A. W. WOOD.

Change-Gates.

No. 140,986. Patented July 15, 1873.

Fig 1

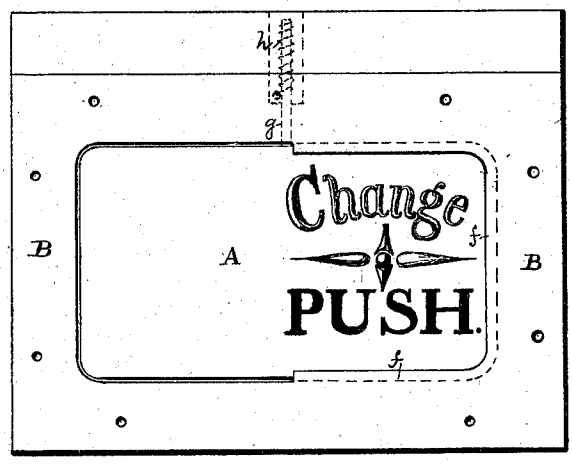


Fig 4

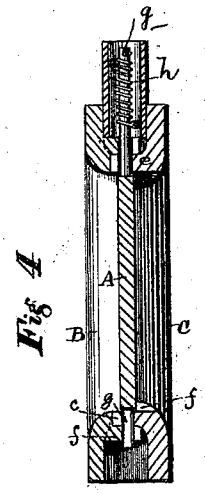


Fig 2

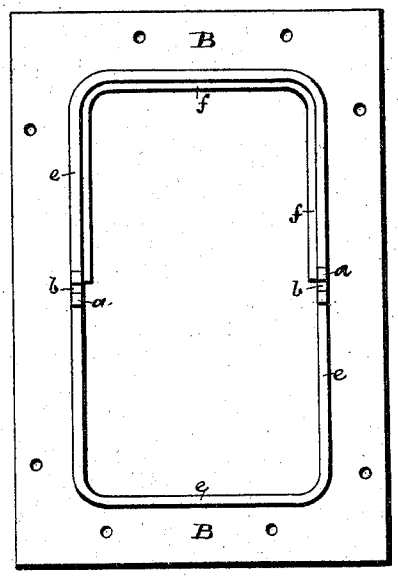
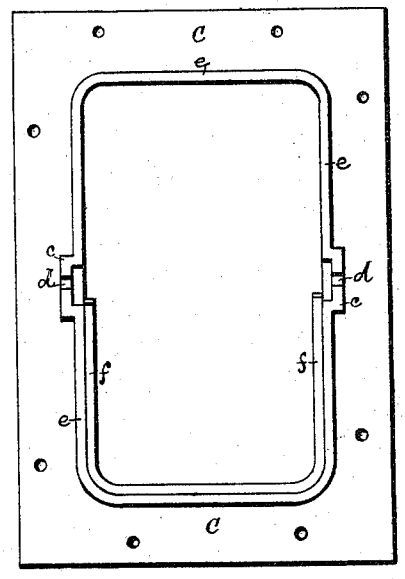


Fig 3



Witnesses –

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UNITED STATES PATENT OFFICE.

ALBERT W. WOOD, OF ST. LOUIS, MISSOURI, ASSIGNOR TO JOHN B. SLAWSON, OF NEW YORK CITY.

IMPROVEMENT IN CHANGE-GATES.

Specification forming part of Letters Patent No. **140,986**, dated July 15, 1873; application filed February 25, 1873.

To all whom it may concern:

Be it known that I, ALBERT W. WOOD, of St. Louis, in the county of St. Louis and State of Missouri, have invented certain Improvements in Change-Gates, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 represents an elevation of my improved change-gate, and Fig. 2 a cross-section of the same taken through the line *x x* of Fig. 1. Figs. 3 and 4 represent a plan of the inner face of the two halves of the gate-frame as arranged to be put together.

