No. 737,382. PATENTED AUG. 25, 1903.

J. V. FREDERICK.

STOVE GRATE.

APPLICATION FILED OCT. 20, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

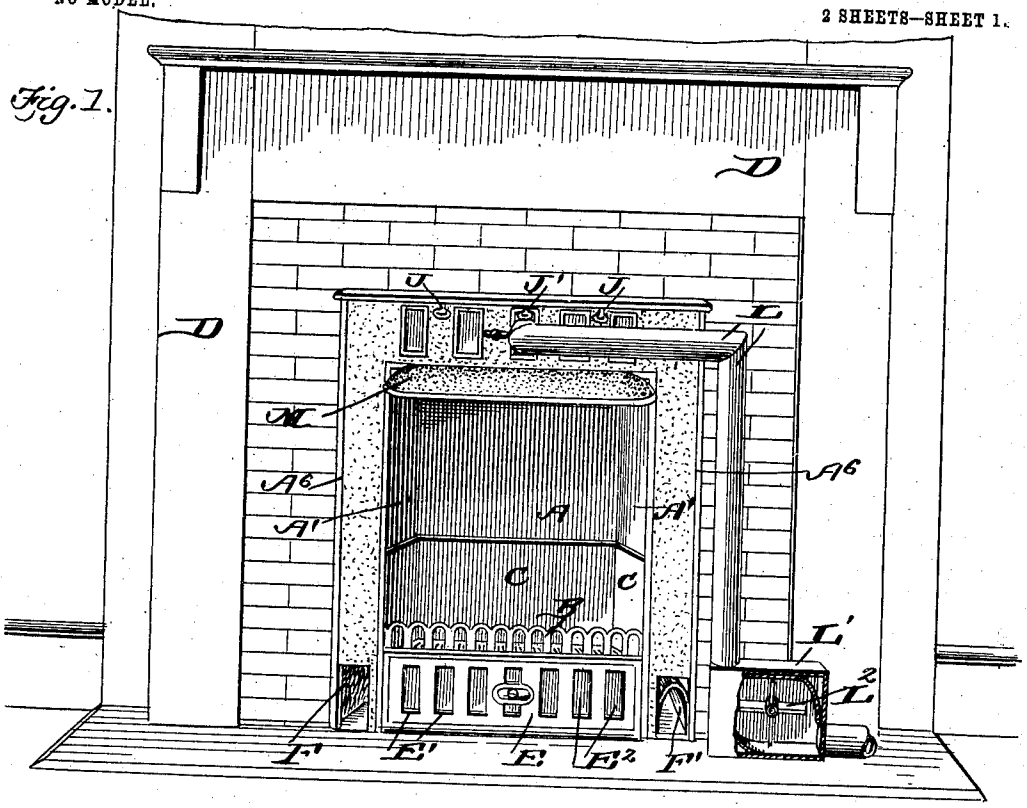
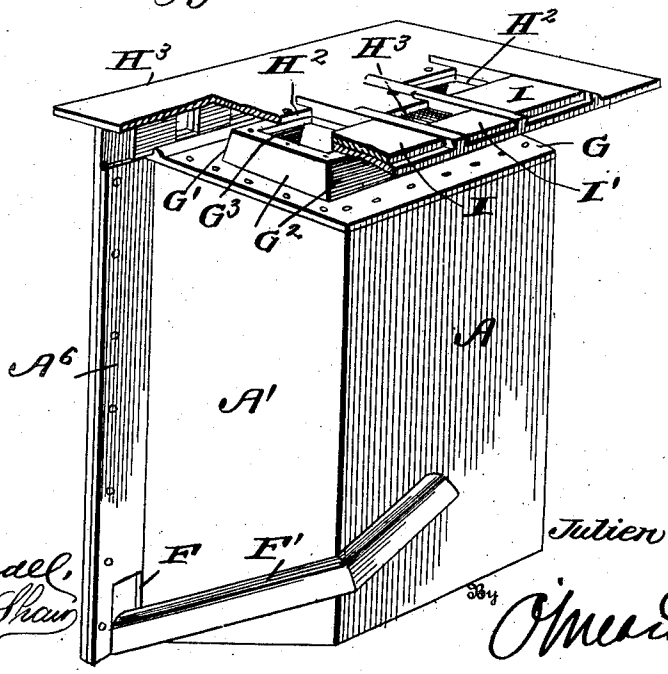


