May 27, 1947. J. H. REID 2,421,130

TIMING DEVICE

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Fig. 1

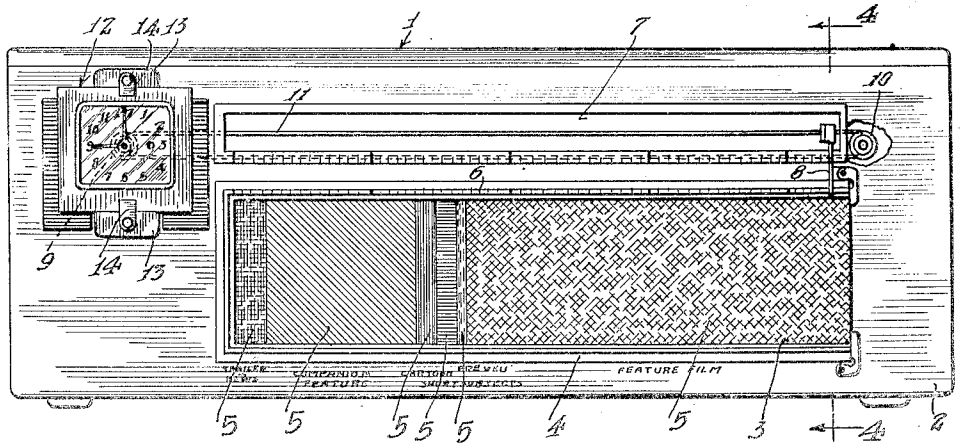
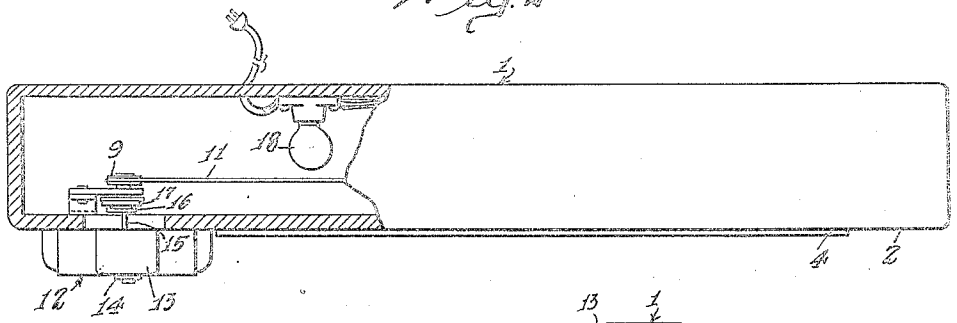



