

Feb. 5, 1946.

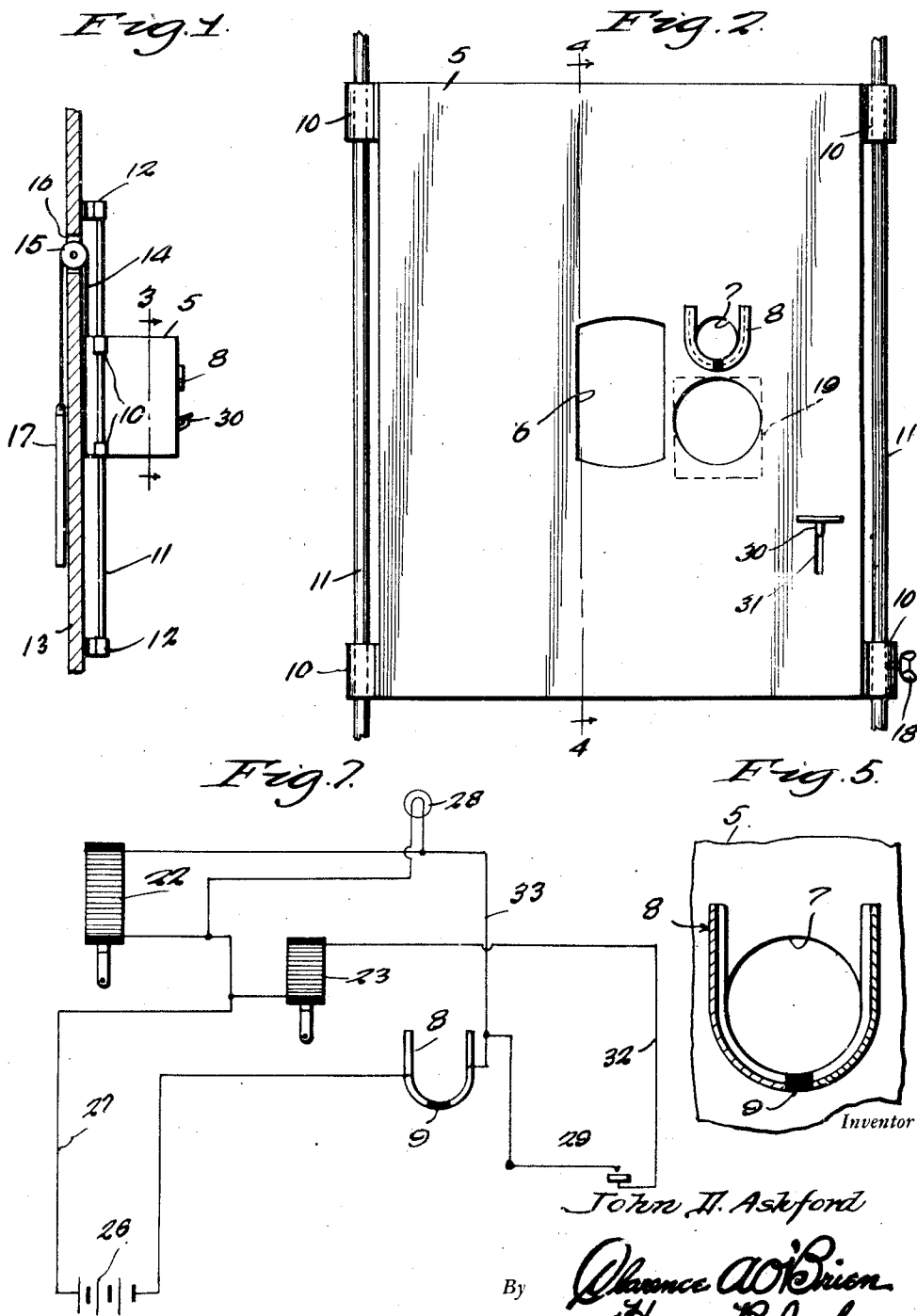
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2,394,225

PHOTOGRAPHIC RECORDING APPARATUS

Filed May 1, 1944

2 Sheets-Sheet 1



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Fig. 3.

