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(71) Applicant  
Strax Distribution Limited

(Incorporated in United Kingdom)

41b Brecknock Road, London N7 0BT

(72) Inventor  
Michael L. H. Frost

(74) Agent and/or Address for Service  
Forrester, Ketley & Co.,  
Forrester House, 52 Bounds Green Road, London  
N11 2EY

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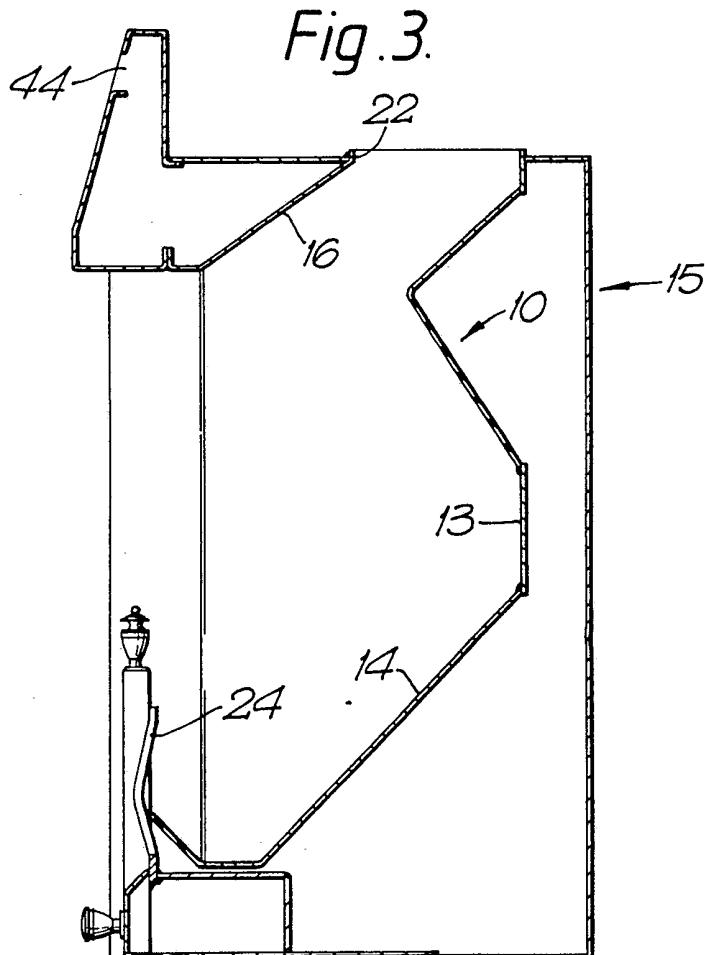
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F4W

## (54) Simulated solid fuel gas fire

(57) In a gas fire (15) having an open hearth containing artificial coals or logs, the coals or logs are supported by a floor (14) which is inclined with respect to the horizontal so as to promote radiation of heat outwardly and to minimise the quantity of artificial coals or logs required to provide a heaped appearance, and gas burners project through the floor (14).



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Fig. 1.

