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REGISTER ACTUATING MEANS

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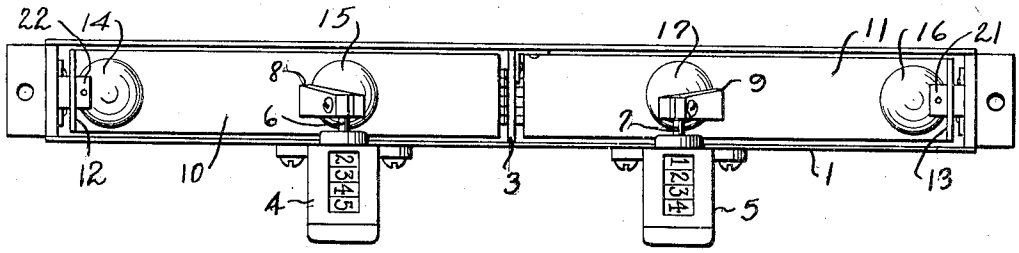


Fig. 2.

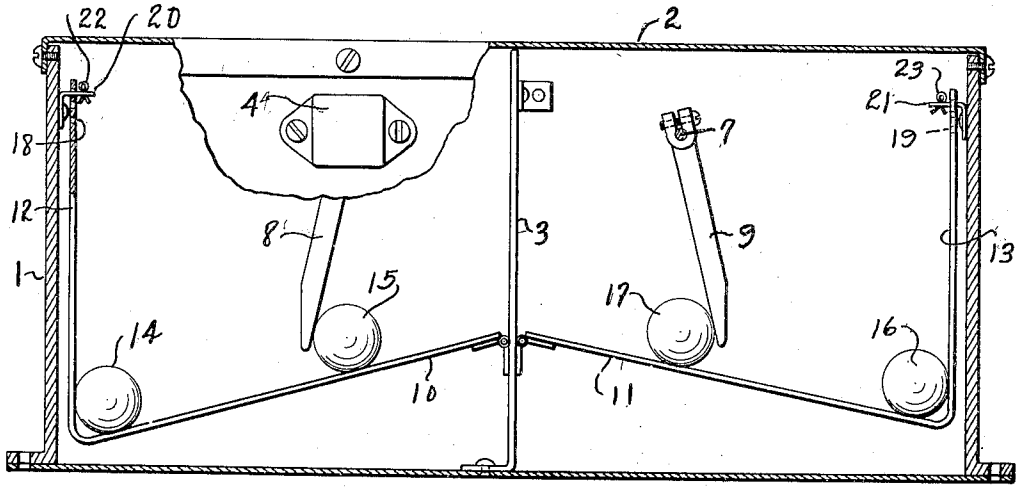


Fig. 1.

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REGISTER ACTUATING MEANS

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3 Claims. (Cl. 235—91)

This invention relates to a register actuating means.

The invention embodies certain improvements over that disclosed in my co-pending application, Serial No. 213,556, filed June 13, 1938, which issued June 3, 1941, as Patent No. 2,244,417.

An object of the invention is to provide in combination with a register, means for actuating the same.

The invention is particularly applicable for use on a motor vehicle or on aircraft for registering, or counting the abnormal operations of the vehicle or craft.

It is a further object of the invention to provide an actuating device for a register which embodies a plurality of freely movable bodies one being rendered active by its inertia and the other by gravity, in combination with a guide or track, along which the bodies may move, an actuating lever connected to the register and arranged to be actuated by said movable bodies with means for varying the inclination of the track whereby to render the device more or less sensitive to the vehicle movements.

With the above and other objects in view the invention has particular relation to certain novel features of construction, operation and arrangement of parts, an example of which is given in this specification and illustrated in the accompanying drawing, wherein:

Figure 1 shows a plan view of the device showing the cover plate removed, and

Figure 2 shows a side view, partly in section.

Referring now more particularly to the drawing wherein like numerals of reference designate the same parts in each of the figures, the numeral 1 designates the casing as a whole. This casing may be of any selected form or material. As shown it is box-like in form and has the top cover plate 2 fitted thereover and secured thereto in any preferred manner.

As illustrated the casing is divided by a transverse partition 3 extending from side wall to side wall and from top to bottom.

