Aug. 26, 1958 C. W. KIKER, JR 2,848,827

CLOCK OPERATED CARD CHANGING DEVICE

Filed Feb. 13, 1956 2 Sheets-Sheet 1

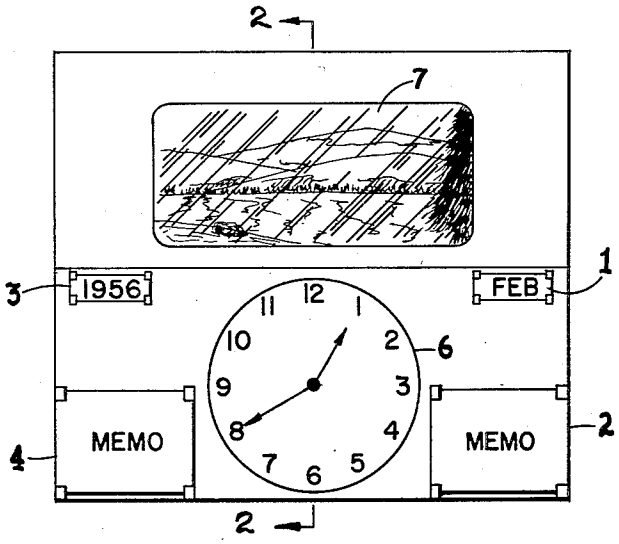

Fig. 1

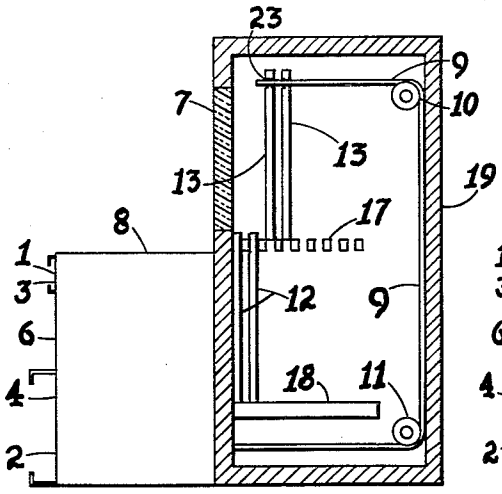

Fig. 2

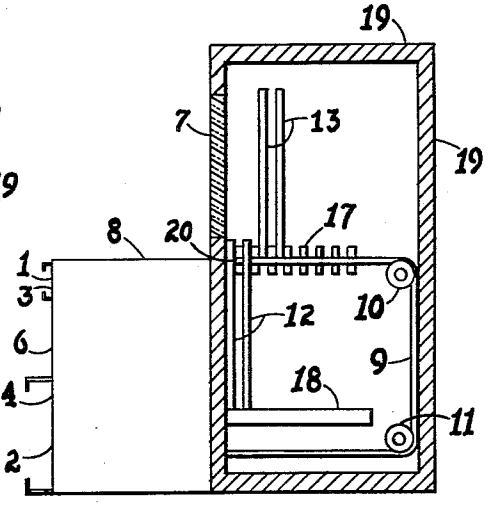

Fig. 4

INVENTOR.
CHARLES W. KIKER, JR.
BY R. W. Hodgson

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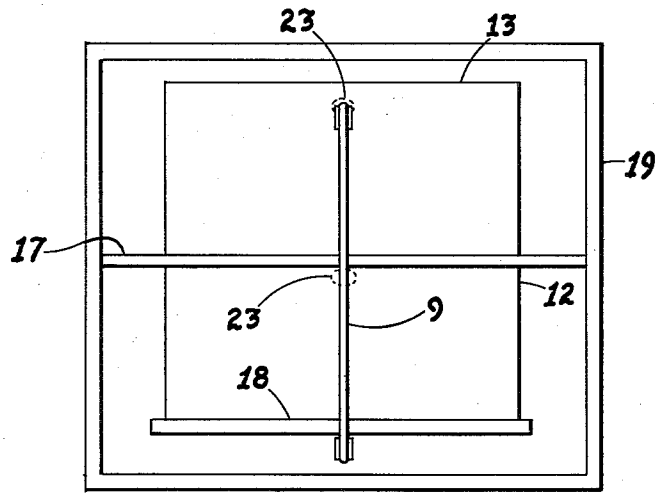

