Nov. 19, 1929. K. AIRD 1,736,241

GAS FIRE

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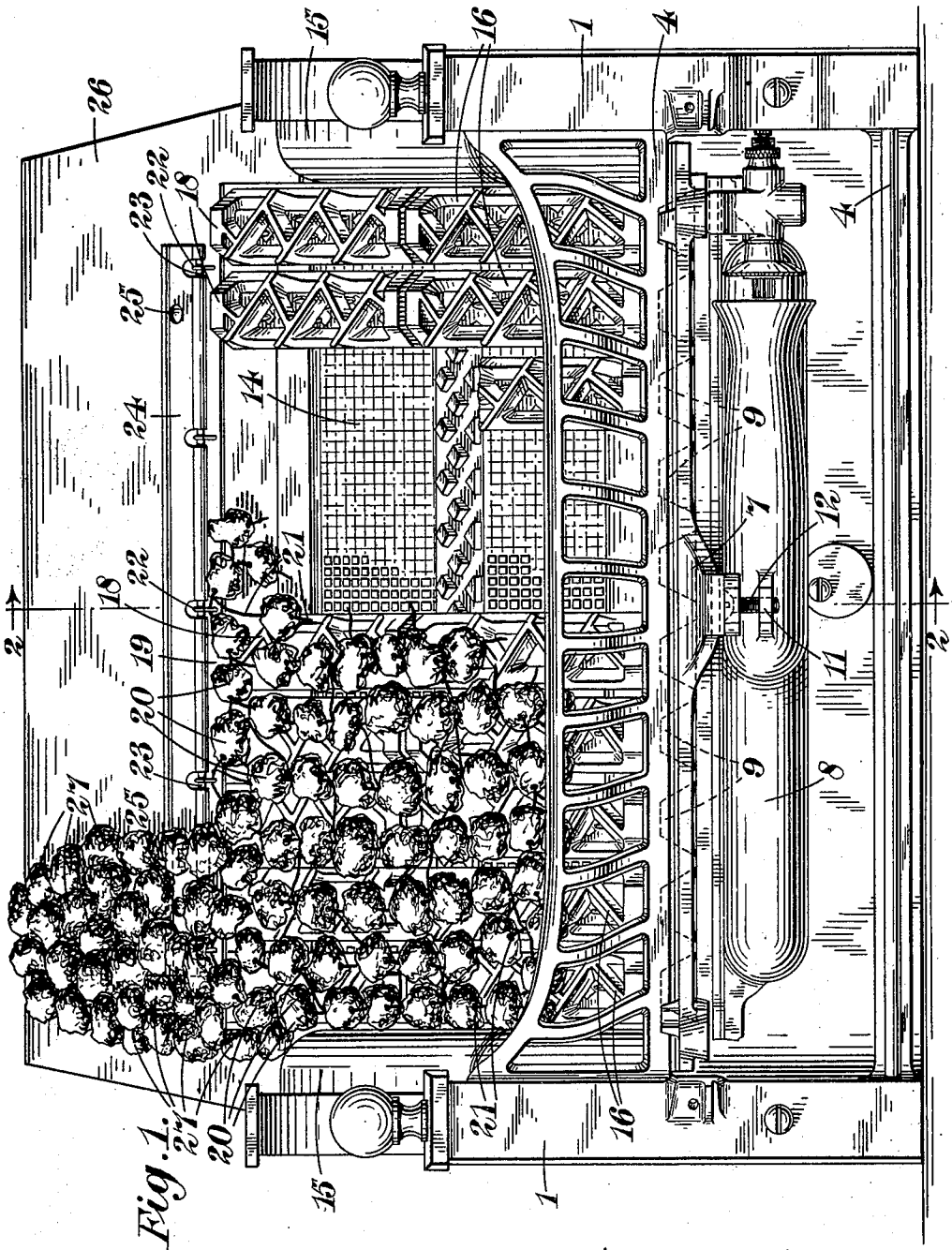


Fig. 1.

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Fig. 3.

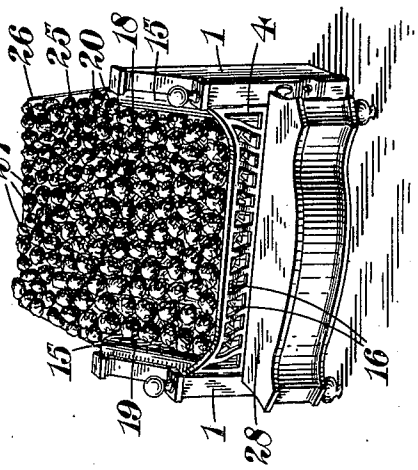


Fig. 2.

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UNITED STATES PATENT OFFICE

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GAS FIRE

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The invention relates to improvements in gas-fires and has for an object to provide a construction which has the general appearance of a coal- or coke-fire.

