W. BEESON.

Car-Step Register.

No. 198,786. Patented Jan. 1, 1878.

Fig. 1.

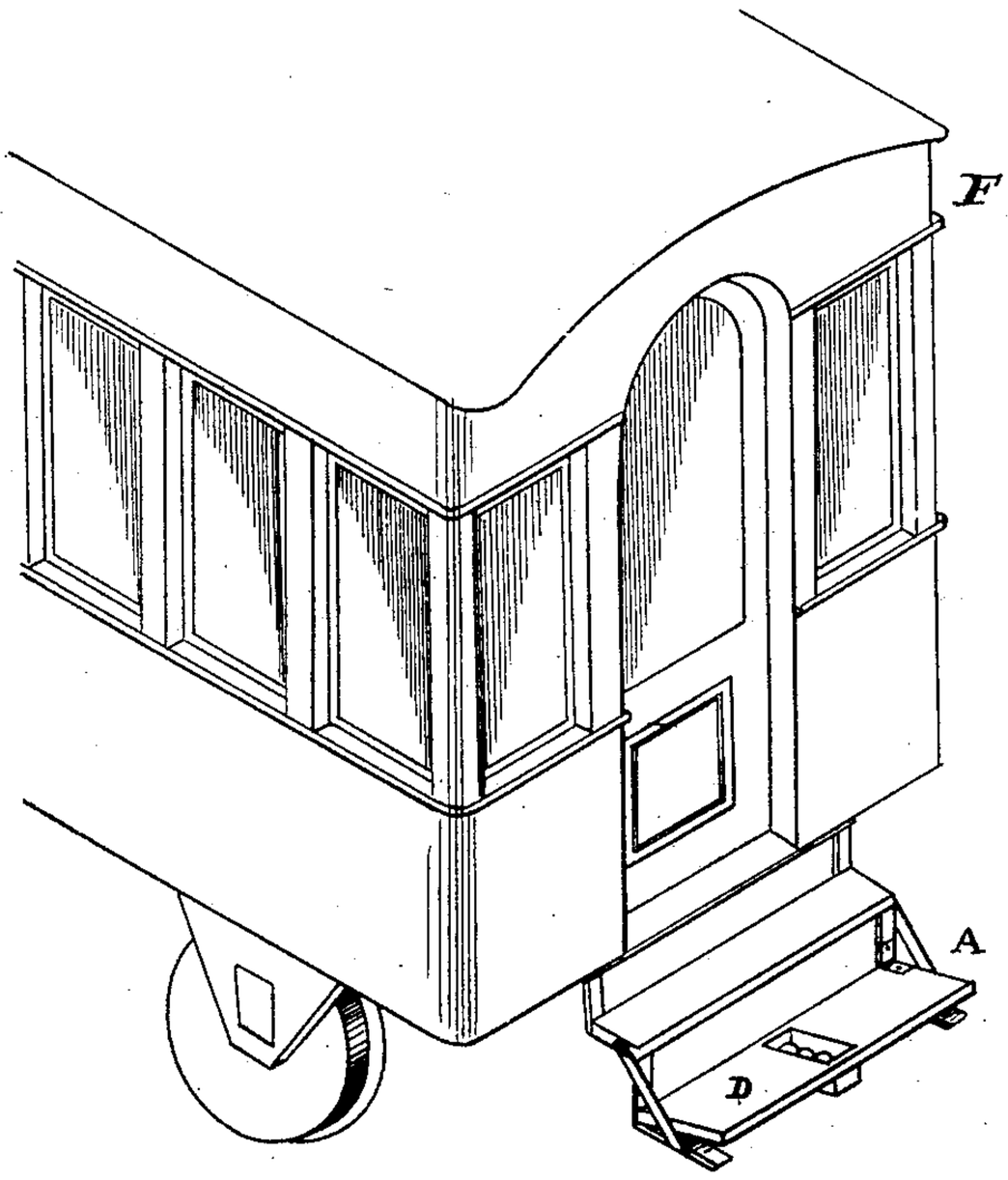


Fig. 2.

