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(54) **Decorative fire**

(57) A decorative fire (10) includes a display (18) and a light source (22) for illuminating the display, the light source being located within a housing. The decorative fire further includes a filter (24) including at least two different colours, at least some of the light which

illuminates the display passing through the filter. The decorative fire further includes means for adjusting the filter from externally of the housing, for example using a friction wheel (30) to alter the colour of the light which passes through the filter (24) and illuminates the display (12).

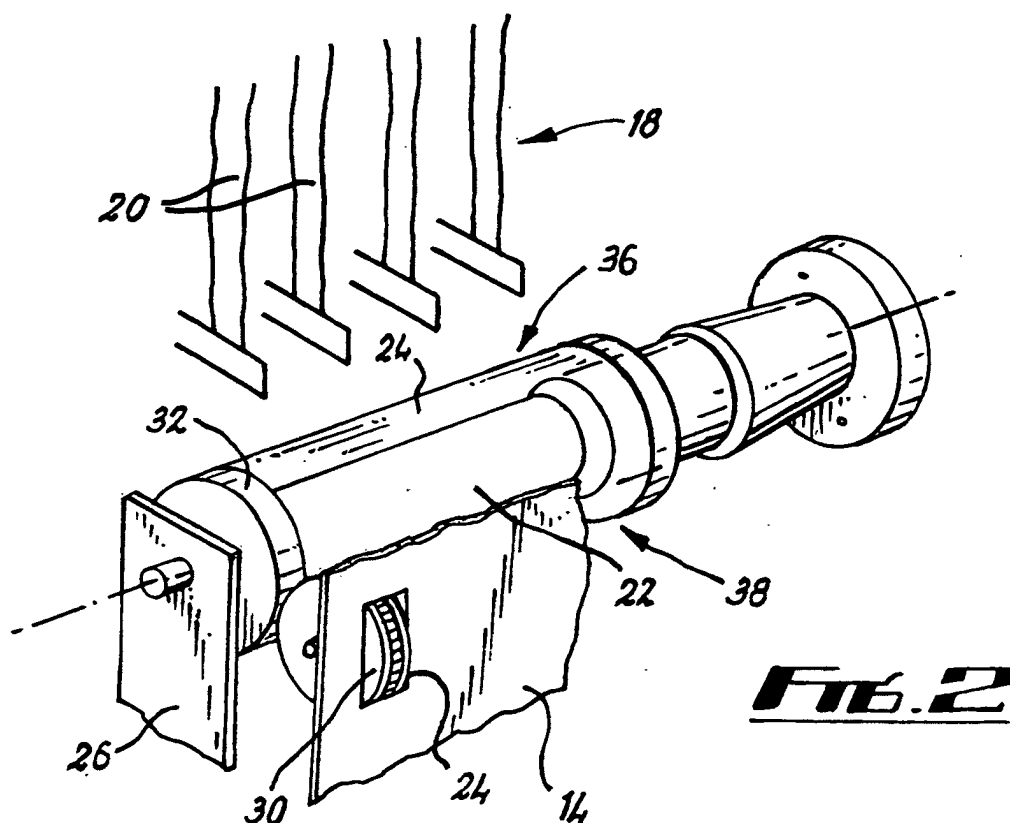


Fig. 2

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Description

[0001] The invention relates to a decorative fire and particularly but not exclusively to an electric fire with a flame effect display.

[0002] An electric fire with a flame effect display typically includes a light source located within a housing, and a display which is illuminated by the light source and which typically (but not necessarily) imitates flames. A part of the housing may comprise an imitation fuel bed, such as a plastics sheet moulded to imitate coals or sticks. Alternatively, the fuel bed may include glass, pebbles, etc, in more modern style fires. The flames or other moving effect on the display may be imitated in a variety of different conventional ways.

[0003] The light source is typically a coloured bulb, which is usually either orange or red in order to mimic the colour of flames when light from the light source is projected on to the display.

[0004] According to the invention there is provided a decorative fire including:

- a display;
- a light source for illuminating the display, the light source being located within a housing;
- a filter including at least two different colours, at least some of the light which illuminates the display passing through the filter; and
- means for adjusting the filter from externally of the housing, to alter the colour of the light which passes through the filter and illuminates the display.

[0005] Preferably the adjustment means allows continuous adjustment of the filter, to cause a gradual change in the colour of the light passing through the filter and illuminating the housing.

