

(No Model.)

2 Sheets—Sheet 1.

R. M. ROSE.

FARE REGISTER AND RECORDER.

No. 281,302.

Fig. 1 Patented July 17, 1883.

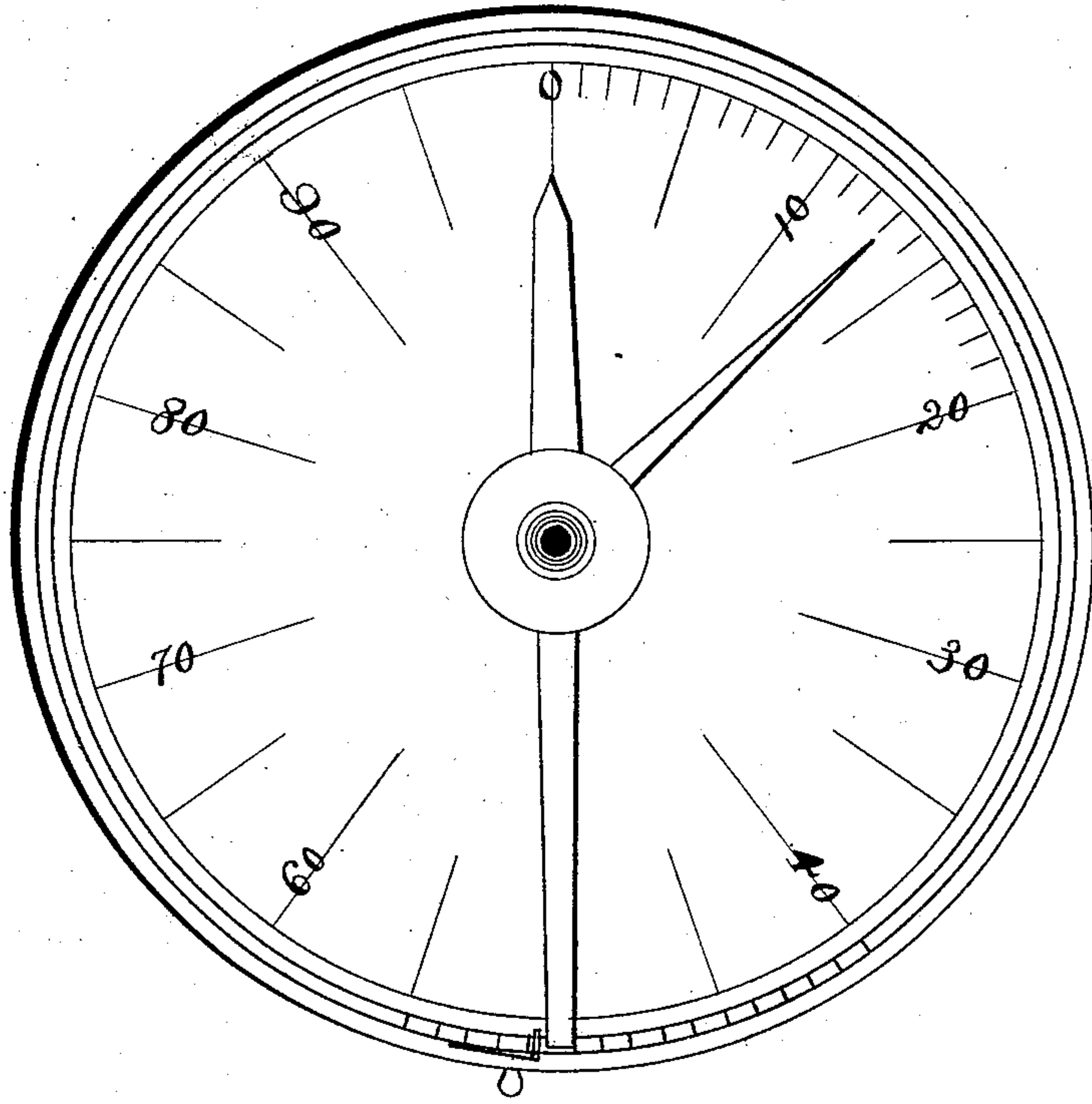


Fig. 5.

