N. JOHNSTON.

FIREPLACE.

APPLICATION FILED MAY 12, 1913.

1,094,659. Patented Apr. 28, 1914.

Fig. 1.

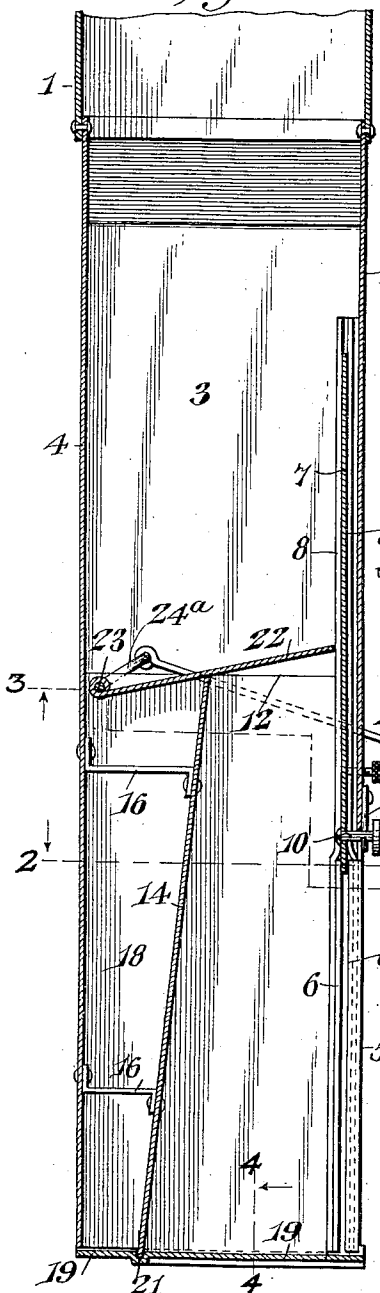


Fig. 2.

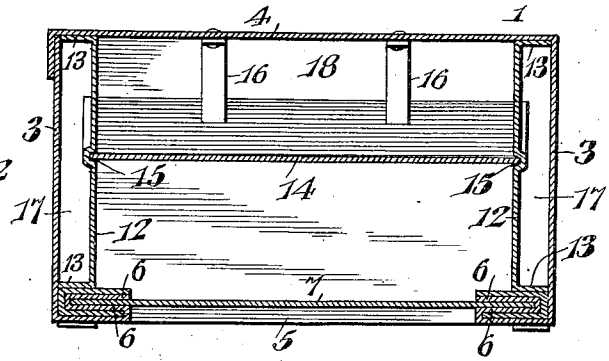


Fig. 5.

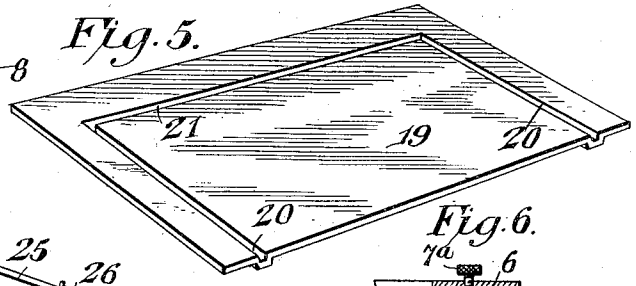


Fig. 6.

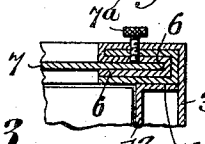


Fig. 3.

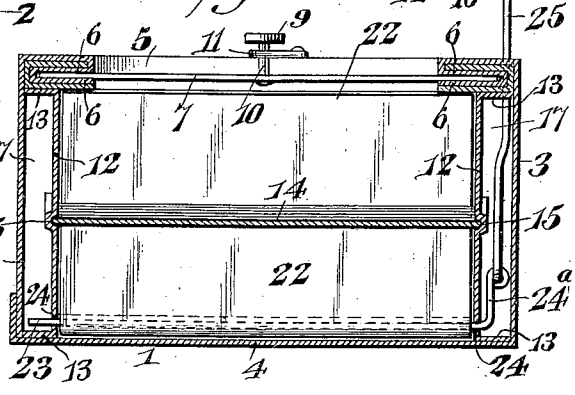
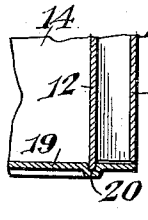


Fig. 4.