Fig. 2.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

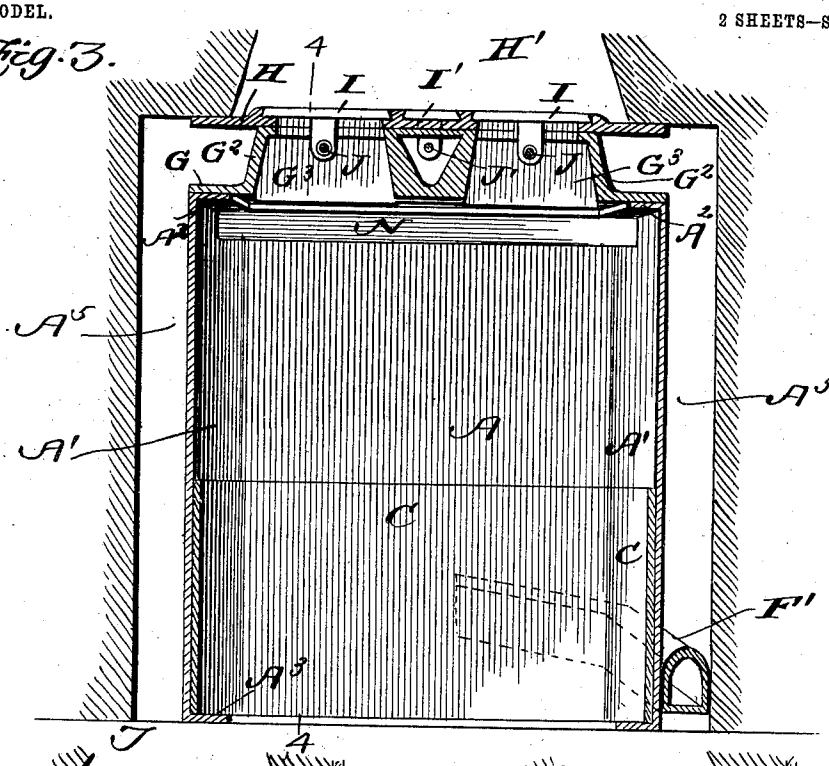


Fig. 4.

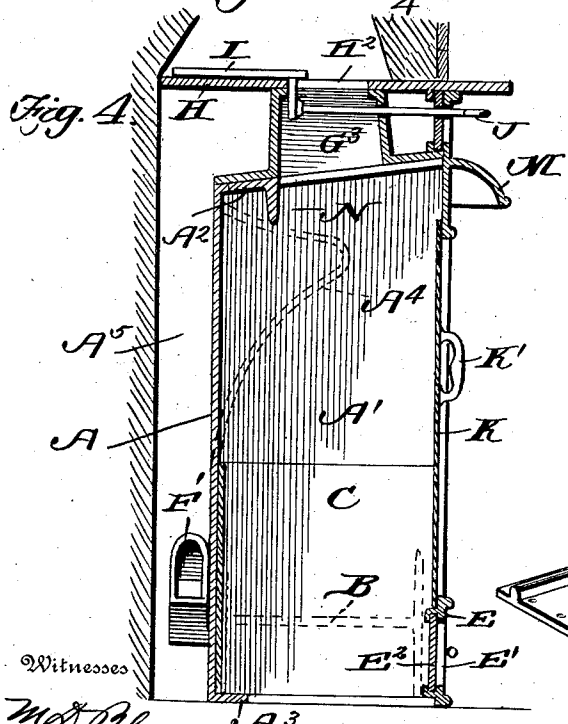


Fig. 5.

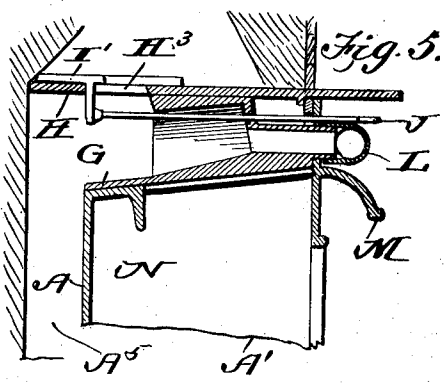
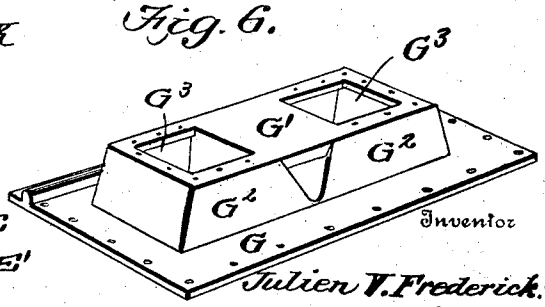


Fig. 6.



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No. 737,382. Patented August 25, 1903.

UNITED STATES PATENT OFFICE.

JULIEN VICTOR FREDERICK, OF MARSHALLVILLE, GEORGIA.

STOVE-GRATE.

SPECIFICATION forming part of Letters Patent No. 737,382, dated August 25, 1903.

Application filed October 20, 1902. Serial No. 127,964. (No model.)

