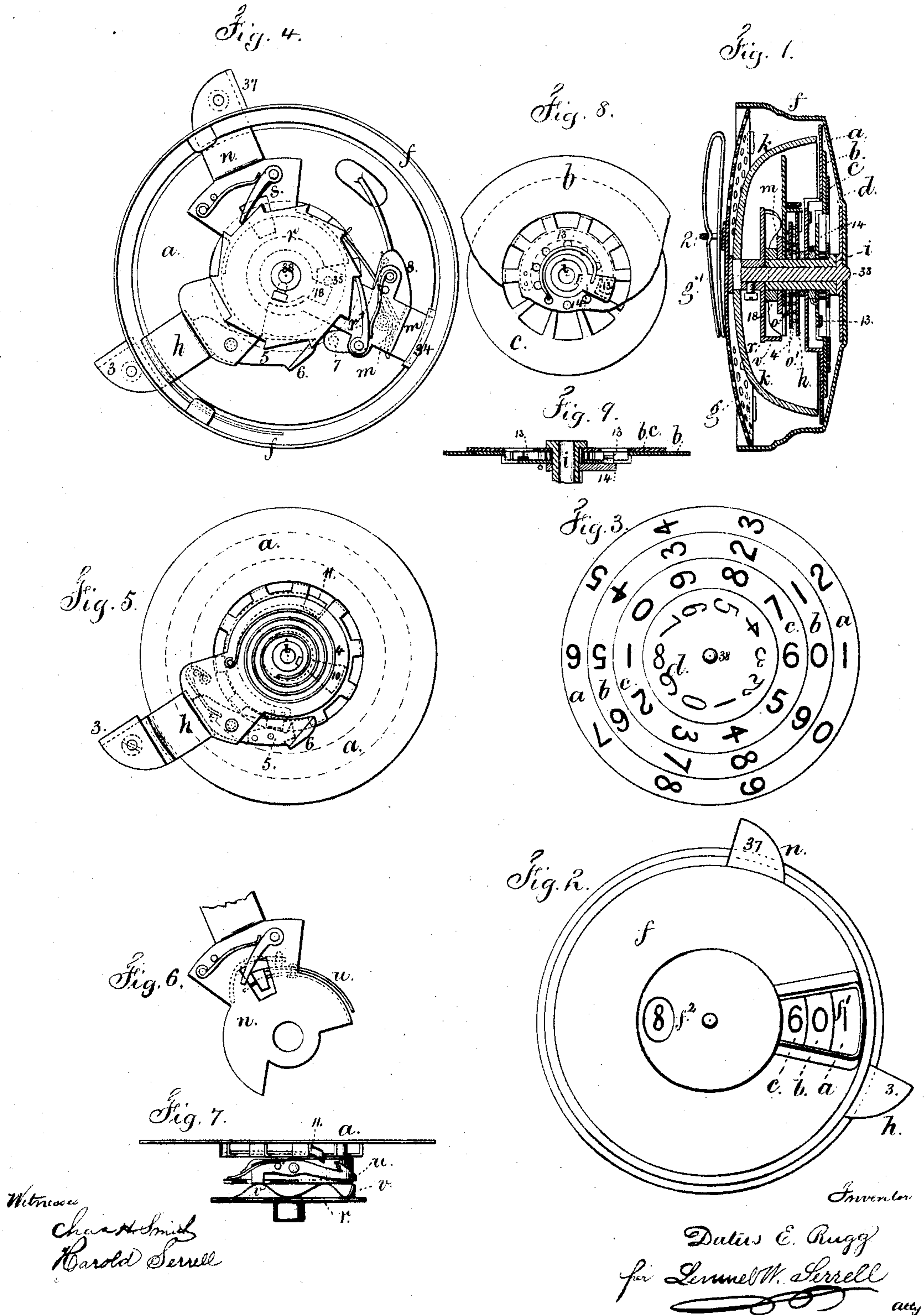


D. E. RUGG.

Registers for Railway-Fares.

No. 150,434.

Patented May 5, 1874.



UNITED STATES PATENT OFFICE.

DATUS E. RUGG, OF TARRYTOWN, ASSIGNOR TO HIMSELF AND ANSON T. COLT, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN REGISTERS FOR RAILWAY-FARES.

Specification forming part of Letters Patent No. **150,434**, dated May 5, 1874; application filed January 13, 1874.

To all whom it may concern:

Be it known that I, DATUS E. RUGG, of Tarrytown, in the county of Westchester and State of New York, have invented an Improvement in Registers for Railway and Stage Fares, or for counting or tallying, of which the following is a specification:

This invention is for counting and registering numbers, and is a portable instrument, adapted to being held in the hand by the conductor or person that receives the car or stage fares, or that has to keep account, or to being attached to his coat or other garment.

