

(No Model.)

D. F. BOWEN.

PAPER ROLL HOLDER AND FARE REGISTER.

No. 510,392.

Patented Dec. 5, 1893.

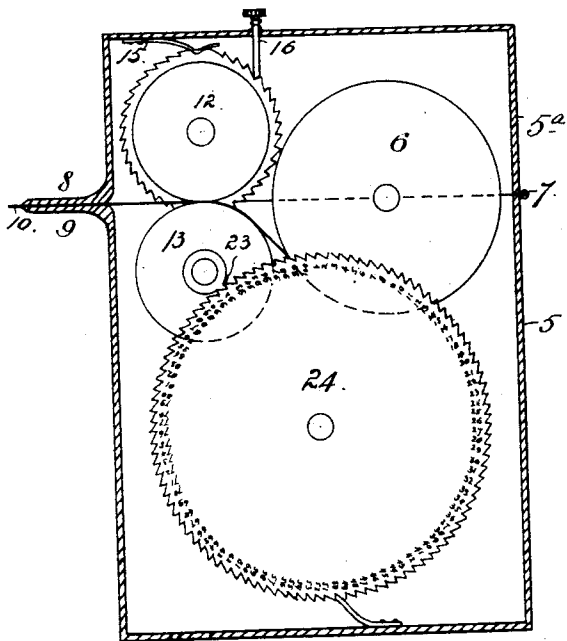


Fig. 2.

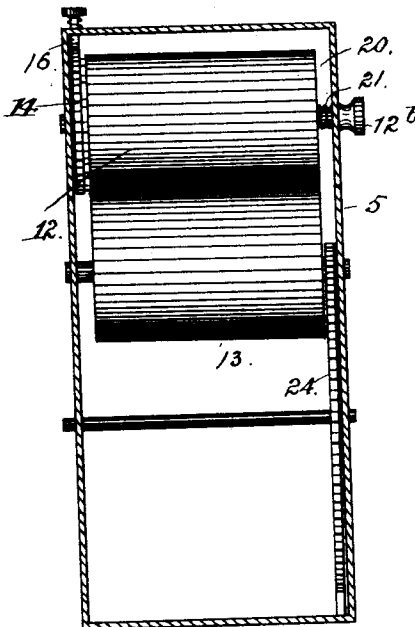


Fig. 3.

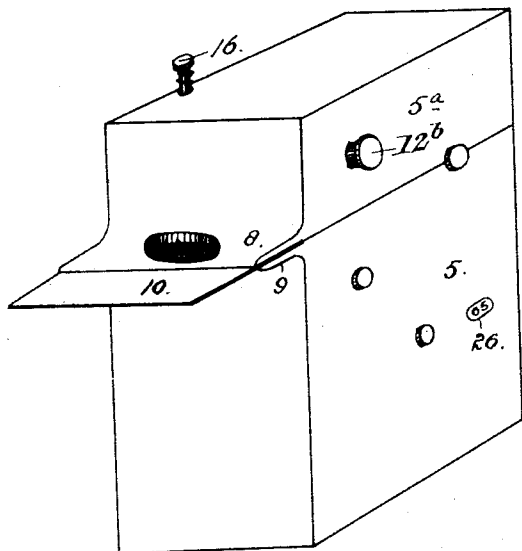


Fig. 1.

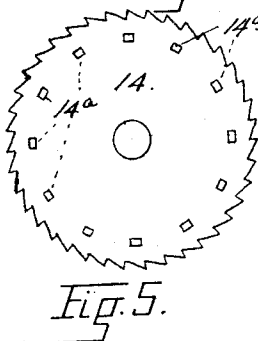


Fig. 5.

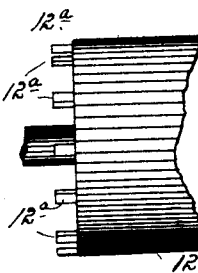


Fig. 6.

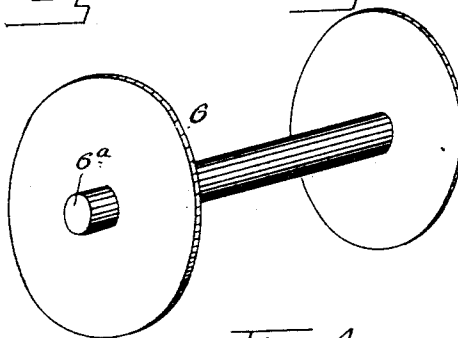


Fig. 4.

WITNESSES:

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PAPER-ROLL HOLDER AND FARE-REGISTER.

SPECIFICATION forming part of Letters Patent No. 510,392, dated December 5, 1893.

Application filed March 18, 1893. Serial No. 466,739. (No model.)

To all whom it may concern:

Be it known that I, DAVID F. BOWEN, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Paper-Roll Holders and Fare-Registers; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to an improved paper roll holder in combination with suitable indicating mechanism. This device is specially designed for use in manipulating a roll composed of a series of transfer tickets printed on a continuous strip of paper. The device is, therefore, intended for use by a street car conductor, and is of such construction that a ticket of suitable length may be drawn therefrom, and torn off as desired.

To this end the invention consists of the features, arrangements and combinations hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a perspective view of the complete device. Fig. 2 is a section taken through the case inclosing the operating mechanism, which is shown in side elevation. Fig. 3 is a section taken through the case, showing the interior mechanism in front elevation. Fig. 4 is a perspective view of the spool for holding the roll. Fig. 5 is a ratchet disk attached to one of the operating rolls. Fig. 6 shows the end of the roll which engages this disk.

