

May 21, 1940.

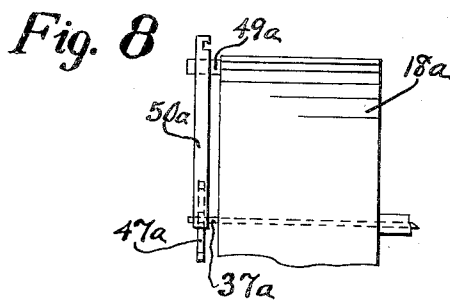
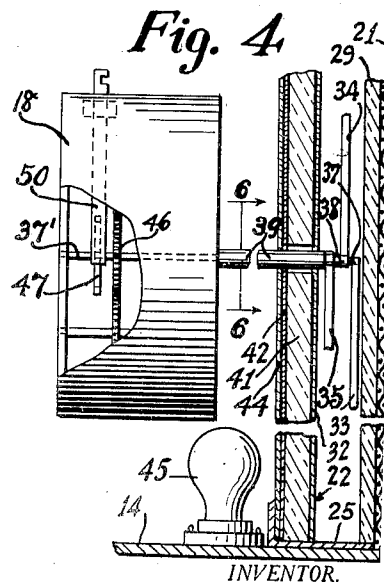
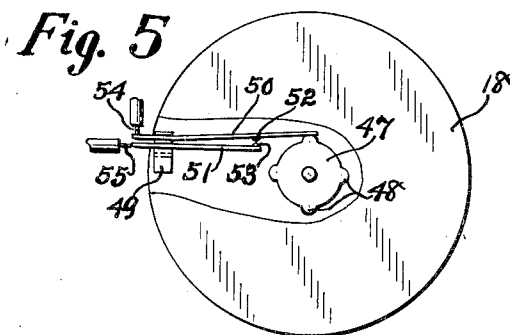
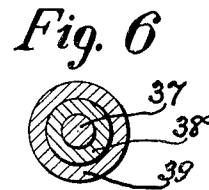
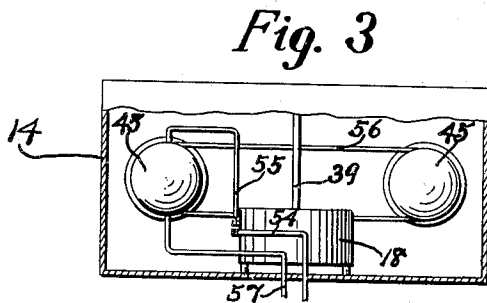
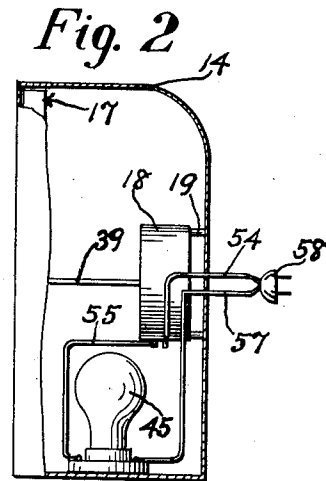
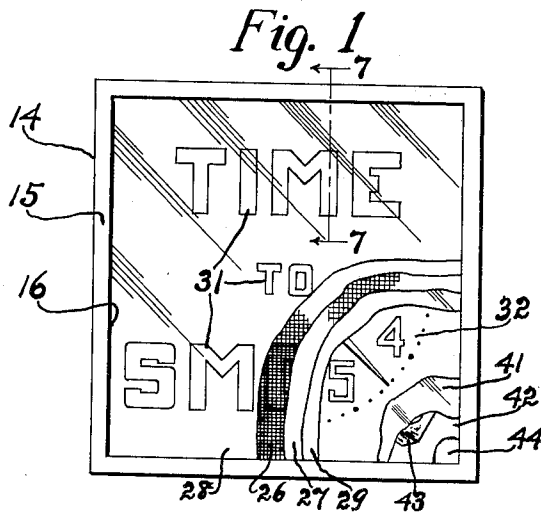
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2,201,809

DISAPPEARING CLOCK DISPLAY APPARATUS

Filed April 10, 1939

2 Sheets-Sheet 1



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DISAPPEARING CLOCK DISPLAY APPARATUS