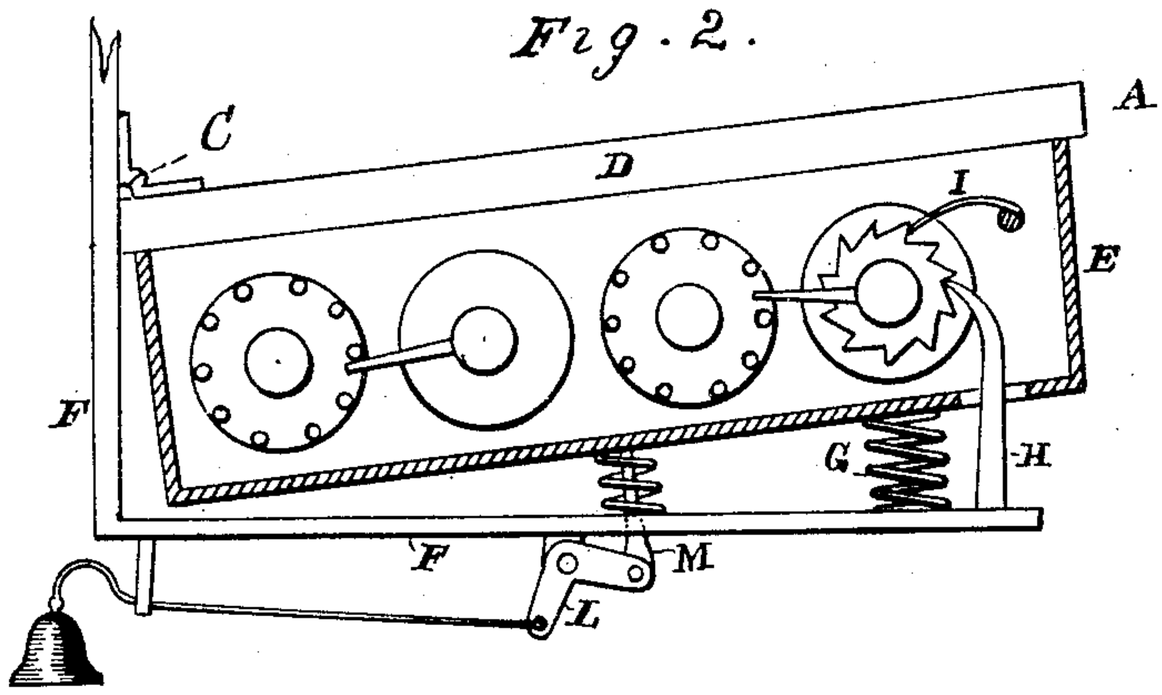
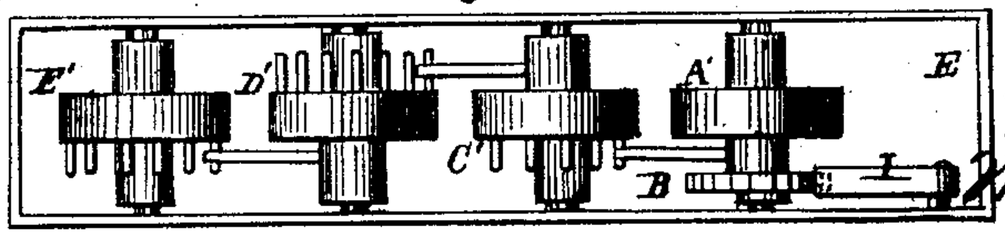


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM BEESON, OF BATTLE MOUNTAIN, NEVADA.

IMPROVEMENT IN CAR-STEP REGISTERS.

Specification forming part of Letters Patent No. **198,786,** dated January 1, 1878; application filed October 22, 1877.

To all whom it may concern:

Be it known that I, WILLIAM BEESON, of Battle Mountain, county of Lander, and State of Nevada, have invented an Improved Car-Fare Register; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to a novel device for counting and registering the number of passengers entering a car or other vehicle; and it consists of a train of gears arranged in a box, and secured to a yielding step of the car or vehicle, in combination with novel mechanism whereby the weight of each passenger, as he treads upon the step in entering the car, will operate the register.

