G. Y. NISHIYAMA.

AUTOMATIC CAMERA ACTUATING DEVICE.

APPLICATION FILED APR. 13, 1917.

1,250,628.

Patented Dec. 18, 1917.

Fig. 1.

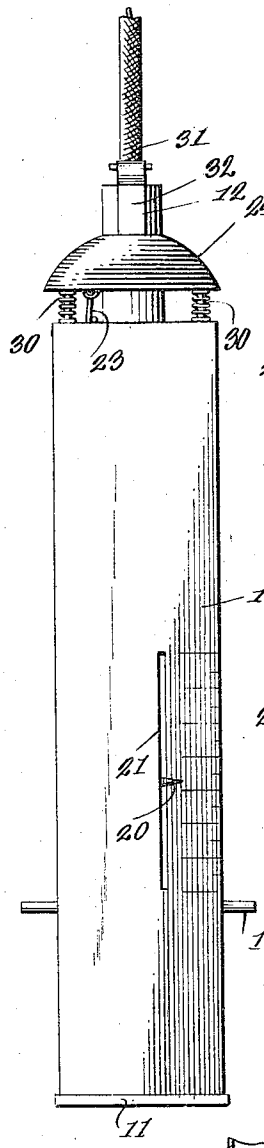


Fig. 2.

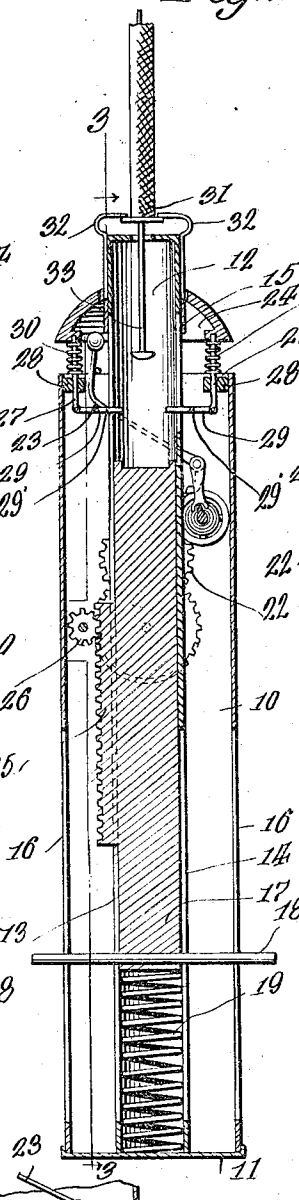
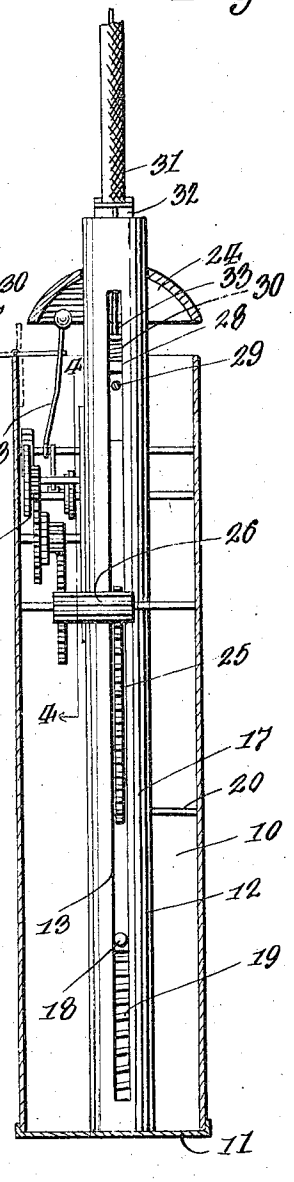


Fig. 3.



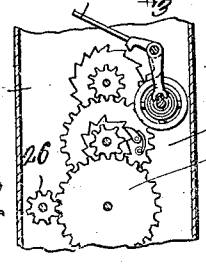


Fig. 4.

WITNESSES

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AUTOMATIC CAMERA-ACTUATING DEVICE.

1,250,628. Specification of Letters Patent. Patented Dec. 18, 1917.

Application filed April 13, 1917. Serial No. 161,834.

To all whom it may concern:

Be it known that I, GEORGE Y. NISHIYAMA, a subject of the Emperor of Japan, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Automatic Camera-Actuating Devices, of which the following is a specification.

This invention relates to an improved automatic camera actuating device and the principal object of the invention is to provide a device which may be connected with the camera operating plunger and which may be set to move the plunger inwardly after a predetermined interval of time thus permitting a person to set the camera to take a picture and then take his place in a group.

Another object of the invention is to so construct this device that a signal bell may be sounded when the device is about to operate the camera actuating plunger.

Another object of the invention is to so construct this device that the mechanism thereof, with the exception of the bell may be contained in a housing.

This invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a view in side elevation of the improved device.

Fig. 2 is a vertical sectional view through the improved device.

Fig. 3 is a vertical transverse sectional view taken along the line 3—3 of Fig. 2.

Fig. 4 is a fragmentary sectional view taken along the line 4—4 of Fig. 3.

The cylinder or casing 10 is open at its upper end and is provided with a bottom or closure 11 at its lower end from which there extends a tube or inner chamber or compartment 12 having slots 13, 14 and 15 formed therein, the slots 13 and 14 being positioned in operative relation to slots 16 formed in the casing 10. A piston 17 is slidably mounted in the chamber 12 and is held against rotary movement therein by a pin or rod 18 which extends through the slots 16 and serves not only as means for drawing the piston downwardly against the tension of the spring 19 but also serves as means for limiting the upward movement of this piston through engagement with the upper ends of the slots 16. A pointer 20 extends from the piston through the slot 21 of the casing 10 and as the casing is provided with a scale as shown in Fig. 1, the piston can be drawn downwardly, the desired amount according to the length of time, it is desired to have elapse before the camera is operated.

In order to control the upward movement of the piston, there has been provided a train of gears indicated in general by the numeral 22 and including a hammer or striker arm 23 which is vibrated to ring the signal bell 24 when the piston moves upwardly and the gears are rotated through engagement of the rack bar 25 with the gear 26 of the train of gears indicated in general by the numeral 22. This signal bell 24 is positioned about the upper end portion of the tube 12 and is provided with depending rods 27 which extend through bearings 28 and pivotally connected to bars 29 pivoted at 29′ and extending into the tube 12 for engagement by the upper ends of the piston 17 upon the piston moving upwardly to a certain point. Springs 30 are provided to yieldably retain the bell in the normal position.

When in use, the device will be connected with the shutter actuating tube 31 of the camera by clamp 32, the actuating plunger 33 of this tube being positioned in the housing 12 as shown in Fig. 2. The piston will be drawn downwardly according to the length of time it is desired to have elapse before the shutter is operated and upon releasing the pin 18, the person taking the picture will take his place in the group. The spring 19 will then move the piston upwardly and in doing so, the rack bar 25 will impart movement to the train of gear and will vibrate the striker 23.

As the piston moves upwardly, its upper end will first engage the pins or arms 29 and will move the bell downwardly into position for engagement by the striker. When the bell starts ringing, this will serve as a signal that the picture is about to be taken and will serve as a warning. After lowering the bell, the piston will then engage plunger 33 and will move the plunger into the tube 31 to actuate the camera shutter in the ordinary manner.

It will thus be seen that with this device, a person can set up a camera upon a tripod and after sighting the camera for the proper position in focus, can move the piston 17 downwardly to the proper point and then take his place in the group.

What is claimed is:—

1. A camera attachment comprising a cas-

ing, a tubular housing in said casing, a shutter tube provided with a plunger extending into the housing, a signal bell slidable upon the upper portion of said housing, pins extending from the signal bell and slidably connected with the casing, levers pivotally connected with the housing and having their outer ends pivotally connected with the pins and their inner end portions extending into the housing, a piston slidable in the housing and yieldably held in a raised position, and a striker to sound the signal bell operated from the piston as the piston moves upwardly engaging the levers to move the same and lower the signal bell into operative relation to the striker and engaging the plunger to move the same upwardly and actuate the shutter of a camera.

2. A camera operating device comprising a casing, a housing in the casing, a signal bell slidably mounted upon the housing, engaging levers extending through openings in the housing and having their outer end portions connected with the signal bell, a piston slidable in the housing and yieldably held in a raised position, and signal striking means actuated from the piston as the piston moves upwardly, the piston when moving upwardly engaging the levers to move the levers and draw the signal bell into operative relation to the striking means.

3. A camera operating device comprising a housing, a piston slidable in the housing and yieldably held in a raised position, a signal bell slidably mounted and yieldably held in a raised position, striking means actuated from the piston as the piston moves upwardly, and means actuated from the piston as the piston moves upwardly to draw the signal bell downwardly into operative relation to the striking means.

4. A camera operating device comprising a casing, bearings carried by the casing, a housing in the casing, a signal bell slidable upon the housing, guiding pins extending from the bell through the bearings, resilient means yieldably holding the bell in a raised position, levers pivotally mounted and having their outer end portions loosely connected with the pins and their inner end portions extending into the housing, a piston slidable in the housing and yieldably held in a raised position, and striking means actuated from the piston as the piston moves upwardly to engage the levers and move the levers to draw the bell downwardly into operative relation to the striking means.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE Y. NISHIYAMA.

Witnesses:
THEODORE N. BROWN,
BUJI KASHINO.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."