

(No Model.)

J. D. VAIL.  
INDICATOR FOR DOORS.

No. 391,215.

Patented Oct. 16, 1888.

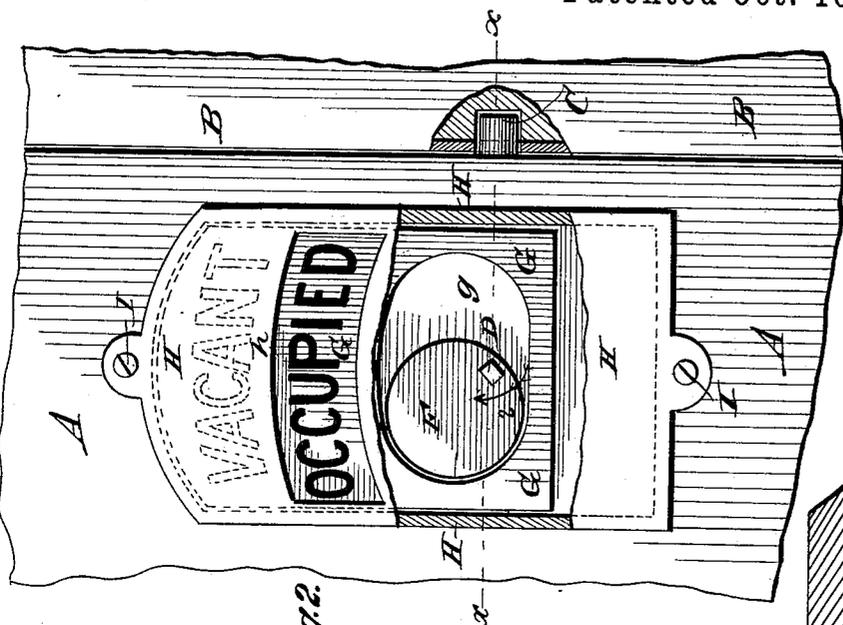


Fig. 2.

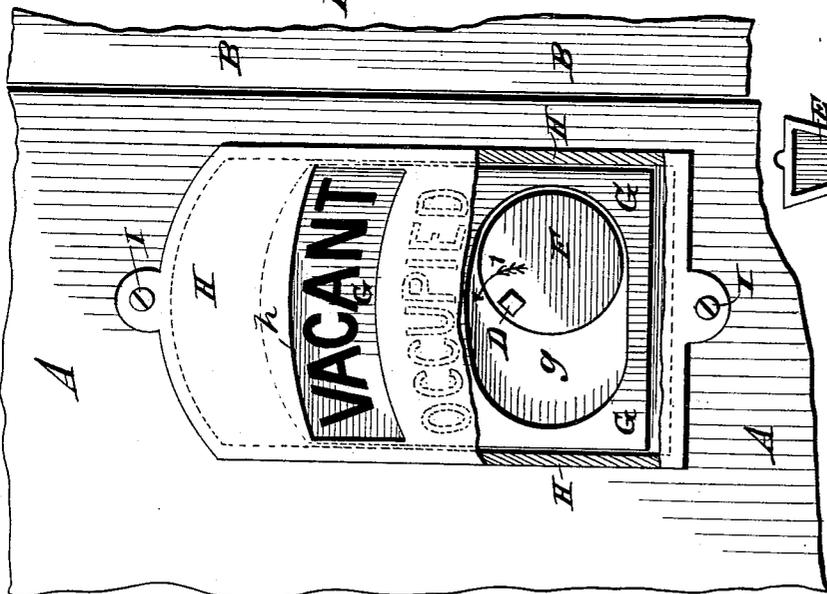


Fig. 1.

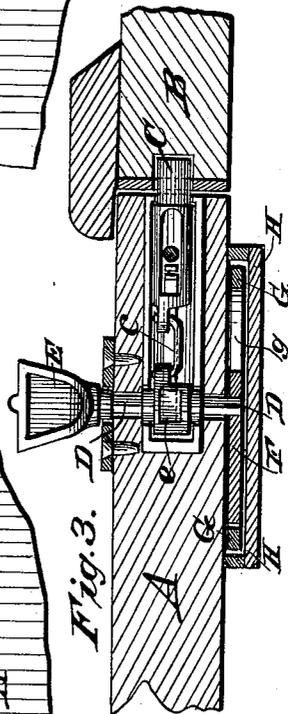


Fig. 3.