This register is provided with counting-disks that are revolved by a step-by-step motion, and denote units, tens, and hundreds. The unit-disk is operated by a lever and pawl, which at the same time operates a lever to strike a bell; the units-disk causes the tens-disk to move forward one space each revolution, and so on with the tens and hundreds disks; or it may be continued to thousands. There is also a tally for half-fares, which in cars and stages usually are three cents, and to complete these, the record of whole fare is turned three whole-fare spaces for five half-fares, ($3 \text{ cents} \times 5 \text{ fares} = 5 \text{ cent fare} \times 3$.) This half-fare tally may operate independently of or be computed with the whole-fare tally.

In the drawing, Figure 1 is a vertical section of the instrument. Fig. 2 is a front elevation. Fig. 3 shows the face view of the number-disks. Fig. 4 is a rear elevation. Fig. 5 shows the rear of the units-disk and its actuating-lever. Fig. 6 is a reverse view of the half-fare lever, and Fig. 7 is a side view of the same and the units-disk. Fig. 8 is an elevation of part of the tens and hundreds disks, and Fig. 9 is a section of the same.

The units-disk *a* is the largest, the tens-disk *b* is smaller, and the hundreds-disk *c* is still smaller, and the half-fare disk *d*, when used, occupies the center. The case *f* has openings at *f*¹ *f*², through which to observe the respective numbers, and the case is provided with glasses at these openings to prevent the disks being moved improperly. A perforated back, *g*, incloses the works firmly, and an attaching-loop, 2, is provided upon the back *g*, to pass through a slit or button-hole in the conductor's

coat, and a spring-wedge, *g'*, secures the same to the garment. The units-lever *h* swings upon the tubular center *i* of the disks, and projects as a thumb or finger piece, 3, through a slot in the case *g*. A spring, 4, turns this lever back to a normal position, and the spring-pawl 5 acts upon the teeth or skeleton ratchet of the units-disk *a* to turn the same around step-by-step. The cam-piece 6 acts upon the tail 7 of the spring hammer-lever 8, to ring the bell *k* each movement of the units-lever. Each revolution of the units-disk *a* moves the tens-disk one division, and for this purpose the back of the spring-pawl 11 upon the units-disk runs under the stationary arm 10, (see Fig. 5,) that projects from the stationary tube *i*, when the nine of the unit-disk is opposite the opening, so that the point of said pawl 11 takes a notch of the tens-disk *b*, and hence the unit and tens disks move together the next time, one division bringing the 0 and next number into view, and the spring-pawl 11 clears the arm 10, and separates from the tens-disk, allowing that to remain stationary until the next revolution of the units-disk. The hundreds-disk *c* is similarly moved, and the pawl 13 (see Figs. 8 and 9) on the tens-disk moves the same when depressed by running under the stationary arm 14. If a thousands-disk is provided, it will be similarly operated by the hundreds-disk. A spring, 41, connected to the arm 14, presses against the disk *b*, and furnishes the friction necessary to keep the disk from turning accidentally. The plate *n*, upon which the hammer swings, has an eye around the tube *i*, and the end passes into or under a locking-flange, 34, within the case *f*, so as to be held stationary, and the tube *i* is connected so as not to turn by a groove in such tube taking the eye of an arm, 18, that is held by a pin, 35, in the plate *m*. The parts thus far described may be used alone without the disk *d*, that registers half-fares, but in order to operate this disk *d*, the additional mechanism next described is used. The half-fare lever *n* and thumb or finger piece 37 outside the case has a limited movement in a slot in the case, and is returned to a normal position by the spring *o*, that, with the spring 4, is connected with the disk *o'*, that is keyed

upon the tube *i*, so that said springs are set up by turning the tube into position by the arm 18, and securing it as aforesaid. The spindle 38 of the disk *d* extends through the tube *i*, and is attached to the ratchet-wheel *r*. The pawl *r'* holds the same, and the pawl *s* on the lever *n* moves this wheel around progressively, and indicates half-fares. This may be used alone, but it is sometimes preferable to add the half-fares to the regular register as they accumulate. For this purpose a pawl, *u*, is hinged upon the under side of the lever *n*, (see Figs. 6 and 7,) and it is moved up and down by cam skirts or projections *v* upon the edge of the wheel *r*. These cams are so positioned that the pawl *u* is either held out of range of the teeth or skeleton ratchet of the units-wheel *a*, or allowed to come in contact therewith; hence, when in contact, that units-wheel is moved one space by the half-fare lever, and by properly positioning the cams, the half-fare lever will be caused to take up as many whole-fare spaces on the units-wheel as are proper to represent the value of the half-fares collected.

In place of having numbers on the disks, there may be figures representing cents on the units-disk corresponding to the money received for the fares, such as five, ten, fifteen, twenty cents, &c., and upon the tens-disk the aggregate of dollars will be shown, such second disk being moved one division when fares to the extent of a dollar are collected.

I claim as my invention—

1. The arrangement of the units-lever *h*, pawl *5*, and cam-piece *b*, in combination with the units-disk, the spring-hammer, and bell, substantially as set forth.

2. The cam *v* upon the ratchet-wheel *r*, in combination with the pawl *u*, half-fare lever *n*, and units-disk *a*, substantially as and for the purposes set forth.

Signed by me this 7th day of January, A. D. 1874.

DATUS E. RUGG.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.