[0006] The filter may include a sheet of translucent coloured material for location between the light source and the display, the filter including at least two different colours of translucent material. The adjustment means is preferably operable to cause movement of the filter relative to the light source and/or the display such that the colour of a part of the filter located between the light source and the display may be altered. The movement may constitute relative rotational movement or lateral displacement.

[0007] The filter may comprise a substantially cylindrical member formed from one or more sheets of translucent coloured material, different parts of the cylinder being of respectively different colours. The cylinder may be formed from a plurality of sheets of translucent material of respectively different colours. Preferably the cylindrical member surrounds the light source such that a first part of the cylindrical member is located generally between the light source and the display and a second part of the filter is located on a side of the light source remote from the display.

[0008] Preferably the substantially cylindrical mem-

ber is mounted such that it may rotate about its own axis. The adjustment means preferably includes means for rotating the cylindrical member such that the colour of the part of the cylindrical member located between the light source and the display alters as the cylindrical member rotates.

[0009] The adjustment means may include a rotatable adjustment member which engages the cylindrical member of the filter such that rotation of the adjustment member causes the filter to rotate.

[0010] Preferably at least a part of the adjustment member is located externally of the housing. The adjustment member may comprise a friction wheel which engages the cylindrical member frictionally. Alternatively the adjustment member may include teeth for engaging complementary teeth on the cylindrical member of the filter.

[0011] The adjustment means may alternatively include an elongate cord which passes around the cylindrical member and extends externally of the housing such that pulling of the cord may cause rotation of the cylindrical member.

[0012] Alternatively, the adjustment means may comprise a disc member forming part of the filter. The disc member may be provided at an end of the filter, a part of the disc member being located externally of the housing such that it may be manipulated. The part of the disc member may pass through an opening in the housing.

[0013] The light source may comprise an elongate low energy bulb or strip bulb.

[0014] The display may include means for producing a moving image when illuminated. The image may imitate flames. The display preferably includes a substantially planar member, located generally in a vertical plane in use. The planar member may be translucent. The display may further include a movable member located behind the planar member, the movable member being illuminated by the light source to cause moving back light on the planar member.

[0015] The decorative fire may further include a heater, which may comprise a fan heater. The fan heater may be located generally above the display. Alternatively, the fan heater may be located underneath the light source.

[0016] The term "fire" is intended to include products having the general appearance of a fire but not including a heater.

[0017] Embodiments of the invention will be described for the purpose of illustration only with reference to the accompanying drawings in which:

Fig. 1 is a diagrammatic vertical section of a conventional decorative fire;

Fig. 2 is a diagrammatic perspective view of a part of a decorative fire according to a first embodiment of the invention;

Fig. 3 is a diagrammatic sectional view of a part of

the fire of Fig. 2, illustrating the way in which the filter is adjusted;

Fig. 4 is a diagrammatic section of a part of an alternative mechanism for adjusting the filter of a fire according to the invention; and

Fig. 5 is a diagrammatic sectional view of a part of a further means for adjusting the filter of a fire according to the invention.

[0018] Referring to Fig. 1, there is illustrated a fire 10 of generally conventional construction. The fire 10 includes a light source in the form of a bulb 12 located within a housing 14. A part of the housing 14 is in the form of an imitation fuel bed 16 which may for example comprise a moulded plastics member shaped and coloured to imitate coals, wood or other interesting shape. The housing may include a mechanical device 19 which spins to create a moving light effect, the device being driven either by the heat of the bulb 12 or by an electric motor.

[0019] The fire 10 further includes a display 18 for displaying a moving image, typically imitation flames, on a planar member in the form of a screen 21. The imitation flames may for example be formed by projecting light from the bulb 12 onto moving strips or ribbons 20 of material, to back light the screen 21.

[0020] The fire 10 further includes a fan heater 21 located above the display 18.

[0021] Conventionally, the bulb 12 is of a single colour, such as red or orange. The inventors have realised that the colour of this bulb is extremely important in determining whether or not a consumer will buy a particular fire. It has been appreciated that different people have very different ideas about the ideal colour of flames or another image projected on the display 18. If a person does not perceive the projected image as being of the right colour, they will not purchase the fire.

[0022] Fig. 2 is a perspective, cut-away view of a part of a fire according to the invention. The fire according to the invention includes a light source in the form of a low energy light bulb 22 which is of elongate, generally cylindrical shape. As with the prior art, the bulb 22 is located within a housing 14, below a fuel bed 16 (not illustrated in Fig. 2) and a display including moving strips of ribbon 20. The bulb 22 illuminates the strips of ribbon 20 to produce a flame effect, in a generally conventional way.

