

J. B. SLAWSON.

Improvement in Fare-Boxes.

No. 132,698.

Patented Oct. 29, 1872.

Fig. 1.

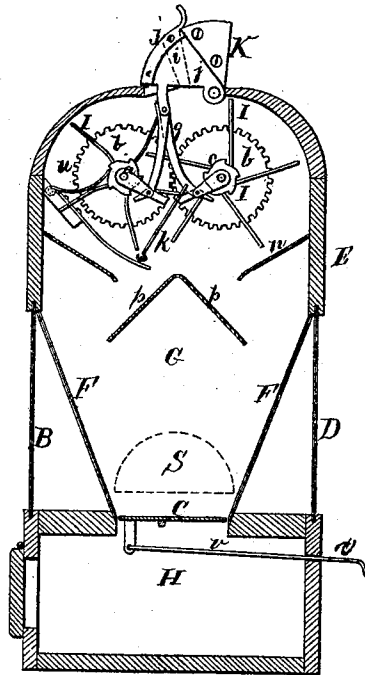


Fig. 2.

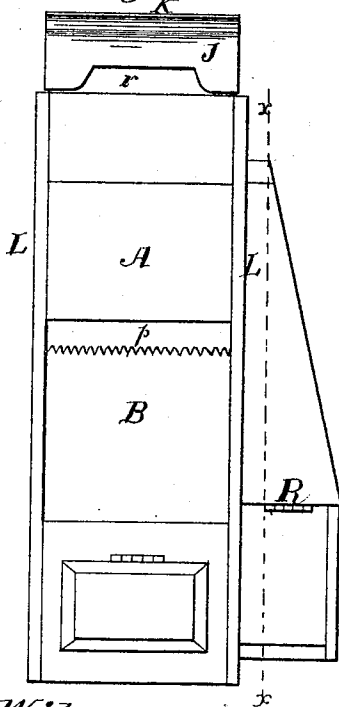
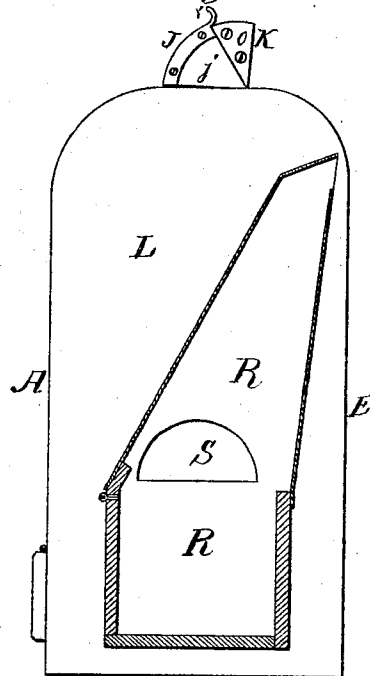


Fig. 3.



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Fig. 4.

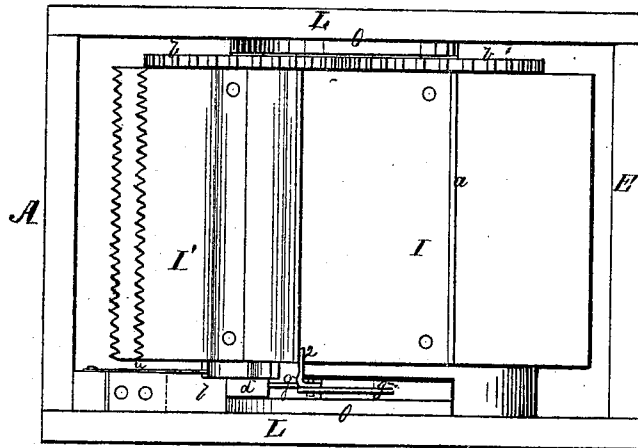
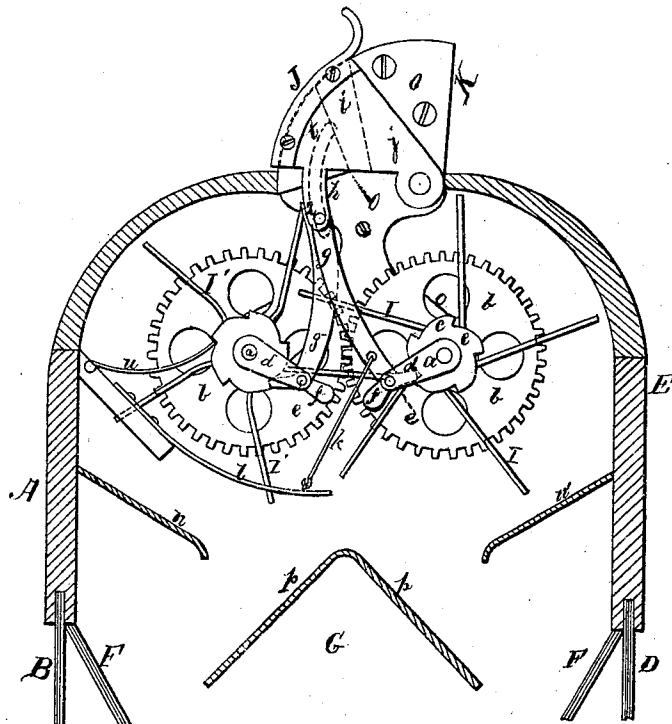


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN B. SLAWSON, OF NEW YORK, N. Y.

