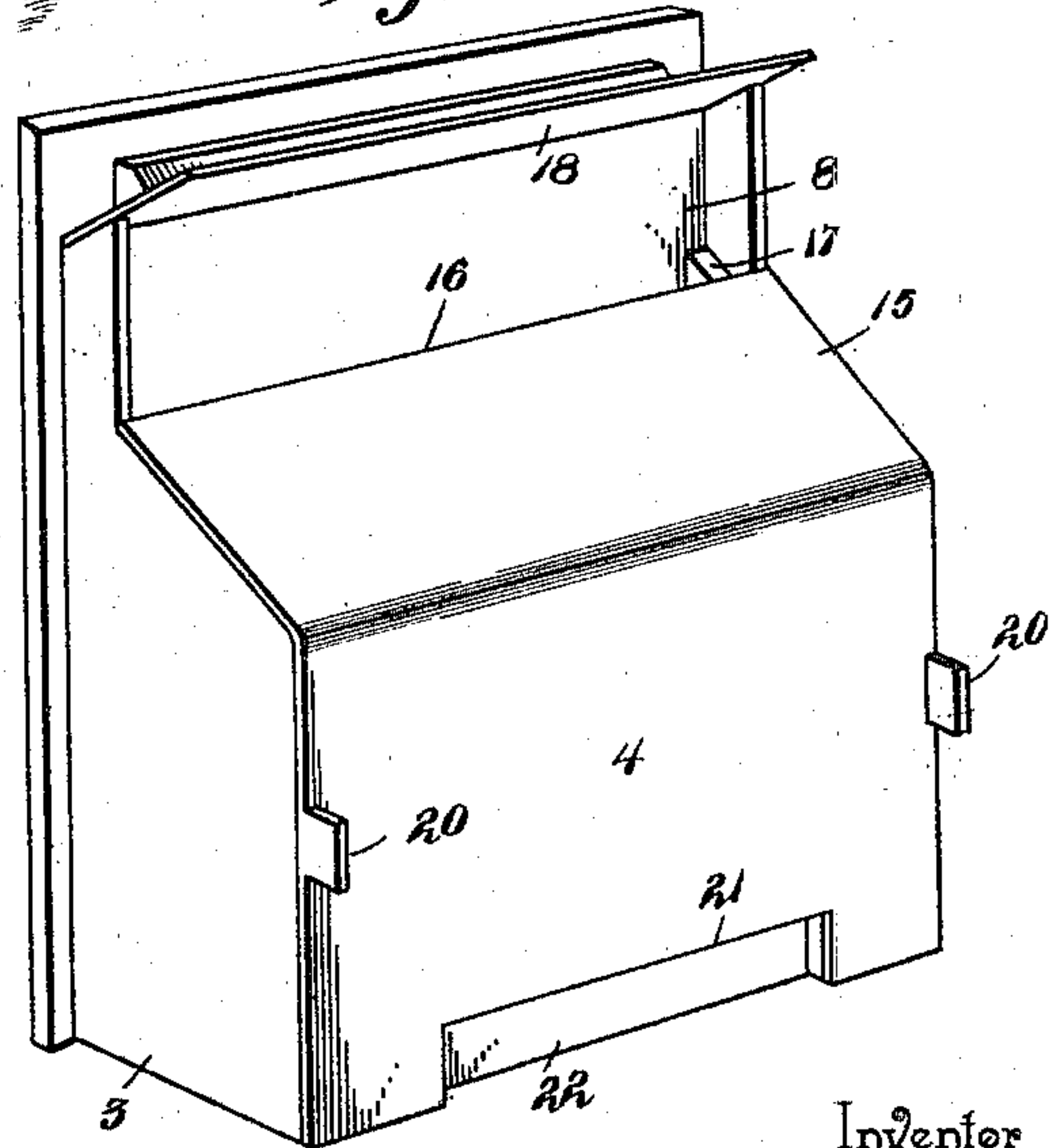
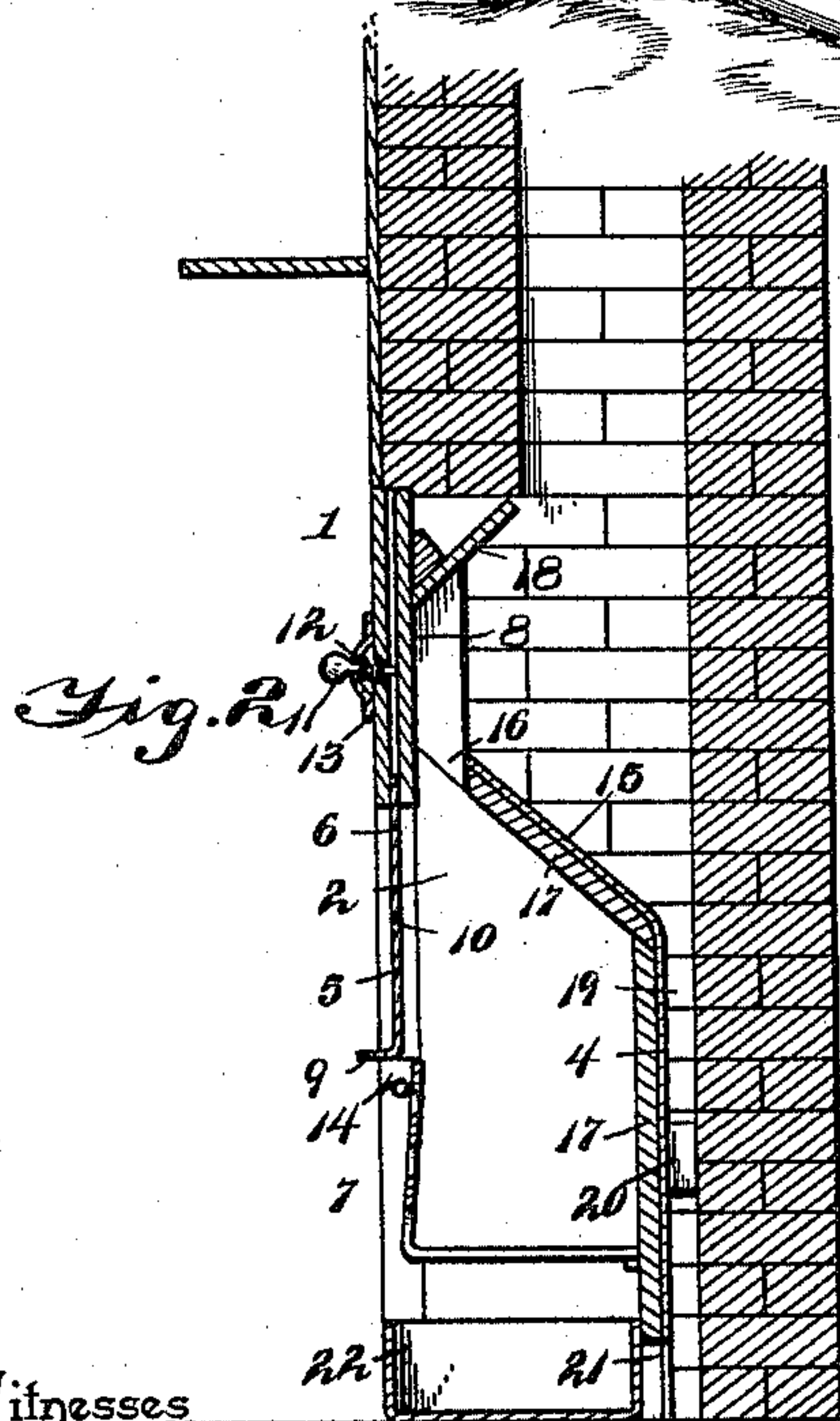
