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COMBINATION ELECTRIC CLOCK AND SIGN

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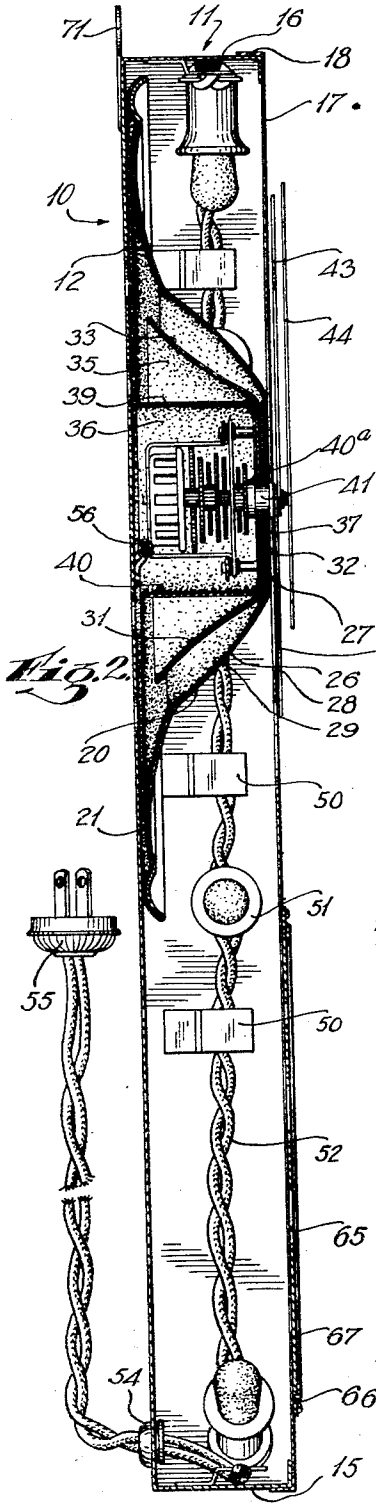


Fig. 2.

Fig. 1.

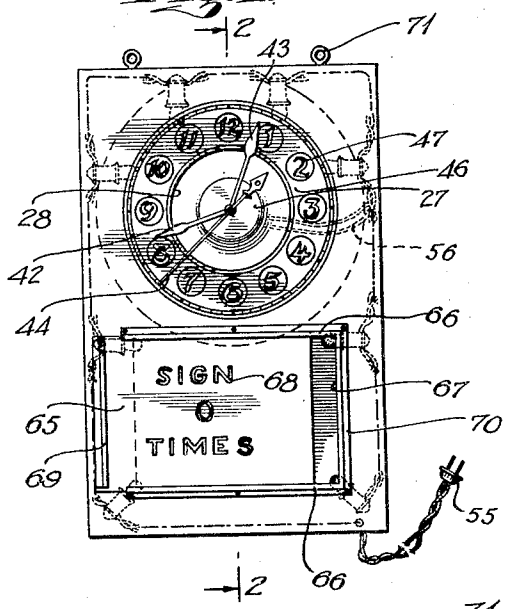
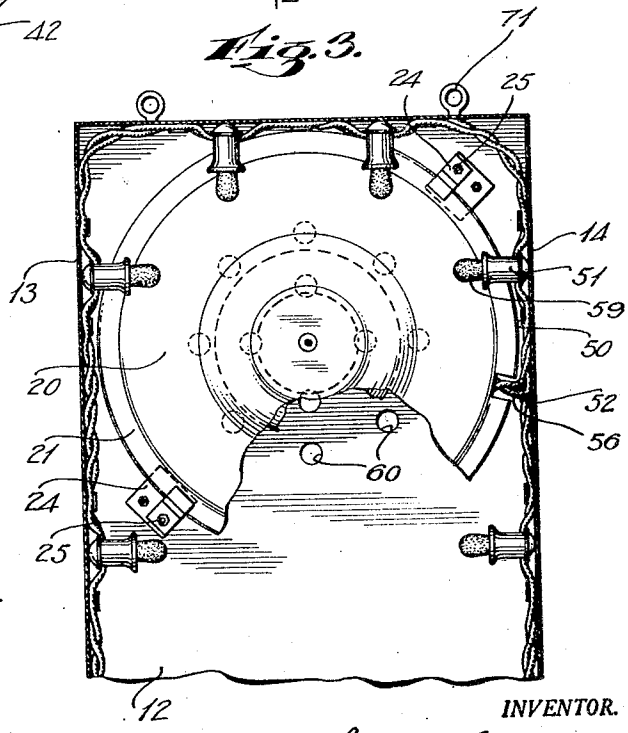


