

P. B. & C. MATHIASON.
PASSENGER-RECORDING APPARATUS.

No. 179,328.

Patented June 27, 1876.

FIG. 1.

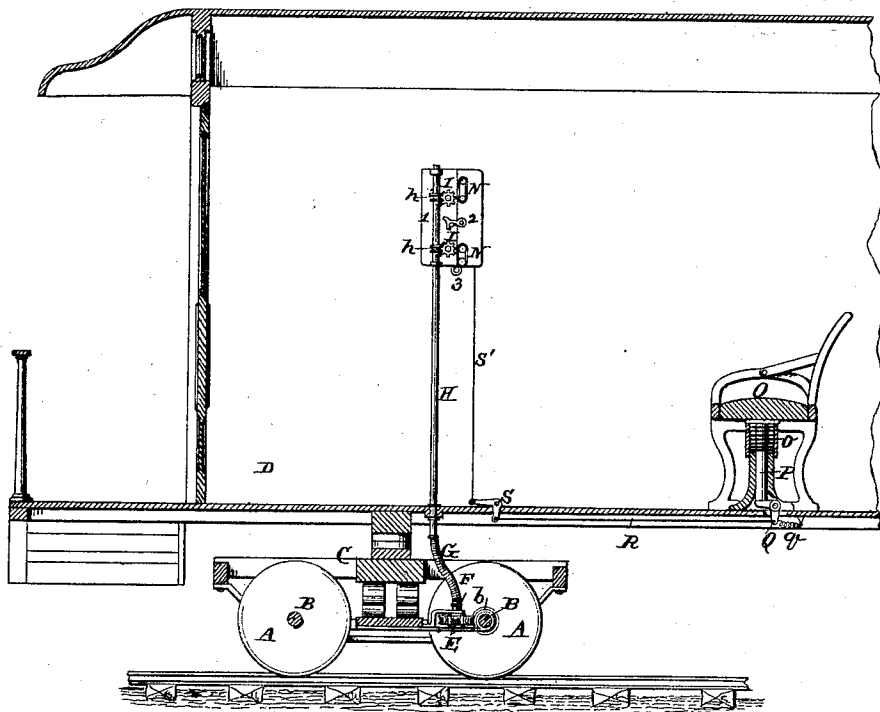
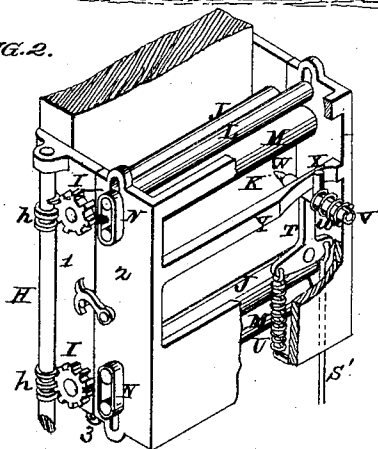


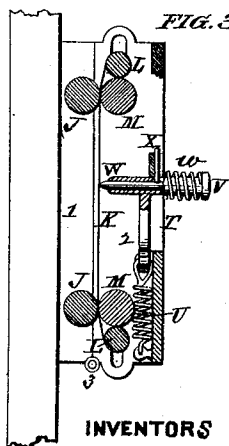
FIG. 2.



ATTEST:

Robt. Birney.
Chas. J. Gooch

FIG. 3.



INVENTORS

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UNITED STATES PATENT OFFICE.

PETER B. MATHIASON AND CHRISTIAN MATHIASON, OF ST. LOUIS, MO.

IMPROVEMENT IN PASSENGER-RECORDING APPARATUS.

Specification forming part of Letters Patent No. **179,328**, dated June 27, 1876; application filed September 25, 1875.

To all whom it may concern:

Be it known that we, PETER B. MATHIASON and CHRISTIAN MATHIASON, both of the city and county of St. Louis, and State of Missouri, have invented a new and useful Improvement in Passenger-Registers, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

Our invention consists of one or more sheets, rolls, or ribbons of paper moved by means of rollers driven by connection with the axle of the car by a screw-gearing, or in any other manner whereby a slow motion may be obtained. It also consists in the manner of connecting a pencil or marker of any kind, suitable for the purpose, to each seat, so that the weight of a person, when occupying a seat, will cause the pencil to mark the paper in such manner that the length of the mark will indicate the distance the car has traveled while the seat was so occupied; and will also indicate, by the position of the mark, whether a light or heavy person occupied the seat, the whole to be covered so as to prevent interference by unauthorized persons.