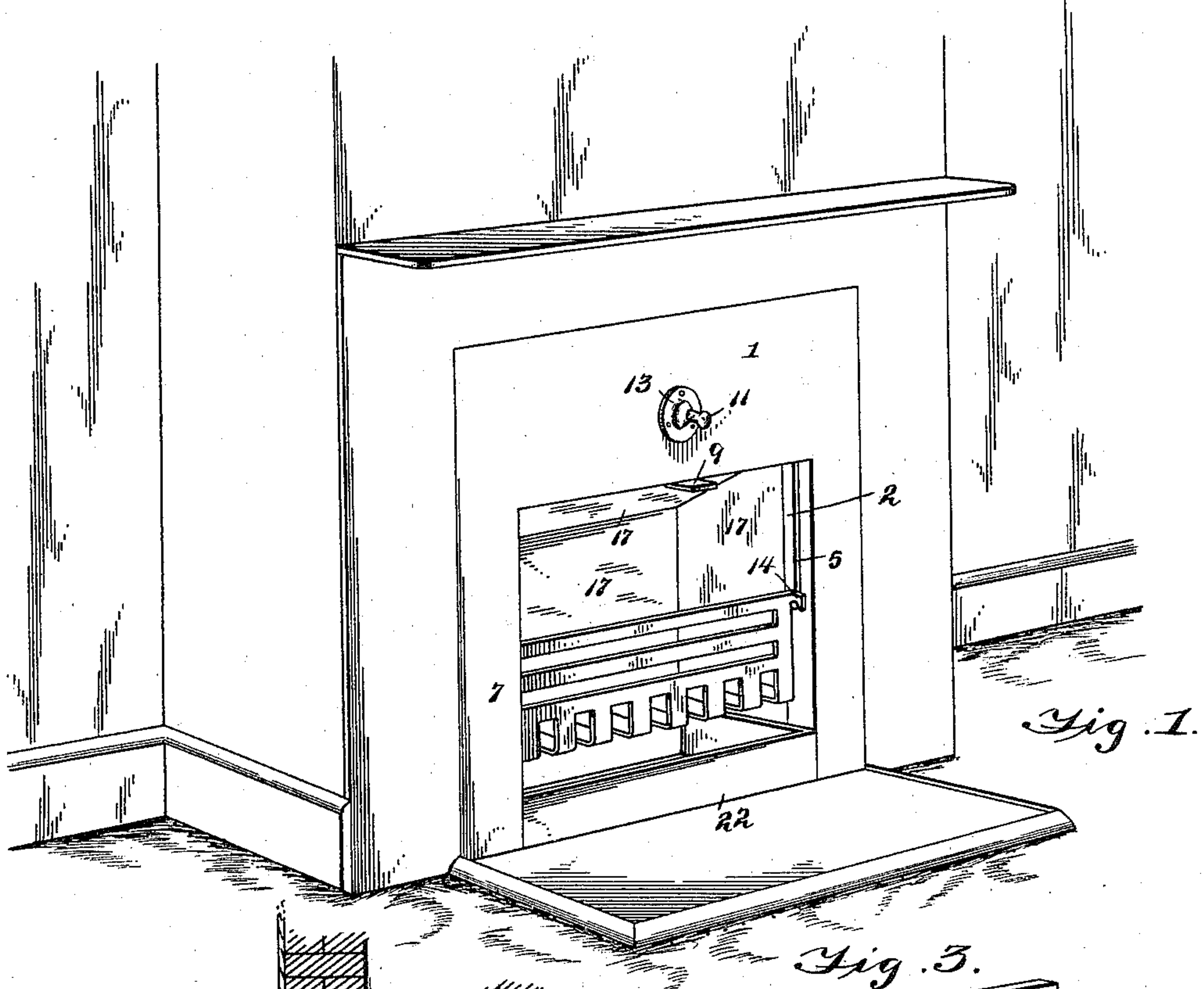


