March 21, 1933. H. H. BERRY 1,902,274

ELECTRIC IMITATION FIRE

Filed March 2, 1932

FIG. 1

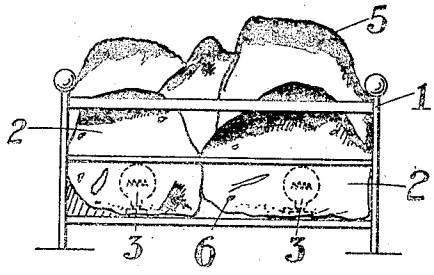
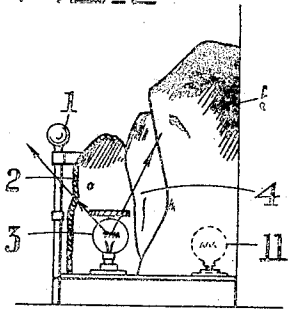



FIG. 2



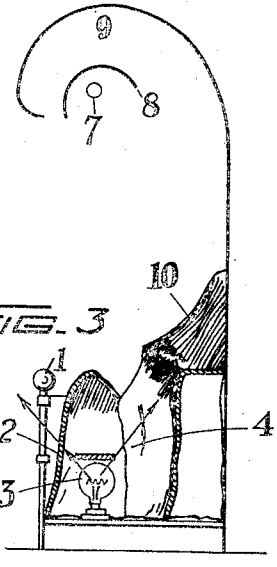




FIG. 3

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## ELECTRIC IMITATION FIRE

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This invention relates to artificial fires and has more particular reference to the construction of artificial fuel elements and their dispositioning relatively to each other and relatively to the means for illuminating them, for the purpose of providing an imitation coal and/or log fire in which is realistically simulated the glowing craters or hollows occurring in a natural coal and/or log fire owing to the burning away of the coal or logs comprising the fire.

The primary object of the invention consists in the provision at the front of an artificial fire of a piece of translucent fuel-simulating material and the provision rearwardly of and spaced from this front piece a second piece of fuel-simulating material. Means are provided for illuminating these pieces which are so treated that when illuminated they appear to be lumps of coal, wood or other fuel in states of glowing combustion. Hence, the space between the pieces appears, when viewed from the front, to comprise a hollow or crater with glowing walls.

The illuminating means for the fuel element at the front of the fire is arranged internally of the said element; and the fuel element at the rear of the fire may be externally illuminated by light from this means and/or by other means located externally or internally of this rearward fuel element. If the said means is located internally of the rearward fuel element it is necessary that the said element be translucent.

The material of which the translucent fuel elements are made may be of any suitable kind for example reasonably stout paper, parchment, parchment paper, or other suitable translucent cellulosic or fibrous material with or without a reinforcing backing such as canvas, stout muslin, or coarse-mesh gauze of wire and the like. The said fuel elements may in some cases be made of vitreous material suitably treated. It is essential that the fuel element at the front of the fire be of translucent material because it is internally illuminated but the rearward piece may be opaque or translucent.

A further object of the invention is the provision in an electric fire of heat reflecting surfaces forming or apparently forming parts of fuel elements at the back of the fire. These surfaces are treated to simulate burning fuel, ash etc. and are used in conjunction with a heating element with respect to which they are so shaped and arranged that they reflect heat from the elements or from reflectors adjacent the elements and throw the heat forwardly into the apartment where the fire is being used.

A further object of the invention consists in the provision of an electric fire in which the above fuel elements are mounted in or upon the grate or fireplace so as to be movable therewith.

A further object of the invention is the provision of an electric fire containing heating elements and the above fuel elements constructed and arranged to be dependently movable.

The above and other objects of the invention will be clear from the following description taken in conjunction with the accompanying drawing and the claims.

Fig. 1 is a front view of a fire grate containing the imitation fuel;

Fig. 2 is a side view in vertical section of the said grate and fuel; and

Fig. 3 is a side view in vertical section of an electric imitation fire and radiator containing in the grate part thereof fuel in accordance with the present invention.

In these examples the front part of the grate 1 contains shells 2 of translucent material treated to simulate burning coal fuel when lamps 3 with flicker devices are in use. The shells 2 are preferably open at their backs at 4 so that light from the lamps and flicker devices passes directly to the front faces of shells, blocks or other suitable bodies 5. The bodies 5 are arranged at the back part of the grate and in spaced relation to and extending higher than the shells 4. The faces of the bodies 5 are treated to simulate pieces of glowing coal when illuminated by the lamps and, in conjunction with the translucent front pieces 2, create a highly realistic appearance of a glowing coal fire with hollows between the pieces of fuel, the walls of

the hollows being in states of glowing combustion.