Fig. 6

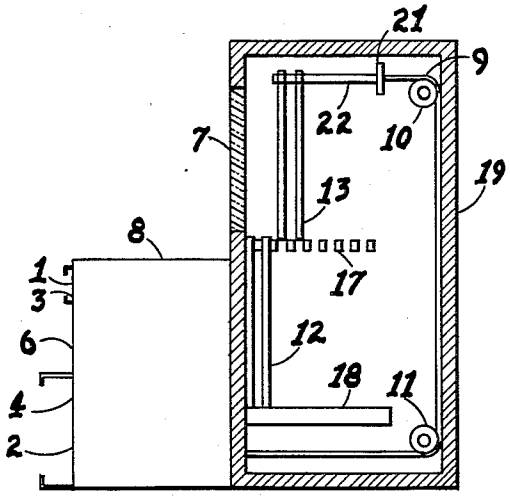

Fig. 5

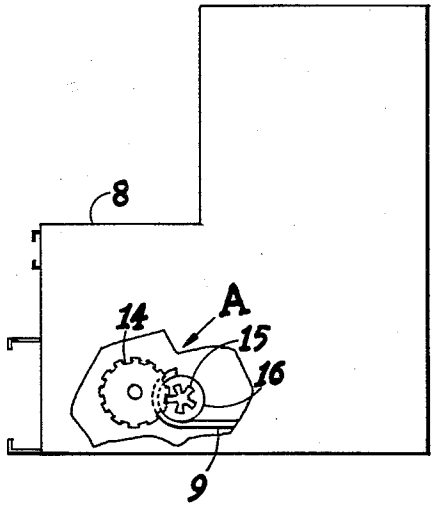

Fig. 3

INVENTOR.
CHARLES W. KIKER, JR.
BY R. W. Hodgson

United States Patent Office

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CLOCK OPERATED CARD CHANGING DEVICE

Charles W. Kiker, Jr., Blue Ridge, Ga.

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2 Claims. (Cl. 40—36)

My invention relates to clocks and more particularly to a unit cooperative with a clock for the purpose of providing a changing pictorial scene, an advertising message, the dates of the month, or other such desirable changeable and eye pleasing view used in connection with and cooperable with a clock.

A clock is essential and is frequently and constantly consulted by the housewife, the business man, and nearly every person. As the result of the continuing focus and reference to a clock it is my aim to utilize such attention as a clock receives for the many fold purposes of presenting a pleasing scene to the person using the clock, presenting information to the person using the clock, presenting an advertising message to such person using a clock, and presenting to such person, additional information such as months, date, year, memorandums and the like.

In order for such a device as I have mentioned to be practicable it must be simple and cooperable with any standard clock mechanism, whether electric operated, spring operated, weight operated, or operated by whatever means. The device must be economical and must be easily adaptable to any type of clock. It must be, in addition thereto, of such nature that the greatest possible utility can be made thereof.

I have devised a method by which a clock can be utilized to provide the motive power for causing a series of scenes, messages or the like to change at predetermined intervals in a window or frame mounted in close proximity to the clock. I have also devised a means by which fixed messages manually changeable may be inserted in close proximity to said clock to further utilize the effect of changeability of the scene or picture as heretofore outlined.

I have discovered that the clock motive power of whatever nature can be utilized to power a speed reduction arrangement which in turn may drive a reel or drum upon which a flexible cord or wire may be wound. By use of a flexible wire being actuated by the drum or reel it is possible to suspend a series of cards with appropriate messages or pictorial representations printed or mounted thereon by said wire or means connected therewith and to cause such wire to be moved so that the cards one by one may drop from view by the force of gravity leaving a new and changing scene before the viewer of the clock.

