(No Model.) 2 Sheets—Sheet 1.

I. H. MILLER.

STREET OR STATION INDICATOR FOR CARS.

No. 386,486. Patented July 24, 1888.

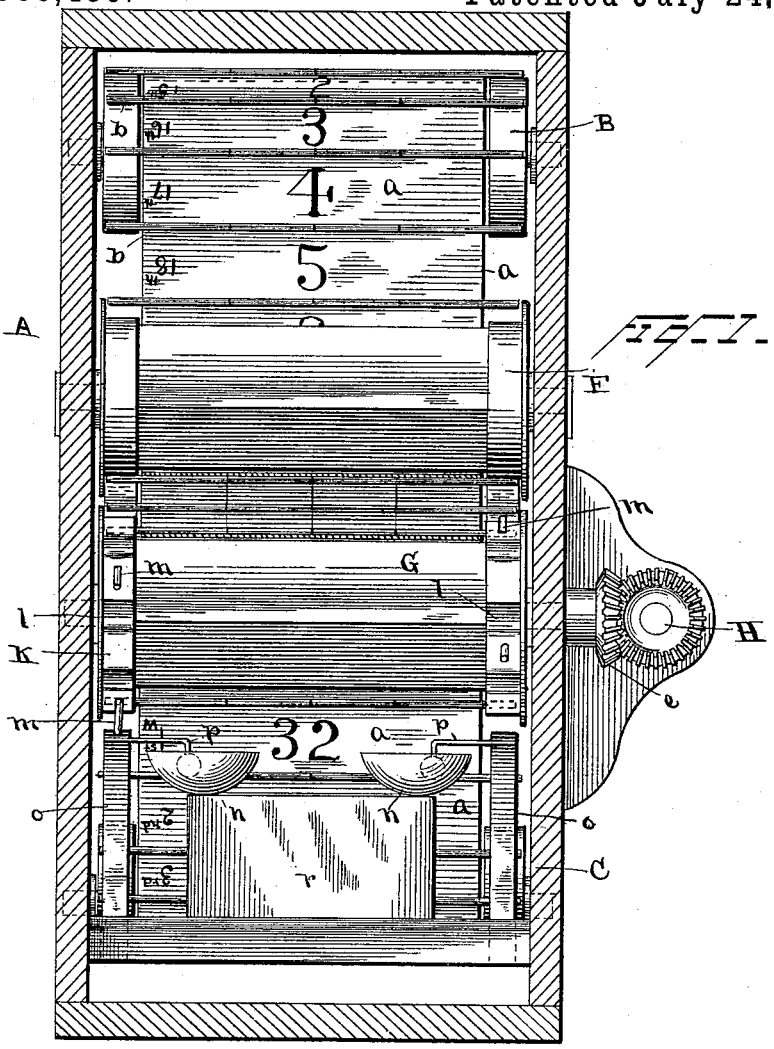

Fig. 1.

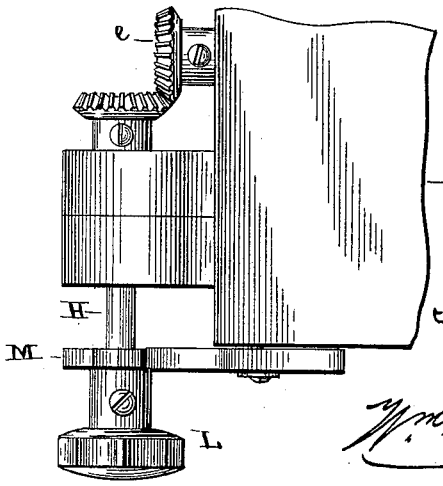

Fig. 3.

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Fig. 2.

