R. M. ROSE.

Passenger and Time Recorder.

No. 223,171. Patented Dec. 30, 1879.

Fig. 1.

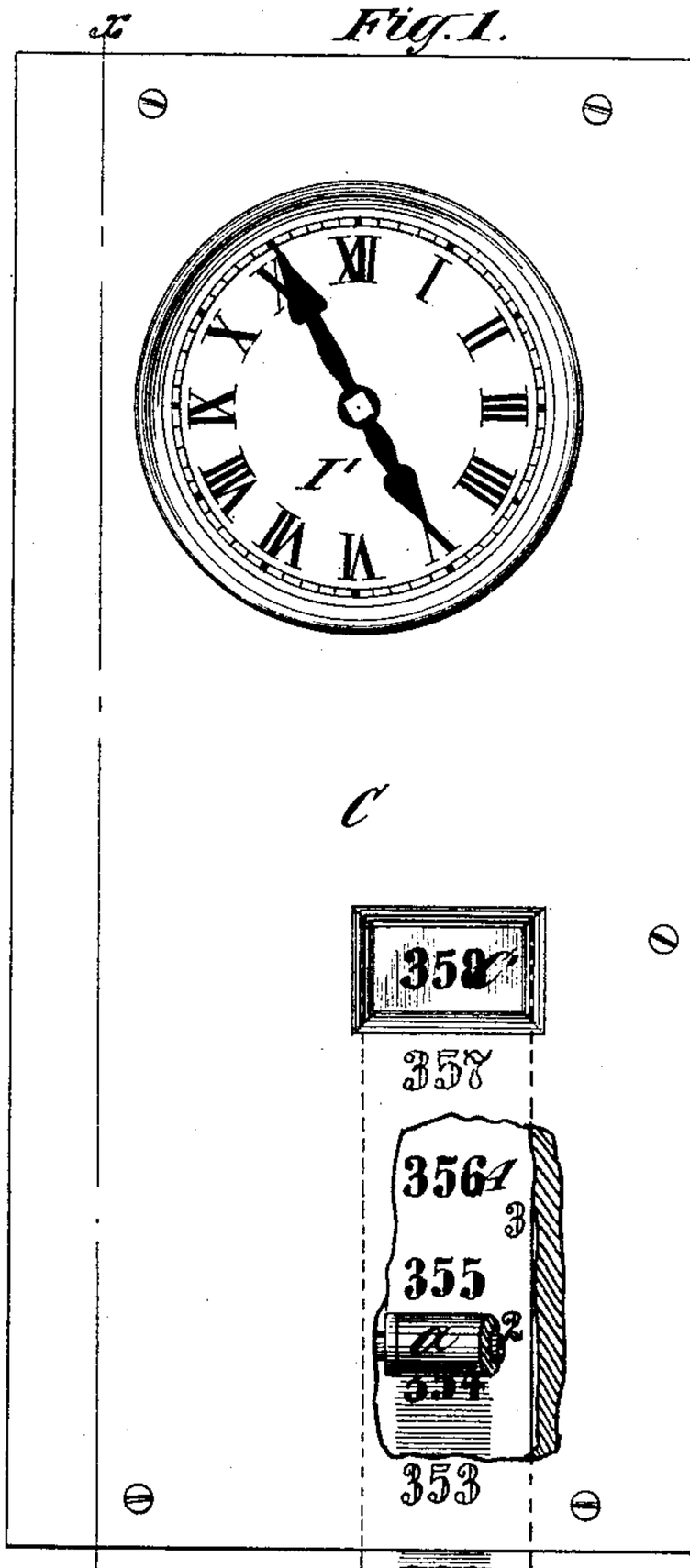


Fig. 2.