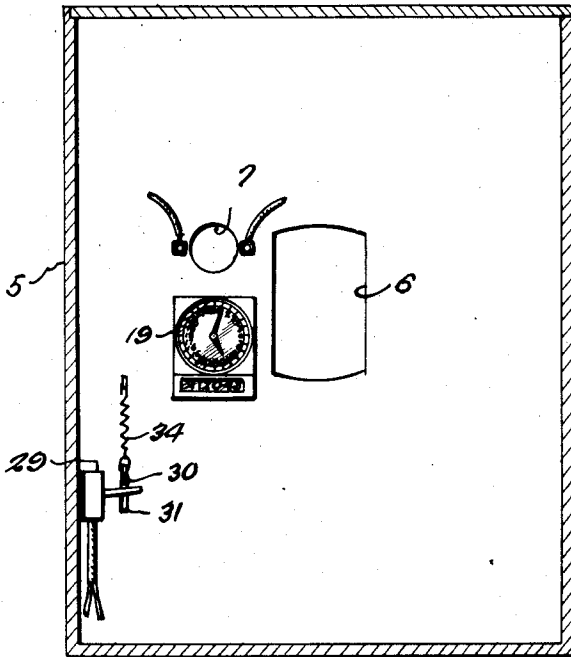


Fig. 8.

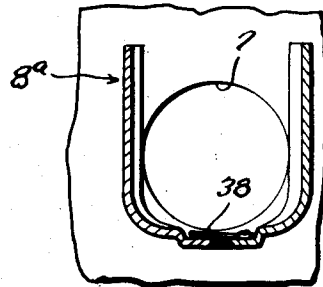


Fig. 4.

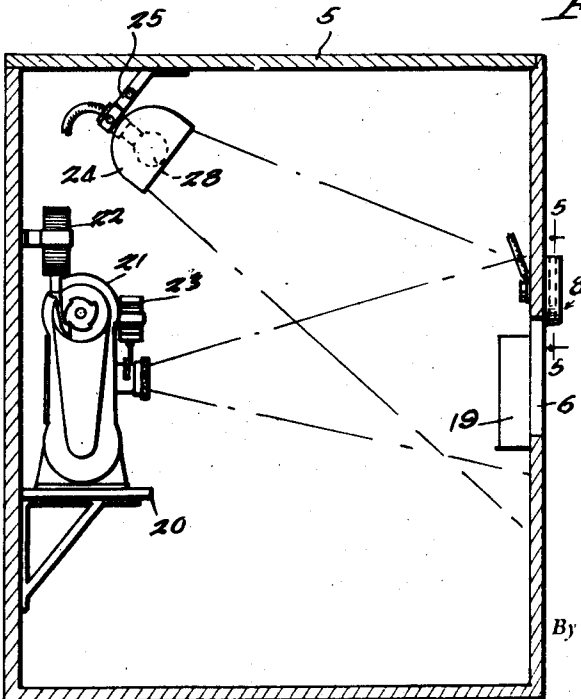
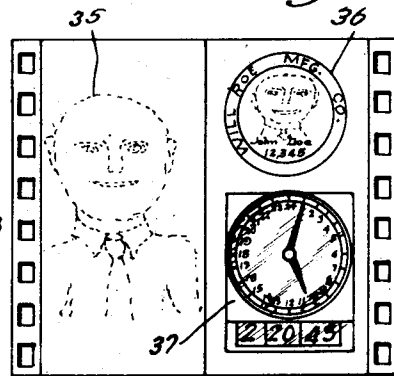


Fig. 6.



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PHOTOGRAPHIC RECORDING APPARATUS

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5 Claims. (Cl. 234—60)

This invention relates to a photographic recording apparatus especially designed for use instead of the conventional time clocks or recorders commonly found in factories and other establishments.

In the use of conventional time clocks or recorders, it has been found that time fraud can be and has been practiced, because such clocks or recorders have no means whereby persons using the clocks or recorders may be identified. Also, the conventional time clock or recorder offers no means whereby the authority of a person to enter an establishment may be checked, because such clocks or recorders make no record of the identification means of the persons entering the establishment.

An important object of the present invention, therefore, is to overcome the above-mentioned shortcomings or objections to conventional time clocks or recorders, by providing an apparatus for photographically recording the likeness and identification means of a person entering or leaving a factory or other establishment, and for simultaneously recording the time and date of his or her arrival at or departure from such establishment.

A more specific object of the present invention is to provide a photographic recording apparatus of the above kind which is comparatively simple, compact and efficient.

More specific objects and features of the present invention will become apparent from the following description when considered in connection with the accompanying drawings, and the invention consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the drawings and claimed.

In the drawings, wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a view partly in side elevation and partly in vertical section, of a photographic recording apparatus embodying the present invention.

Figure 2 is a fragmentary front elevational view of a portion thereof drawn on an enlarged scale.

Figure 3 is a vertical section taken substantially on line 3—3 of Figure 1 and drawn on an enlarged scale.