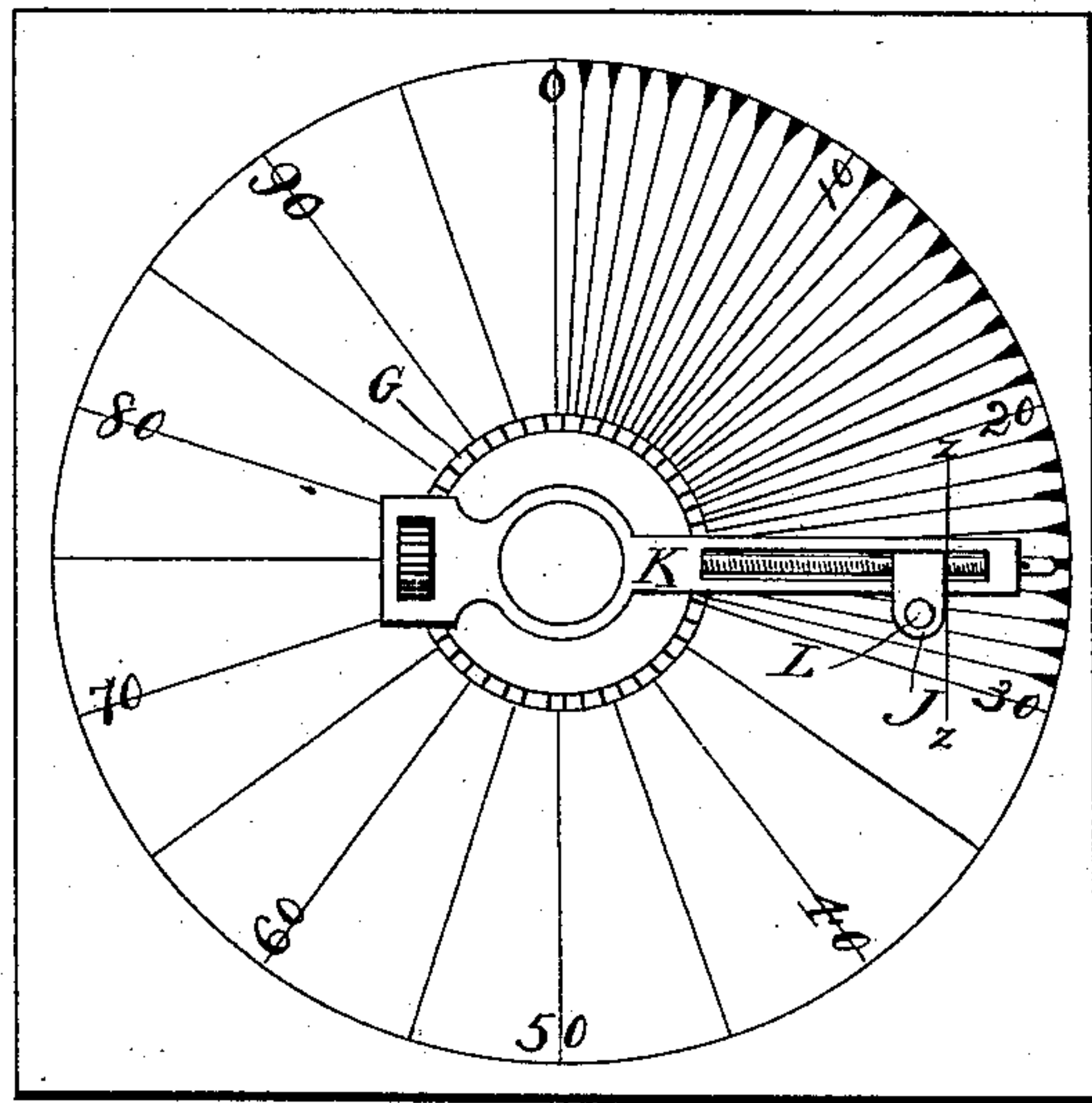
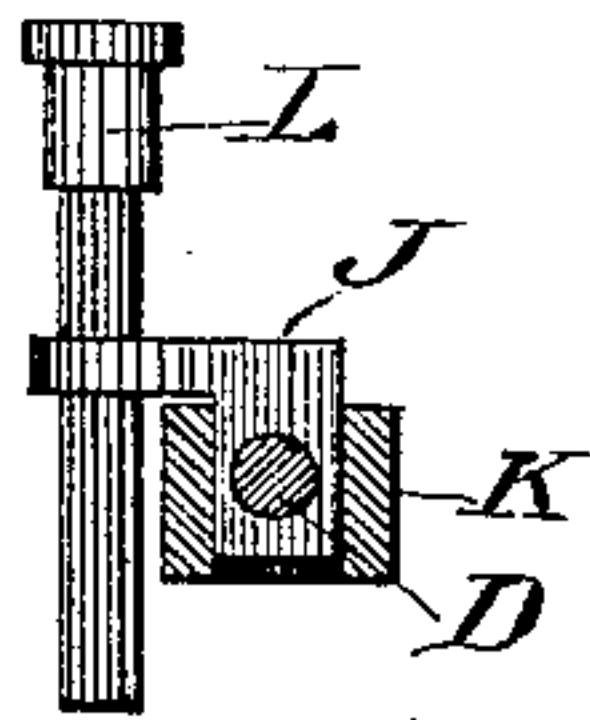