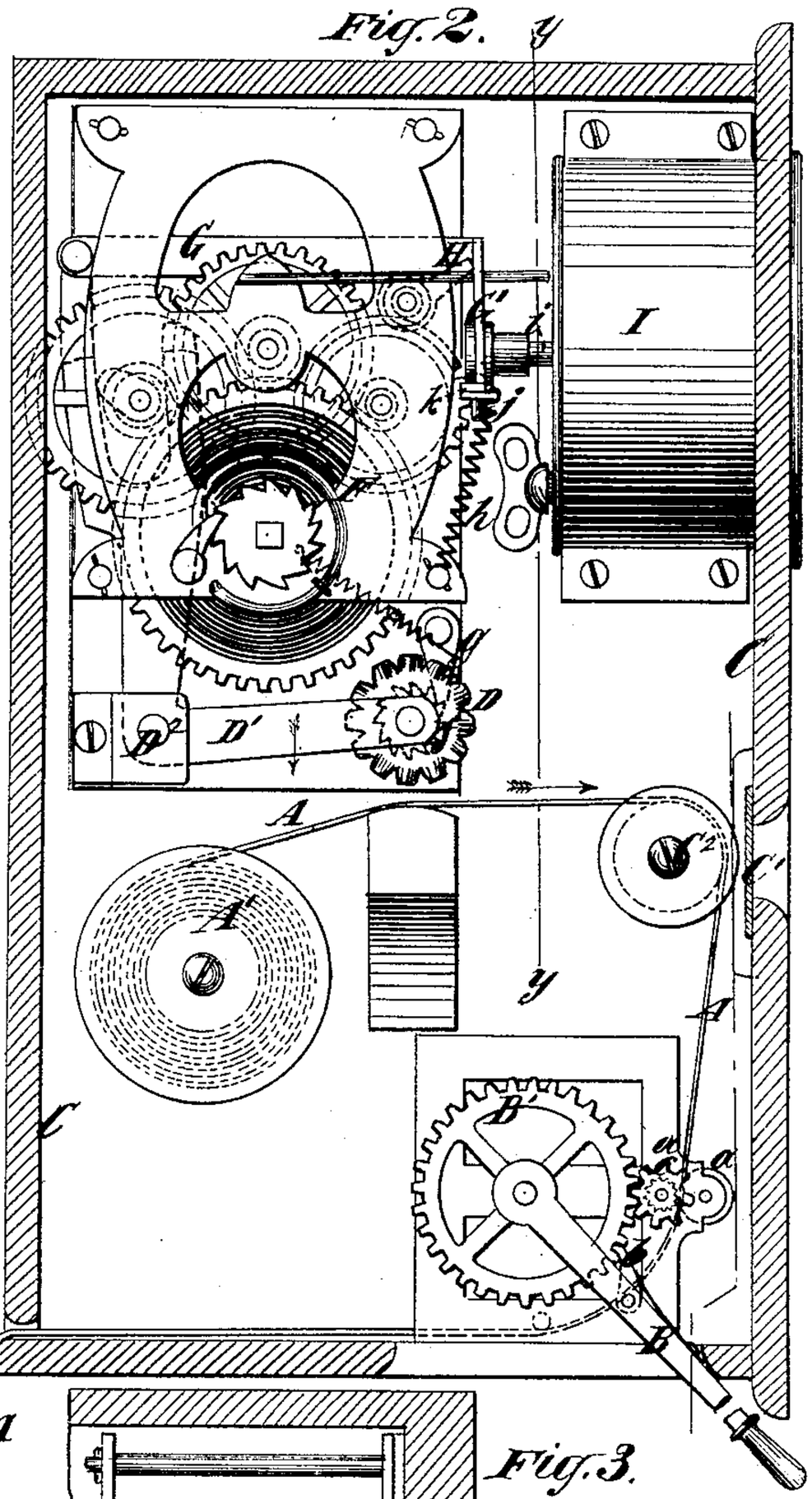


Fig. 3.

Fig. 4.