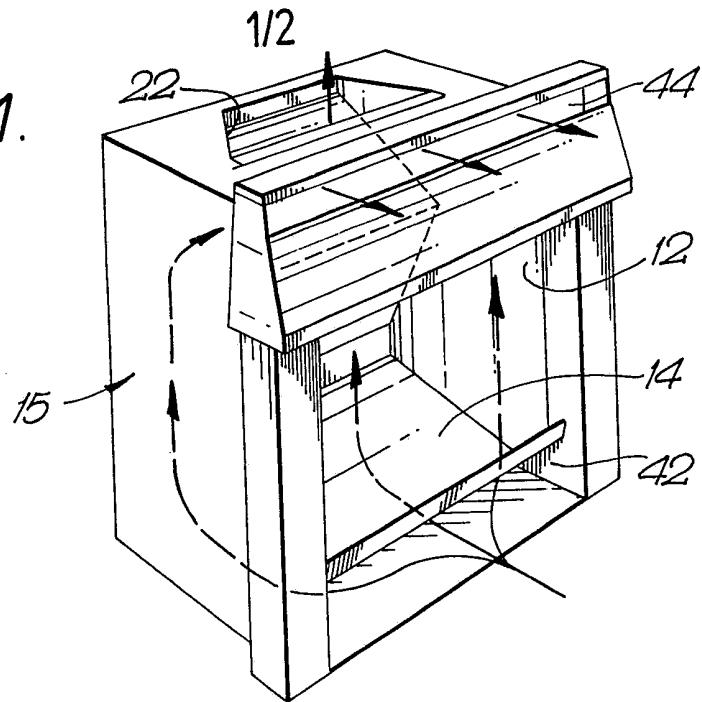
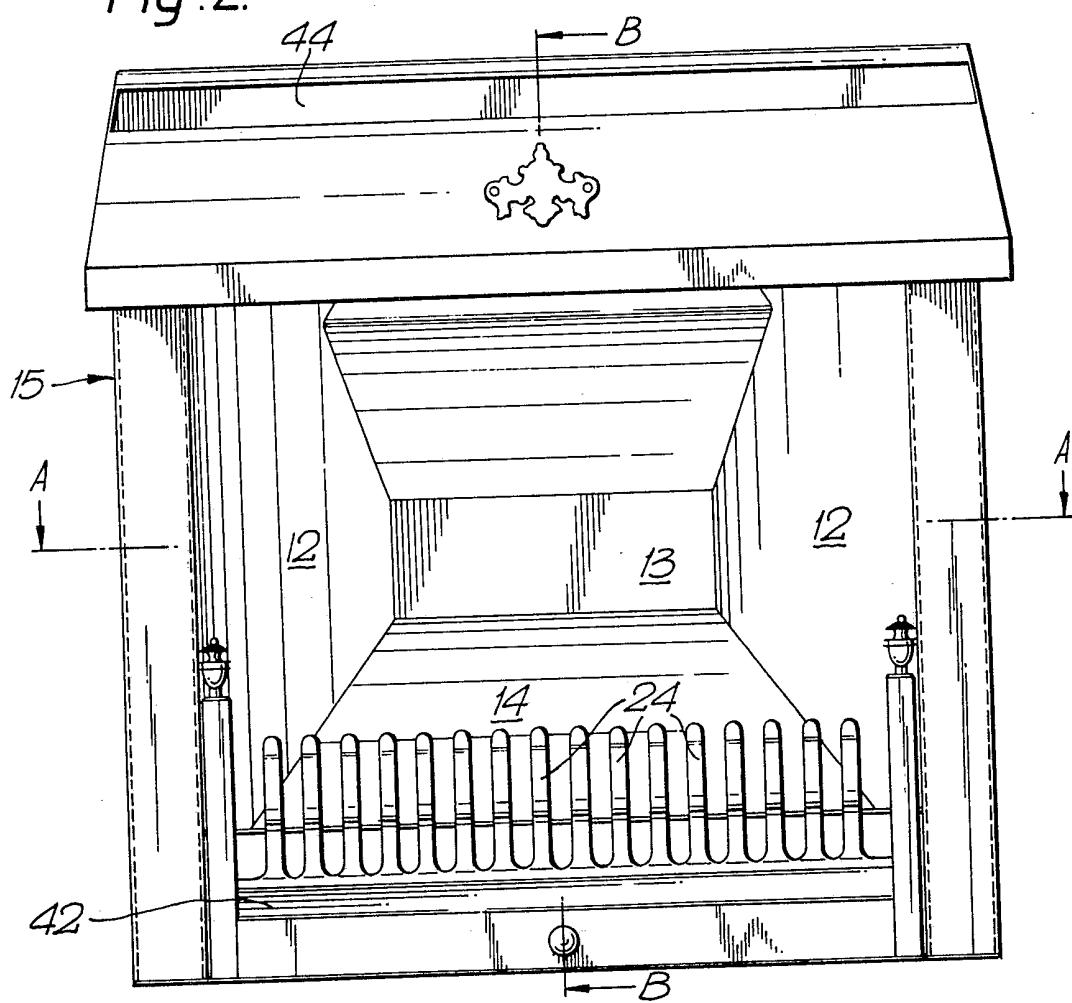


Fig. 2.



