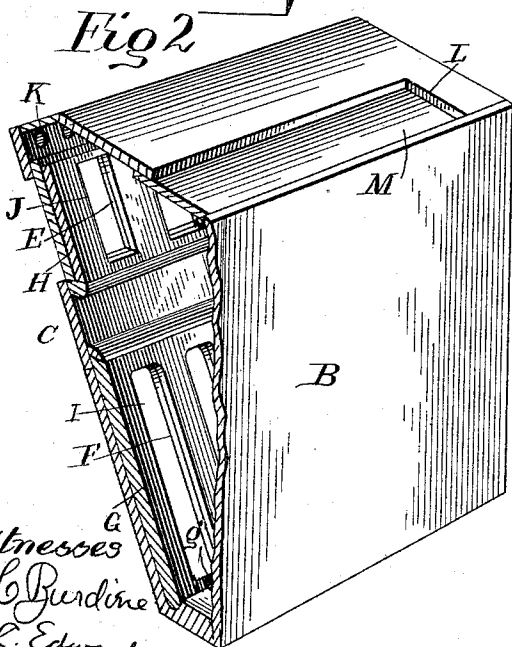
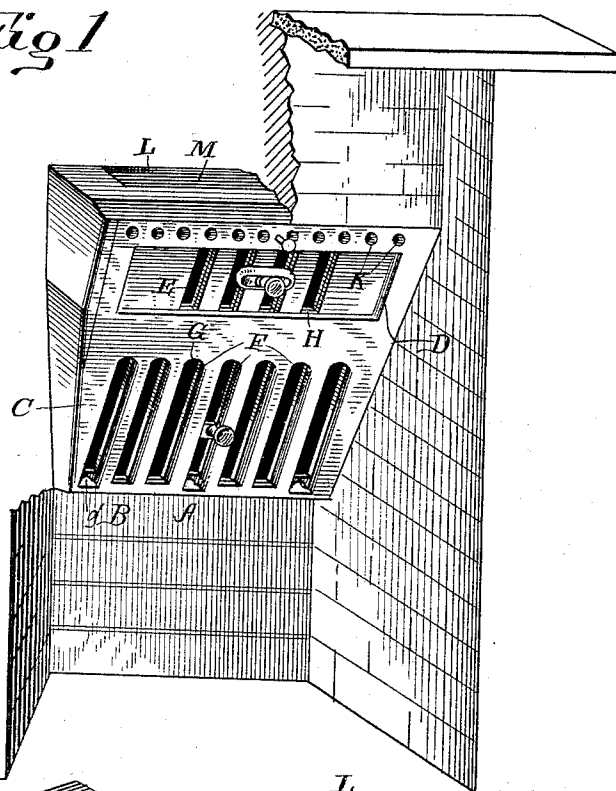


(No Model.)

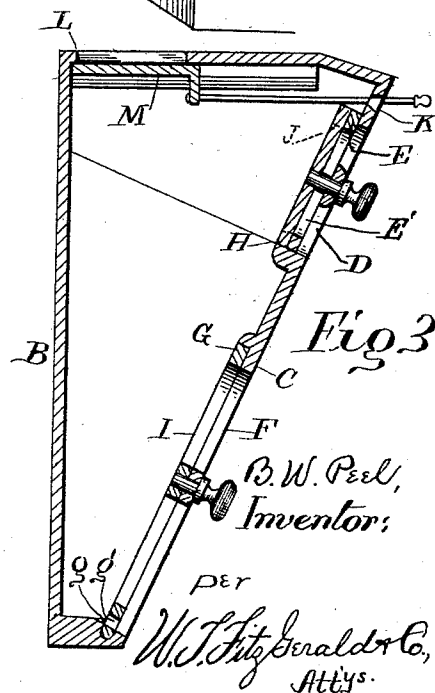
B. W. PEEL.
DRAFT REGULATOR FOR FIREPLACES.

No. 485,772.

Patented Nov. 8, 1892.



Witnesses
C. C. Burdine
J. L. Edwards



B. W. Peel,
Inventor:

per

W. T. Fitzgerald & Co.
Attys.

UNITED STATES PATENT OFFICE.

BENJAMIN W. PEEL, OF CHICAGO, ILLINOIS.

DRAFT-REGULATOR FOR FIREPLACES.

SPECIFICATION forming part of Letters Patent No. 485,772, dated November 8, 1892.

Application filed August 11, 1891. Renewed October 6, 1892. Serial No. 448,084. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN WILLIAM PEEL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Draft-Regulators for Fireplaces; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to improvements in draft-regulators for fireplaces; and it consists in the construction, certain novel combinations, and the adaptation of parts hereinafter described, and particularly pointed out in the claim appended.

