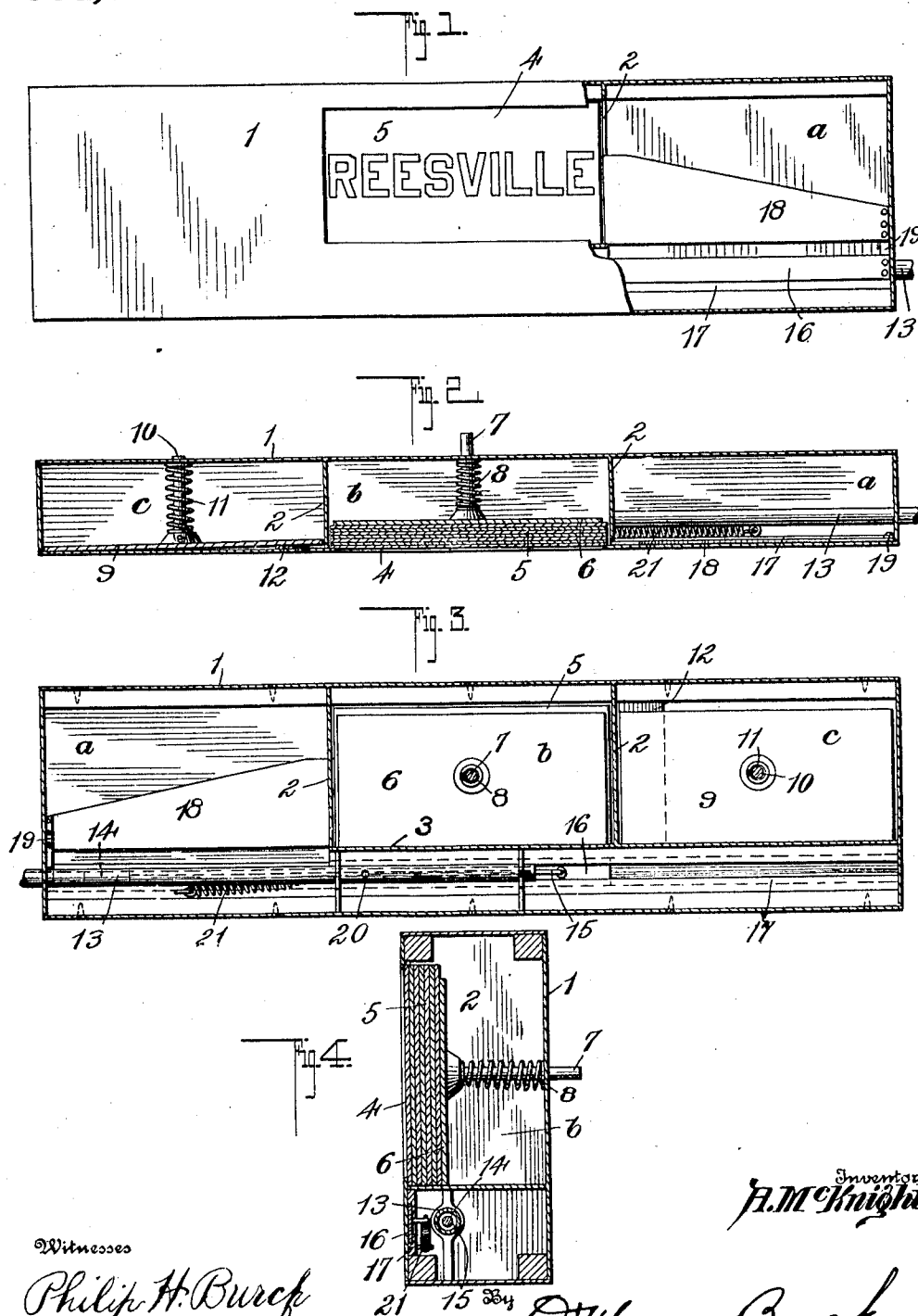


A. McKNIGHT.
COMPRESSED AIR DEVICE.
APPLICATION FILED MAR. 25, 1909.

984,512.

Patented Feb. 14, 1911.



Witnesses

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UNITED STATES PATENT OFFICE.

ALFRED McKNIGHT, OF WILMINGTON, OHIO.

COMPRESSED-AIR DEVICE.

984,512.

Specification of Letters Patent.

Patented Feb. 14, 1911.

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To all whom it may concern:

Be it known that I, ALFRED McKNIGHT, a citizen of the United States, residing at Wilmington, in the county of Clinton and State of Ohio, have invented a new and useful Improvement in Compressed-Air Devices, of which the following is a specification.

This invention relates to a device for displaying by means of compressed air cards having printed thereon names of stations, streets, or stopping points of street or railway cars.

The device can also be employed for shifting cards containing information of any desired kind, as for example cards at a large depot indicating arrival and departure of trains.