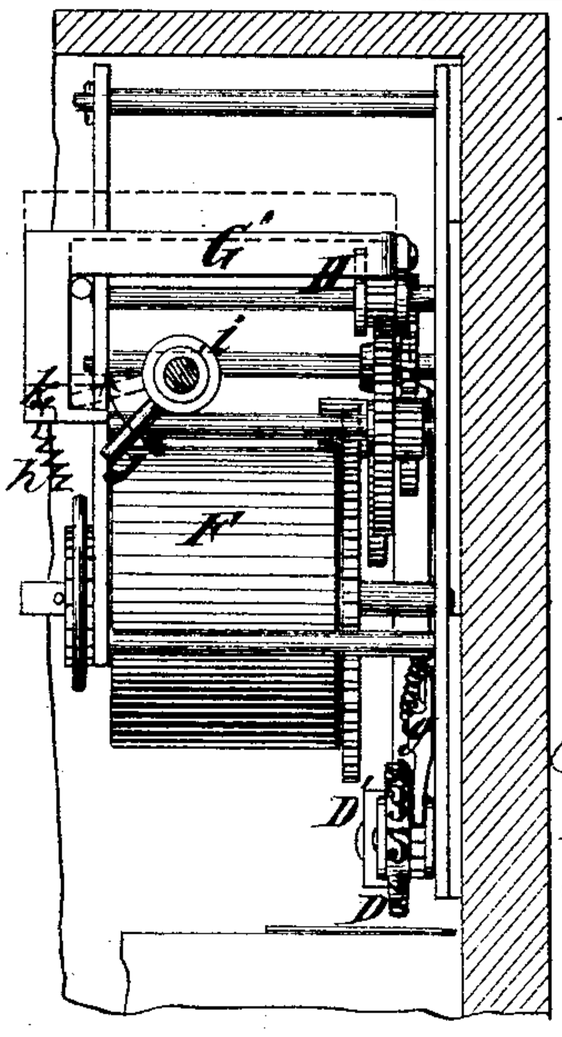
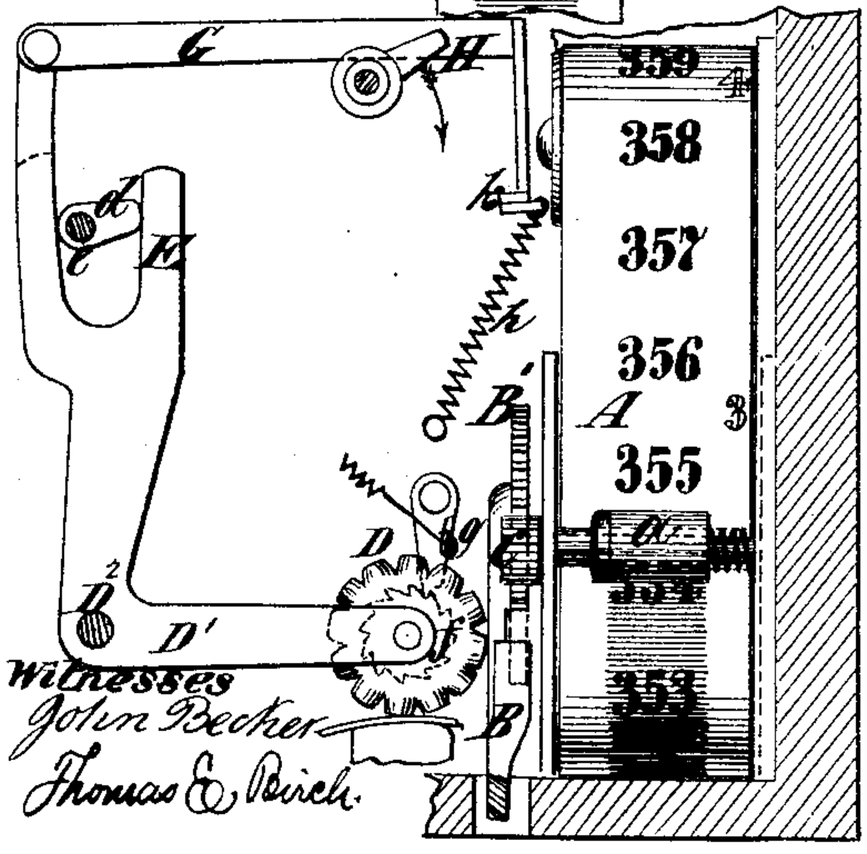


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

REUBEN M. ROSE, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO DAVID F. ATKINS, OF SAME PLACE.

IMPROVEMENT IN PASSENGER AND TIME RECORDERS.

Specification forming part of Letters Patent No. **223,171**, dated December 30, 1879; application filed August 26, 1879.

To all whom it may concern:

Be it known that I, REUBEN M. ROSE, of Brooklyn, in Kings county and State of New York, have invented certain new and useful Improvements in Registering Apparatus, of which the following is a specification.

My improvements relate to that class of registering apparatus intended for use at railway-stations, ferries, toll-bridges, exhibitions, &c., for registering the number of passengers or people passing through a gate or other entrance or exit; and one object of my invention is to provide a registering apparatus which shall register not only the number of passers in the aggregate, but also the number for any given hour or other period of time. The invention is also, in part, applicable for registering the number of passengers or fares in any railway-car or other vehicle.

One of my improvements consists in the combination, in a passenger-register, of a strip or ribbon of paper or other material consecutively numbered with numbers to indicate passengers, rollers which both feed and mutilate or deface the said strip or ribbon, and mechanism for imparting to said rollers an intermittent motion at such intervals of time as may be desired.

Another of my improvements consists in the combination, with such an intermittently-moving strip or ribbon and feeding and mutilating rollers, of a printing device and means for producing the operation of said device on said strip or ribbon for making impressions thereon.

Another improvement consists in the combination, with such a strip or ribbon and feeding device, of a printing device adapted to be moved toward said strip for making an impression thereon, a spring or weight for actuating said printing device, and a clock-movement for releasing said spring or weight at regular intervals.

Other improvements consist in details and combinations of parts hereinafter explained.

In the accompanying drawings, Figure 1 designates a plan of my apparatus, a portion of the case being broken away. Fig. 2 designates a section on dotted line *x x*, Fig. 1. Fig. 3 designates a section of a portion of my apparatus on the dotted line *y y*, Fig. 2. Fig. 4 designates a detail view, showing the mechanism for imparting motion to the printed strip or ribbon; and Fig. 5 is a detail view of the mechanism for actuating the printing device.

Similar letters of reference designate corresponding parts in all the figures.

A designates a continuous strip or ribbon of paper having printed upon it a series of consecutive numbers, and here represented as arranged upon a reel or drum, A′.