Fig. 3.

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(No Model.)

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Fig. 2 Patented July 17, 1883.

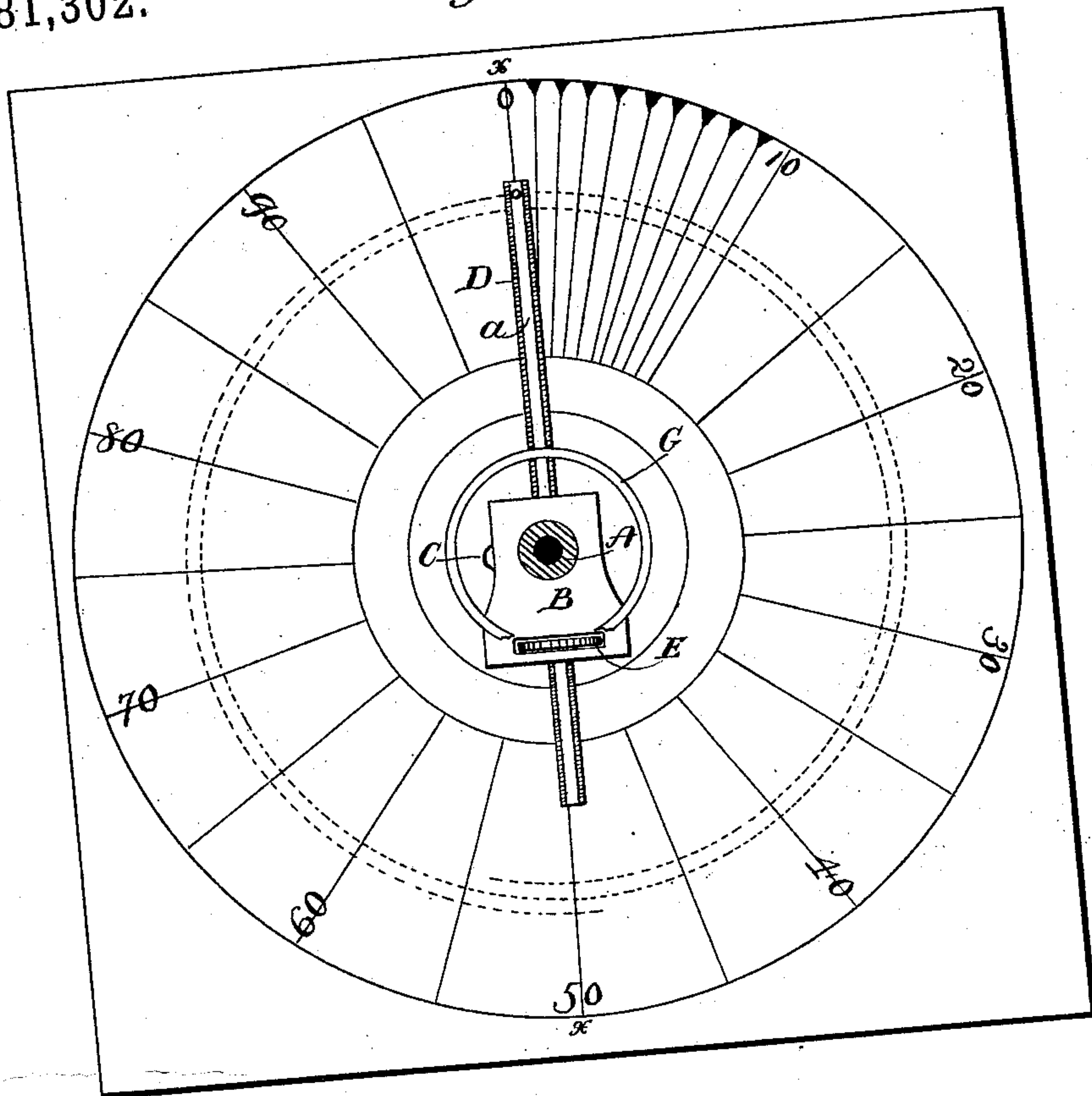
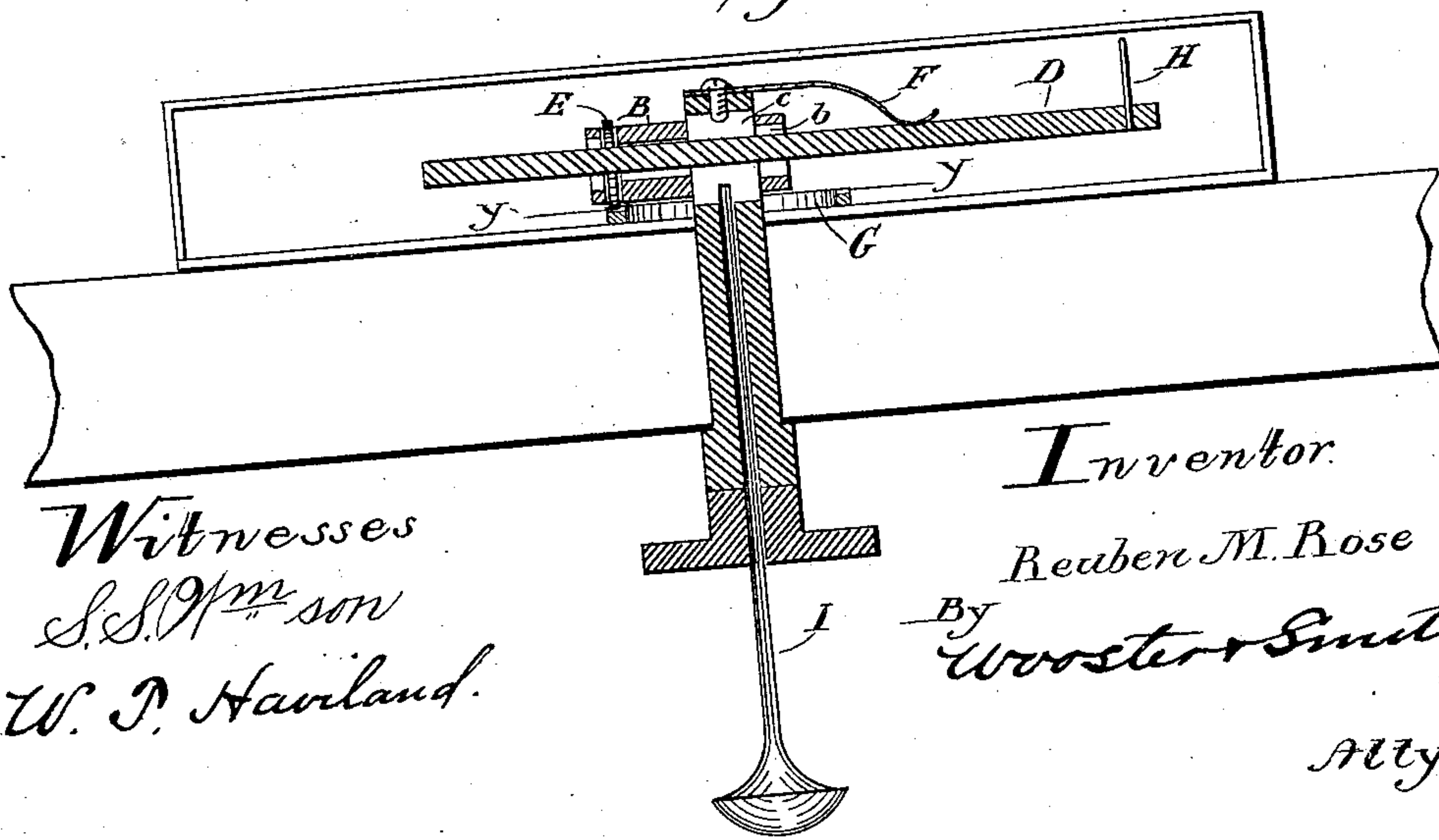