Fig. 3.



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COMBINATION ELECTRIC CLOCK AND SIGN

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13 Claims. (Cl. 58—50)

This invention relates to clocks and is particularly directed to a combination illuminated electric clock and sign.

An object of this invention is to provide a clock of the character described having electrical illuminating means and improved means for effectively insulating the clock mechanism from the heat of the illuminating means.

A further object of this invention is to provide in a clock of the character described, heat insulating means constructed to serve also as a reflector and background for effectively illuminating the clock dial.

A further object of this invention is to provide a neat, compact and rugged combination electric clock and display sign of the character described which shall be highly attractive in appearance, which shall have means for illuminating the clock dial and other advertising matter on the clock, be comparatively inexpensive to manufacture, comprise few and simple parts, easy to assemble, and yet be practical and efficient to a high degree in use.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the following claims.

In the accompanying drawing, in which is shown one of the various possible illustrative embodiments of this invention,

Fig. 1 is a front elevational view of a clock embodying the invention with the plate carrying the advertising matter slightly moved out of place;

Fig. 2 is a cross-sectional view taken on line 2—2 of Fig. 1; and

Fig. 3 is a fragmentary elevational view of the clock with the front thereof removed and parts broken away to show the interior construction.

Referring now in detail to the drawing, 10 designates a clock embodying the invention here shown in the form of an electrically illuminated combination electric clock and sign, and comprises a box or casing 11 having a rear wall 12, side walls 13 and 14, a bottom wall 15 and a top wall 16. The front of the clock can be closed by a wall 17 having flanges 18 receiving side edges of the front top and side walls and attached thereto in any suitable manner.

For the purpose hereinafter set forth, there is attached to the rear wall 12 adjacent the upper portion thereof, a cup-shaped member 20 having a circular rim edge 21 contacting the rear wall 12. The attachment may be effected by means of a pair of diametrically disposed clamps 24 secured to the rear wall by bolts 25 or in any other suitable manner, and engaging said edge 21. The member 20 is provided with a substantially conical or tapering wall portion 26 and with a flat front wall 27 substantially in the plane of the front wall 17, the latter being formed with a circular opening 28 concentric with said front wall 27 of the member 20. The member 20 may be made of heat insulating material such as pressed asbestos or may be provided with an asbestos liner 29 in the inner surface thereof. Mounted within the member 20 is a second cup-shaped member 31 having a wall 32 contacting the inner surface of the wall 27, and an outwardly flaring wall 33 spaced from said wall 26 of the member 20. The member 31 may likewise be provided with an asbestos or the like insulating liner 35, or may be made of a single piece of heat insulating material. Mounted within the member 31 is a third cup-shaped member 36 having a wall 37 contacting the inner surface of the wall 32, and a cylindrical wall 39 projecting rearwardly toward the rear wall 12 of the casing. The member 36 may likewise be made of heat insulating material or may be lined with an asbestos liner 40.