IMPROVEMENT IN FARE-BOXES.

Specification forming part of Letters Patent No. **132,698**, dated October 29, 1872.

To all whom it may concern:

Be it known that I, JOHN B. SLAWSON, of New York, in the county of New York and State of New York, have invented certain Improvements in Fare-Boxes, of which the following is a specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a vertical section through the middle of a box, from front to rear, having my improvements applied thereto; and Fig. 2 a front elevation of the same. Fig. 3 represents a vertical section through the line *xx* of Fig. 2, and Fig. 4 a plan of the improved box with the top and mouth-block and also the lamp-chamber removed. Fig. 5 is an enlarged view—a portion of Fig. 1.

My invention relates to a new and improved mode of constructing a fare-box so as to provide in a surer manner against the abstraction of the fare from the box when arrested for inspection; and it consists, first, in the combination of a gate that covers the mouth of the box and is operated by the passengers, with two revolving fan-bladed wheels so arranged with relation to each other and to the channel that leads to the arrest-apron that the arms of each shall overlap each other across the channel as they are made to revolve for the purpose of depositing a fare upon the arrest-apron, thereby obstructing the communication between the latter and the mouth of the box when the gate is raised. It further consists in combining with these wheels and gate a device or devices for simultaneously operating the former in the act of operating the latter. It also consists in so arranging and combining a rotating arrest apron or aprons with the gate or door that covers the mouth that the automatic closing of the door will operate the apron or aprons and thereby cause the fare to be instantly precipitated upon the arrest-apron. By this arrangement the passenger not only pays his fare into the box, but is indirectly made the cause of precipitating it into the arrest-chamber for inspection, which is a great advantage over the old method, where the fare of the first passenger has to remain in the wheel until the box is again operated by the next passenger, or else by the driver, should he desire to immediately inspect it, in which case the driver is obliged to operate the box twice before he can deposit it into the money-drawer below; and, lastly,

it consists in combining with the box as thus constructed an improved arrangement of slides as an additional protection against the fraudulent abstraction of fare.

To enable others skilled in the art to make, construct, and use my invention, I will now proceed to describe its parts in detail, omitting a particular description of such parts of a fare-box as are common to other boxes and well known.

The box may be made in any suitable form and of any suitable material or combinations of material.

A box of suitable shape is represented in the drawing, consisting of four inclosed sides, a bottom, and curved top. In the front side A is arranged a glass light, B, or other transparent medium, through which the passengers can examine the fare when arrested on the apron C, another one, D, being similarly framed into the rear side E for the convenience of the driver or conductor in making his examination of the fare. Two other, but inclined, glass plates, F, are arranged on the inside, which act as guides for the fare to the arrest-apron C. As thus constructed the box is divided into two communicating chambers, G and H, by the tilting-apron C. Near the top of the upper or inspecting chamber G are mounted two fan-bladed wheels, I and I', on shafts *a*, having their bearings in the sides of the box, and the legs of the standards O that support the mouth-block K. These wheels are so arranged that the blades of the one are made to alternately overlap and be overlapped by the blades of the other, as shown in Fig. 1. Each shaft *a* at one end of the blades is provided with a pinion, *b*, which mesh with each other, and are of the same size and carry the same number of teeth. On the opposite end of each shaft, on the other side of the blades, is secured a ratchet-wheel, *c*, and on the outside of that again is loosely mounted a crank-lever, *d*, to the inner side of which (the side next the ratchet-wheels on the same shaft *a*) is secured a stud or pivotal pin, *e*, (see Fig. 5,) on which is hung a weighted pawl, *f*, so arranged as to mesh with the teeth of the ratchet-wheel *c*. To the lever *d* is connected, by means of a hinge-joint, a rod or lever, *g*, the other end of which is connected by a similar joint to an arm, *h*, formed on or otherwise secured to the frame *j* of the hinged gate or

door J that covers the mouth *i* of the box. The lever *g* near its lower end is connected, by means of a rod, K, to a spring-bar, *l*, made fast to a bar or supporting-beam, *m*, screwed to the side of the box.

