By interposing the foraminous web between the gas-grate and the opening of the summer-front plate none can escape through that source into the room. Consequently a chief objection to gas-stoves is removed.

In Fig. 9 I have shown a modified form of construction whereby a summer-front gas-grate is adaptable to fireplaces having a curved top like that here shown at A' . The summer-front plate has its upper part A^2 made to conform to the general curvature of these old-style frames, and the adjustable strips or wings have the upper curved parts A^3 . These strips have the slots and clamping-knobs described for the preferred form, so that the wings may be adjusted laterally to close any opening which may occur at the top and sides of the summer-front gas-grate.

In Figs. 8 and 10 I have shown a plate H, which may be used where the fireplace-frame is formed with an overhanging hood, such as shown at H' , dotted lines, in Fig. 5. This plate is cut with a curved edge, as shown, and has the downturned flange h , by which it is secured upon the top of the gas-grate. The vertical slot h' is formed therein centrally to fit over the bolt, which secures the upper adjustable plate or wing B^2 . The flange of this plate H may be inserted between the plate and the washer on the bolt and thereby clamped in place.

This completes the construction of my invention, and its operation will be readily understood from the foregoing description without further explanation.

I do not desire to limit myself to the precise details of construction herein shown and described nor to the exact arrangement or location of parts, but reserve to myself the right and privilege to alter the same within the bounds of mechanical skill without departing from the spirit of my invention.

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

1. The combination with a fireplace-frame having on its rear face upper and lower opposing lugs or keepers, of a burner and summer-front provided with laterally-adjustable side extensions or wings which rest or abut

against said lugs or keepers, and a top extension for said burner and summer-front which is both laterally and vertically adjustable and projects upwardly behind the fireplace-frame, substantially as described and set forth.

2. The combination with a fireplace-frame having on its rear face upper and lower opposing lugs or keepers, of a combined burner and summer-front provided with adjustable side extensions or wings which rest or abut against said lugs, a top extension for said summer-front which is both laterally and vertically adjustable and projects upwardly behind the fireplace-frame, as and for the purposes described.

3. The combination with a fireplace-frame having on its rear face upper and lower op-

posing lugs or keepers, of a combined burner and summer-front provided with adjustable side extensions or wings which rest or abut against said lugs, a top extension for said summer-front which is both laterally and vertically adjustable and projects upwardly behind the fireplace-frame, and means for preventing the injuring of objects by the flame of the burner, substantially as described and set forth.

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

GEORGE E. SHARPE.

Witnesses:

C. H. PUNKE,

I. W. JORDAN.