The invention consists of the novel features of construction hereinafter described, pointed out in the claims and shown in the accompanying drawings, in which,

Figure 1 is a front view of the device, the casing being partly broken away to show the interior construction. Fig. 2 is a longitudinal section through the casing. Fig. 3 is a rear elevation, the rear side of the casing being removed and the casing being shown in section. Fig. 4 is a transverse section on the line 4-4 of Fig. 2.

In these drawings, 1 represents a casing which is divided by means of vertical partitions 2 into three compartments, *a*, *b* and *c* of equal length. The compartments *b* and *c* are provided with a false bottom 3, the partitions extending only between said false bottom and the top of the casing. The compartment *b*, which is the central compartment is cut out on the front as at 4, to form a sight opening through which the printed matter upon the cards can be read. The cards 5 containing the printed matter are placed in the compartment *b*, and are held in proper position by a follower plate 6, which is provided with a rod 7 encircled by a coil spring 8, which spring bears respectively upon the back of the casing and upon the boss of the follower plate into which the rod 7 is secured. The rod 7 which acts as a guide rod is journaled in the back of the casing.

The partitions separating the compartments are vertically slotted or cut away adjacent the front wall of the casing, thus affording communication between the said compartments. In the compartment *c* is placed a follower plate 9, having also a rod

10 and spring 11, similar to those in the compartment *b* and the plate 9 is slightly spaced from the front wall of the casing adjacent the opening in the partition 2 separating the compartments *b* and *c* by means of a wedge fillet 12. Within the casing and extending lengthwise through the lower portion of the compartment *a*, and beneath a portion of the false bottom 3 is a compressed air pipe 13 which forms a cylinder within which works a piston 14 to which is connected a piston rod 15 which projects from the inner open end of the pipe 13, and the outer end of the piston rod curves laterally and is secured to a slide 16, which is of greater length than the portion of the pipe 13 inside the casing, and this slide works in a guide way 17 carried by the front of the casing and below the sight opening 4. Working in the compartment *a* and sliding through the partition into the compartment *b* is a plunger plate 18 which is connected to the slide 16 by means of a vertical strap 19. The air pipe 13 is provided with a side vent 20, and a spring 21 is secured at one end to the casing and at the other end to the slide 16, and returns the parts to their normal position.

The operation of the device is as follows: The cards are arranged in proper order and are then placed in compartment *b*, being held in proper position by the follower plate 6. This displays the printed matter upon the first card. When the second card is to be brought into view compressed air is admitted to the pipe 13, the piston 14 is pushed forward, thus moving the slide 16 which in turn moves the plunger plate 18. This plate in sliding through the partition separating compartments *a* and *b* strikes the end of the first card, the card being about one-eighth of an inch thick, and the card is forced through the cut out portion of the other partition into position back of the follower plate 9, the fillet 12 permitting the card to enter behind said plate. When the piston 14 passes the vent 20 the air will be exhausted from the pipe, and the spring 21 will then return the piston, piston rod, slide and plunger to their normal positions. This causes the plunger to uncover the sight opening 4, and the follower plate 6 will move forward one-eighth of an inch thus placing the second card in alinement with the cut out portions of the partitions, and this card will be held in front of the sight opening 4 until air is again admitted into the pipe 13,

when the second card will be moved in the same way as the first from the compartment *b* to compartment *c* and the third card will then be displayed.

5 What I claim is:—

1. A casing divided into three compartments of equal length, the central compartment having a sight opening, a false bottom extending under two of said compartments,
10 all of said compartments communicating with each other adjacent the front of the casing, card holding means arranged in the central compartment and holding cards in alinement with the sight opening, an air
15 pipe extending into the lower part of the casing to a point beneath the false bottom, a piston therein, a piston rod, a slide working in the lower portion of the casing and connected to the piston rod, and a plunger
20 plate connected to said slide and movable from one compartment to another, said plunger plate adapted to move the cards one at a time from the central compartment to an adjacent compartment, as and for the purpose
25 set forth.

2. A device of the kind described comprising a plurality of compartments, spring

pressed follower plates arranged in two of said compartments, a wedge fillet arranged in one compartment and coöperating with
30 one of the follower plates, the other compartment having a sight opening therein, cards held in alinement with said sight opening by one of the follower plates, the compartments communicating, a compressed
35 air pipe arranged in the lower portion of the casing, a guide way formed in the casing, a slide in the guide way, a piston working in the compressed air pipe, a piston rod card next to the sight opening and adapted
40 erally, said piston rod being connected to the slide, and a slidable plunger plate, said plunger plate sliding longitudinally in the casing and adapted to engage the end of the
45 card next to the sight opening and adapted to move the same from beneath one follower plate to the other, the said plunger plate being connected to the slide, and a spring for returning said parts to their normal positions.

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Witnesses:

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