The object of my invention is to provide a cheap and simple self-closing gate, capable of being opened either from the outside or inside of the car, and not liable to get out of order, through which passengers can obtain change from the driver or conductor, it being more especially intended for use in connection with fare-boxes into which the exact fare has to be deposited, although it may be advantageously used irrespective of such. My invention consists in the use of a gate pivoted at or near its middle in a frame, so constructed as to allow each end of the gate to be moved only in one direction, and of a spring or other suitable device, so arranged, in connection therewith, as that its reaction shall automatically close the gate when the pressure of the hand is removed therefrom.

To enable others skilled in the art to make, construct, and use my invention, I will now proceed to describe its parts in detail.

The frame of the gate A consists of two parts, B and C, corresponding in all respects in size and construction, except that the lugs *a*, which form the bearings of the pivots *g* of the gate, differ in this, that in the one simple holes *b* are bored to form bearings for the pivots, while in the other lugs *c* slugs *d* are cut, the lugs *a* being so arranged on their frames B as to sit, when in place, on the inside of the slotted lugs *c*, the latter being arranged wider apart on their frame C for this purpose, as seen in Fig. 3, there being a depression formed in the frame C corresponding in shape to the lugs *a* for their reception. The openings in each half of the frame, within which the gate is arranged to operate, are provided with a flange, *e*, which runs all around with the exception of the space occupied by the lugs, forming as it were a seat for the gate, in addition to which the opposite end of each half is provided with another flange, *f*, projecting at right angles to the other flange *e* and having their faces looking in opposite directions from each other, against which the edges of the gate bear in such manner that the gate A can only be forced outwardly at the one end, and inwardly at the other, and in no other way—that is to say, it can only be pushed outwardly at the end marked "change, push" on the drawing, and inwardly from the outside at the other end.

The gate A may be made of any suitable size and shape. In practice, however, I find the rectangular form, in which the length is equal or nearly equal to double its width, answers an excellent purpose. If desired, the angle may be slightly rounded, as shown in the drawings.

On each side, at or near the middle of the gate, small pivotal pins *g* are secured in any suitable manner, as, for instance, by screwing them in, they, for this purpose, being inserted through the holes *b* in the lugs *a*, which form their bearings. Over the end of one of the pivots *g*, (or both, if desired,) and which projects between the sides of the gate-frame, and is prolonged for the purpose, is arranged a spiral spring, *h*, one end of which is fastened to the upper end of the pin *g* in any suitable manner, and the other to the gate-frame or frame of the car-door.

By this arrangement the gate when opened, no matter from what side, will be closed on the removal of the pressure of the hand, its further motion under the influence of the spring being arrested by the flanges *f*, which check it at that point that enables it to entirely close the opening through which change is made; or, instead of a spiral spring, a simple spring of suitable form and size may be firmly secured at one end to one or both of the pivotal pins *g*, while its other end is made to bear against the inner face of the gate-frame in such manner that it will be compressed when the gate

is opened, so that its reaction will close it when the hand is removed.

The operation is simple: The passenger simply pushes on that end of the gate A on which "change, push," or words of similar import, are painted or marked, when the gate will open and enable him, on calling the driver's attention, to procure change. On withdrawing his hand the gate will close automatically by virtue of the spring *h*. Should the driver wish to hand change—the gate being closed—he pushes on the opposite end, when it opens in the same manner. It, for this purpose, may also be marked with words similar to "change, push," if desired.

In order to call the attention of drivers or passengers, a bell may be arranged in connection with the gate, by which, as the latter opens, the bell may be rung.

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

1. In combination with a centrally-pivoted gate, A, a spring, *h*, as arranged to close the gate, in the manner described.

2. In combination with the gate A and spring *h*, or its equivalent, as described, a gate-frame consisting of two halves, B and C, provided with flanges *e* and *f*, when so arranged, with relation to each other, that the gate can only be opened from either side at one end only, substantially as described.

ALBERT W. WOOD.

Witnesses:
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