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2 Sheets-Sheet 2

Fig. 9

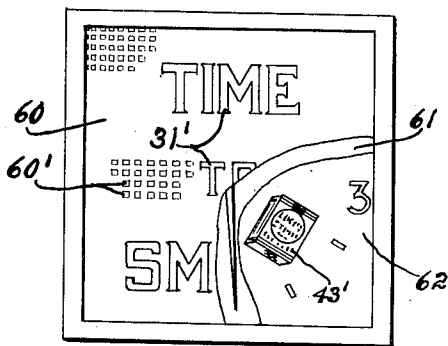


Fig. 10

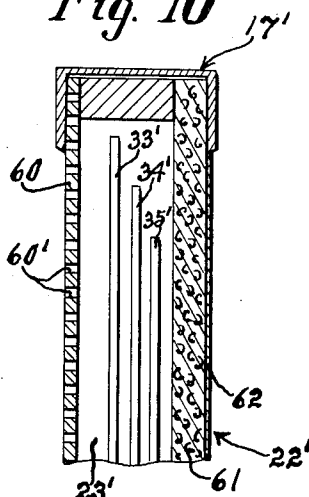


Fig. 11

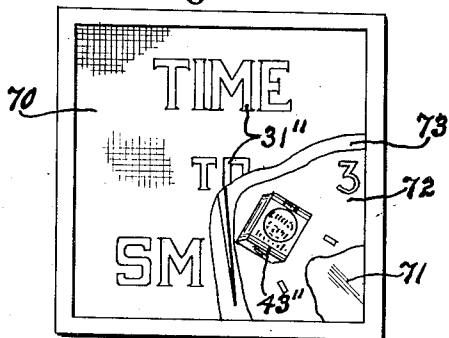


Fig. 12

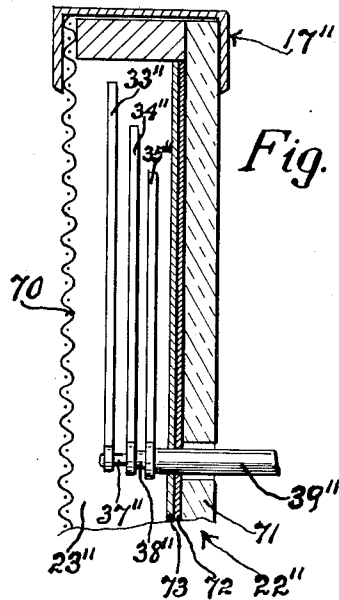
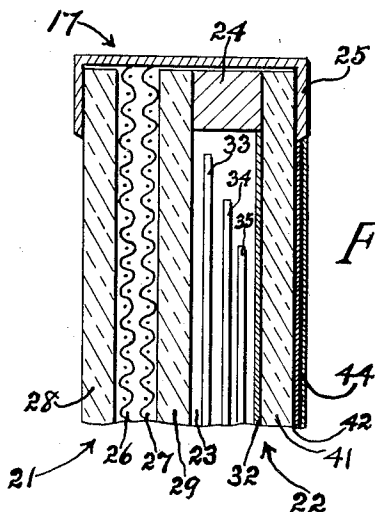


Fig. 7



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2,201,809

DISAPPEARING CLOCK DISPLAY
APPARATUSMarshall Brown, Chicago, Ill., assignor of one-
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Application April 10, 1939, Serial No. 267,017

8 Claims. (Cl. 40—132)

This invention relates to a novel disappearing clock display apparatus.

One of the main objects of this invention is to provide a display apparatus comprising a clock among its display means which intermittently appears and disappears.

Another object of this invention is to provide a display apparatus which comprises an electric clock, and the dial of said clock provides a part of the disappearing display means, while the operating mechanism of the clock is utilized to operate the means of the apparatus for alternately displaying and concealing the display means.

Another object hereof is to provide such a display apparatus which comprises a front display means which is visible with any outside light, and further comprises a clock having its dial positioned rearward of said front display means and being intermittently rendered visible by the use of strong illuminating means and thru the action of the clock, while during that time the front sign vanishes from view.