The same reference characters indicating the same or corresponding parts or elements of the mechanism in the several views, let the numeral 5 designate a suitable receptacle or case in which is pivoted the roll-holding spool 6. The upper portion 5^a of this case is separated from the body part, to which it is hinged as shown at 7. The openings for the extremities 6^a of the spool spindle are composed of semi-spherical recesses formed in the two parts

of the case, whereby the spool may be placed in position or removed by turning the top backward at the hinge 7. The two parts of the case are provided with lips or jaws 8 and 9, between which the strip 10 wound upon the spool is drawn, and whereby it may be readily torn off at will, when it has been drawn out to a suitable length. The strip of paper 10, after leaving the spool 6, is drawn between two friction rollers 12 and 13, arranged the one directly above the other when the box is in an upright position. One of these rolls is pivoted in each part of the divided case.

The circumference of each of the rolls is of the same length as the ticket to be used. Hence it is necessary that the person manipulating the box should be warned or notified every time a revolution is completed. To accomplish this, a ratchet disk 14 is loosely mounted upon the spindle of the roll 12. A spring 15 is made fast to the case at one extremity, its opposite extremity being formed into a cam adapted to engage a notch of such depth formed in the disk, that there will be a decided click, distinguishable from that which occurs regularly as the ordinary teeth of the disk engage the spring. The depth of this notch is such that when the spring engages the disk the rolls will naturally cease to turn, since it will require more power to release the spring from this notch than is required when the spring engages the ordinary teeth of the disk. When the strip 10 does not project far enough from the jaws 8 and 9 to enable a person to grasp the same, the vertically reciprocating pin 16 may be employed. This pin is attached to the top of the case, through which it projects to engagement with the teeth of disk 14. It is held in its normal position by a coil spring located between the box and the head of the pin one extremity of the spring being attached to the box, and the other engaging the head of the pin which forms a stop therefor, the length of the pin being so regulated with reference to the spring that the lower extremity of the pin will always protrude through the top of the box on the inside, whereby the pin is held in position. This pin engages the disk in the rear of the roller spindle or axle. Hence as the pin is pressed, the roller is given a partial rotation, and the

strip of paper thrust outward to the extent of the rotation of the roller. The construction is such that the disk moves one tooth for each pressure of the pin. The roller 12 is provided with pins 12^a which engage counterpart apertures 14^a formed in the disk 14. There is a space 20 between the opposite end of this roller and the side of the case of sufficient width to permit the movement of the roll far enough to one side to draw the pins 12^a from their corresponding apertures 14^a, and thus disengage the roll from the disk. The roller is, however, normally maintained in engagement with the disk by means of a coil spring 21 surrounding the spindle, and located between the end of the roller and the side of the case. When the roll 12 is disconnected from the disk, it, the roll, may be turned independently of the disk, which is normally locked, temporarily, by the cam spring 15. The roll 12 is rotated from the outside of the box by means of a stem 12^b provided with a milled head. Now, if for any reason it may be necessary or desirable to turn the roll independently of the disk, the roller may be disconnected therefrom by pulling the stem 12^b outward, whereby the roll 12 is moved endwise sufficiently to disconnect the pins 12^a from the apertures 14^a, and the ticket strip adjusted at pleasure by turning the roller.

The friction roller 13 is provided with a tooth or cam 23 adapted to engage the toothed periphery of the registering disk 24, whereby as the friction rollers are turned, every rotation thereof moves the disk 24 one notch. This last named disk is provided with a number on its face for each notch on its edge. As shown in the drawings the disk has one hundred teeth correspondingly numbered beginning with 1. The case 5 is provided with an aperture 26, covered by a transparent plate, and so located that the numbers on the face of the disk 24 may be observed therethrough as the disk is rotated. Hence the figures exposed at this aperture will indicate the number of tickets unrolled from the spool.

Having thus described my invention, what I claim is—

1. The combination of the case, the spool pivoted therein and carrying the roll of paper, the friction rollers 12 and 13 between which the paper is drawn, roll 12 being made fast to its spindle which protrudes through the casing, the ratchet disk loosely mounted upon the spindle of roll 12 and apertured to receive counterpart pins formed upon the adjacent extremity of the last named roll, a spring located between the side of the case and one end of the roll and normally holding the pins of the opposite end in engagement with the apertures of the disk, and a spring cam attached to the case and engaging the teeth of the disk, substantially as described.

2. In a ticket register, the combination with the case of the spool pivoted therein, the friction rolls, one being spring actuated endwise, and provided with pins on one extremity, the ratchet disk loosely mounted on the spindle of the spring-actuated roll and apertured to receive the pins on the roll, a spring cam engaging the teeth of the disk, and a registering disk connected in operative relation with one of the friction rolls, substantially as described.

3. In a ticket register, the combination of the case, the spool, the friction rolls, one of which has a protruding spindle at one extremity and pins at the opposite extremity, a ratchet disk apertured to receive the pins of the roll and loosely mounted on its spindle, a spring normally holding the pins of the rolls in engagement with the apertures of the disk, a spring cam engaging the teeth of the disk, a spring-actuated adjusting pin also engaging the disk, and a registering disk connected in operative relation with one of the friction rolls, substantially as described.

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

DAVID F. BOWEN.

Witnesses:

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CHAS. E. DAWSON.