Generally speaking, my invention consists of (A) a clock mechanism, having attached thereto a device for utilizing the clock power to turn a reel upon which a wire is wound; (B) a housing consisting of an upper and lower portion; (C) said upper portion being capable of holding a series of display cards which can be viewed through (D) a window, and which are suspended by means of said wire attached to said reel, and (E) said lower portion of said housing capable of holding all of said cards when dropped therein by reason of said wire mechanism, and (F) means on the front of said clock to hold cards or memorandum which may be manually removed.

In the specific mechanism it has been found that among other forms it is possible to provide a series of cards with a relatively stiff wire running through holes in their upper areas which wire is gradually wound upon a reel attached to the clock mechanism and in such manner withdrawn one by one from said cards allowing them to drop from view into a concealed storage space. This accomplishes a changing of the scene or message at any predetermined interval depending upon the gearing arrangement of the clock mechanism.

I have, of course, discovered there are numerous ways in which to accomplish the end result, all of which have as their basis a series of cards as heretofore set forth mounted behind a glass or other appropriate framing device and each card mounted one behind the other in series. The cards are all suspended above a container which is large enough to accommodate the cards when dropped by gravity into said container. Each card is suspended behind the said picture frame by being held in position by said wire either passing under said card and over a series of spacers for said cards or through a hole in the top of each card or by whatever means of suspension seems desirable in connection with the basic invention of withdrawing a wire or cord by winding upon a reel by the use of the clock power.

The cards and wire may be made of any suitable material; the wire, generally speaking, being desirably constructed of a flexible metal and the cards probably being constructed of a plastic or paper fiber.

The attachment to the clock mechanism is accomplished by attaching a gear reduction method to one of the main driving shafts of said clock and attaching thereto, and in whatever speed ratio is desired, a reel or drum for winding said wire, Said wire then passes under the card storage chamber up the rear of said card storage chamber into cooperable position with said cards in the display section.

It is quite obvious that anyone skilled in the art can easily calculate the desired speed and attach to the clock driving shaft a speed reduction system such that said reel can be wound at any desired and predetermined speed.

It is further quite obvious that anyone skilled in the art may construct a storage cabinet and display area for said cards of the simplest materials and form.

In order to more fully understand my invention and the means of operation thereof reference is made to the attached drawing of which—

Figure 1 is a front elevation of my clock and mechanism;

Figure 2 is a sectional view through 2—2 of Figure 1, said section being a sectionalized view of the card display and storage portion only; the clock portion itself has not been sectionalized. It is quite obvious that I do not claim any clock mechanism and therefore it is unnecessary to illustrate a clock mechanism, the form and operation which is well known and understood by anyone skilled in the art.

Figure 3 is an end elevation of said clock and picture display with the portion A of the side broken away to show only a means of driving said reel by the clock mechanism and without showing any other detail of the clock mechanism which, as heretofore set forth, is well known to anyone skilled in the art and therefore needs no further description.

Figure 4 illustrates an alternate sectional view of the mechanism the same central section being shown as in Figure 2 with the exception that in Figure 4 an alternative method of causing said cards to drop from the display area has been devised and illustrated.

It is quite clear that a plurality of wires could be used

or a single wire and a wide variety of means for dropping said cards could be used.

Figure 5 shows such additional alternate method in which the wire is used to withdraw a stiff member supported by a bearing.

Figure 6 is a rear elevation of the card containing housing shown in Figure 2 as seen from the right side of Figure 2, with the back removed.

Referring in more detail to the drawing and the characters and figures therein, Figure 1 shows card or memorandum holding devices 1, 2, 3, and 4 into which a card, memorandum, or memorandum pad may be manually inserted. 6 is a clock face. 7 is the window through which the movable cards, pictures, or the like will be seen.

