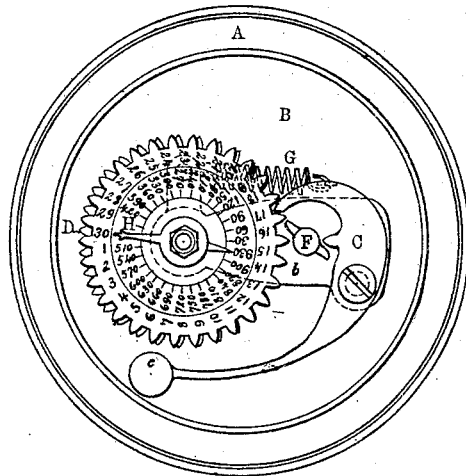


J. SOLTER.
 CAR FARE REGISTER.

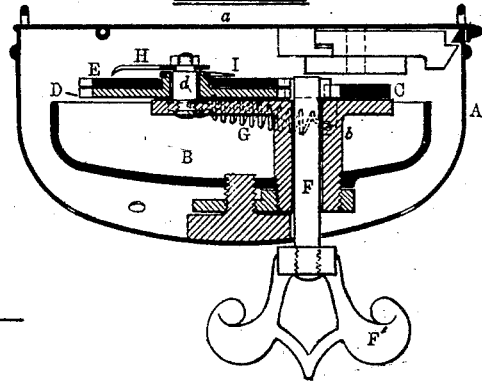
No. 184,217.

Patented Nov. 7, 1876.

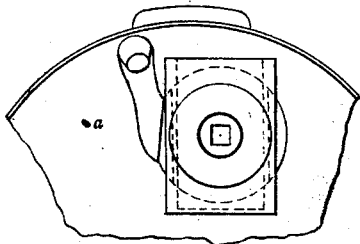
— FIG. I —



— FIG. II —



— FIG. III —



— FIG. IV —



— WITNESSES —

Wm. H. Gibson
W. W. Wharton

— INVENTOR —

John Solter
 by *Wm. S. Howard*
Atty.

UNITED STATES PATENT OFFICE.

JOHN SOLTER, OF BALTIMORE, MD., ASSIGNOR OF TWO-THIRDS HIS RIGHT TO
GEORGE V. KEEN AND JAMES S. HAGERTY, OF SAME PLACE.

IMPROVEMENT IN CAR-FARE REGISTERS.

Specification forming part of Letters Patent No. 184,217, dated November 7, 1876; application filed
October 13, 1876.

To all whom it may concern:

Be it known that I, JOHN SOLTER, of the city of Baltimore and State of Maryland, have invented certain Improvements in Fare-Registers, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

This invention relates to a car-fare register, in which the means for registering the fares consist, principally, in two or more differentially-toothed wheels or disks, one or more of which bear figures or characters, and suitable pointers adapted in the circumferential movement of the said disks from the exterior of the casing to indicate the revolutions and parts of revolutions of the said disks by means of the figures or characters aforesaid.

In the description of my invention which follows, reference is made to the accompanying drawing, forming a part of this specification, and in which—

Figure 1 is a plan of the invention, with the upper portion of the casing removed; Fig. 2, a sectional elevation of the same; and Figs. 3 and 4 detached views of a lock accompanying the invention.

Similar letters of reference indicate similar parts in all the figures.

A represents the casing of the instrument, provided with suitable means of attachment for the suspensory strap. The casing is also provided with a hinged door, *a*, fitted with a seal-lock, of a construction hereinafter described. B is a gong secured within the casing A, and *b* a frame supporting the striking and fare-registering mechanism. C is a bell-crank, one arm of which is furnished with a hammer, *c*, to strike the gong, and the other adapted to stop or limit the movement of the differentially-toothed wheels or disks D E. The wheel D revolves upon a stud, *d*, projecting from the frame *b*, and the one E on the hub of the wheel D. These wheels or disks receive their joint rotary movement from the hand of the operator, through the medium of a spindle, F, which is fitted at its inner end with two or more wings or projections adapted

to engage with the teeth thereof. A handle, F', on the outer end of the spindle, is used to turn the same in registering the fares. The hammer *c* is held nearly in contact with the inner surface of the gong, and the stop tightly between the teeth of the disks, by the resilient force of the spiral spring G, which connects the bell-crank with the frame *b*.

The wheels or disks D E are, as before mentioned, differentially toothed, the under one D having in the present case one more tooth than the one E, although corresponding with it in diameter. The upper wheel or disk E has on its outer surface two lines of figures, one representing the number of teeth on the disk, and arranged numerically from 1 to 30, the other commencing at 30, and increasing in arithmetical progression, the common increase or difference being the number of teeth in the disk, viz., 30. The number of spaces into which this latter line, which is the inner one, is divided, is equal to the number of teeth on the lower wheel or disk, viz., 31. H and I are, respectively, long and short pointers, used in connection with the figures on the outer disk to record the fares. The pointer H is rigidly attached to the stud *d*, and extends radially to the outer line of figures. The short pointer I revolves with the disks, it being secured to the hub of the one D.

Parts of the invention not yet alluded to will be described, and their uses fully set forth in the description of the operation of registering fares by means of my improved instrument, which follows:

The registering devices are set by first disengaging the stop from the teeth of the disks, and then moving the said disks independently of each other until the long pointer indicates 30 in the outer line of figures, and the short one the highest number (930) in the inner line. Upon giving the spindle F a half revolution by means of the handle F', one wing on the said spindle comes in contact with a projection on the bell-crank C, and, in passing it, causes the hammer *c* to strike the gong. During this operation the other wing engages with the teeth of the disks, and causes them to be moved forward a distance equal to the pitch of the teeth on the disk E. The long

pointer will now indicate the numeral 1, and the short pointer will have moved a one-thirtieth part of the distance between the figures 930 and 30.

From this it will be seen that in an entire revolution of the outer disk E the short pointer will have moved one thirty-first of an entire revolution, and will indicate 30. The entire number of fares registered is found by adding the numbers indicated by both pointers.

Figs. 3 and 4 show the construction of the spring-lock, before alluded to as used to secure the hinged door of the casing.

This lock does not form a part of the invention as herein claimed, but may form the subject of a separate application, but it is here described that the structure of whole instrument of which it is a part may be the better understood.

In this lock the spring-latch K is turned to disengage it from the catch on the rim of the casing, by means of a key adapted to fit into the central part or hub thereof, the said key

and hole being of some polygonal or irregular shape, in order to cause a combined movement between them. A paper or card seal is used in connection with the lock, which seal is perforated by the insertion of the key thereto.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

As a car-fare-registering device, an instrument consisting substantially of the casing A, differentially-toothed wheels D E, pointers H I, spindle F, bell-crank C, and gong B, one arm of the said bell-crank being employed to sound the said gong, and the other to stop or limit the movement of the said wheels D E, for the purpose specified.

In testimony whereof I have hereunto subscribed my name this 12th day of October, in the year of our Lord 1876.

JOHN SOLTER.

Witnesses:

WM. T. HOWARD,
THOS. MURDOCH.