Fig. 4.



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UNITED STATES PATENT OFFICE.

REUBEN M. ROSE, OF BROOKLYN, NEW YORK.

FARE REGISTER AND RECORDER.

SPECIFICATION forming part of Letters Patent No. 281,302, dated July 17, 1883.

Application filed May 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, REUBEN M. ROSE, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Fare Registers and Recorders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain novel and useful improvements in fare registers and recorders, and has for its object to provide a device of this description in which the total number of passengers or fares shall be denoted on a removable paper dial without registering each individual passenger or fare. With these ends in view, my invention consists in certain details of construction and combination of elements hereinafter fully described, and then specifically designated by the claims.

In order that those skilled in the art to which my invention appertains may more fully understand its construction and operation, I will proceed to describe the same in detail, referring by letter to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of the face of a fare-register with a numbered dial; Fig. 2, a cross-section taken at the line *y y* of Fig. 4 and a numbered dial attached; Fig. 3, a plan view of a modification of my improvement; Fig. 4, a section through the line *x x* of Fig. 2, and showing my improvement attached within the back of an ordinary register; and Fig. 5, a section at the line *z z* of Fig. 3.

Similar letters denote like parts in the several figures of the drawings.

The construction and arrangement of the internal mechanism is the same as in any ordinary fare register and recorder, and it is not deemed necessary to enter into any description of the same.

A is the spindle, which is adapted to rotate by means of mechanism above referred to.

B is a block attached to this spindle by means of a set-screw, C, or otherwise, so as to prevent any vertical sliding movement.

D is a threaded arm, which is passed through the block and spindle, and also through the eye of a cog-wheel, E, located within the block in such manner as to rotate freely. This wheel

is threaded in its eye, so as to operate upon the arm D, all of which will be seen by reference to Figs. 2 and 4. Said arm has a flat upper surface similar to the bottom surface, as seen at *a*, and against this surface a flat spring, F, bears, which prevents the arm from rotating. The thread in the eye of the wheel E is a female left-handed, while that on the arm is a male left-handed, so that it will be readily understood that as the wheel revolves the two threads will engage, and the arm, being held as against rotary motion, will be fed out. As the arm D and the several parts through which it is passed rotate, the independent rotation of the wheel E is accomplished by the latter meshing into a stationary gear, G, secured in any ordinary way to the bed of the register. At the forward extremity of the arm is a needle, H, whose function will be presently explained.