The shells 2 may have small irregular openings such as 6 for the purpose of giving spark-like appearances. The lamps may be coloured and parts, preferably the lower parts, of the pieces 2 and 5 simulate ash material. The bodies 5 may be translucent in which event they may be illuminated by lamps such as 11, Fig. 2.

In Figs. 1 and 2 any suitable heating elements and reflectors may be incorporated in the fire.

Fig. 3 shows one way in which a heating element and a reflector may be incorporated, said element and reflector being indicated by 7 and 8 and arranged beneath a canopy 9. Heat from 7 and 8 strikes curved, preferably irregular, and polished surfaces 10 at the upper parts of the bodies 5 and these surfaces redirect the heat forwardly of the grate.

The fuel instead of simulating coal may simulate logs.

What I claim is:

1. In an electric artificial fire, a piece of translucent fuel simulating material at the front of the fire, a second piece of fuel simulating material arranged in rear of and spaced from the said translucent material, an electric lamp for illuminating the rear of the translucent material and the front of the second piece of material, whereby the said pieces of material appear to glow and give to the space between them the appearance of a hollow with glowing sides.

2. In combination in an artificial fire, a piece of translucent fuel simulating material at the front, a second piece of fuel simulating material in rear of and spaced from said first mentioned piece of material, means for illuminating the rear of the first mentioned piece of material, and means for illuminating the front of the second mentioned piece of fuel simulating material whereby the space between them has the appearance of a hollow with glowing sides.

3. In combination in an artificial fire, a piece of translucent fuel simulating material at the front, a second piece of fuel simulating material in rear of the first mentioned piece and spaced therefrom, the second piece of fuel simulating material extending higher than the first mentioned piece of material, and an electric lamp arranged to illuminate the rear of the first mentioned piece of material and the front of the second piece of material, to thereby impart to the said pieces of material the appearance of being in a state of glowing combustion.

4. In combination in an artificial fire, a piece of translucent fuel simulating material at the front, a second piece of fuel simulating material at the rear, said pieces of material being spaced apart to simulate a hollow between them when viewed from the front of the fire, and an electric lamp arranged between the said pieces of material so as to illuminate the rear of the first mentioned piece and the front of the second mentioned piece of material, to thereby impart a glowing simulation to the sides of the visible hollow defined by the spacing of the respective pieces.

5. In combination in an electric fire, a piece of fuel simulating material, an electric lamp for illuminating the piece of fuel from the front, a screen for the said illuminating means comprising a shell of translucent fuel simulating material arranged in front of and illuminated by the said lamp, the screen and the first mentioned piece of fuel simulating material being treated to simulate glowing combustion when illuminated.

6. In an artificial fire, a shell of translucent fuel simulating material at the front, said shell being open at its rear, a second piece of fuel simulating material at the rear and spaced from the first mentioned piece of fuel simulating material, an electric lamp arranged within the first mentioned piece of fuel simulating material for illuminating both said pieces, the illumination being directed to the interior of the first mentioned piece of material and the exterior of the second mentioned piece of material, the said pieces of material being treated to simulate a glow under illumination.

7. In a artificial fire, a piece of translucent fuel simulating material at the front, a second piece of fuel simulating material arranged in rear of the first mentioned piece of material, said second piece of material being spaced from and extending above the first mentioned piece of material, a heating element above the reflector, and electric lamps for illuminating the said pieces and for directing said illumination to the rear of the first mentioned piece of material and to the front of the second mentioned piece of material, the respective pieces of material being spaced apart to simulate a hollow when viewed from the front of the fire.

8. In an artificial fire, a piece of translucent fuel simulating material at the front, a second piece of fuel simulating material arranged in rear of the first mentioned piece of material, said second piece of material being spaced from and extending above the first mentioned piece of material, a heating element above the reflector, electric lamps for illuminating the said pieces and for directing said illumination to the rear of the first mentioned piece of material and to the front of the second mentioned piece of material, the respective pieces of material being spaced apart to simulate a hollow when viewed from the front of the fire, a reflector at the upper part of the second piece of material, and a heating element above the reflector.

9. An artificial fire employing imitation

fuel and an electric lamp for illuminating the fuel, wherein a piece of translucent imitation fuel is arranged in front of the fire and a second piece of imitation fuel is arranged at the back of the fire and in spaced relation to the said translucent imitation fuel, with an electric lamp behind the said translucent fuel and in front of the imitation fuel at the back of the fire so as to illuminate the translucent fuel from behind it and to illuminate the front of the imitation fuel which is arranged at the back of the fire.

10. In a electric artificial fire, fuel simulating pieces relatively disposed to indicate a hollow when viewed from the front of the fire, with said hollow defined by the rear wall of one piece and the front wall of the next rearwardly adjacent piece, and means for illuminating the rear wall of the front piece and the forward wall of the rearward adjacent piece to illuminate the hollow and simulate combustion glow therein.

In testimony whereof I affix my signature.

HERBERT HENRY BERRY.