

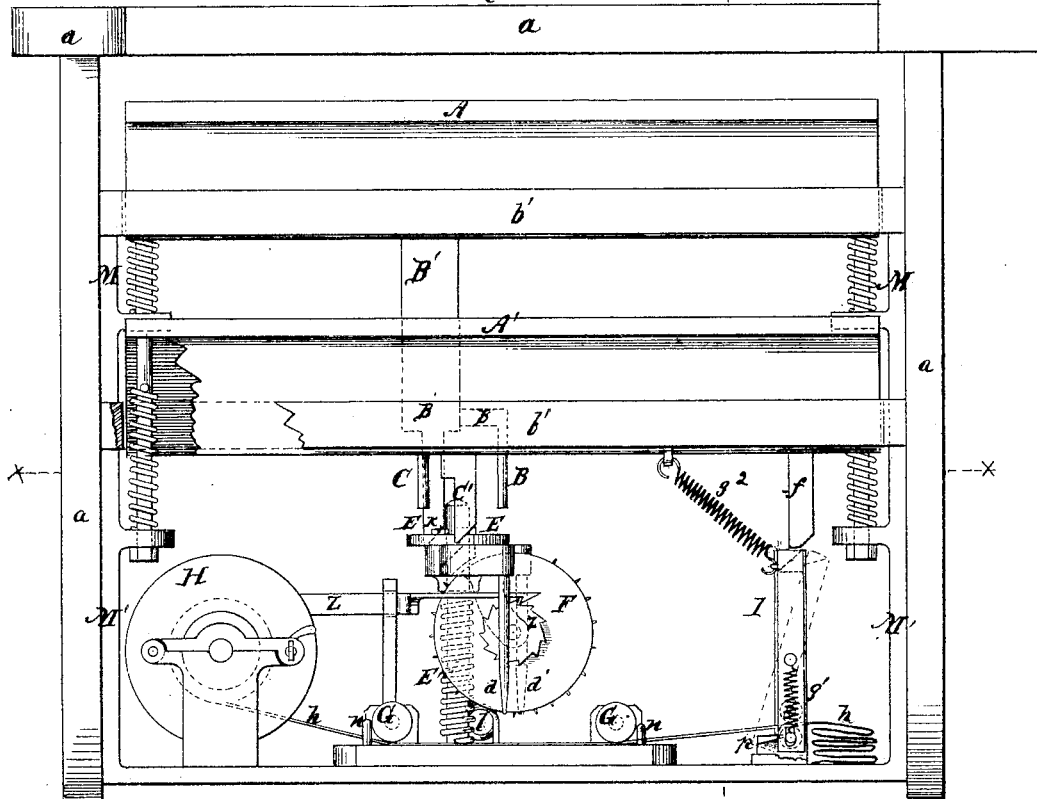
JAMES T. ALDRICH.

Improvement in Passenger Recorders for Vehicles.

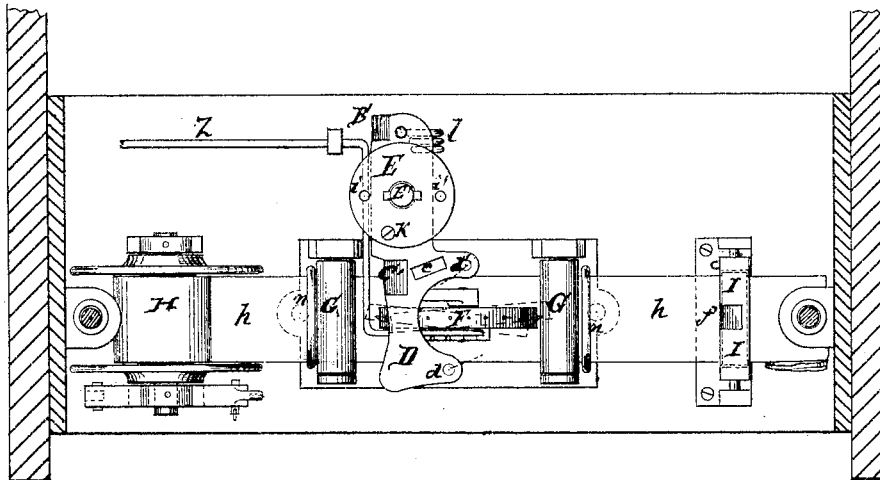
No. 115,801.

