

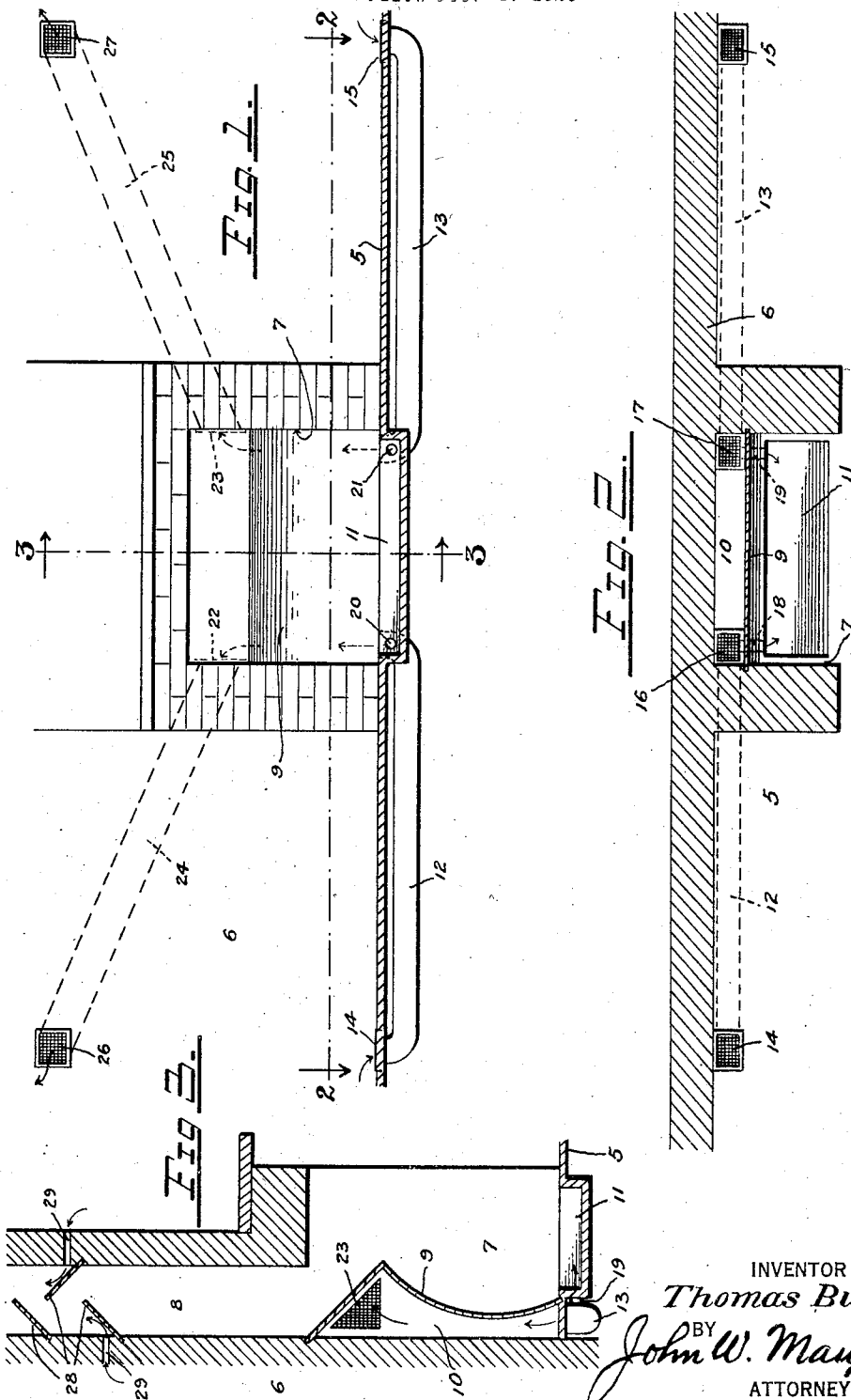
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T. BURLEY

FIREPLACE

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UNITED STATES PATENT OFFICE.