[0023] The fire 10 according to the invention further includes a filter 24 which is cylindrical in shape and is made up of strips of respectively different coloured translucent material. For example, the filter 24 may include a strip of orange material and a strip of blue material, strips of orange, green and blue material or red, yellow and blue material, etc. The strips lie parallel to an axis of the filter. The strips may have mixed colours or patterns to allow or reduce the light passing through.

[0024] The filter 24 is supported at its end by a support member 26 and is able to rotate about its axis.

[0025] Referring also to Fig. 3, the fire includes a friction wheel 30 which is in frictional engagement with an end part 32 of the filter 24. Most of the friction wheel 30 is located within the housing 14. However, the housing 14 includes an opening 34 through which a part of the friction wheel 30 projects such that the friction wheel 30 may be rotated from externally of the housing 14.

[0026] The relative locations of the low energy bulb 22, the filter 24 and the display 18 mean that the light from the low energy bulb 22 which illuminates the display 14 passes generally through an upper part 36 of the filter 24. A lower part 38 of the filter is positioned on a side of the bulb 22 remote from the display. Thus, the colour of illumination of the display 18 is determined largely by the colour of the upper part 36 of the filter 24.

[0027] Because the filter 24 comprises strips of differently coloured material, the colour of its upper part 36 may be altered by rotating the filter about its own axis 39. Such rotation may be effected by manipulating the friction wheel 30. Depending upon the precise orientation of the filter, the light which illuminates the display may be, for example, primarily red, primarily blue, primarily orange, primarily yellow, etc. or may be a combination of two adjacent colours on the filter 24. In this way, the colour of light illuminating the display 14 may be adjusted continuously and with great precision.

[0028] Fig. 4 illustrates an alternative means for rotating the filter 24. In this embodiment, a cord 40 extends around the end part 32 of the filter 24 and passes to an exterior of the housing 14. By pulling the top or the bottom 42 or 44 respectively of the cord the user may cause the filter 24 to rotate as desired.

[0029] Fig. 5 illustrates an alternative means of rotating the filter 24. In this embodiment, the end part 32 of the filter 24 is enlarged, such that a portion 42 of it passes through the opening 34 in the housing 14 and may be directly manually manipulated in order to rotate the filter 24.

[0030] There is thus provided a decorative fire in which the colour of the display may be altered very easily by a user of the fire. The owner of the fire may adjust the colour of the light illuminating the display to suit their own taste or mood or to suit the decoration of a particular room. Further, different members of the same household may adjust the fire according to their own taste.

[0031] Various modifications may be made to the above described embodiments without departing from the scope of the invention. In particular, the filter need not be cylindrical and alternative means for moving the filter may be used. The decorative fire need not include a heater. Some decorative fires are for ornamentation purposes only. The display need not be adapted to project imitation flames. Any illuminated, and preferably moving, display may be used.

[0032] Whilst endeavouring in the foregoing specification to draw attention to those features of the invention

believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinbefore referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.

Claims

1. A decorative fire (10) including:

a display (18);
a light source (22) for illuminating the display, the light source (22) being located within a housing;
a filter (24) including at least two different colours, at least some of the light which illuminates the display passing through the filter (24); and means (30) for adjusting the filter (24) from externally of the housing, to alter the colour of the light which passes through the filter (24) and illuminates the display.

2. A decorative fire according to claim 1, wherein the adjustment means (30) allows continuous adjustment of the filter (24), to cause a gradual change in the colour of the light passing through the filter (24) and illuminating the housing.

3. A decorative fire according to claim 1 or claim 2, wherein the filter (24) includes a sheet of translucent coloured material for location between the light source (22) and the display, the filter (24) including at least two different colours of translucent material, and the adjustment means (30) is operable to cause movement of the filter (24) relative to the light source (22) and/or the display such that the colour of a part of the filter (24) located between the light source (22) and the display may be altered.

4. A decorative fire according to claim 3, wherein the filter (24) comprises a substantially cylindrical member formed from one or more sheets of translucent coloured material, different parts of the cylinder being of respectively different colours.

5. A decorative fire according to claim 4, wherein the cylindrical member surrounds the light source (22) such that a first part of the cylindrical member is located generally between the light source (22) and the display and a second part of the filter (24) is located on a side of the light source (22) remote from the display.

6. A decorative fire according to claim 4 or claim 5, wherein the substantially cylindrical member is mounted such that it may rotate about its own axis

and the adjustment means (30) includes means for rotating the cylindrical member such that the colour of the part of the cylindrical member located between the light source (22) and the display alters as the cylindrical member rotates.