Fig. 2



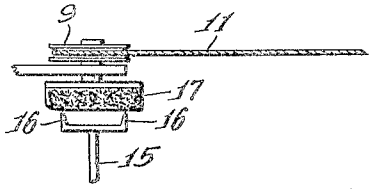


Fig. 3

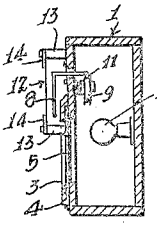


Fig. 4

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Fig. 5

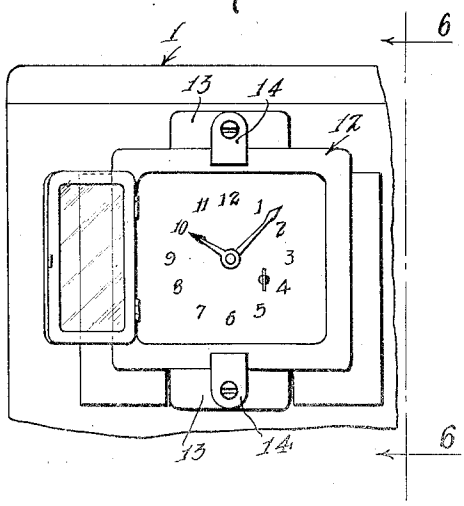



Fig. 6

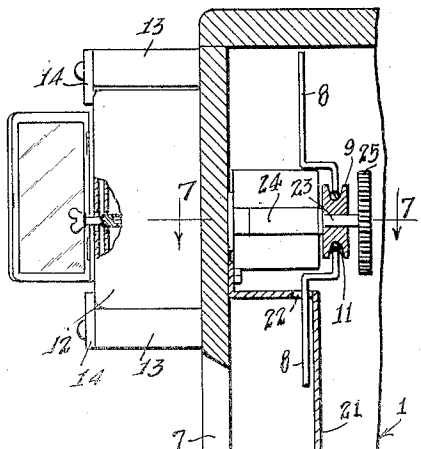
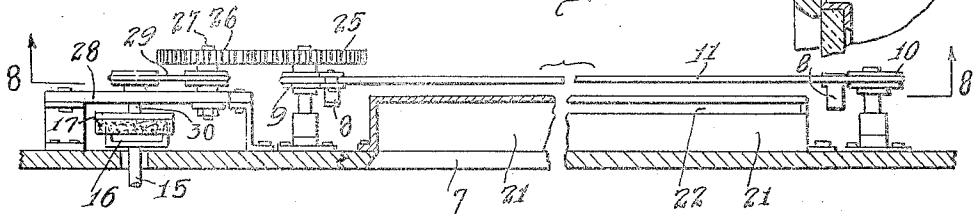



Fig. 7



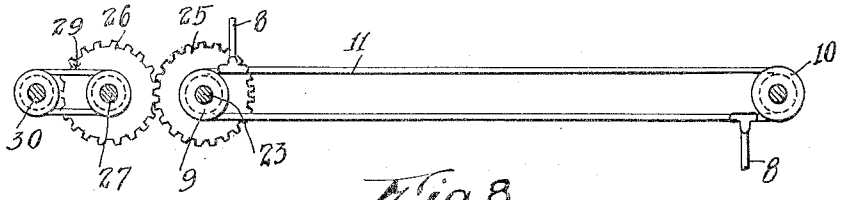




Fig. 8

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ATTORNEYS

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## TIMING DEVICE

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Application December 16, 1944, Serial No. 568,508

2 Claims. (Cl. 161—15)

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My invention relates to timing devices and more particularly to timing devices adapted to be used by theaters, and among the objects of the invention are:

First, to provide a timing device wherein the various matters, such as features, shorts, previews, news or the like being shown by the theatre are represented graphically in a display in the theatre lobby or foyer, the graphical representation being correlated with a clock or other timing device so that one can readily ascertain which film is being shown, how many minutes it has been running, or the time which must elapse before termination, or to determine at which time any specific film will be shown.

Second, to provide a timing device of this character which may be arranged to represent a single cycle of moving pictures or to represent an entire day's showing.

Third, to provide a timing device of this character which may be readily changed to correspond with the different lengths of film which are shown by the theatre.

Fourth, to provide a timing device of this character which incorporates a particularly simple yet effective drive connection between the clock and a pointer associated with the graphical representation of the film being shown by the theatre.

With the above and other objects in view, as may appear hereinafter, reference is directed to the accompanying drawings, in which

Figure 1 is a front view of a cabinet incorporating my invention.

Figure 2 is a top or plan view thereof with a portion broken away and in section to show particularly the drive connection between the clock and the means which carry the pointer.

Figure 3 is an enlarged view of the drive connection.

Figure 4 is a transverse sectional view through the cabinet on a reduced scale, taken through 4—4 of Fig. 1.

Figure 5 is an enlarged front view of the clock.

Figure 6 is an enlarged fragmentary sectional view through 6—6 of Figure 5, as showing a modified form of drive connection between the clock and pointer.

Figure 7 is a fragmentary longitudinal sectional view thereof taken through 7—7 of Figure 6.

Figure 8 is a longitudinal fragmentary sectional view taken through 8—8 of Figure 7.

With reference first to Figures 1 through 4 of the drawings, a cabinet 1 is provided which is rectilinear and relatively shallow. The front side

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2 is therefore provided with a relatively large longitudinally extending window 3 provided with a frame 4 along the upper and lower margins across one end, the remaining end being left open. The frame 4 slidably receives a plurality of variously colored panels 5. These panels are intended to represent graphically the various films which are to be shown by the theatre, such as the feature film, companion feature, preview, some short subject or cartoon, and perhaps a trailer or news reel. The width of the various panels varies in proportion to the relative durations of the various films. Thus compositely the panels form a graph of which the distance along its longitudinal axis represents divisions of time. Such divisions of time may be marked along the frame 4 forming a scale 6 divided into hours and minutes. The scale may be such that the graph represents the duration from the opening of the threatre to its closing time, in which case the various films, as they are repeated, are represented by panels of like color and length, or if desired, the graph may represent a single cycle of film being shown.