To all whom it may concern:

Be it known that I, JULIEN VICTOR FREDERICK, a citizen of the United States, residing at Marshallville, in the county of Macon and State of Georgia, have invented a new and useful Stove-Grate, of which the following is a specification.

My invention is an improved form of stove-grate; and the object is to provide such a grate or heater that it may be used either as a stove or as an open fireplace.

Another object of my invention is to produce a grate which can be used for heating other rooms than the one in which the grate is located.

Other objects and advantages of my improvement will be pointed out in the accompanying specification and drawings, in which—

Figure 1 is a front perspective view of my device. Fig. 2 is a perspective view of the stove-grate detached from a fireplace, as seen at an angle from the rear. Fig. 3 is a view, partly in section, showing my device in position in the fireplace. Fig. 4 is a section about on the line 4 4 of Fig. 3. Figs. 5 and 6 are detail views.

In carrying out my improvement I employ a back plate A, which may be of cast-iron or any suitable metal. This back plate has forwardly and laterally extending side plates A′, which may be cast with the back plate, and both back and side plates having an inwardly-turned flange A^2 A^3 at their upper and lower edges. This casing is adapted to set in a fireplace, and a space A^5 is left between the walls of the casing and fireplace, thus forming a hot-air chamber. A grate B, of any ornamental or desired form, is placed in the lower part of the fireplace within the casing. To prevent the walls of the casing adjacent the grate from burning out, it is reinforced by the inner casing C.

The side plates have laterally-extending flanges A^6, secured to the inner side of the mantelpiece D, as in Fig. 2.

In front of the grate is a fender E, having the usual draft-opening E′ and dampers E^2. On either side of the fender are air-passages F, leading to the space A^5. In one of these the conduit F′ is positioned, extending upwardly to a point at the rear of the plate A, thus drawing a supply of air to the hot-air chamber. A plate G is secured to the flange A^2, having a rectangular opening secured in its central portion. A smaller plate G′ is supported above the plate by the inclined plates G^2, and the plate G′ has the openings G^3 registering with the openings formed in the plate G. This entire construction G G′ G^2 may be cast in one piece, as shown in Fig. 4. A plate H rests on G′, this plate extending to the rear wall of the fireplace, to the side walls of the flue H′, and projecting in front beyond the plate G. This plate has opening H^2 registering with the openings G^3 and affording communication between the interior of the casing and the flue H′. The plate H also has an opening H^3, giving communication between the flue and the air-chamber A^5. Dampers I I′ and damper-rods J J′ control these openings. The opening H^3 permits escape of heated air up the chimney when same is not wanted in the rooms.

A front plate K, having a handle K′, is adapted to close the front of the stove. It can also be used as a blower in starting fires. With the front removed the device can be used as an ordinary grate, and by removing the grate it may be converted into a wood-fireplace. This stove-grate may also be used in connection with grates now in use by taking out the bricks used in lining the back and sides of grates. The mantel would be cut out at the bottom to form the openings F and a space left at the top between the mantel and my attachment for the heated air to escape from the space A^5 to the room.

For heating other rooms than the one in which the stove, grate, or heater is located a pipe or flue L is secured between the front edges of the plates G and H and extends to a room above or downward under the flooring to a room on the same floor, and if to a dining-room the pipe can be extended to a point under the center of the room and open in the room under the table. In order to propel the air through this pipe, a chamber L′, containing a fan L^2, is secured to the flue at any convenient point. The fan may be driven by clockwork or by electric motor, as desired. A flange M extends outwardly and downwardly along the upper front of the stove and serves both for ornament and as a deflector to throw heated air out in the room. A baffle-plate N

is also formed within the casing integral with the flange A^2.

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, a metal casing comprising back and side plates adapted to stand therein at some distance from the walls of the fireplace, a top plate having openings therein, a metal plate supported by said top plate and extending rearwardly to the wall of the fireplace, said plate having openings adapted to register with the openings of the top plate and having an opening effecting communication between the chimney and the space to the rear of the back plate, dampers adapted to close said openings, means for actuating said dampers from the front of the stove, and a removable front plate.

2. The combination with a fireplace and mantel, of a casing open in front and adapted to stand in said fireplace at a distance from the walls of same, its end pieces carrying outwardly-turned flanges adapted to be secured to the rear of the mantelpiece, a top plate having openings thereon, a cover-plate above said top plate and extending rearwardly to the back wall of the fireplace its ends bearing against the upper walls of the fireplace, and its front end resting against the rear of the upper portion of the mantel, said plate having openings produced therein registering with the openings and the space to the rear of the casing, respectively, dampers adapted to close said openings, means for operating the dampers, a detachable plate adapted to close the front of the casing, and means for admitting cool air to the space behind the casing from either side, a pipe extending from the front of the stove to other rooms and means for forcing heated air through said pipe, substantially as described.

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