*Fig. 1.*

Patented June 13, 1871,



*Fig. 2.*



*Witnesses.*

*James H. Hanksville*  
*R. L. Perme.*

*Inventor.*

*James T. Aldrich.*

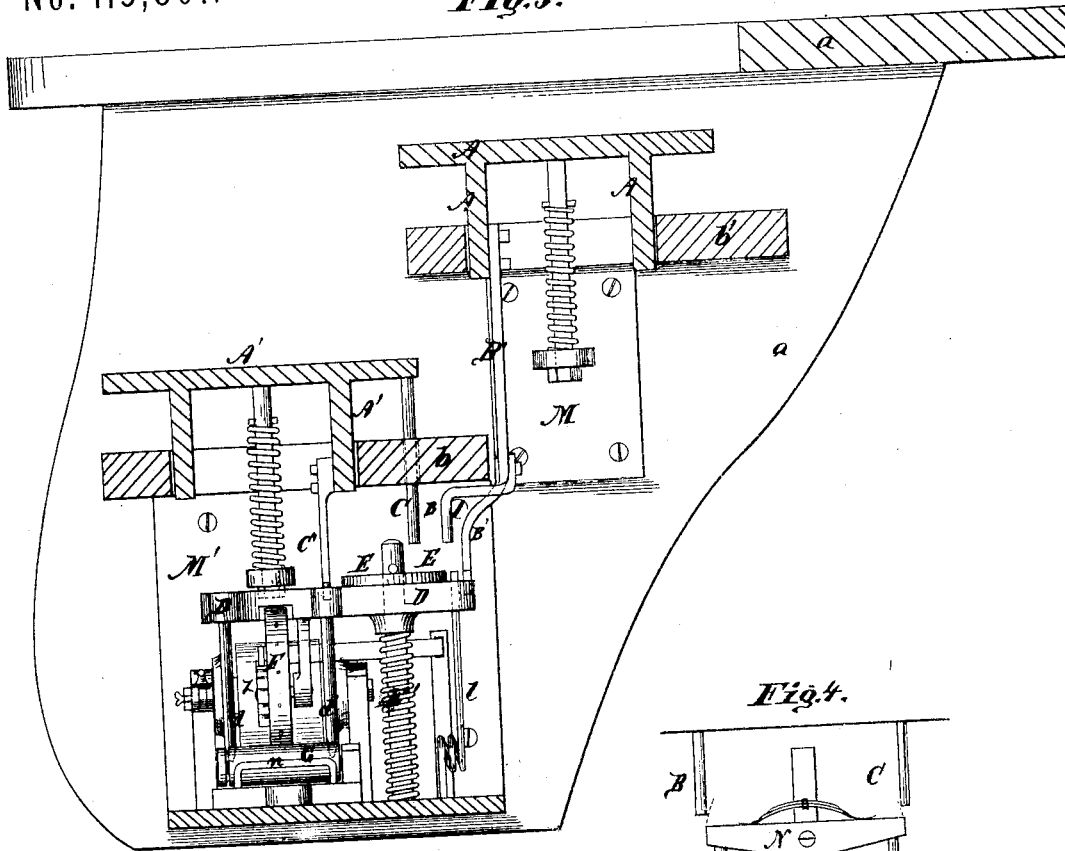
JAMES T. ALDRICH

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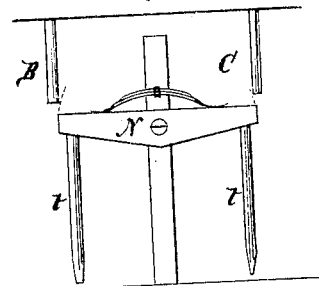
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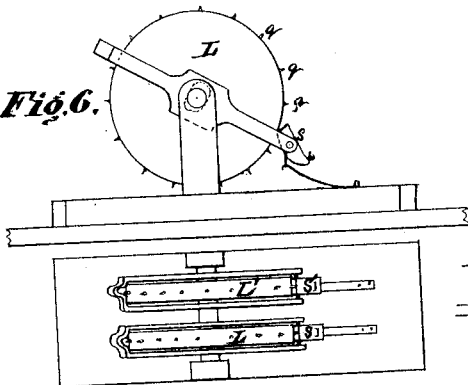
*Fig.3.*



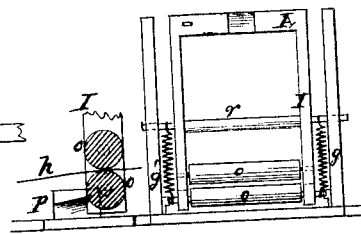
*Fig.4.*



*Fig.6.*



*Fig.5.*



Witnesses.