Above the window 3 is a longitudinal opening 7 through which extends a pointer 8 adapted to overhang the scale 6. Within the cabinet 1 is mounted a pair of pulley wheels 9 and 10 around which extend a cable 11 to which is attached the pointer 8. One of the pulley wheels is preferably located beyond an end of the window 3. Forwardly of this pulley 9 is mounted a clock 12, which may be conventional. In the structure shown the clock is mounted between brackets 13 secured to the front side of the cabinet and held in place by clips 14. The winding shaft 15 of the clock is provided with prongs 16 which are adapted to engage a clutch disk 17, preferably formed of sponge rubber or other soft material, and mounted on the shaft with the pulley 9. Thus when the clock is in position it is in driving relation with the pulley wheel 9 and therefore actuates the cable 11 and pointer 8. The clock is removed for winding the clutch 17 and prongs 16 and disk 17 is automatically disengaged. It should be noted, however, that the clock may be electrically driven and the prongs 16 or similar means connected to an extension of the minute or hour hand shaft. In such case, the clock need be removed only for resetting the pointer 8 when the program is changed.

Operation of my timing device as depicted in Figures 1 through 4 is as follows: At the beginning of the day, or at the beginning of the cycle of events as represented by the graph formed by the panels 5, the clock 12 is set and the pointer

8 positioned at the left-hand side of the window. At any time thereafter it is possible from an observation of the location of the pointer and by noting the time indicated by the clock to tell which film is being shown, how many minutes it has been running, and how many minutes it will continue to run. Furthermore, it is possible to ascertain readily at what time any film of interest will start. As the program of the theatre is changed, the panels 5 may be removed and other panels of different length substituted. The panels may be merely colored strips of translucent or transparent material, or may contain pictures which are representative of the film being shown, or contain matter advertising such films. This is particularly true of the panels which represent the feature picture being shown. In order to enhance the appearance of the panels, electric lights 18 may be provided within the cabinet.

Reference is now directed to the construction shown in Figures 5 through 8. In this construction a cover plate 21 is provided within the cabinet 1 over the opening 7. The cover plate is offset inwardly from the opening 7 and its upper edge is provided with a longitudinal slot 22. The cable 11 is provided with two or more pointers 8 and the pulley wheel 9 is mounted on a stub shaft 23 supported from a bracket 24 located within the cabinet at one end of and above the opening 7. The shaft 23 is connected by gears 25 and 26 to a countershaft 27 supported from a frame 28 mounted within the cabinet behind the clock. The countershaft 27 is connected by a pulley drive 29 to a clutch shaft 30 which carries the clutch disk 17 for coaction with the prongs 16 provided at the end of the clock shaft 15.

With the arrangement shown in Figures 5 through 7, one pointer at a time is caused to traverse the opening 7 and indicate the progress of the program. The panels 5 in this case, may be arranged to indicate one complete cycle of moving pictures being shown and the pointers may be so positioned that as one pointer leaves the opening 7, the other appears to indicate the beginning of the next cycle of operation. Also, the clock in the construction shown in Fig. 5, may be arranged for winding and setting if spring driven, or merely for setting if electrically driven



from its face side, so that it can remain permanently in position for setting of the clock automatically effects adjustment of the positions of the pointers 8.

Many other embodiments of the invention may be resorted to without departing from the spirit of the invention.

I claim:

1. A timing apparatus for motion picture theatres comprising: a relatively flat, rectangular cabinet structure having a longitudinally extending opening on its front face and a slit along one side of and spaced from said opening; a guide frame bordering three sides of said opening; a series of translucent panels adapted to be universally fitted sidewise into said guide frame to cover said opening, the width of said panels representing grapically the duration of various films comprising the theatre program; and endless drive belt unit mounted in said cabinet behind said slit and carrying at least one pointer adapted to project through said slit for observation from the front of said cabinet; a clock mounted on the front of said cabinet at one end of said slit; and a clutch operatively connecting said clock to said endless belt unit.

2. An apparatus as set forth in claim 1 wherein said clutch comprises: a rotatable element carried by said clock and having prongs; a shaft for driving said endless belt; and a disk of yieldable material on said shaft adapted to receive said prongs to form a yieldable drive connection therewith.

JOSEPH H. REID.


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