THOMAS BURLEY, OF SEATTLE, WASHINGTON.

FIREPLACE.

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My invention relates to fireplaces and the principal object of the invention is to provide a fireplace having a chamber back of its radiator plate whereby a circulation is set up by means of pipes arranged to conduct the cool air to said chamber where it is heated and then returned by pipes disposed at an elevation above said chamber. Another object is to provide auxiliary means for furnishing a draft for a fire well that is disposed in the bottom of the fireplace. A further object is to provide means in co-operation with this particular form of fireplace for increasing the draft of the chimney flue and eliminating any danger of the fireplace becoming smoky.

With the above and other objects in view which will appear as the description proceeds, the invention consists of the novel construction, adaptation, combination and arrangement of parts hereinafter described and claimed. These objects are accomplished by devices illustrated in the accompanying drawings; wherein:—

Figure 1 is a view partly in front elevation and partly in vertical section of a fireplace embodying the principal features of the invention;

Fig. 2 is a view in horizontal section taken substantially on a broken line 2, 2 of Fig. 1; and

Fig. 3 is a view in transverse vertical section taken on a broken line 3, 3 of Fig. 1.

Referring to the drawings throughout which like reference numerals designate like parts, the numerals 5 and 6 indicate respectively the floor and vertical wall of a room wherein is disposed the fireplace having an opening 7 for the fire and a chimney flue 8 leading upwardly therefrom.

Disposed within the back of the fireplace opening 7 is a radiator plate 9 that forms a back chamber 10 in combination with the floor and rear wall of said opening. A fire well 11 is located in the bottom of the fireplace opening. Pipes 12 and 13 disposed below the floor 5 lead from intake openings 14 and 15 provided in said floor to outlets 16 and 17 in the bottom of the chamber 10. Auxiliary pipes 18 and 19 leading from the

pipes 12 and 13 respectively have outlets 20 and 21 into the fire well 11.

Openings 22 and 23 in the upper portion of the chamber 10 are connected by pipes 24 and 25 with registers 26 and 27 that are located in the vertical wall 6 at an elevation with respect to said openings. A plurality of upwardly slanting deflector plates 28 secured in the walls of the chimney flue 8 have associated openings 29 through said walls.

In the operation of the device the air within the back chamber 10 will obviously be heated by the fire within the bottom of the opening 7 as the heat is deflected outwardly by the radiator plate 9. The warm air will, of course, rise through the openings 22 and 23 and pipes 24 and 25 to the registers 26 and 27 where it will be thrown out into the room. At the same time cool air will be drawn into said chamber through the openings 14 and 15, pipes 12 and 13 and openings 16 and 17 to replace the warm air as it rises to said registers.

While the cool air is being drawn into the back chamber 10 some of it will be deflected through the small auxiliary pipes 18 and 19 into the fire well 11 by the fire within the fireplace and in passing upwardly into the chimney flue 8 will serve as a draft to feed said fire.

Owing to the fact that the entrance to the flue 8 is somewhat restricted by the upper portion of the radiator plate 9 in this particular form of construction, the slanting deflector plates 28 are provided for the purpose of concentrating the draft at this point whereby air entering the openings 29 will have a maximum effect in increasing the draft and will serve as a positive means of preventing a back draft from carrying smoke down into the fireplace.

Having thus described my invention, it being understood that such changes may be resorted to as do not constitute a departure from the scope and spirit of the invention, what I claim and desire to secure by Letters Patent of the United States is:

A fireplace comprising a radiator plate that is arranged to form a back chamber, upwardly slanting deflector plates disposed

in the chimney flue having associated draft openings, a fire well in the bottom of the fireplace, conduits for the entry of cool air connected with the bottom portion of the
5 back chamber, auxiliary pipes connecting said conduits and fire well, conduits leading from the upper portion of said back chamber, and registers for the discharge of warm

air at the ends of the last named conduits disposed above their connection with the 10 chamber.

In witness whereof, I hereunto subscribe my name this 27th day of November, A. D. 1926.

THOMAS BURLEY.