Figure 4 is a vertical section taken substantially on line 4—4 of Figure 2.

Figure 5 is an enlarged fragmentary vertical section taken substantially upon line 5—5 of Figure 4.

Figure 6 is an enlarged plan view showing a

frame of a camera film whereon is recorded the likeness and identification means of a person using the present apparatus, and the time and date of his use thereof.

5 Figure 7 is a wiring diagram of the electrical devices embodied in the apparatus of Figure 1.

Figure 8 is a view similar to Figure 5 showing a modification of a detail of the apparatus.

Referring more in detail to the drawings, the illustrated embodiment of the invention includes a suitable box-like casing 5 having in its front wall two framing openings 6 and 7 that are located near each other. An identification badge or the like is adapted to be framed at the opening 7, and a suitable slide holder 8 is mounted on the outside of the front wall of casing 5 to removably receive the identification badge or the like and sustain it in position registered with the opening 7. As shown, this slide holder 8 consists of a pair of metallic sections insulated from each other, as at 9, and adapted to afford contacts interposed in an electric circuit and capable of being bridged by the identification badge to close the circuit at this point. The head of the person using the apparatus is adapted to be framed in the opening 6, and in order that the apparatus may be conveniently employed by persons of different height, the casing 5 is suitably mounted for vertical adjustments. For this purpose, the casing 5 may be provided on opposite sides with aligned pairs of guides 10 slidable on vertical guide rods 11 fixed in a vertical position and in properly spaced relation by mounting brackets 12 upon a suitable vertical wall or panel 13. The casing 5 is preferably counterbalanced to facilitate its vertical adjustments, the counterbalancing means illustrated consisting of a flexible member or cable 14 attached to the top of the casing 5 and passing upwardly over a pulley 15 through an opening 16 in the wall or panel 13 and having a weight 17 attached to its other end and vertically movable behind the wall or panel 13. Any suitable means may be provided for fixing the casing 5 in any of its vertically adjusted positions, such as a set screw 18 threaded through one of the guides 10 and arranged to impinge the adjacent guide rod 11, as shown in Figure 2. A conventional form or type of calendar clock 19 is fixed upon the inner face of the front wall of casing 5 adjacent the openings 6 and 7, the face of the calendar clock being presented to the rear of the casing.

Suitably mounted upon a support 20 within and at the back of the casing 5 is a roll-holding

camera 21 which is arranged in proper focus with the framing openings 6 and 7 and the calendar clock 19. Electrically operated means including a solenoid 22 may be provided for turning the film roll of the camera 21 to bring a new or unexposed frame of the film in position for exposure. The arrangement is such that each impulse of solenoid will move the film a distance of one frame of the film. Also, electrical means is provided for actuating the shutter of the camera 21 for exposing the new frame of the film which has been brought into position for exposure, such means including a solenoid 23 operatively connected to the camera shutter.

A lamp 24 is suitably mounted in the casing 5, as at 25, for illuminating the subject at the framing opening 6, the identification badge or the like at the framing opening 7, and the face or dial of the clock 19.

As shown in Figure 7, one section of the holder 8 is connected to one side of a battery 26 or other suitable source of electricity, the other side of said battery being connected by wire 27 to one side of solenoid 22 and one side of solenoid 23, as well as to one side of the source of light 28 embodied in the lamp 24. A normally open, manually operated switch 29 is mounted in the casing 5 near the front wall of the latter, and an actuating lever 30 for this switch projects through a slot 31 in the front wall of casing 5. The movable contact of switch 29 is connected to the other section of holder 8, as shown in Figure 7, while the stationary contact of switch 29 is connected by wire 32 with the other side of solenoid 23. The second-named section of holder 8 is also connected by wire 33 to the other sides of the source of light 28 and solenoid 22.

