



# UNITED STATES PATENT OFFICE.

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## PASSENGER-REGISTER.

SPECIFICATION forming part of Letters Patent No. 569,543, dated October 13, 1896.

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To all whom it may concern:

Be it known that I, WILLIAM HENRY CLING, of Charleston, in the county of Charleston and State of South Carolina, have invented a new and Improved Passenger-Register, &c., of which the following is a specification.

My invention is an apparatus for registering the number of passengers that enter a car or persons in attendance at a theater or fair, &c., the same being operated automatically by depression of a plate by the superimposed weight of a person.

The construction and operation of the apparatus are as hereinafter described, and shown in accompanying drawings, in which—

Figure 1 is a vertical section of my improved register. Fig. 2 is a plan view of the same, the depressible cover or tread-plate being removed. Fig. 3 is a detail view herein-  
after referred to.

The working parts of my register are contained in and attached to a box A. This box is in practice placed with its flat cover A' flush with the floor of a car, a theater entrance, or other place where it is desired to register the number of persons entering or in attendance. The said cover A' is depressible, being supported on four helical springs B, as shown, so that it yields when a person steps upon it, and descends until arrested by the stop shoulders or ribs a, which are affixed to the inner sides of the body of the box. The cover A' is prevented rising above a certain distance by clips or hooks a', that engage the stops a, as shown.

A spring hook-pawl C is attached to the cover or tread-plate A' and its forked free end engages a ratchet-wheel D, keyed on a horizontal shaft E, that rotates in vertical supports a<sup>2</sup>, fixed on the floor of the box. A smaller ratchet-wheel G on the same shaft E is engaged by a stop-pawl or detent H, which prevents backward rotation of said shaft.

It is apparent that when the cover A' is depressed the hook-pawl C will ride down on the larger ratchet D, and when it rises to its normal position the said pawl C will engage the ratchet D and rotate it a distance corresponding to the range of movement of the cover A', which may be the distance indicated by the space between the teeth of ratchet D. The desired effect of this opera-

tion is the winding of a tape I off a spool or reel 1 and onto a similar reel 2. The tape is inscribed with figures from "1" upward. The spool or reel 2 is detachably applied to the extended end of the spindle or shaft E, on which the ratchet D is mounted, and the other reel, 1, is similarly mounted on a shorter spindle or shaft E', journaled in notches or open slots of parallel supports or brackets a<sup>3</sup>, attached to the floor of the box A. A brake is provided for reel 1 in the form of a plate-spring 15, as shown.

Equidistantly of the reels 1 and 2 is arranged a stationary device J, which I denominate an "indicator." It is a metal bar attached to and pendent from an arm J', secured to the side of the box A.

When the apparatus is prepared for use, the tape I is supposed to be wound upon the left-hand reel 1 and the reel 2 to be empty. Then each time the cover A' is depressed and rises to its normal position the ratchet D, shaft E, and reel E' are all rotated and the tape I thereof drawn off the reel 1 and wound upon the other one, 2, moving intermediately beneath the bent end of the indicator J. Thus by inspecting the tape at any time it is readily ascertained from the number or figure thereon which is directly at the right of the indicator J how many times the cover A' has been depressed and thereby the number of persons who have stepped upon the cover A'.

In Fig. 3 I show the reels 1 2 detached from their spindles and connected by the tape, the left-hand reel 1 being empty and the other one, 2, being wound full, this being the condition of the reels when the tape I has been used to the full extent.

It is obviously necessary that the tape I shall be rewound on reel 1 to adapt it to be used as before. For this purpose I utilize the apparatus as follows—that is to say, I employ two sets of reels and tapes, namely, 1 2 I and 1' 2' I', and so arrange them that when one tape, I, is being wound from reel 1 onto reel 2 another tape, I', is being unwound from a corresponding reel 2' and rewound on a reel 1'. To this end the shaft or spindle E is extended, as shown in Fig. 2, to adapt it for application of a reel on either end, and a second short shaft E<sup>2</sup> is supported detachably in brackets a<sup>2</sup>. Thus when the reel 2 is full it is detached

from one end of shaft E and placed on the short shaft E<sup>2</sup>, while its empty companion reel 1 is placed on the other end of shaft E. In other words, when an empty reel is placed on the farther end of shaft E a full reel is placed upon shaft E'. Then when the shaft E is rotated step by step the tape I is wound off reel 1 and onto reel 2 and the tape I' is simultaneously unwound from reel 2' and onto reel 1'. The box A has a door a' in each of two opposite sides to permit convenient inspection of the tape and the shifting of reels and tapes as desired.

What I claim is—

1. In a register of the character specified, the combination, with the depressible cover, springs supporting it, a hook-pawl pendent from the cover, a shaft arranged horizontally, two ratchet-wheels mounted thereon, a stop-pawl engaging one of said wheels, two reels and a tape connecting them, one of said reels

being removably applied to the aforesaid shaft, and the other reel being supported in brackets from which it is removable, and the indicator or pendent arm arranged adjacent to the tape, as and for the purpose specified.

2. The combination, with a box and its depressible, spring-supported cover, or tread-plate, of the shaft E, supported horizontally in bearings and its ends extending free on the outer sides of the latter; ratchet-wheels fixed on said shaft, pull and stop pawls engaging such ratchets; and reels which are adapted to be placed on either end of said shaft E, and to be mounted removably in brackets arranged on the floor of the box, and a tape connecting such reels, as shown and described.

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Witnesses:

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