In the accompanying drawings, Figure 1 is a perspective view of my improved draft-regulator in position within a fireplace. Fig. 2 is a perspective view, partly in section, of the draft-regulator removed; and Fig. 3 is a vertical transverse section of the same.

Referring by letter to said drawings, A indicates a fireplace, which may be of the ordinary or any approved form, and B indicates the casing of my improved draft-regulator, which extends into the flue and serves as a combustion-chamber.

The front wall or plate C of the casing B, which is inclined upwardly and outwardly from the lower end of said casing and serves to deflect the heated air into the room, is provided in its lower portion with a series of vertical transversely-disposed slots F, which are preferably of the proportional length and width, as illustrated, and are designed for a purpose presently set forth. Formed in the front wall or plate C of the casing a suitable distance above the slots F is a horizontal slot D, and loosely mounted on a ledge upon the inside of the front wall C at the lower edge of the slot D is a plate E, which is provided with a series of vertical slots E', which are comparatively shorter than the slots F, for a purpose presently set forth. By reason of the plate E being loosely mounted, as described, it will be perceived that it may be swung back, when desirable, to entirely open the slot D.

Mounted in suitable bearings upon the inner side of the wall or plate C is a damper-plate G, having a series of vertical slots I, de-

signed to alternately register with the slots F and the strips between said slots to create and stop the draft, and mounted in bearings upon the inner side of the plate E is a damper-plate H, having a series of vertical slots J, designed to alternately register with the slots E' of the plate E and the strips between said slots.

The main damper-plate G is arranged to close the slot F in the front plate C, and will be larger than the supplemental damper H. The object of this is to permit the greater amount of smoke and gases when the fire is first started or when it is desired to increase the heat to quickly pass from the grate through the slots in the damper G, and in consequence of the inclination of the front plate C, forming the front of the combustion-chamber B, the smoke and gases entering the combustion-chamber through the openings in the lower damper (the upper damper being closed) cannot expand forward or backward, but will take a direct upward course to the flue, meeting the cold air in the flue and causing it to rise quickly, and as the flame from the fire-box enters the combustion-chamber through the lower damper with a sufficient quantity of fresh air to create combustion it ignites all the inflammable gases in the combustion-chamber and in a great measure consumes the smoke and at the same time increases the heat of the front plate, which it radiates into the room and gives an upward draft to the air near the floor, causing it to rush under the grate, thus creating a bright fire in a very short time. The upper damper H is only used when it is desired to maintain a steady heat, in which case the lower damper G is closed. The opening of the damper H and closing of damper G causes a moderate instead of a strong draft. The heated air in the fire-box ascends to a greater height before entering the combustion-chamber, causing a slower combustion, and in consequence less heat is allowed to escape to the flue, and a steady but more intense heat is radiated into the room.

Extending through the front plate C above the upper or supplemental damper are a series of holes K, which communicate with the inside of the casing B. The function of these holes is to insure ventilation, to create and maintain a continued circulation of air in the flue, and facilitate combustion. Thus when

the fire is strong or bright no danger will arise were both dampers G and H inadvertently closed, which is a matter of the greatest desideratum.

- 5 Formed a suitable distance apart in the upper side of the bottom of the casing B and pitched or inclined toward the front thereof are a series of grooves *g*, (better illustrated in Fig. 3 of the drawings,) with which openings
10 *g'* in the lower edge of the damper-plate G are designed to register when the damper is opened for the discharge of soot or any dirt that might collect within the casing.

- Formed in the upper plate of the casing or
15 combustion-chamber B is an opening L, which communicates with the flue, and movably secured below this opening is a damper-plate M. The object of this damper is to provide a means of decreasing the outlet from the combustion-chamber to the flue where a flue is
20 too large to secure the best results, and thus prevent a useless draft in the flue proper, causing the air to be drawn from under the grate and through the fire.

It is obvious that the general arrangement 25 of the dampers G and H, vent-holes K, and holes *g'* for the escape of dirt and soot might be altered without departing from my invention, as might, also, the exact form of the casing. 30

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

In a draft-regulator for fireplaces, the combination, with the casing having the forwardly 35 and upwardly inclined front wall or plate and a series of grooves *g*, formed in the upper side of the bottom of the casing and inclined forwardly and downwardly, of the sliding damper G, having a series of holes *g'* in its lower 40 edge designed to register with the grooves *g*, substantially as and for the purpose set forth.

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

BENJAMIN W. PEEL.

Witnesses:

WM. ARMSTRONG,
WM. A. MAGUIRE.