My invention further consists of an alarm-bell which is connected with and operated by the same mechanism which operates the counting-register, so that each time a number is registered the alarm-bell will be sounded, all as hereinafter fully described.

Referring to the accompanying drawings, Figure 1 is a perspective view; Fig. 2, a longitudinal section of the gears; Fig. 3, a plan.

Let A represent one of the steps of a horse-car or other public conveyance to which the registering-gears are attached. This step is loose, or unattached to the supporting-hangers, except by hinges C C at its rear edge, which secure it to the supports, while its outer edge is supported on a spring or springs, so that it will be depressed by the weight of a person stepping upon it. I make a recess or opening in this tread D, and in this opening I secure a box, E, containing the train of registering-gears. This box is secured in place by flanges projecting from its sides, which are screwed or bolted to the under side of the tread. A bent rod or angle-iron, F, is secured to the steps, so as to hang horizontally below the box E.

I place a spiral spring, G, between the hanger F and the bottom of the box, so that when the tread of the step is forced down by the weight of a person stepping upon it the box will rest upon the horizontal arm of the hanger F, and when the weight is removed the box and tread of the step will be thrown up from the hanger F by the pressure of the spring G.

In the box E, I secure a train of registering-wheels, having their bearings in the sides of the box. The first or outer wheel, A′, has a ratchet-wheel, B, on its shaft. This ratchet-wheel is operated by a fixed pawl, H, which extends through an opening in the bottom of the box, and is attached to the outer end of the supporting-hanger F. I keep the pawl in contact with the ratchet-wheel by a spring, I, secured in the end of the box, and it acts as a detent to prevent the ratchet from turning in the wrong direction.

The wheel A′, I connect with the two or more wheels C′ D′ E′ of the train, in the usual manner of arranging registering-gears, so that one revolution of the wheel A′ will move the second wheel, C′, one space or tooth, and one revolution of the second wheel, C′, will move the third wheel, D′, one tooth, and so on through the train.

I form the shafts or axles of the gear-wheels of a large diameter, so as to furnish a large bearing, to prevent the wheel from turning by the jar of the car or other causes when not acted upon by the progress of the train.

The top of the box E, I form with openings over each wheel, in which plate-glass is fixed, so that the record of the register can be read at a glance without removing or disturbing the box. The box I will have sealed, so as to prevent it from being tampered with by any person. Beneath the box, and on the under side of the supporting-bar, I attach a bell-crank, L, to one arm of which I secure a bell-wire, which operates a bell placed at any convenient point in or on the car. The other end of the bell-crank I secure to a vertical rod, M, which extends upward through a hole in the bar or angle-iron F, and is fastened at its upper end to the bottom of the box E.

The operation of my register is then as follows: The tread of the step containing the registering-box is, when there is no weight upon it, held up from the angle-iron F by the spiral spring G. But when a passenger, in entering the car, steps upon it, the weight forces the tread and box down upon the angle-iron, and causes the pawl H to act and move the

unit-wheel one tooth, registering one fare. The bell is also rung by the rod M operating the bell-crank L, thus notifying the conductor that a passenger has entered the car.

By my invention I secure a perpetual register that will record the entrance of every passenger into the car, and one so constructed and secured as to be out of the way, impossible to tamper with, and a means of detecting any irregularities in the returns of the conductor or ticket-receiver.

I am aware that a box containing a registering device located under the hinged tread of a step of a car, said hinged tread forming the cover to the box, and the medium through which, in connection with a pawl and ratchet-wheel, the registering device is operated by persons passing in the car, is old; and such I do not claim, broadly, as my invention; but,

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a box containing a train of registering-gears and a ratchet-wheel, said box secured in the tread of a car or other step, of the right-angled bar F, provided with the pawl H and spring G, the several parts constructed and arranged to operate substantially as herein shown and described.

2. The combination, with the box E, right-angled bar F, and spring G, of the projecting rod M and bell-crank L, arranged to operate in connection with a wire and bell, substantially as herein shown and described.

In witness whereof I have hereunto set my hand and seal.

WILLIAM BEESON. [L. S.]

Witnesses:
GEO. E. THOMPSON,
E. K. DAVIS.