WITNESSES

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FIREPLACE.

1,094,659. Specification of Letters Patent. Patented Apr. 28, 1914.

Application filed May 12, 1913. Serial No. 767,176.

To all whom it may concern:

Be it known that I, NATHAN JOHNSTON, a citizen of the United States, residing at Sugden, in the county of Jefferson and State of Oklahoma, have invented a new and useful Fireplace, of which the following is a specification.

The invention relates to improvements in fireplaces.

The object of the present invention is to improve the construction of fireplaces, and to provide a simple, cheap and practical chimney and fireplace of strong and durable construction, adapted to be readily manufactured and easily and quickly arranged for use, and equipped with an interiorly arranged damper for controlling the passage or flue of the chimney and with a vertically movable blower or screen adapted to cooperate with the damper for controlling the draft and also to be arranged to expose the fire or to close completely the fireplace either to protect a room or apartment from the fire during the night and at other times, and also during seasons of the year when a fire is not required.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a vertical sectional view of a chimney, having a fireplace constructed in accordance with this invention. Fig. 2 is a horizontal sectional view on the line 2—2 of Fig. 1. Fig. 3 is a similar view on the line 3—3 of Fig. 1. Fig. 4 is an enlarged detail sectional view on the line 4—4 of Fig. 1. Fig. 5 is a detail perspective view of the hearth plate. Fig. 6 is a detail view illustrating the arrangement of the set screw for securing the blower in its adjustment.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

In the accompanying drawing in which is illustrated the preferred embodiment of the invention, the chimney 1, which may be made in any number of vertically arranged sections, is illustrated in the drawing as constructed of sheet metal, but it may be made of various other materials, and it comprises in its construction a vertical front wall 2, vertical side walls 3 and a rear wall 4, preferably formed integral, as clearly illustrated in Figs. 2 and 3 of the drawing. The front wall 2 is provided at its lower portion with a fireplace opening 5, extending upwardly from the lower edge of the front wall, and terminating short of the side walls and provided at the front corners of the chimney with vertical guides 6 for a vertically adjustable blower or screen 7. The vertical guides 6, which are approximately U-shaped in horizontal section, are shown as formed integral with the side portions of the front wall by extending the side portions inwardly. The chimney is also provided with extension guides 8 consisting of strips of metal bent longitudinally to form two sides or flanges and a connecting portion. The extension guides are approximately U-shaped in cross section, and their lower portions fit around the guides 6 of the front wall and are arranged between the said guides and the adjacent portions of the side walls and the front walls, whereby the extension guides 8 are firmly held in a vertical position. The extension guides preferably extend upwardly from the lower edges of the chimney a sufficient distance above the fireplace opening to permit the blower or screen 7 to be arranged substantially above the fireplace opening where the greater portion of it is out of view.

The screen or blower is equipped adjacent to its lower edge with a centrally arranged projecting knob 9, having a shank 10 adapted to be engaged by a hook 11, or other suitable catch for retaining the blower in an elevated position. When the blower or screen is raised, as illustrated in Fig. 1 of the drawing, it provides a double thickness at the front of the chimney above the fireplace to prevent a mantle or other woodwork from becoming excessively heated. Also any suitable means such as a set screw 7^a may be provided for securing the screen at an intermediate adjustment between the bottom of the chimney and the top of the fireplace to arrange the blower or screen for controlling the draft to cause a fire to burn with the desired rapidity.

The chimney is equipped with interiorly arranged vertical side plates 12, constructed