In Figure 2 the housing or container 19 for said cards or pictures is shown in section as are the contents. The clock 8 is not shown in section. Referring specifically to the figures and characters in said drawing, 1, 2, 3, and 4 indicate holders for the cards or memorandum pads as heretofore set forth in the description of Figure 1; 6 indicates the face of the clock, 7 is the glass or other aperture through which the cards 13 which stand behind said aperture may be seen. The cards 12 have already dropped from the position of viewing to the container below. The wire 9 is shown passing around a pulley or spindle 10 at the top and a second pulley or spindle 11 at the bottom and then entering the clock mechanism. 17 are spacers holding said cards or the like which are being viewed and 18 is a stop board in the container which keeps the cards which have dropped down from breaking or interfering with the wire which passes beneath.

Figure 4 illustrates the same elements as Figure 2 except that in Figure 4 the wire passes through a hole 20 in the spacers 17 and the cards 13 being displayed rest upon said wire and drop down when said wire has been withdrawn from under said card. Said cards then drop in the position of cards 12 which are no longer in view.

Figure 5 introduces still another alternative method of dropping said cards in which a stiff member 22 is attached to the wire 9 and is held in place by a bearing member 21. As the wire withdraws said stiff member 22 from the cards 13 they will drop to the position of the cards 12 in the container beneath the viewing portion.

Figure 3 indicates a broken away section of the side A to show a possible gearing method by which the drive gear 14 of the clock shall drive a gear or series of gears 15 which in turn actuate the drum or reel 16 and cause the wire 9 to be wound thereupon.

Figure 6 is a rear elevation of said card containing housing 19 with the back removed showing the card 13 in viewing position and the card 12 which has already dropped from view, the wire 9 running down the rear of the container and passing forward through the hole 23 in card 13.

Having thus described my invention in such manner that anyone skilled in the art may construction it, it is my express purpose to indicate that the illustrated and described form of my invention relates only to and is used only for purposes of description and said particular forms of my invention and the details thereof are merely descriptive and are not intended to be limited thereto. It is obvious that a person skilled in the art might devise a number of different means of causing said cards or advertising messages to change by the alteration of the exact configuration and form and method of holding said materials in position.

A wide number of variations can be devised as I have shown by indicating three possible means of suspending and dropping the said cards or the like from the viewing surface.

It is not intended that the exact configurations and construction shown and the cooperation of the elements one with the other should be exclusive but that all variations are within the spirit and teaching of this invention. It is not intended that the description and illustration as set forth herein should serve any purpose than that of example and my invention is to be considered in the light of the prior art and the appended claim with due consideration being given to the doctrine of the equivalents throughout.

I claim:

1. In combination with a clock, card changing means comprising a housing or container for cards consisting of an upper and lower portion having a window in the upper portion thereof; means for retaining said cards in the upper portion of said housing, and for permitting said cards to drop into the lower portion thereof; consisting of an elongated strip engageable with said cards and having a flexibly windable longitudinal tensile portion; means for attaching said flexibly windable longitudinal tensile portion of said elongated strip to the clock mechanism consisting of a speed reduction gear having mounted thereon a reel upon which said flexibly windable longitudinal tensile portion of said strip is wound.

2. In combination with a clock, card changing means comprising a housing or container consisting of an upper and lower portion having a window in the upper portion thereof; mounted within said housing a series of spacers cooperable to receive a series of cards in such manner that said cards may freely move upward or downward; means for retaining said cards in the upper portion of said housing, and for permitting said cards to drop into the lower portion thereof; consisting of a wire engageable with said cards and removable therefrom and having a flexibly windable longitudinal tensile portion; and means for attaching said flexibly windable longitudinal tensile portion of said wire to the clock mechanism consisting of a speed reduction gear having mounted thereon a reel upon which said flexibly windable longitudinal tensile portion of said wire is wound.

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