7. A decorative fire according to any of claims 4 to 6, wherein the adjustment means includes a rotatable adjustment member which engages the cylindrical member of the filter (24) such that rotation of the adjustment member causes the filter (24) to rotate, and at least a part of the adjustment member is located externally of the housing.

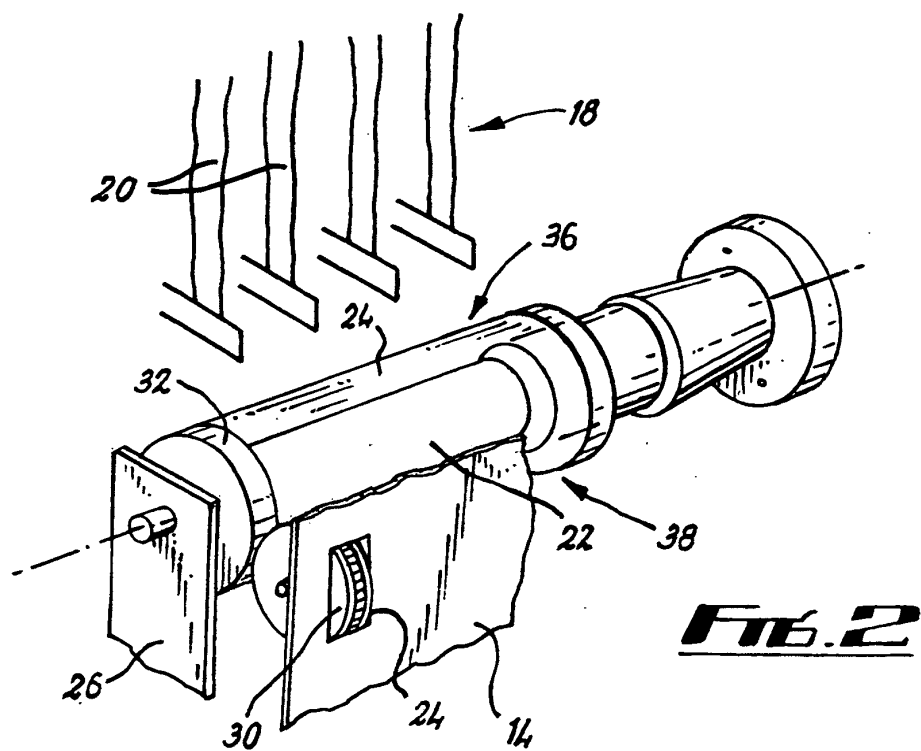
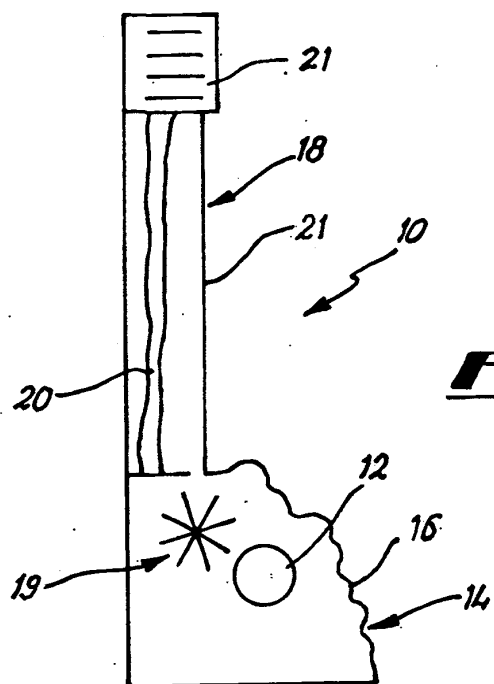
8. A decorative fire according to claim 7, wherein the adjustment member comprises a friction wheel which engages the cylindrical member frictionally.

9. A decorative fire according to any preceding claim, wherein the light source (22) comprises an elongate low energy bulb or strip bulb.

10. A decorative fire according to any preceding claim, wherein the display includes means for producing a moving image when illuminated.

11. A decorative fire according to any preceding claim, wherein the fire further includes a heater.

12. Any novel subject matter or combination including novel subject matter disclosed herein, whether or not within the scope of or relating to the same invention as any of the preceding claims.