A further object of this invention is to provide a display apparatus which includes a clock, the dial of which indicates the time of day and also serves as a part of the disappearing display means, and wherein the operating mechanism of the clock provides the operating means for intermittently operating the flasher mechanism, thereby furthermore providing a flasher means which operates at certain selected and definite time intervals.

These and various other objects and advantages are attained with this invention as will become apparent from the following description, taken in connection with the accompanying drawings in which the invention is shown in a few of its various forms, it being understood that other arrangements and forms of construction may be resorted to for carrying out the objects and purposes of this invention.

In the drawings:

Fig. 1 is a front elevational view of a disappearing clock display apparatus which embodies my invention, parts being broken away.

Fig. 2 is a side elevational view thereof, being partly in section.

Fig. 3 is a top plan view thereof, having part of the top removed.

Fig. 4 is a side elevational view of the clock and associated elements, being partly broken away.

Fig. 5 is a rear elevational view of the clock, being partly broken away.

Fig. 6 is an enlarged cross-sectional view taken on line 6—6 of Fig. 4.

Fig. 7 is an enlarged sectional view, taken on line 7—7 of Fig. 1.

Fig. 8 is a partial view of a modified form of clock having the flasher elements located outside of the clock housing, instead of inside as in the preceding form.

Fig. 9 is a front elevational view, illustrating the display means in a modified form and arrangement.

Fig. 10 is an enlarged partial sectional view of this form of display means.

Fig. 11 is a front elevational view, illustrating another modified form of display means.

Fig. 12 is an enlarged partial sectional view of said means.

In the drawings I have illustrated my invention in a few of the various forms in which it is adapted to be provided. Briefly, in this novel apparatus I utilize a clock, the dial of which forms a part of the disappearing display means and contains or is provided with translucent material, so as to diffuse or reflect a weak light, but to transmit a strong light and thereby display the numbers on the dial and also the hands which travel thereover. The display apparatus further comprises front sign bearing or display means positioned forwardly of the dial and the hands, which front means may include one or more members or layers, and either one or all of which may consist of perforated or meshed material, such as a metal screen, meshed cloth, a perforated sheet of paper, or Cellophane, and the like. In addition to the dial which is positioned rearward of said front display means, a rear display means or some advertising medium is preferably also provided, in connection with the dial or adjacent thereto, and in such form as to harmonize with or to form a companion part of said front display means.

The clock used in this invention is preferably an electrically operated one, which for the sake of economy may be substantially of standard construction; and the usual operating means of the clock is utilized for intermittently actuating the flasher mechanism. This may be conveniently done by connecting a make-and-break switch to the shaft of one of the clock hands, preferably by having the switch or some suitable flasher means connected to the rear part of the shaft, as best shown in Fig. 4 of the drawings.

My invention is shown in a desirable form of construction in Figs. 1 to 7 of the drawings, which comprises a casing or housing 14 having a

front flange 15 provided with a front opening 16 therein; and a display assemblage 17 is mounted rearward of the flange to be visible thru said opening. A clock 18 is mounted in the casing rearward of said assemblage 17, and is shown herein as supported by means of brackets 19 on the wall of the casing.

In this form of the invention, as best shown in Fig. 7, the sign assemblage 17 comprises a front sign or display means 21 and a rear sign or display means 22, having a space 23 provided therebetween, as by a peripheral spacing member 24, and preferably has a channel-shaped member 25 secured around the same, for mounting them together at the inward side of flange 15. The front sign or display means 21 includes two adjoining members or layers 26 and 27 which are substantially translucent, being herein shown as screens, and which have a pair of transparent elements 28 and 29, shown as sheets of glass, at the front and at the rear thereof, respectively.

The front display indicia or advertising means 31 is indicated herein by the words "Time to smoke," as shown in Fig. 1, being placed on the front screen 26, as by painting it thereon.

The rear display means 22 in this form includes the dial 32 of clock 18, which is placed rearwardly of said front display means 21, and at the rear of said space 23. In this space are located and travel the second hand 33, minute hand 34, and hour hand 35, which are carried on the shafts 37, 38, and 39, respectively.