Secured to the outer side of one of the side wall there are the registers, or counters 4, 5 and which are operable by the rocking of the respective shafts 6, 7 which extend inwardly into the casing and to whose inner ends the actuating levers 8, 9 are secured. These levers depend from their respective shafts as shown.

Ball guides, or tracks, 10, 11 diverge downwardly from the central partition 3 to which they are hinged. The outer ends of these tracks are turned upwardly forming the hangers 12, 13.

On the guide 10 are the momentum balls 14, 15 and on the guide 11 are the momentum balls 16, 17. The free end of the lever 8 extends down between the balls 14, 15 and the free end of the lever 9 extends down between the balls 16, 17.

Assuming that the device is installed transversely on the vehicle, should said vehicle suddenly turn to the left the inertia of the balls 14, 15 would cause them to move to the right, with relation to the casing 1, the ball 14 striking the lever 8 and actuating it to the right. Upon completion of the abnormal movement of the vehicle the balls 14, 15 will move by gravity back to the left, the ball 15 actuating the lever 8 in a corresponding direction. The register 4 will thus be actuated and a count of such abnormal movement will be made. When used for registering abnormal turns the tracks 10, 11 should be adjusted to the same inclination.

On the other hand should the vehicle be abruptly turned to the right the inertia of the balls 16, 17 will cause the lever 9 to be actuated first to the left and upon completion of said abnormal movement the gravity movement of the ball 17 will actuate the lever 9 to the right thus actuating the register 5 so that a count of said abnormal movement to the right will be made.

In a similar manner if the device is installed in the vehicle in a longitudinal position, a sudden abnormal movement of the vehicle forwardly will cause an actuation of the lever 8, first rearwardly by the inertia of the ball 14 and then forwardly by the gravity movement of the ball 15 causing a count of said abnormal movement to be made by the register 4, and in a similar manner a sudden abnormal stoppage of the vehicle will cause the lever 9 to be actuated forwardly by the inertia of the ball 16 and then rearwardly by the momentum, or gravity movement of the ball 17, registering a count on the register 5.

The inclination of the guides 10, 11 is such that the levers 8, 9 will not be actuated during normal movements of the vehicle and this inclination can be changed as desired by adjusting the hangers 12, 13 up or down. To provide for this adjustment the hangers 12, 13 are provided with the transverse slots 18, 19 at different elevations at their upper ends to receive the inwardly turned brackets 20, 21 which are secured to the ends of the casing on the inside as illustrated in Figure 1. When the guides are adjusted to the desired inclination cotter keys as 22, 23 may be inserted through the ends of the brackets to prevent detachment of the hangers.

The drawing and description are illustrative merely, while the principle of the invention will be defined by the appended claims.

What I claim is:

1. Register actuating means comprising a casing, an adjustable inclined guide therein forming a track, an oscillatable register actuating lever whose free end is adjacent the track, a stop, spherical bodies on opposite sides of the free end of the lever and on the track normally held by gravity, one against the stop and the other against the lever to hold the lever in one position, said bodies being movable along the track under the influence of their inertia one away from the lever and the other against the lever to actuate the lever to another position, then after said movement, the balls being movable by gravity to original positions whereby the lever will be returned to starting position.

2. A register actuating device comprising a casing, an inclined guide therein forming a track, an oscillatable register actuating member whose free end is adjacent the track, spherical bodies positioned on opposite sides of the free end of the member and movable along the track in one direction by their inertia and in the other direction by gravity to alternatively contact with, and actuate, said member connected therewith, and means for varying the inclination of the track.

3. A register actuating device comprising a casing, a guide fitting closely in the casing and including a straight inclined portion which is hinged at one end to the casing, the other end of the guide being turned at an angle to the inclined portion to form a hanger, means for adjustably connecting the hanger to the casing, an oscillatable register actuating member mounted in the casing with one end free, said free end of the member being adjacent the inclined portion of the guide, balls supported by the guide and positioned on opposite sides of the member, said balls being movable up the track under the influence of their inertia one away from the member and the other against the member to actuate the member from initial position, then after said movement, the balls being movable down the track by gravity to the original positions whereby the member will be returned to initial position.

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