(No Model.)

E. FINCH.
FIREPLACE GRATE.

No. 582,049.

Patented May 4, 1897.



Witnesses

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UNITED STATES PATENT OFFICE.

ERNEST FINCH, OF LISBON, OHIO.

FIREPLACE-GRATE.

SPECIFICATION forming part of Letters Patent No. 582,049, dated May 4, 1897.

Application filed February 14, 1896. Serial No. 579,288. (No model.)

To all whom it may concern:

Be it known that I, ERNEST FINCH, a citizen of the United States, residing at Lisbon, in the county of Columbiana and State of Ohio, have
5 invented a new and useful Fireplace-Grate, of which the following is a specification.

This invention relates to an improvement in fireplace-grates, and has for its object to provide means whereby soot, ashes, &c., will
10 be received in a pocket especially provided therefor and prevented from gaining access to the room to the detriment of the furniture and carpet, provision being made at the same time whereby such soot and ashes may be con-
15 veniently removed when desired.

A further object of the invention is to provide a novel construction of heater which may be removably fitted in any fireplace and to employ in connection therewith an adjust-
20 able blower slidingly mounted in the heater-frame and adapted to be elevated and held out of the way when not required.

The invention consists in certain novel features and details of construction and arrange-
25 ment of parts, as hereinafter fully described, illustrated in the drawings, and finally pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of the improved fireplace
30 grate and heater in place. Fig. 2 is a vertical transverse section through the same. Fig. 3 is a detail perspective view of the heater, looking from the rear or inside of the fireplace.

Similar numerals of reference designate cor-
35 responding parts in the several figures of the drawings.

This invention contemplates the use of a novel form of heater, which may be either cast in sections and put together or formed of
40 sheet metal, and in either event lined with fire-brick or other suitable material. This heater comprises a front 1, having the grate-opening 2, the sides or ends 3, and the back 4. These parts are preferably formed of sheet
45 metal, though in many instances it may be found desirable to construct the sides and back of sheet metal and the front of cast-iron, so that an ornamental finish may be imparted thereto, and also to provide for the formation
50 of vertical grooves 5 in the inner adjacent surfaces of the sides of the grate-opening 2.