As shown in Fig. 7, the dial 32 is positioned to the rear of the hands, and it forms the forward member of the rear display means 22. A transparent sheet 41, such as glass, is placed at the rear of the dial, and the rear advertising means or display means 42 is placed at the rear thereof, and may be in the form of a layer of material attached to sheet 41, as a sheet of decalcomania, or it may be any suitable display arrangement for illustrating display indicia or advertising means including an article 43. A layer of translucent material 44 such as a thin coat of white paint, is placed over the rear face of said display means 42, adapted to transmit any strong light therethru which comes from the rear, as from the electric light bulbs 45 illustrated herein as mounted in the casing; and it further serves to diffuse the light from source 45, and to show the dial and the rear display means distinctly.

As stated above, the front sign or display indicia 31 on element 26 of the front display means 21 is shown by the words "Time to smoke," and thus the indicia 43 on the rear sign or display means 42 may include a package of certain cigarettes, or the like, to suggest exactly what to smoke. The clock forms a distinct part of the disappearing display means herein, and also serves the useful purpose of showing the time of day, and will thus constantly and repeatedly draw the attention of the passer-by to this display apparatus.

The flasher means is arranged to be operated by the operating mechanism of the clock, and in the form shown in Fig. 4 the shaft 37 of the second hand 33 extends rearwardly beyond the clock operating means 46 to the rear wall of the clock. An operating element 47 is secured on the shaft 37, and in this form illustrated it is a disk of insulating material which has lugs 48 provided on its periphery. A pair of contact elements 50 and 51, such as spring reeds, are sup-

ported by bracket means 49 in the clock 18, and have cooperating contact points 52 and 53 thereon, while circuit wires 54 and 55 extend from the reeds, and other suitable circuit wires 56 and 57 are provided for connecting the reeds, lamps, and clock with a plug 58, whereby to connect them with some outside source of electric current.

As the disk 47 rotates, its lugs 48 push in succession against one of the reeds, to separate the contact points 52 and 53 and thereby break the circuit thru the reeds, which is again completed when the lug passes from under the reed. The reeds may also have the contact points normally held separated, which are then joined by action of the lugs thru rotation of the disk 47; or the contacts may be arranged to make-and-break the circuit in some other suitable manner.

In Fig. 8 the clock 18a is similar to that shown in Fig. 4, but an extension 37a on the shaft of the second hand protrudes beyond the rear of the clock; and the pair of reeds or contact elements, along with the disk 47a which is secured on said extension, are all placed outside of housing 18a, while the lugs of said disk operate reed 50a as in the preceding form. The bracket 49a is herein also provided at the rear and outside of the clock for supporting the reeds.

In Figs. 9 and 10 I have illustrated how the display members or sheets and the arrangements thereof may be modified. In this form the display assemblage 17' has its front display means provided in the form of a single perforated sheet 60, such as paper, cloth, and the like, having perforations 60' therein and bearing the front sign or advertising indicia 31' thereon. By varying the percentage of the openings 60' in this member 60 to the solid portion thereof, the amount of detail may be readily varied. This member 60 carries the front display 31' thereon, and the hands 33', 34', and 35' are placed and operate in the space 23', as in the preceding form. The rear sign or display means 22' herein is also varied, and includes a translucent member 61 or sheet of translucent material positioned rearward of the hands, and on the back thereof is a sheet or layer 62 which includes or is arranged to provide the dial and which also includes the other rear display indicia, as indicated at 43'.

In Figs. 11 and 12 a further modified form of this invention is illustrated. In this form the display assembly 17'' comprises a single member 70 for its front display means, which is preferably of screen material, such as a metal screen or cloth screen, and the like, and which carries the front sign or advertising indicia 31'' thereon. In the space 23'' to the rear thereof are mounted the hands 33'', 34'', and 35'', on the shafts 37'', 38'', and 39'', respectively, as in the first described form. The rear display means 22'' in this form includes a rear transparent plate 71, preferably of glass, and a dial 72 in front thereof, which may also have the advertising indicia 43'' provided thereon; and said dial is provided on the front with a translucent layer 73 such as a light coat of white paint. In this form the front sign member 70 is translucent and its sign means 31'' shows with the usual light, while the translucent coat 73 hides the dial 72 with its advertising indicia; and when the source of light 45 is illuminated, then the dial and rear indicia will be displayed; while the front indicia is then dissolved, as in the preceding forms.