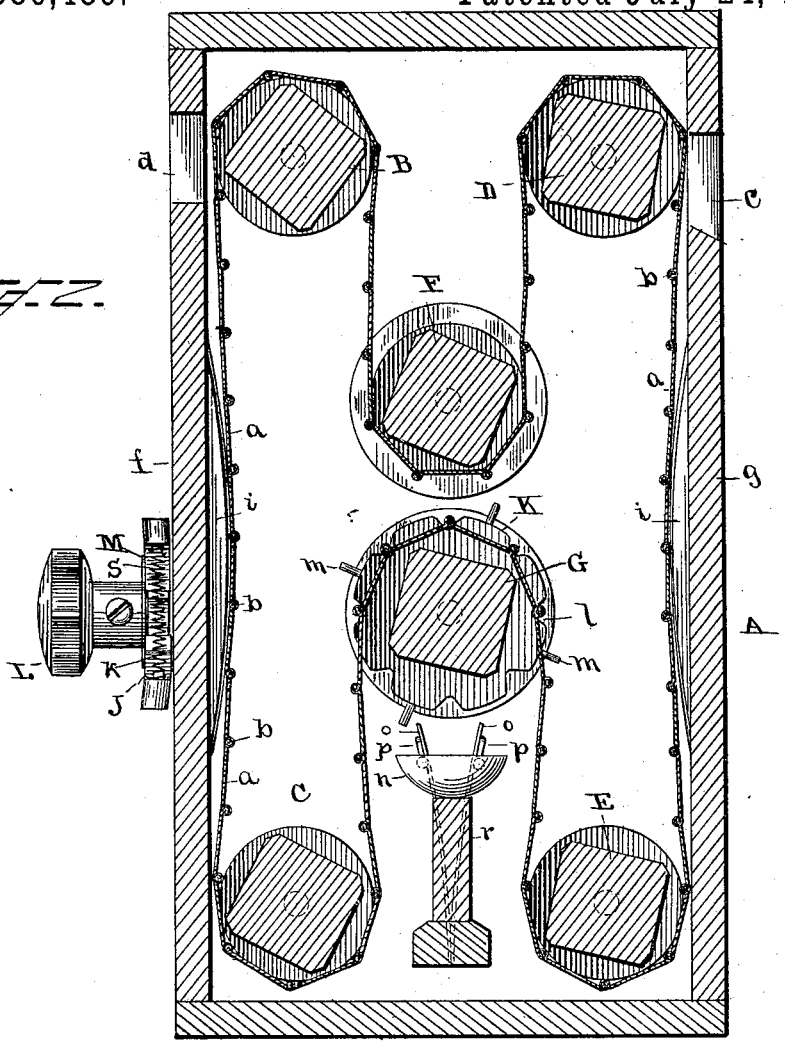
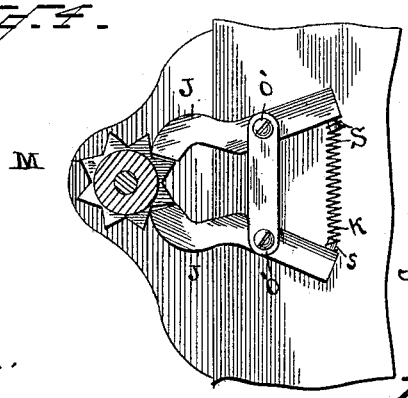


Fig. 4.



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UNITED STATES PATENT OFFICE.

ICHABOD H. MILLER, OF QUINCY, ILLINOIS.

STREET OR STATION INDICATOR FOR CARS.

SPECIFICATION forming part of Letters Patent No. 386,486, dated July 24, 1888.

Application filed July 30, 1887. Serial No. 245,680. (No model.)

To all whom it may concern:

Be it known that I, ICHABOD H. MILLER, a citizen of the United States, residing at Quincy, Adams county, Illinois, have invented new and useful Improvements in Street or Station Indicators for Cars, of which the following is a specification.

This invention relates to certain new and useful improvements in street or station indicators for cars and similar vehicles; and it consists substantially in such features of arrangement, construction, and combinations of parts as will hereinafter be more particularly described, and pointed out in the claims.

In a former patent, granted me on the 17th day of May, 1887, No. 362,163, I have set forth certain improvements in this class of inventions, and wherein a series of rolls is employed around which trends a belt composed of a number of strips hinged together, having thereon the names of the streets or stations, and wherein, also, I employ an automatically-operating signal for attracting the attention of passengers, by which to keep them reminded of the streets or stations for which they may be destined.

The object of the present invention is to overcome several difficulties encountered in the practice of the invention covered by the Letters Patent referred to, and also to render the devices more complete and effective in the performance of their functions.

The present invention also has other objects in view, all as will more fully hereinafter appear when taken in connection with the accompanying drawings, wherein—

Figure 1 represents a vertical section of a street or station indicator embodying my invention, taken on the line *x x* of Fig. 2, showing parts in elevation; and Fig. 2 is a vertical central section taken in a plane at right angles thereto. Fig. 3 is a plan view of the operating mechanism controlled by the driver or conductor of a car, and also representing the devices for preventing movement of the operating-shaft due to the jolting of the car. Fig. 4 is a view representing more clearly the spring-actuated pawls for maintaining the hand-shaft in place after being operated to move the indicating-belt.