It will thus be seen that the nesting cup-shaped members 20, 31 and 36 form an effective heat insulation between the chamber within the cup 36 and the portion of the casing outside of the member 20. Mounted within the cup 36 is an electric clock mechanism 40*a* of any suitable well known type, operated by a synchronous motor. The contacting walls 27, 32 and 37 may be formed with registering openings and attached together by means of a tubular bushing 41 extending through said openings and carrying the shafts for the hour hand 42, the minute hand 43 and the second hand 44 of the clock. It will be noted that the three hands extend over the front wall 17 of the casing and overlap the edge portion 46 of said front wall around the opening 28. Said edge portion 46 may be provided with cut out portions or stencilled indicia or marks 47 to represent the hours, for example, numbers 1 to 12, inclusive. The ends of the clock thus cooperate with the stencilled indicia 47 which form the dial of the clock. It will also be noted that the front surface of the wall 27 as well as a portion of

the tapering wall 26 of the member 20 may be seen from the front of the clock through the opening 28 in the front face 17 of the casing. The member 20 thus forms a background for the clock hands and for the cut out portions 47.

For illuminating the clock there is provided within the casing 11 and attached to the bottom, top and side walls thereof, a number of clamps or clips 50 for mounting a plurality of sockets 51 wired by means of wires 52, preferably in parallel circuit, to said casing. Any number of sockets arranged in any suitable manner may be provided for effectively distributing the illumination within the casing. The wires 52 may extend through a bushing 54 in the rear wall of the casing and terminate in a plug 55 or any other suitable attachment fitting for connection to a source of electricity. Wires 56 connected across the wires 52 in parallel circuit pass beneath the rim 21 of the member 20 into the interior of the cup 36 for supplying current to the synchronous motor for the clock, said rim 21 being formed with a cut out notch for this purpose. Small lamps 59 preferably of about 110 volts and having colored bulbs, may be attached to the sockets 51 for decoratively illuminating the clock. It will be noted that the light will be reflected from the outer surface of the wall 26 through the stencilled or cut out portions 47. Also the light from the lamp will illuminate the wall 27 of said member 20. The member 20 thus acts as a background and reflector for illuminating the dial.

The member 20 as well as the members 31 and 36 further serve to prevent the heat of the lamps from affecting the motor and parts, and from drying up the lubricating oil within the clock works thus permitting the same to be used for long periods without necessitating change of oil. The rear wall 17 of the clock is preferably formed with a plurality of openings 60 in the portion thereof which covers the rear of the member 20 to permit circulation of air within and around the clock works.

The member 10 may be further provided with any suitable stencilled advertising matter, for example, in the form of a plate 65 slidably or removably mounted on the front wall 17. The plate may be mounted on a pair of parallel guides 66 attached to the front wall which is cut out as at 67 for this purpose. The plate 65 may likewise be provided with stencilled cut out portions 68, in the form of advertising or display matter, to permit the light within the sign to pass through said cut out portions. The plate 65 may be provided with a border member 69 attached to one side edge thereof to harmonize in design with the guides 66 and a border simulating portion 70 on wall 17, at one side of opening 67, to provide a proper frame for said plate. The casing may be further provided with a pair of eyelets 71 attached to the top thereof for hanging the sign on any suitable support.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing, is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. In combination, a casing, a clock mechanism therein, electric illuminating means within said casing, and means for insulating said mechanism from the heat of said illuminating means, said means comprising a plurality of nesting cup-shaped members housing said mechanism.

2. In combination, a casing, an electric clock mechanism therein, a wall of said casing having cut out portions therein, clock hands for said mechanism disposed adjacent said wall of said casing adapted to traverse said openings, electric illuminating means within said casing, and means for insulating said mechanism from the heat of said illuminating means, said insulating means comprising an outwardly flaring member adapted to reflect light from said illuminating means to said cut out portions.

3. In combination, a casing having a rear and a front wall, a cup shaped member having a rim edge attached to said rear wall and forming a chamber therewith, electric clock mechanism within said chamber, said front wall having cut out portions in the form of clock dial indicia for said clock, clock hands operated by said mechanism, movable over the front wall of said cup shaped member and adapted to traverse said cut out portions, and electric illuminating means within said casing.