of heavy sheet metal or other suitable material and extending from the corner guides to the rear wall of the chimney and provided at their front and rear edges with vertical flanges 13, arranged at right angles to the planes of the side plates 12 and fitting against the side walls 3 of the chimney and spacing the side plates therefrom. The side plates are maintained in such spaced relation by an inclined back plate 14, extending upwardly and forwardly at an intermediate point between the front and rear walls of the chimney and having its side edges arranged in inclined grooves 15 in the inner faces of the side plates 12. The grooves are stamped or formed in the side plates 12, and when the parts are assembled, the side edges of the back plate are interlocked with the side plates, and the latter are maintained in position at opposite sides of the chimney. The inclined back plate, which extends to a point above the horizontal plane of the top of the fireplace opening, as illustrated in Fig. 1 of the drawing, may be connected with the rear wall of the chimney by short braces 16, riveted, bolted, or otherwise secured to the back plate and to the rear wall, and adapted to prevent the inclined back plate from springing either inwardly or outwardly. The side and back plates form intervening side and back spaces 17 and 18 between them and the walls of the chimney, and these spaces 17 and 18 may be left open and utilized as dead air spaces, or they may be filled with any suitable material, such as mortar, firebrick and other non-combustible material. The chimney is provided at the bottom with a rectangular hearth plate 19, constructed of suitable metal and being of a size to cover the bottom of the chimney and provided with side and rear grooves 20 and 21 to receive the lower edges of the side and back plates, as clearly shown in Figs. 1 and 4 of the drawings.

The chimney is equipped at a point above the fireplace opening with an oblong damper 22, provided at its rear edge with a pintle rod 23, which is mounted in suitable bearing openings 24 in the upper portions of the side plates adjacent to the rear edges thereof. The inclined rear plate extends to the upper edges of the side plates, and the damper is hinged at a point below the plane of the upper edge of the inclined plate, and it is adapted when closed to rest upon the upper edge of the said inclined plate in an inclined position, as clearly illustrated in Fig. 1 of the drawing. The damper extends substantially from the rear wall of the chimney to the blower, the damper being spaced at the front and rear from the said rear wall and the blower or screen a distance equal to the thickness of a piece of sheet metal so as to clear the said rear wall and blower or screen. The pintle is provided at one end with a short arm 24ª, arranged to operate in the adjacent side space 17 and connected to the rear end of an operating rod 25. The arm is provided with an eye, which is linked into a similar eye of the operating rod, and the latter, which pierces the front wall of the chimney, is equipped at its outer or front end with a suitable handle 26 to enable it to be readily grasped. The rod is adapted to slide inwardly and outwardly to swing the damper upwardly and downwardly.

The fireplace of the chimney may be equipped with a grate or heater or any other suitable means for supporting and burning the fuel. The damper is adapted to be closed to keep the heat in the room after the smoke has escaped from the fuel and also after a fire has died out to prevent cold air from coming down the chimney and entering the room. This result may also be accomplished by closing the blower or screen. The blower or screen is also adapted to be closed when it is desired to effectually prevent the fire from dropping into a room or from being blown into the same by the down draft through the chimney, and it will render a house perfectly safe at night and also at other times when there is no one present to attend to the fire. When the blower or screen is opened a short distance, say three or four inches, it is adapted to create a strong draft or suction through the fireplace for causing a rapid burning of the fuel. Also in seasons of the year when a fire is not needed, the blower or screen may be closed to conceal the fireplace. The front of the chimney may be finished in any suitable manner and the screen may be ornamented so as to present an attractive appearance. Also the improvements may be applied to ordinary chimneys constructed of brick, stone or analogous material.

What is claimed is:—

1. The combination of a chimney including front, rear and side walls and provided at the front wall with a fireplace opening, a blower mounted at the said fireplace opening and slidable downwardly and upwardly to cover and uncover the same, a rear inner plate extending upwardly from the bottom of the chimney and spaced from the rear wall thereof, and an inclined damper pivotally mounted in the space between the inner rear plate and the rear wall of the chimney at a point slightly below the upper edge of the said rear plate and extending forwardly over the same and resting thereon with its front edge arranged in close proximity to the said blower.

2. The combination of a chimney including front, rear and side walls and provided at the front with a fireplace opening, inner upright side plates extending from the front of the chimney to the rear wall thereof and arranged in spaced relation with the side

walls to form side spaces, an inner rear plate extending upwardly from the bottom of the chimney in spaced relation with the rear wall thereof to provide a rear space and connected at its side edges to the said inner side plates, a blower mounted at the fireplace opening and slidable downwardly and upwardly to cover and uncover the same, a damper pivotally mounted between the side plates in the space between the rear plate and the rear wall of the chimney and at a point below the upper edge of the said rear plate and extending forwardly over the same and resting thereon and having its front edge arranged in close proximity to the blower, and operating means connected with the damper and arranged in one of the said side spaces.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

NATHAN JOHNSTON.

Witnesses:
H. C. GOODLOW,
A. S. GOODLOW.

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