*James F. Manderill*  
*W. L. Perrine.*

Inventor.

*James T. Aldrich.*

# UNITED STATES PATENT OFFICE.

JAMES T. ALDRICH, OF NEW YORK, N. Y.

## IMPROVEMENT IN PASSENGER-RECORDERS FOR VEHICLES.

Specification forming part of Letters Patent No. 115,801, dated June 13, 1871.

*To all whom it may concern:*

Be it known that I, JAMES T. ALDRICH, of the city and State of New York, have invented certain Improvements in Recording Passenger-Registers, of which the following is a specification:

### *Nature and Objects of the Invention.*

My invention relates especially to that of George H. Aldrich, patented April 25, 1871, No. ; and it consists, first, in a peculiar construction of the independently-acting spring treading-pieces, so that by the lower treading-piece a record of the passenger may be effected upon a paper fillet as he enters a car or other vehicle, (an opera-house, or any other place where it is desirable to record the number of auditors,) and that by the upper treading-piece his exit therefrom may also be recorded in like manner; or, by means of a mechanism particularly described hereafter, the upper treading-piece may register the passenger going on, while the lower one registers him going off. I therefore denominate my invention a reversible recording passenger-register. My invention consists, second, in a swinging or rocking lever, whereby, in connection with a removable plate, a reversal of the action of the treading-pieces may be effected. My invention consists, third, in a swinging clamp, or a wheel with sharp points, whereby to feed the paper. These devices are in combination with the treading-pieces, but when the wheel is used it both feeds the paper and registers at the same time. My invention consists, fourth, in a wheel, with the number of the station arranged upon its periphery, attached to a swinging lever and operated by the foot of the passenger, so as to record any given point on the line of travel at the time a passenger enters the car.

### *Description of the Accompanying Drawing.*

Figure 1 is a front elevation. Fig. 2 is a plan view through the line *yy*, Fig. 1. Fig. 3 is a side or end view through the line *xx*, Fig. 1. Fig. 4 is a detached view of the rocking lever. Fig. 5 is a detached view of the swinging clamp. Fig. 6 is a side and a plan view of the wheel for recording the ingress and egress of passengers.

### *General Description.*

My register is placed under the steps at the

entrance to a car or vehicle. The register occupies two steps. In Fig. 3, *a* represents the wood frame-work and *b b'* the two steps (or the upper and lower steps) which the passenger ascends in going into the car. *MM'* represent the stanchions attached to the frame-work *a*, which support the two spring treading-pieces *A A'*, arranged in slots cut nearly the whole length of the steps *b b'*, and which, when depressed by the feet of the passenger, operate the recording mechanism. At the instant of depression the incline, either *B'* or *C'*, (according to whichever treading-piece descends,) strikes the swinging lever *D*, whereby the punches *d d'* are so moved that one is off of a line over the recording-fillet and the other is on a line over it. When the treading-piece is about half-way down the pins, either *B* or *C*, strike the plate *E E*, according to whichever treading-piece is depressed, so that, by a further depression, the pricklers, (or punches,) either *d* or *d'*, attached to the lever *D*, are made to pass through the recording-fillet and thus leave a permanent indication upon either side of the paper strip, one side showing the number of passengers who went on, the other those who left the car. At the same time the treading-piece goes down, an incline, *f*, Figs. 1 and 5, swings the rocking spring-clamp *I* into the position shown in dotted lines, the lower spring-roller *o* passing under an incline, *p*, which opens the two rollers *o o* and allows the fillet *h* to pass between them. On passing out from under the incline *p* the rollers are closed by the action of a coiled spring, *g g'*, so that upon the rising of the treading-pieces—whereby the spring-clamp is again brought back into a vertical position by another coiled spring, *g''*—the lower clamping-roller *o* passes over the incline *p*, thus carrying the fillet with it as the spring-clamp assumes a vertical position. The fillet *h* is wound upon a reel, *H*, and in its forward motion it passes under rollers *G G* through guides *n n*, Fig. 2, and the clamping-rollers *o o*, Fig. 5. Though represented as lying in a heap, loosely, at one end, this fillet might be taken up by another reel connected by a band to the reel *H*; but this is so obvious that it has not been shown in the drawing. The plate *E* and the swinging lever *D*, Fig. 2, are guided in their descent by the spring steady-pin *E'*, and also by another spring, *l*, which moves the