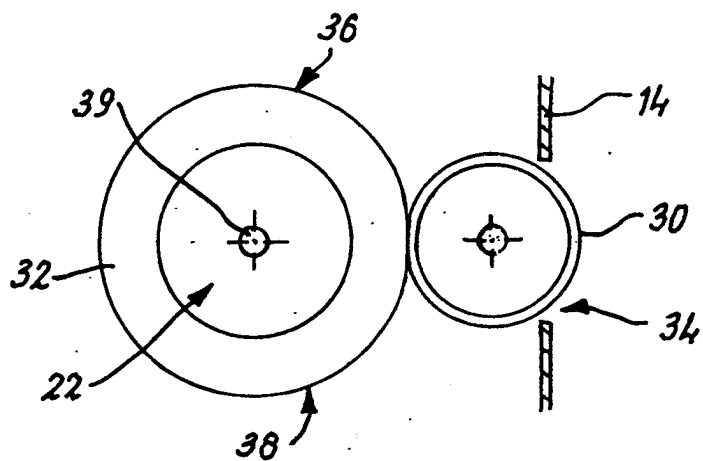


FIG. 3

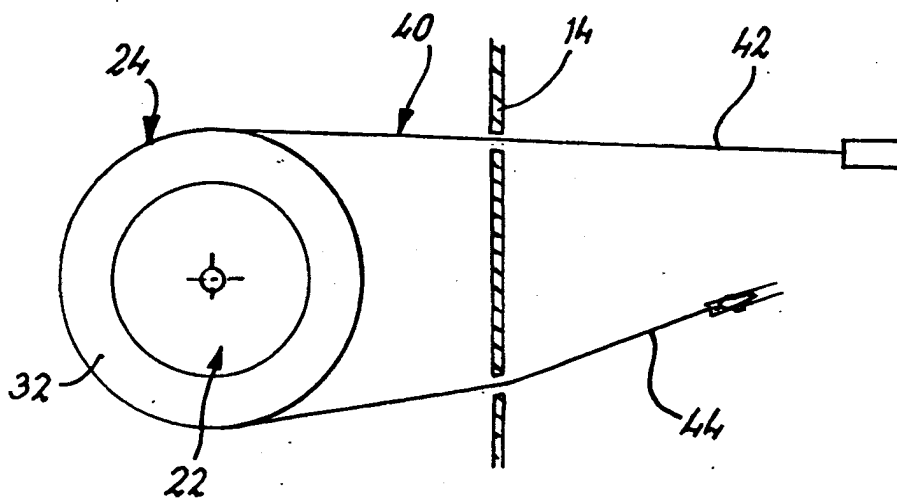


FIG. 4

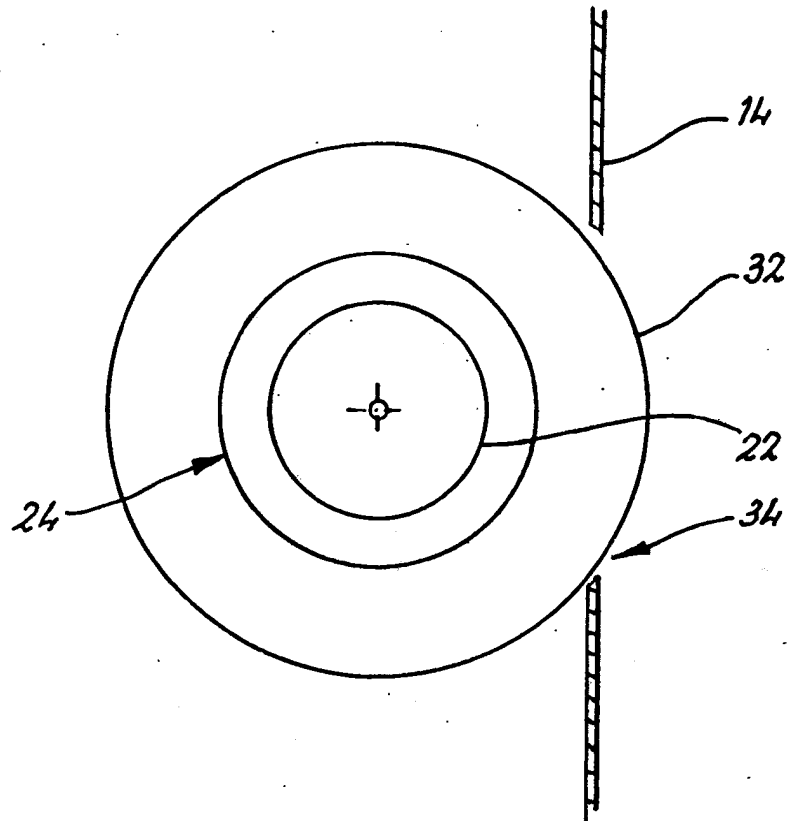


FIG. 5