Within these grooves 5 a blower 6 is mounted to slide. This blower is of sufficient area to cover the space between the top of the grate-opening 2 and the upper edge or bar of
55 the grate, (indicated at 7,) and when not in use may be moved upward behind the upper portion of the front 1 and between said front and a backing 8, either of sheet metal or fire-brick, the said backing and the front together form-
60 ing a pocket or recess into which the blower recedes. The blower is provided at its lower edge with a finger-hold 9 and is further provided with a perforation 10, which when the blower is elevated is adapted to be engaged
65 by a spring-catch arranged over the grate-opening and consisting of a pin or bolt 11, a spring 12 for giving the same an inward tendency, and a disk-shaped face-plate 13, secured to the adjacent surface of the front 1 of
70 the heater.

The grate 7 may be of any desired pattern, and at its opposite upper corners is provided with forward extensions or ears 14, by means of which the grate may be secured in place
75 within the heater at such points, and which also serve as stops for arresting the downward movement of the blower 6.

The heater further comprises an inclined table or deflector 15, partially covering the
80 top of the grate-space and united at its rear edge to the back 4 and at its side edges to the sides 3 of the heater, but terminating at its upper forward edge at a sufficient distance from the front of the heater to leave a throat
85 16, which will admit of the upward passage of the products of combustion and afford the necessary draft. The sides and back are lined inside with fire-brick or tiling 17, and a similar lining is applied to the under sur-
90 face of the table or deflector 15, the said lining serving to deflect the flame, &c., upward through the throat 16. Immediately above the throat 16 is arranged a rearwardly and upwardly inclining deflector 18. This over-
95 hangs the throat 16 and serves to direct the products of combustion properly into the flue, and also forms a ledge which will prevent soot, &c., in its descent from passing through the throat 16 and gaining access to the room.
100 The table or deflector 15 directs the soot, &c., between the back 4 and the rear wall of the

flue in the chimney, a space 19 being left therebetween for the purpose of forming a soot-receptacle. Spacing-lugs 20 project rearwardly from the back 4 of the heater and
5 bear against the rear wall of the flue-space, and are of such length as to bring the front surface of the front of the heater flush with the corresponding surface of the fireplace or mantel, thus enabling the heater to be re-
10 moved and replaced with accuracy and without the services of an expert. An aperture 21 is formed in the bottom edge of the back 4, thus affording communication with the soot-space 19, and such aperture is ordinarily
15 closed by the ash-pan 22, placed beneath the grate and having its rear wall or portion of the same of greater height than the said aperture 21.

From the foregoing description it will be
20 seen that when, owing to jar or for other reasons, a quantity of soot is thrown downward in the chimney the same will be directed by the means hereinabove described into the space in rear of the heater, not a particle of
25 the same obtaining access to the room. At the same time when there has been an accumulation of such matter the same may be readily removed by first withdrawing the ash-pan, as above stated, thus affording access to
30 the said matter through the aperture 21.

The utility of the blower is too well understood to need any further description, the advantage attained by this arrangement being that said blower may be folded up out of the
35 way when not required for use, thus obviating the trouble and annoyance incident to detaching the ordinary blower when hot and finding a place where the same may be safely deposited until cool.

40 By making the heater as a whole removable it may be placed on sale in hardware-stores like an ordinary stove, and it also has the advantage that it may be readily removed

from the fireplace whenever it is desired to afford access to the chimney and flue. 45

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what 50 is claimed as new is—

A fireplace-heater of less depth than the fireplace in which it is located, said heater being removable as a whole, and consisting of front, side and back plates connected to- 55 gether, the front plate having a grate-opening 2 and the rear plate having an opening 21 at its lower end, and the side plates being shorter than the front plate and cut away to form supports for the forwardly and upwardly 60 inclined portion 15 of the rear plate and their upper ends beveled to support the upwardly and rearwardly inclined plate 18 at a distance above the top edge of the back plate, whereby a throat is formed, and lugs projecting 65 from the back plate to engage the rear wall of the fireplace, the construction being such that when the heater is in position a space will be formed in its rear, the front edge of the inclined plate 15 will extend forwardly 70 beyond the vertical plane of the front face of the flue, and the rear edge of the plate 18 being in the same vertical plane as the front face of the flue, whereby any soot that may fall from the flue will be deflected into the 75 space in the rear of the heater and may be removed therefrom through the opening at the bottom of the rear plate, substantially as described.

In testimony that I claim the foregoing as 80 my own I have hereto affixed my signature in the presence of two witnesses.

ERNEST FINCH.

Witnesses:

A. A. RAMSEY,
WILLIS JORDAN.