No. 871,584. PATENTED NOV. 19, 1907.

C. M. GRAHAM.

FIRE GRATE.

APPLICATION FILED AUG. 28, 1905.

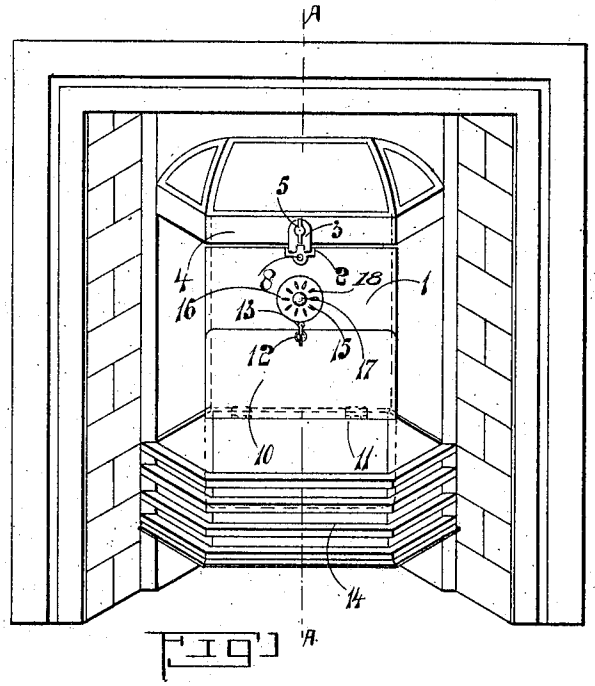


Fig. 1

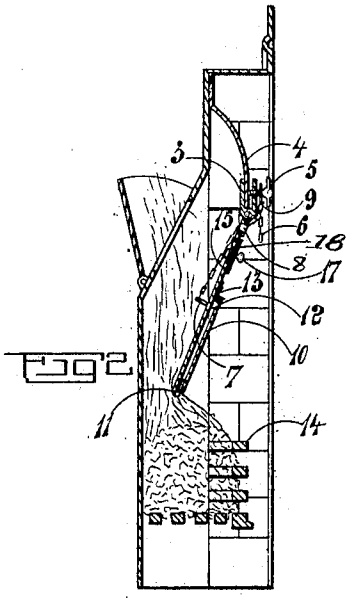


Fig. 2

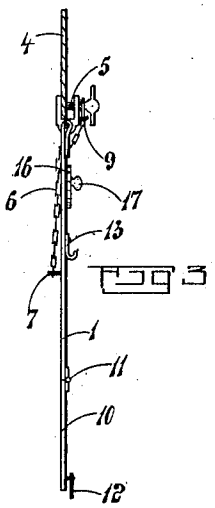


Fig. 3

Witnesses
E. L. Balduus
A. Watson

Inventor
Charles Mayes Graham
by his Attorney Kenneth H. Hayward

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES MAYES GRAHAM, OF DUNEDIN, NEW ZEALAND.

FIRE-GRATE.

No. 871,584. Specification of Letters Patent. Patented Nov. 19, 1907.

Application filed August 28, 1905. Serial No. 276,114.

To all whom it may concern:

Be it known that I, CHARLES MAYES GRAHAM, a subject of His Majesty the King of Great Britain and Ireland, and residing at 223 Leith street, Dunedin, in the Provincial District of Otago, in the Colony of New Zealand, have invented certain new and useful Improvements in Fire-Grates, of which the following is a specification.

This invention relates to fire grates of the class known as "register" grates and has for its object the better regulation of the draft and the saving of fuel by deflecting into the room as much as possible of the heat of the fire.

According hereto, I employ a plate shaped to approximately fit, when in its normal position, the fireplace of the grate above the bars and hinged at its upper end to a clamp which is secured to the hood or other corresponding upper part of the grate. The plate is employed at an angle sloping from the front towards the rear of the grate and is supported by a chain by means of which its angle may be adjusted. The plate has a number of apertures, the size of which is regulated by a revoluble disk having similar apertures which may be brought into correspondence or otherwise with the apertures in the plate. To the bottom of the plate is hinged a shutter which is normally folded against the plate, but may when the shutter is drawn forward, be turned upon its hinges to lie against the front of the grate bars to increase the draft through the fire.

Referring to the accompanying drawing,—Figure 1 is a front elevation, Fig. 2 a vertical section on A—A, Fig. 1 and Fig. 3 a part similar section to Fig. 2 showing the shutter in its operating position.

The plate 1 is hinged at 2 to a clip bracket 3 which fits upon the hood 4 of the grate and is secured in position by a clamping screw 5 which passes through a screw threaded hole in the clamp. The chain 6 is secured to a staple 7 at the back of the plate and passing through a hole 8 at the top of the plate is linked upon a hook 9 having a ring at its end which is swiveled upon the screw 5. The length of the chain is adjusted by placing one or other of the links upon the hook as required in order to suspend the plate at a desired angle in relation to the fire in order to prevent down draft and to deflect as much heat as possible from the fire into the room. The shutter 10 is hinged at 11 upon the plate 1 and is provided with a swivel ring 12 which, to hold the shutter when out of use, is passed over a hook 13 upon the plate 1 as shown in Fig. 1. When the shutter is required for use to increase the draft through the bottom of the fire, the ring is released from the hook and the plate allowed to fall in front of the grate bars 14 as shown in Fig. 3.

The plate 1 has a number of apertures 15 and a disk 16 revolubly mounted upon the plate 1 and operated by a knob 17, has holes 18 which, for the purpose of regulating draft, can be brought into correspondence or otherwise with the holes 15 by revolving the disk.

The shutter may be dispensed with, if desired, but will usually be found a useful part of my invention.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

In open grates the combination of a clamp bracket; a screw for clamping the bracket to the upper part of a grate; a plate hinged to the clamp bracket; a chain attached at one end to the hinged plate, and passing through a hole at the top of the plate; a hook upon the screw of the clamp bracket adapted to engage the links of the chain; and a shutter hinged to the bottom of the plate substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two witnesses.

CHARLES MAYES GRAHAM.

Witnesses:

ARCHIBALD DICKSON HUNTER,

SAMUEL PHILIP NIRAMS.