The strip or ribbon passes between feed-rollers *a a*, to which an intermittent motion is imparted by means of the lever B, which is oscillated to impart motion, by means of a pawl, *b*, to a gear-wheel, B′, and thence, through a pinion, *c*, to the feed-rollers.

A platform or turnstile might be substituted for the lever B, and so connected as to impart the desired motion to the strip of paper, and one of the said feed-rollers is fluted or otherwise prepared, so that the fed portion of the strip is creased or otherwise mutilated, marred, or defaced in such manner as to prevent its being again used.

In order to prevent the registering mechanism from being tampered with, the parts thereof are arranged in a locked box or case, C, through one side of which the lever B projects, and said box may be arranged in proximity to a door or other entrance in such a position that a person passing through the same must necessarily oscillate said lever B.

C′ designates a hole or window in the top of the case, through which the numbers on the strip of paper may be seen; and C^2 designates a roller, over which the strip of paper is carried in its passage to the feed-rollers.

D designates a printing device, shown as consisting of a roller or wheel having figures upon its periphery denoting the hours of the day, and mounted on one arm of a bell-crank lever, D′, which is pivoted to the case at D^2. The other arm of said bell-crank lever is bifurcated or forked at E; and *d* designates a rotary cam mounted on a shaft, *e*, and serving to oscillate the bell-crank lever D′. By this means the printing-wheel D is brought against the strip of paper A, and an impression denoting the hour of the day made on said strip. As the printing-wheel D returns after each

impression, a ratchet-wheel, *f*, which is carried upon its axis, is brought in contact with a fixed pawl, *g*, and the printing-wheel is rotated so as to bring the next figure on its periphery opposite the strip of paper.

F designates a spring which acts, through the wheels of a clock-movement, to rotate the shaft *e* and oscillate the bell-crank lever D′.

G designates a lever, pivoted at one end to the bifurcated arm of the bell-crank lever D′, and having its other end, G′, bent at right angles, so as to extend to the front of the movement, as clearly illustrated in Fig. 3. When not otherwise actuated, the said lever is drawn over by the spring *h*, so that the portion G′ obtrudes itself in the way of the rotary flier H and renders the movement inoperative. A weight or other power might be employed in lieu of the spring F.

In order to release the spring F, and permit it to actuate the printing-wheel D at regular intervals, I have represented a clock, I, upon the minute-hand arbor *i* of which is mounted a toe, *j*, which, as the arbor *i* rotates, comes in contact with the end *k* of the lever G, and swings the lever back against the force of the spring *h* sufficiently to disengage the rotary flier H and permit the spring F to actuate the printing-wheel D.

The cam *d*, when it moves the printing-wheel against the strip of paper, raises the bifurcated end E of the bell-crank lever D′, and when said cam *d* completes its rotation the lever G is depressed, and its portion G′ again obtrudes itself in the way of the rotary flier H and stops the latter.

The clock I is furnished with a dial, I′, on the outside of the box or case C.

By ascertaining the numbers upon the strip A between any two impressions of the printing-wheel D the number of persons passing in any given hour may be ascertained.

This apparatus might with advantage be used as a watchman's time-detecter, and in such case the lever B should be actuated by the watchman once between each two impressions of the printing-wheel D.

If desirable, I may substitute a dial for the printed strip of paper, and in such case the said dial would be moved intermittently in the same manner that the strip is moved.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a passenger-register, of a strip or ribbon of paper or other material consecutively numbered with numbers to indicate passengers, rollers which both feed and mutilate the said strip, and mechanism for imparting to said rollers an intermittent motion at such intervals of time as may be desired, substantially as specified.

2. The combination, in a passenger-register, with a strip or ribbon of paper or other material consecutively numbered with numbers to indicate passengers, rollers which both feed and mutilate said strip, and mechanism for imparting to said rollers an intermittent motion at such intervals of time as may be desired, of a printing device and means for producing the operation of said printing device on said strip or ribbon for making impressions thereon, substantially as specified.

3. The combination, with a strip or ribbon of paper having delineated upon it a series of consecutive numbers and means for feeding said strip, of a printing device adapted to be moved toward said strip for making an impression thereon, a spring or weight for actuating said printing device, and a clock-movement for releasing said spring or weight at regular intervals.

4. The combination, with a movable printing device, of a spring or weight for actuating said device and a clock-movement for releasing said spring or weight at desired intervals of time, substantially as specified.

5. The combination, with the bell-crank lever D′, the cam *d*, and the spring F, of the lever G, pivoted to said bell-crank lever, and adapted to engage with the rotary flier H, and the clock I, having a toe, *j*, mounted on the minute-hand arbor, whereby the said toe oscillates the lever G and releases said rotary flier, and the said lever G, after releasing the flier, is caused to pass over to the opposite side of the said toe, substantially as specified.

REUBEN M. ROSE.

Witnesses:
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