The gas fire of this invention in one aspect comprises in combination a plurality of gas-burner-outlets, a support for fuel which support in inclined rearwardly and upwardly away from above the burner outlets, radiants carried by said support so as to present a surface inclined similarly to the support, an "artificial coke-blanket" arranged over said surface, an inclined tray forming an extension of the support beyond the radiants loose artificial coke on said tray, and means which secure both the "artificial coke-blanket" and inclined tray to the top of the support for fuel.

The words "artificial fuel" used throughout the specification and claim denote materials which when placed in a gas-flame emit radiant heat without combustion of the materials. The words "artificial coke-blanket" used throughout the specification and claim denote a plurality of pieces of artificial fuel so secured together as to form a mat-like structure, which artificial fuel is so manufactured as to have the appearance of coke.

It will be appreciated that a gas-fire such as described above may be built into different forms of framework so as to represent various grates, such as a dog-grate or a basket-grate, and thus may easily be installed in fire-places constructed for such grates.

A further feature of the invention consists in so forming said support that it locates and carries above it the said radiants and a backing, and carries beneath it a gas-burner and ejector-nozzle. The said gas-burner is preferably secured to the said plate by three attachments.

Other features of the invention will be apparent from the claim and from the following description of one form of gas-fire according to this invention.

Reference is made to the accompanying drawings, in which—

Figure 1 is a front elevation of a gas-fire with the trivet removed and having the appearance of a basket-grate;

Figure 2 is a section on the line 2—2 of Figure 1, and

Figure 3 is a front perspective view of a gas-fire.

The frame of the gas-fire comprises two side-plates 1, 1 to which are secured back-plates 2, 3 and a front plate 4. A fuel-support 5 rests on and is secured to lugs (not shown) cast integral with the said side plates. The fuel-support is provided on its under side toward each end thereof with a socket 6 and at the centre of its forward edge with a forwardly-projecting lug 7. The gas-burner 8 having a number of burner-outlets 9 is carried beneath the fuel-support by means of lugs 10 formed on the burner, which lugs rest in the said socket 6. The burner is also provided with a forwardly extending lug 11 which is secured to the before-mentioned lug 7 by a set-screw 12. The fuel-support has formed in it apertures 13 through which the burner-outlets extend. The upper face of the fuel-support is arranged to carry the fire-brick-backing 14, side bricks 15 and the lower radiants 16. The radiants are tubular and are located above the burner-nozzles by means of projections 17 formed integral with the fuel-support. The lower back-plate 2 is arranged to extend vertically up to the level of the burners, and the upper back-plate 3 is inclined to the vertical, so that the fire-brick-back and radiants which it locates are inclined rearwardly and upwardly away from the burner-outlets. An upper radiant 18 is supported by the lower radiant 16 and extends to the top of the fire-brick backing. An artificial coke-blanket 19 is suspended from the top of the upper back-plate 3 in a manner hereinafter described. The coke-blanket comprises a plurality of pieces of artificial fuel 20 which are threaded together on lengths of iron wire 21. The mat is secured in position by means of links 22 which are arranged to hook on to the iron wire at the top of the mat and also on to a rod 23 which is carried by a metal strip 24 secured to the backing 3 by set-screws 25.

Secured also to the top of the backing 3 is a tray 26 which is arranged to extend upwardly away from the backing and forms a

continuation of the front sloping surface of the radiants. Loose pieces of artificial fuel 27 are located on the said tray. The said tray may be cut so that its contour may fit snugly into an existing fire-place. The tray and the strip 24 are secured to the backing by the same set-screws 25. The front plate 4 extends upwardly in front of the burners and is curved outwardly so as to form a gap between it and the lower radiants 16. The lower extremity of the artificial coke-blanket is located in said gap, as is best seen in Figure 2, and the top portion of the front plate thus forms a guard. A trivet 28 is arranged to cover the burner.

It will be appreciated that in the construction above described the fuel-support serves to support and locate the chief elements of the gas-fire in relation to one another, that is to say it locates the fire-brick-backing, side bricks, radiants, the gas-burner and injector-nozzle. Further, the burner may readily be removed by releasing the set screws 7.

I claim:—

A gas fire of the class specified, comprising a framework, a burner with a series of gas nozzles extending longitudinally in the lower part of the framework, a plurality of hollow radiants supported to extend upwardly and rearwardly from the burner nozzles, a backplate supporting said radiants, the upper edge of said backplate terminating in substantially the same plane as the upper surface of the radiants, a blanket of interconnected radiant lumps overlying the hollow radiants and suspended from said upper edge of the backplate, an extension plate inclined upwardly and rearwardly from the backplate, said extension plate being adaptable to fill the gap in a fireplace above the gas fire, and a supplemental system of radiant lumps on said extension plate and constituting a substantial continuation of the blanket overlying the radiants.

In testimony whereof I affix my signature.

KENNETH AIRD.