The operation of my improvement is as follows: As each fare or passenger is received, the spindle A is caused to rotate by means of the internal mechanism above referred to, which also imparts a rotary motion to the arm D, and the cog-wheel E will mesh into the gear G, all as previously explained. As these movements of the several parts continue, two motions will be uniformly and regularly imparted to the arm D—namely, a rotary motion and a motion at right angles to the spindle, the latter caused by the engagement of the left-handed female thread in the eye of the cog-wheel E with the left-handed male thread on the said arm—so that if a marking-point were attached at the extremity of the arm a spiral would be inscribed upon the face of the dial, as indicated by dotted lines in Fig. 2.

In the use of my improvement, the starter inserts a punch, I, within a longitudinal opening in the spindle at the face of the register, as seen at Fig. 4, against the arm D, thereby causing the needle H to puncture the dial, the openings *b c* within the block B and spindle, through which the arm passes, being of such a character as to permit of a vertical play of said arm. When the punch is withdrawn, the action of the spring causes the arm to resume its normal position. At the conclusion of each trip of the car, or whenever it may be desired, the punch is again inserted and a similar puncture made which will be farther from the center of the dial.

In determining the number of fares or passengers recorded, a reading-disk or key may be applied to the dial, or other suitable method for accomplishing the same result may be utilized.

I have thus far described my invention in connection with Figs. 1, 2, and 4 of the drawings, which illustrate my improvement as applied within the back of an ordinary register; but a slight modification is illustrated at Fig. 3. In this instance the cog-wheel E is not threaded in its eye, but is secured to the threaded arm D, so that the latter will rotate as the said wheel meshes into the stationary gear G. A threaded tracer, J, engages with the threaded arm, the nature of the threads being the same as hereinbefore set forth. The arm is supported in a frame, K, and the traveler extends within the latter in such manner as to have no rotary motion around the arm, while at the same time a free sliding movement along the frame is permitted.

A hollow guide, L, may be attached to the traveler, through which any suitable instrument may be inserted to puncture the dial; or a spring-punch or any suitable device may be used in connection with the traveler. The operation is similar to that already described, and a marking-point attached to the traveler would inscribe a spiral on the dial.

It is immaterial whether the arm or the traveler is fed out or in, as a mere change in the character of the threads will cause the opposite movement of the parts.

I have shown numbered dials in my drawings; but my improvement is especially applicable to blank dials, and, as only two punctures are made on a trip, it is absolutely im-

possible for any one not provided with a reading-disk to ascertain how many fares or passengers have been indicated.

I can with equal facility use my improvement in combination with any ordinary register by placing it in the back of the latter, as shown, thus forming a duplex register; or I can use it independently, as shown in the modification in the drawings.

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

1. In a fare register and recorder, a device for puncturing the dial at intervals, as described, attached to a revolving threaded arm operated by a cog-wheel traveling thereon, which meshes into a stationary cog, whereby said puncturing device is fed and carried around without any frictional contact with the dial, substantially as set forth.

2. In a fare register and recorder, the cog-wheel E, arranged within the rotary block B, and adapted to mesh into the stationary gear G, in combination with the threaded arm D, substantially as set forth and described.

3. The threaded arm D, provided with needle H, and passed through the spindle A, and block B, attached thereto, in combination with the spring F and cog-wheel E, having its eye threaded, as described, said wheel meshing into the stationary gear G, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

REUBEN M. ROSE.

Witnesses:

S. S. WILLIAMSON,
W. W. MORTIMER.