Thus constructed, as the gate J is turned on its hinges—that is to say, raised by the passengers to unclothe the mouth to deposit their fare—its arm *h* drags with it the lever *g*, which, in turn, acting on the lever *d*, raises the pawl *f*, causing it to engage with the upper tooth of the ratchet-wheel *c*, it, in this respect, being arrested by the under side of the guide-plate N. The fare having been deposited and the hand removed, the spring *l*, acting on the lever *g* through the rod K, causes the latter to descend, carrying with it the gate J and pawl *f*, thereby turning the ratchet-wheel *c*, and with the latter the fan-bladed wheels I and I'. The movement of the ratchet-wheels is so graduated as to cause the blades of the wheels I and I' to perform so much of a revolution as will enable a fare to be dropped by the blade upon the arrest-apron C each time the gate is opened and shut. To prevent the wheels from turning too far a stop, 2, is attached to one of the levers *g*, which, as the latter descends, arrests the blade of the wheel I', as seen in Figs. 4 and 5. Usually the wheels will be provided with three or four blades and will in such case perform a third part of a revolution for three, and a fourth part for four blades, and in like proportion for any other number of blades; but these are deemed the preferable numbers.

In the drawing the box is represented as having a ratchet-wheel, *c*, lever *d*, pawl *f*, and connecting-rod *g* for each wheel; but one set may be sufficient for both, as their pinions *b* mesh with each other. At the same time it may be well to use both, as they will be apt to operate with more certainty and precision. The mouth *i* of the box is formed in a block, K. This block is curved in front and secured at each end to two metallic standard-plates O, which in turn are made fast to the inner face of the sides L of the box. The gate J is made of metal, and so curved as to conform to the external shape of the curved front of the block K, and is attached at each end to an arm, *j*, pivoted to the standards O at a point which forms the center of the circle of which the curve of the block K is the circumference. To one of the arms *j* is secured the arm *h*, by which the gate, as before stated, is connected to the lever *g* and other operative devices of the wheels I and I', for which purpose (the arm *j* being on the outside and lever *g* on the inside of the standard O) a curved slot, *t*, is cut in the standard O, into which plays the pivotal pin that connects the arm *j* and lever *g* together. In a line below the wheel I', to the front side A of the box, is secured, in any suitable manner, an inclined metallic plate, *n*, which extends the whole width of the box, and is provided on its lower edge with a series of saw-teeth throughout its length, similar to

those shown at *p*, Fig. 2, a similar plate, *n'*, being secured in like manner to the rear side E. While below these and below the wheels I, and centrally between them, (see Fig. 1,) is arranged a double or roof-shaped plate, *p*, similarly provided with saw-teeth on its lower edges, (see Fig. 2,) which extends all the way across the box, and is secured to the sides L. As thus constructed and arranged these plates *n n'* and *p*—in the event of any device being so operated as to pass the blades of the wheel and thence down to the arrest-apron C for fraudulent purposes—will arrest and strip the fare from such device as it is attempted to be withdrawn from the box. To the side of the box is attached a lamp-chamber, R, an opening, S, covered by a glass light, being made in the side of the box to admit the light of the lamp to the chamber G in order to illuminate the fare at night for inspection purposes.

The operation is simple. The passenger, by means of the lip *r*, raises the gate J until the mouth *i* is uncovered; he then deposits his fare and releases the gate, which is immediately closed by the reaction of the spring *l* on the connecting-link K, lever *g*, and arm *h* of the gate, which drags them down, and with them the gate, and in doing so, through the pawl *f* and ratchet-wheel *c*, causes the wheels I and I', as before stated, to perform a partial revolution, sufficient to precipitate the fare (just deposited and arrested on the blade of the wheel I) down upon the arrest-apron C for inspection, it, in its descent, passing over one side of the ridge-shaped plate *p*. At this stage it becomes the duty of the driver to inspect it, and which he does through the window D and glass guide F. When satisfied that the fare is correct, he then deposits it into the receiving-chamber H by pulling the rod *v*, which will cause the apron C to tilt and drop the fare.

The chamber H, although not so represented in the drawing, is intended to be provided with a locked drawer, as in my other patented boxes.

To prevent backward movement in the wheels I and I', a small spring-detent, *u*, secured to the side of the box, is arranged to engage with the teeth of the ratchet-wheel *c*.

Having described my invention, I claim—

1. The combination of a gate, J, for covering the mouth of a fare-box, with two rotating fan-bladed wheels, I, when constructed, arranged, and operated in the manner and for the purposes substantially as described.

2. In combination with two wheels, I, operating as described, I claim the ridge-shaped guard-plate *p*, for the purpose set forth.

3. In combination with the subject-matter of the second claim, I claim the guard-plates *n* and *n'*, as constructed and arranged, for the purpose set forth.

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Witnesses:

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