4. In combination, a casing having a rear and a front wall, a cup-shaped member having a rim edge attached to said rear wall and forming a chamber therewith, electric clock mechanism within said chamber, said front wall having cut out portions in the form of clock dial indicia for said clock, clock hands operated by said mechanism, movable over the front wall of said cup-shaped member and adapted to traverse said cut out portions, and electric illuminating means within said casing, said cup-shaped member having a tapering wall adapted to reflect light from said illuminating means to said cut out portions.

5. In combination, a casing having a rear and a front wall, a cup-shaped member having a rim edge attached to said rear wall and forming a chamber therewith, electric clock mechanism within said chamber, said front wall having cut out portions in the form of clock dial indicia for said clock, and electric illuminating means within said casing, said cup-shaped member being made of heat insulating material.

6. In combination, a casing having a rear and a front wall, a cup-shaped member having a rim edge attached to said rear wall and forming a chamber therewith, electric clock mechanism within said chamber, said front wall having cut out portions in the form of clock dial indicia for said clock, clock hands operated by said mechanism, movable over the front wall of said cup-shaped member and adapted to traverse said cut out portions, and electric illuminating means within said casing, said cup-shaped member being made of heat insulating material.

7. In combination, a casing having a rear wall and a front wall, said front wall being formed with a circular opening, a housing member within said casing flaring outwardly toward said rear wall, aligned with said opening, electric clock mechanism within said housing member, and clock hands operated by said mechanism and overlying said front face of said casing at said opening.

8. In combination, a casing having a rear wall

and a front wall, said front wall being formed with a circular opening, a cup-shaped housing member within said casing, aligned with said opening, electric clock mechanism within said housing member, clock hands operated by said mechanism, movable over the front wall of said cup-shaped member and adapted to traverse said cut out portions, and electric illuminating means in said casing, said front wall having clock dial indicia cut out portions at the edge portion thereof formed by said circular opening, said housing member having a wall flaring outwardly toward said rear wall forming a backing for said cut out portions and a reflector for light from said illuminating means.

9. In combination, a casing having a rear wall and a front wall, said front wall being formed with a circular opening, a housing member within said casing, aligned with said opening, electric clock mechanism within said housing member, and electric illuminating means in said casing, said front wall having clock dial indicia cut out portions at the edge portion thereof formed by said circular opening, said member having a wall portion flaring outwardly toward said rear wall forming a backing for said cut out portions and a reflector for light from said illuminating means, said members being made of heat insulating material.

10. In combination, a casing having a rear wall and a front wall, said front wall being formed with a circular opening, a housing member within said casing, aligned with said opening, electric clock mechanism within said housing member, clock hands operated by said mechanism, movable over the front wall of said housing member and adapted to traverse said cut out portions, and electric illuminating means in said casing, said front wall having clock dial indicia cut out portions at the edge portion thereof formed by said circular opening, said member having a wall portion inclined toward said rear wall, forming a backing for said cut out portions and a reflector for light from said illuminating means, said member being made of heat insulating material.

11. In combination, a casing having a rear wall and a front wall, said front wall being formed with an opening, a cup-shaped member having a rim edge attached to said rear wall and forming a chamber therewith, said member having a bottom wall portion aligned with said opening and an outwardly tapering wall portion extending toward said rear wall, electric clock mechanism within said chamber, clock hands operated by said mechanism and movable over the bottom wall of said cup-shaped member, and a plurality of electric lamps within said casing.

12. A display device comprising a casing, having a wall provided with cut out portions, a synchronous motor and gearing attached thereto mounted within said casing, electric illuminating means within said casing and a member interposed between said motor and gearing and said illuminating means for insulating said motor and gearing from the heat of said illuminating means, said member being aligned with and forming a background for said cut out portions.

13. A display device comprising a casing having a rear wall, and a front wall formed with cut out portions, a conical cup-shaped member attached to said rear wall and forming a backing for said cut out portion, and an electric clock housed within and mounted on said cup-shaped member.

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