Reference being had to the several parts marked thereon, A represents the box or casing in which the several rolls and other operating devices are arranged, the said rolls having their bearing between the two sides of the casing, as shown. Preferably I employ six rolls, (indicated by the letters B, C, D, E, F, and G,) by which to obtain a greater length of belt in a minimum space, the said indicating-belt being constituted of a number of strips of metal, *a*, hinged together or united by pieces of wire, *b*, that extend somewhat beyond the edges of the strips, for a purpose to be hereinafter described. The strips *a* have painted or inscribed thereon in consecutive manner the numbers or names of the streets that are passed by the car or other vehicle in its passage to and fro, and as the operating-roll G is turned by the driver or conductor the name or number of the streets will appear in view from or through the opening *c*, provided in that side of the casing designed to face the interior of the car, and as a convenient means of enabling the operator to be sure that he is bringing the proper names or numbers before the eyes of the passengers I also provide a series of characters or numerals on the strips in reverse manner, which shall be brought to the view of the operator through a small opening, *d*, in the opposite side of the casing. Thus, for instance, when the belt is turned to indicate street number "44" to the passengers the same number will appear to the eye of the operator, and in this way he is not liable to any mistakes.

The shaft of the operating-roller G is provided at one end with a beveled gear, *e*, meshing with a similar gear on the end of the hand or operating shaft H, and thus when the said shaft is turned the belt is correspondingly moved through the medium of the said roller G. An additional roll, F, is also employed to assist in enabling the employment of greater length of belt in a minimum space, and this roll I propose to sometimes make adjustable in its bearings, so as to permit of slackening or tightening the belt at will; but I have not herein shown any means for such adjustment.

The two sides *f* and *g* of the casing are preferably provided interiorly with curved projections or shoulders *i i*, which bear against the indicating-belt and serve to keep the same in place on the rolls by friction. As a further

precaution against slipping of the belt, the roll G is provided at each end with a disk, K, notched around their edges, as at *l*, and into which notches the extended ends of the wires *b* slip as the belt is moved. Intermediate of said notches pins or pegs *m* project from the edges of the disks, and these pegs are for the purpose of automatically operating the signal-bell.

The signal devices are constituted of two bells or gongs, *n n*, and the springs *o o*, having secured to their ends a clapper, *p*, operating against the sides of the gongs, as will be explained. The bells or gongs *n n* are secured or mounted upon a block secured between the sides of the casing and represented by the letter *r*, and to the outer sides of these gongs the springs are located and secured to the block in any preferred manner.

By referring to Fig. 2 it will be seen that the springs are of an approximate V shape, and to each of their extremities the clappers are secured at right angles and extend within the gong. The purpose of this form and arrangement is to insure a correct signaling at each operation of the roller G, whether the same be turned backward or forward, and it will be apparent that as the said roller is operated in either direction the pins or pegs *m* will come in contact with the clappers, thereby drawing together the two ends of the spring, and then when the contact is broken the springs will again fly apart, thereby causing the clappers to sound the bell.

I desire to state that a station-indicator embodying my improvements may be operated in both directions, thus rendering the same useful on lines of railway where the car is to make return trips.

J J represent each a pawl or detent pivoted to the casing, as at *o' o'*, and having at one end a lug or projection, *s*, and K represents a spring fitting between the pawls and around the lug thereof, the tendency of which spring is to force together the opposite ends of said pawls.

L represents a handle fitting upon the end of the operating-shaft, and provided with a ratchet, M, which is engaged by the two levers or detents J, as shown, and it will thus be seen that by the engagement of these pawls with the said ratchet no accidental rotation of the hand-shaft will occur due to the jolting of the car or otherwise, and consequently the indicating-belt will be prevented from movement and causing any mistake. When, however, it is desired to operate the belt, a very slight force on the part of the operator is all that is necessary to compress the spring to disengage the pawls and allow the hand-shaft to be turned, and as soon as the operator releases his hold upon the handle the said pawls will be again restored to a firm engagement with the ratchet by the resilient action of the spring.

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

In a street or station indicator, the combination, with the box or casing having apertures *c* and *d*, and a number of rolls supported between the sides thereof, of a belt traversing the rolls, having thereon two sets of names or numbers of the streets arranged reversely to each other, the operating-roll G, having the notched disks and provided with pins *m*, and beveled gear *e*, the gongs *n n*, and the V-shaped springs having clappers extending into the gongs, the hand-shaft having cog meshing with cog *e*, and having its handle provided with the ratchet, the pawls pivoted to the casing and engaging the ratchet, and the spring bearing between the outer ends of said pawls, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ICHABOD H. MILLER.

Witnesses:
M. LOCKWOOD,
B. ARNTZEN.