Figure 1 is a longitudinal section of part of a car. Fig. 2 is a perspective view of the register proper; and Fig. 3 is a vertical transverse section of the same.

A A are the track-wheels, and B B the axles. C is the body of the truck, and D part of the body of the car. One of the axles B has a gear-screw, *b*, engaging a screw gear-wheel, E, whose shaft F has a flexible coupling-connection, G, to the lower end of the vertical shaft H, having gear-screws *h h* engaging gear-wheels I I upon the paper driving-rollers J J. The paper is shown at K, coiled upon two rolls, L L, which are driven by contact with the pressure-rolls M M, the paper being pressed between the driving and pressure rolls, and driving the latter by friction against them. The paper rolls are held by springs N at the ends closely in contact with the rolls, by which they are turned, the springs acting on the gudgeons of the paper rolls. Each seat O in the car is made to descend when occupied by a person; and from the middle of the seat depends a rod or leg, P, whose lower end is hinged to one arm of a bell-crank lever, Q,

and the other arm of this lever is connected to a rod, R, passing beneath the surface of the floor, and extending to a point just beneath the register proper, (before described,) where the end of said rod is connected to one arm of a bell-crank, S, whose other arm is connected to a vertical rod, S', extending up to a T-lever, T, and connected to one of the side arms of said lever, so that when the car-seat descends the described connections cause the simultaneous side movement of said lever T. The other side arm of the lever T has secured to it one end of a spring, U, which tends to hold the upper arm of lever T in a perpendicular position. The upper arm of lever T has a sleeve, V, extending at right angles to the arm and its plane of movement, and in this sleeve works a spring-pencil or other marker, W, whose spring *w* tends to push the point of the pencil toward the paper. When the upper arm of the lever T is vertical the pencil is held from contact with the register-paper by a pin, X, of the pencil resting against a bar, Y, and the paper consequently moves behind it without receiving any mark; but when the car-seat is depressed the lever T is swung over to one side, and the pin X on the pencil passes along an inclined part of the bar Y, the incline being so arranged as to allow the pencil under the action of the spring *w* to come in contact with the paper, and to trace a mark thereon during the whole time that the seat is occupied.

The seat is sustained by a spring, *o*, and its descent is according to the weight of the person occupying it, and as the lower the seat descends the farther the pencil is swung over it is evident that the position of the line on the paper would indicate whether the seat were occupied by an adult or a child. Behind the lower arm of the bell-crank Q is a spring, *q*, acting in the same direction as springs *o* and *w*. Each seat O has separate connection with the register, and has a separate pencil, and each pencil has its appropriate line-space of marking on the paper strip or ribbon.

The housing-box consists of two parts, 1 and 2, hinged together at bottom at 3; and secured together by lock, if desired. The arrangement is such as to allow the parts to be opened apart to carry the driving-rolls and the pressure-

rolls asunder to allow the introduction of a fresh supply of paper.

It will be understood that any party moving from one seat to another would continue to register, and that there would be a record made of the aggregate number of miles traveled by all the persons, and the movements of a passenger might be traced by the positions of the pencil lines, said positions being determined by the position of the seat, and by the weight of the setter.

The sheet or roll K of paper, or other suitable material, is preferably printed with lines and figures or letters to designate distances traveled, stations, &c.

We claim—

1. The combination of sheet or roll K, hav-

ing proportional movement with the axle B, and marker W, having movement parallel with the plane of the sheet and proportional to the vertical movement of the seat to indicate the weight of the sitter, substantially as and for the purpose set forth.

2. The combination of spring-seat O, bell-cranks Q S, rods R S', lever T, spring-marker W w, inclined bar Y, and pin X, bearing against said inclined bar, substantially as set forth.

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Witnesses:

SAML. KNIGHT,
ROBT. BURNS.