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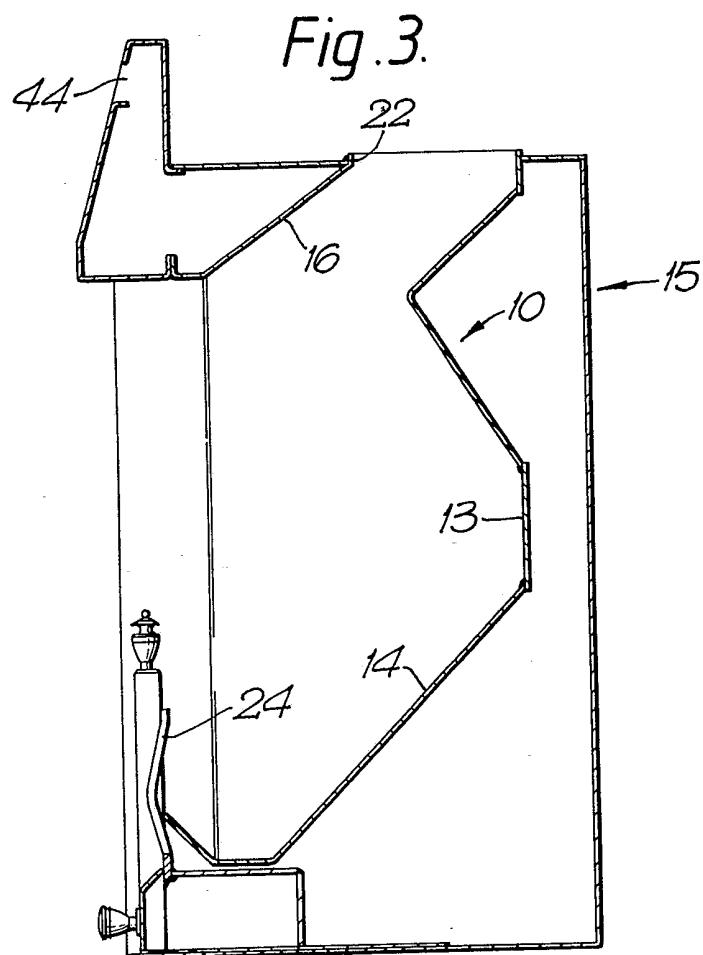
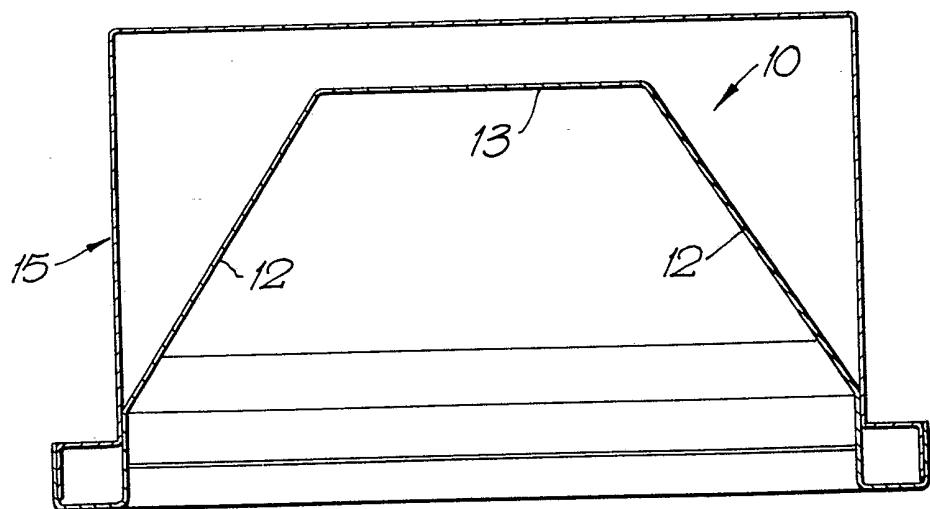


Fig. 4.



## SPECIFICATION

## A gas fire

5 THIS INVENTION relates to a gas fire, suitable for domestic heating.

Gas fires are known which simulate open coal or log fires, such fires having a combustion space on a floor of which are supported 10 a plurality of ceramic or other heat-resistance bodies which are configured to resemble lumps of coal or logs of wood, gas burners or jets projecting through the floor of the combustion space to supply gas which burns in 15 flames under, around and above the artificial coal or logs thus supported.