I claim:

1. A display device comprising a casing con-

taining front display means provided with display indicia thereon, a clock in the casing having a dial located rearward of said front means and having shafts which carry hands traveling between said dial and said front means, translucent means between said front means and dial, illuminating means in the casing rearward of said dial, and means associated with said shafts and actuated by the traveling shafts for intermittently rendering the illuminating means operative to illuminate the dial, whereby said dial is displayed alternately with said front indicia.

2. A display device comprising a casing containing front and rear display means, there being a space between said two means and each bearing a companion part of certain display indicia, a clock in the casing having a dial which is associated with the rear display means, the latter bearing rear display indicia, the hands of the clock travel in said space forward of the dial, translucent means in the casing rearward of the rear display means, and means associated with said hands and actuated along therewith to render the illuminating means intermittently effective, whereby to display alternately the front portion of the display indicia and then the rear portion with its dial and hands.

3. A display device comprising a casing containing front display means provided with front display indicia thereon, rear display means provided with indicia cooperating with said front indicia, a clock in said casing having dial means provided in conjunction with said rear display means, translucent means between said dial means and the front indicia, shafts on the clock with hands which travel over the dial means, illuminating means in the casing rearward of the display means to display the rear indicia and dial means while dissolving the front indicia from view, and means connected with one of the shafts to render the illuminating means intermittently active, whereby to display alternately the front portion of the indicia and then the rear portion with the dial means and hands.

4. A display device comprising a casing containing spaced front and rear display means, each means bearing a companion portion of certain display indicia, a clock in the casing having a dial which provides a member of the rear display means, a transparent panel engaging the dial, means bearing the rear display portion and engaging said panel, the front display means including a member bearing the front display portion and a translucent member to the rear thereof, shafts on the clock with hands which travel between the dial and the front indicia, illuminating means in the casing rearward of the rear display means for displaying the rear indicia and dial while dissolving the front indicia from view, one of said shafts being extended in length, trip means on said shaft extension and actuated by the shaft, and electric circuit means connected with the illuminating means and with the clock and actuated by the trip means to be intermittently operative, whereby to display alternately the front portion of the indicia and then the rear portion with the dial and hands.

5. A disappearing display device comprising front and rear display means each bearing a part of companion display indicia thereon, the front display indicia being normally visible by the light coming from outside of the device, a clock dial which is connected to said rear display means, concentric shafts which carry clock hands movable over the dial, and means including a circuit with a switch and a switch operating trip element mounted on one of said shafts, for intermittently illuminating said dial and hands and rear display indicia, whereby the same are displayed alternately with said front display indicia.

6. A disappearing display device comprising spaced front and rear display means each bearing a part of companion display indicia thereon, said front indicia being normally visible by the light coming from the front of the device, light diffusing means between said front and rear means, a clock dial connected to the rear display means, clock hands for the dial traveling in the space between the front and rear display means, and means rearward of said rear means for intermittently illuminating the dial and hands and rear display indicia, whereby the same are displayed intermittently with said front display indicia.

7. A disappearing display device comprising spaced front and rear display means, each provided with display indicia, the front means including a member bearing display indicia thereon and also means to the rear thereof for diffusing light, the rear means including a clock dial and means to the rear thereof provided with the rear display indicia, clock hands in the space between said front and rear means for traveling over the dial, means rearward of said rear display means for illuminating the same, and means for actuating the hands and for intermittently rendering said illuminating means operative, whereby to display the front and the rear display means alternately.

8. A disappearing display device comprising spaced front and rear display means each provided with a companion portion of certain display indicia, the front display means including a screen member bearing the front display portion thereon and a member to the rear thereof for diffusing light, also transparent panel means for retaining said members in place, the rear display means including a member bearing a clock dial and a transparent member at the rear thereof, also a translucent member with the rear display portion thereon, shaft means extending thru the rear display means and carrying near one end trip means and at the other end hands movable in the space between said front and rear means for traveling over the dial, illuminating means rearward of the display means for illuminating the same, and means for actuating the shaft means and therewith the hands and the trip means and rendering the illuminating means intermittently operative, whereby to display the front and the rear display means alternately.

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