In use, the person entering or leaving the establishment where the apparatus is provided places his identification badge or the like in the holder 8 so that it faces inwardly or rearwardly of the casing 5 in registry with the opening 7 and within the focal field of the camera 21. In doing this, the badge bridges the sections of holder 8 and closes the circuits of source of light 28 and solenoid 22 so as to cause the lamp 24 to be lighted and to cause an unexposed frame of the film of camera 21 to be moved into position for exposure. The person then adjusts the casing 5 vertically so that his head is exposed or framed in the opening 6 while facing the casing, thus placing his head within the focal field of the camera 21. The lever 30 is then actuated so as to close the switch 29 momentarily for actuating solenoid 23 and causing the shutter of the camera to quickly open and close, thereby causing the camera to take a picture of the user, his identification badge, and the dials or face of the clock 19. As soon as the lever 30 is released, it is elevated by a spring 34 so as to allow the switch 29 to open. The badge is then removed from holder 8 so as to de-energize and throw out of operation the source of light 28 and solenoid 22 for the next user of the apparatus. The core of solenoid 22 and that of solenoid 23 may be of a well known type in which the core is spring-projected and is retracted when the coil of the solenoid is energized. As shown in Figure 6, the above-described use of the apparatus causes the likeness 35 of the user of the apparatus to be recorded on the frame of the camera film alongside of a picture 36 of the identification badge and a picture 37 of the face or dials of the calendar clock 19. A permanent and clear record is thus obtained as to the identity of the person using the apparatus, the

time and date of such use, and the particular identification of the user. These can be checked to determine whether or not the user of the apparatus was authorized to do so or have access to the establishment. Also, the record enables comparison between the identification means and the actual user. These records are had along with the exact time and date when the records were taken. It will thus be apparent that the present apparatus provides a means for carrying out the stated objects of the invention in a manner calculated to meet with the requirements for successful commercial use. Obviously, the invention is susceptible of many modifications and changes in details of construction without departing from the spirit and scope of the invention as claimed.

A modified form of holder is shown in Figure 8 at 8a, in which the sections of the holder are separated and one carries a flexible contact 38 normally disengaged from the other section but pressable into engagement thereof by the weight of the identification badge placed in the holder. This arrangement is desirable when the identification badge is not of a material capable of bridging the sections of the holder for closing the electrical circuit. Otherwise, this form of holder is similar to that shown in Figure 5.

What I claim is:

1. In a recording apparatus of the character described, a casing having a framing opening in a wall thereof, supporting means for an identification element mounted on the casing to support said element in a position wherein the same is framed within said opening, a roll-film holding camera mounted in the casing in focus with said opening, means operable for moving the film of the camera to bring an unexposed frame thereof in position for exposure, means operable for actuating the shutter of the camera to expose said frame of the film and photograph the identification element of the person using the apparatus, and means operable by the identification element when inserted in said supporting means for rendering said film moving means operative.
2. In a photographic recording apparatus of the character described, a casing having a framing opening in a wall thereof, a holder on said wall of the casing for supporting an identification element so that the same will be framed within said opening, a roll-film holding camera mounted in the casing in focus with said opening, electrically operated means controlled by and automatically operable upon insertion of an identification element in said holder for moving the film of the camera to bring an unexposed frame of the film in position for exposure, electrically operable means for actuating the shutter of the camera to expose said frame of the film, and switch means manually operable from the outside of the casing for controlling said shutter-actuating means.
3. In a photographic recording apparatus of the character described, a casing having a framing opening in a wall thereof, a holder on said wall of the casing for supporting the identification element so that the same will be framed within said opening, a roll-film holding camera mounted in the casing in focus with said opening, electrically operated means controlled by and automatically operable upon insertion of an identification element in said holder for moving the film of the camera to bring an unexposed frame of the film in position for exposure, electrically operable means for actuating the shutter of the camera to expose said frame of the film, and switch means manually

operable from the outside of the casing for controlling said shutter-actuating means, said holder embodying normally open switch means closable by the identification element when the latter is inserted in the holder.

4. In a photographic recording apparatus of the character described, a casing having a framing opening in a wall thereof, a holder on said wall of the casing for supporting an identification element so that the same will be framed within said opening, a roll-film holding camera mounted in the casing in focus with said opening, electrically operated means controlled by and automatically operable upon insertion of an identification element in said holder for moving the film of the camera to bring an unexposed frame of the film in position for exposure, electrically operable means for actuating the shutter of the camera to expose said frame of the film, and switch means manually operable from the outside of the casing for controlling said shutter-actuating means, said means for controlling the operation of the camera shut-

ter including a normally open switch mounted in the casing.

5. In a recording apparatus of the character described, a casing having a framing opening in a wall thereof, a roll-film holding camera mounted within the casing in focus with said opening, a solenoid for moving the film of the camera to bring an unexposed frame of the film in position for exposure, means exteriorly of the casing for controlling the operation of said solenoid, a second solenoid for actuating the shutter of the camera to expose the frame of the film, and means manually operable from the exterior of the casing for controlling the operation of said second-named solenoid, the controlling means for the first-named solenoid including a holder for an identification element associated with said opening and constituting switch means closable by the insertion of the identification element therein for causing operation of the first-named solenoid.

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