It is among objects of the present invention to provide a gas fire of the above-noted type which will provide more efficient heating of a 20 room space than known gas fires of this type and in which the quantity of the artificial coals or logs required is reduced as compared with known fires of this type.

According to the invention there is provided 25 a gas fire including a combustion space which includes a floor through which gas burners or jets project and which supports a layer of artificial coals or logs, and wherein said floor is inclined with respect to the horizontal so that 30 it is higher at the rear than at the front, to promote radiation of heat outwardly from the combustion space and to minimise the quantity of artificial coals or logs required to present a heaped appearance.

35 An embodiment of the invention is described below by way of example with reference to the accompanying drawings:

Figure 1 is a diagrammatic perspective view of a gas fire embodying the invention,

40 Figure 2 is a front elevational view of the fire of Fig. 1,

Figure 3 is a vertical sectional view along the line B-B of Fig. 2, and

45 Figure 4 is a view in horizontal section, on the line A-A of Fig. 1.

Referring to the drawings, a gas fire includes a structure defining a combustion space defined by side walls 12 (Fig. 1), a rear wall 13 (Fig. 2), an inclined floor 14, and a 50 roof 16. The structure 10 defining the combustion space is located within a larger rectangular housing 15 the front of structure 10 is attached. The combustion space is open at its front which corresponds with a rectangular 55 opening defined by the front of the housing 15. Thus, the fire illustrated is an open fire. A mass of artificial coal (not shown) is supported on the floor 14 of the combustion space and is retained by a grille or grating 24 60 extended across the lower portion of the open front of the combustion space. A plurality of gas jets, (not shown) extend through the bottom wall 14 and into the combustion space, the gas jets being covered by the layer of 65 artificial coal. The roof 16 defines a down-

wardly open cowl or funnel adapted to gather combustion gases rising in the combustion space into a vertically extending flue pipe (not shown) connected with a flue opening 22 in

70 the top of housing 15.

In use, gas issuing from the gas nozzles is burnt within the region of the artificial coal and above that region, in a manner known *per se*, to simulate an open coal fire, the artificial

75 coal being, of course, ceramic bodies which are not consumed by fire. The gas so burnt is burnt in air drawn from the room and which enters the combustion space through the open front of the fire. The combustion products

80 pass outwardly, through the cowl 16 and the flue opening 22. Whilst much of the heat generated by the combustion of the gas is radiated from the open front of the fire, in particular, from the heated coals and the inclined

85 floor 14, some of the heat of combustion passes through a simple heat exchanger defined by the structure 10 and housing 15.

Thus as illustrated in Fig. 1, air from the room enters the outer housing 15 by way of an

90 inlet opening 42 defined at the front of the housing between the lower edge of grille 24 and the upper edge of a false ash-pan, to pass below the floor 14 into the space defined between the structure 10 and the hous-

95 ing 15. This air then passes upwardly, along the outer surfaces of the side walls 12 and behind the rear wall 13, passes into a space defined between the top of the housing 15 and the cowl 16 and thence passes from the

100 outer casing once more through outlet openings 44 adjacent the top of the housing at the front of the latter.

It will be appreciated by those skilled in the art that a more elaborate and efficient heat 105 exchanger arrangement than that disclosed may be utilised if desired.

## CLAIMS

1. A gas fire including a combustion space 110 which includes a floor through which gas burners or jets project and which supports a layer of artificial coals or logs, and wherein said floor is inclined with respect to the horizontal so that it is higher at the rear than at 115 the front, to promote radiation of heat outwardly from the combustion space and to minimise the quantity of artificial coals or logs required to provide a heaped appearance.

2. A gas fire according to claim 1 including 120 an outer housing, said gas-combustion space being defined by a structure supported within said housing and defining with said housing, around said structure, air passages extending from a lower level inlet or inlets communicat- 125 ing with the room space around the fire, to an upper level outlet or outlets communicating with the room space around the fire, whereby air may be drawn from the room space to be heated by passing around said structure pro- 130 viding the combustion space and may pass by

convection to said upper level outlet or outlets, without admixture with the products of gas combustion in said combustion space.

3. A gas fire substantially as hereinbefore described with reference to, and as shown in, the accompanying drawings.
4. Any novel feature or combination of features disclosed herein.

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