lever back into its normal or central position upon the ascension of the treading-pieces. In Figs. 1 and 3 there is shown a rotating punch, F, which records in the center of the fillet the number of any station on the line by means of figures or words arranged upon its periphery, and it is operated upon every depression of the treading-piece. If the passenger is going on, it records in the center of the strip nearest to the outside punch, either *d* or *d'*, which registers him going on. If the passenger is going off it records nearest to the punch which registers his exit. It will thus be easily understood that this rotating punch has two lines of indentations as it swings with the lever D either to one side or the other from the center of the fillet. The name of the station is changed by hand simply by operating the lever Z, spring-catch, and ratchet-wheel *z*. The lever and spring-catch are then withdrawn so as to allow the rotating punch to swing from one side to the other of the paper fillet. A modification of my invention is shown in Figs. 4 and 6. Instead of swinging punches *d d'* there may be substituted a rocking lever, N, with sharp points *t t*, which will record on the fillet the entrance and exit of passengers as the respective treading-pieces are operated; or there may be substituted, in lieu either of the swinging or rocking punches, rotating punches L L, having sharp points *q q*, by means of which the fillet is moved along and indented at the same time. Rotation is imparted to the wheels L by spring-dogs *s*, which are suitably connected to the treading-pieces. There now only remains to be described the reversal of the action of the treading-pieces, so that either the upper or lower treading-piece may be made to register, at will, the entrance or exit of passengers. This device is a security against fraud by keeping all parties (except the one who sets the machine) from knowing which treading-piece registers the passengers on or off the car. No party, therefore, will attempt to falsify the account. This is done in the following manner: The plate E is removed by taking out the screw *k*, Figs. 1 and 2. The plate is then replaced, but turned into a position so as to bring the holes *i i'* at right angles with the lever D, as shown clearly in Fig. 2. The pins, either C or B, according to whichever treading-piece is first depressed, will now pass through one of their corresponding holes, either *i* or *i'*. The other pin does not enter the opposite hole, but strikes the plate E and thus forces the punches down into the paper. The pin B always goes through the hole *i'* when the passenger comes off, and strikes the plate E when

he goes on. The pin C always goes through the hole *i* when the passenger goes on, and strikes the plate when he comes off. When a passenger comes out of the car the incline B' swings the lever D around, so that the incline C' passes through the slot *c*, not operating, and the pin B passes through the hole *i'*; then the pin C strikes the plate E when he touches the lower treading-piece, which, when it descends, carries with it the punch that records his exit. When a passenger goes on, the incline C' does not enter the slot *c*, but so swings the lever D that the incline B' passes down by one side and does not operate at all. The pin C passes through the hole *i*, and then the pin B, as the passenger steps on to the upper treading-piece, strikes the plate E and forces it downward so as to record his entrance. When the machine is not reversed the pins never enter the holes.

It is proper here to notice the distinctions between this invention and that patented to George H. Aldrich. In his invention only one step works at a time, the other being securely locked so that it cannot operate. In my invention both treading-pieces can be depressed at once, but only one will operate. In his invention there is no reversibility of the action of the steps; but in mine the action of the treading-pieces may be reversed daily, and thus secure the machine against all fraud. The swinging, rocking, and rotating punches are all additional elements, not shown in the patent of George H. Aldrich.

#### Claims.

I claim—

1. The independent spring treading-pieces, in combination with a reversible plate and rocking, swinging, or rotating punches, so that either treading-piece may interchangeably register the entrance and exit of passengers upon a paper fillet.
2. In combination with the treading-pieces, a wheel for indicating the number of the station along the line of travel, set by a device under control of any person other than the passenger, but operated only by the passenger.
3. In combination with the treading-pieces, a swinging, rocking, or rotating punch, either of which produce a double record, or a register of the ingress and egress of passengers.
4. In combination with the treading-pieces, spring clamping-rollers for feeding paper fillet.

JAMES T. ALDRICH.

Witnesses:

JAMES S. GRINNELL,  
W. G. HENDERSON.