WITNESSES:

*Phil. C. Dietrich.*  
*W. Bedgwick*

INVENTOR:

*J. D. Vail*  
BY *Munn & Co.*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN D. VAIL, OF BLAIRSTOWN, NEW JERSEY.

## INDICATOR FOR DOORS.

SPECIFICATION forming part of Letters Patent No. 391,215, dated October 16, 1888.

Application filed August 1, 1888. Serial No. 281,625. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN D. VAIL, of Blairstown, in the county of Warren and State of New Jersey, have invented a new and Improved Indicator for Doors, of which the following is a full, clear, and exact description.

My invention relates to a device designed especially for indicating whether a room is vacant or occupied, but applicable also for indicating whether a person is at or away from his place of business; and the invention has for its object to provide a simple, inexpensive, and efficient device of this character.

The invention consists in certain novel features of construction and combinations of parts of the indicator, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front view of parts of a door and its casing or jamb with my improved indicator applied and partly broken away and in section, the door-bolt being withdrawn. Fig. 2 is a front view of the same parts, showing the door-bolt projected; and Fig. 3 is a transverse section taken on the line *xx* in Fig. 2.

The door A, which is arranged to close to or at the casing or jamb B, may have any approved construction, and may control entrance to a private office or consulting-room, a bathroom, or water-closet, or a state-room on ship-board. To the door is fitted a bolt or latch device by which the door may be locked closed by a person within the room. This bolt may have any ordinary or approved construction, provided its locking-bar C is connected for projection or withdrawal to a spindle, D, which projects through the door and carries at the inner face of the door a finger plate or piece, E, by which the spindle may be turned to operate the locking-bar. In the drawings the bar C is connected by a link, e, with a block or hub plate, e, which is fitted on and turns with the spindle. The spindle projects through or past the outer face of the door and to it is fixed eccentrically a cam-plate, F, which is adapted for operation between opposing walls of a slot, g, made in a plate, G, which is fitted to slide in suitable ways or guides held to the outer face of the door, said

ways or guides being preferably the front and side walls of a thin light casing or box, H, which may be held to the door in any suitable manner, but preferably by means of upper and lower screws I I, as shown in the drawings. The casing H is provided with a face slot or opening, h, through which may be clearly seen either one of two words, "Vacant," or "Occupied," which are printed, marked, cast, or otherwise produced on the outer face of the indicator-plate G, one word above the other and both over the transverse slot g of the plate.

The operation of this indicator is as follows: As the occupant of the room closed and locked by the door A and bolt C is about to leave, he, by turning the spindle D in direction of the arrow 1 in Fig. 1 of the drawings, will withdraw the bolt-bar C from the casing or jamb B and simultaneously rotate or partially rotate the cam-plate F in the indicator-plate slot g, and thereby lower the plate G to conceal the word "Occupied" and bring the word "Vacant" to view. When a person enters the room and closes the door A and turns the spindle D in direction of the arrow 2 in Fig. 2 of the drawings, he will project the bolt-bar C into the casing B, and at the same time will turn the cam-plate F in the indicator-plate slot g and lift the plate and hide the word "Vacant" and bring the word "Occupied" to view, thus clearly indicating that exclusion of visitors is desirable.

It is obvious that by reversing the position of the cam-plate F on the spindle D the indicator device may be readily adapted to right or left hand doors.

The entire device is very simple and can be made at a trifling cost, and may be applied by any person of ordinary intelligence, and has marked advantages over an indicator provided with a rotating indicator-plate shown in my prior patent, No. 345,339, dated July 13, 1886, in that with the cam-plate F fitting rather closely within a slot of the reciprocating indicator-plate there is little or no lost motion which can cause the plate to carry its word-symbols "Vacant" or "Occupied" into positions other than central with relation to the front opening of the case in which the plate operates; hence the words will always appear at the center of the opening, which cannot be assured when a rotating indicator-plate is

turned by or through the medium of the bolt or lock spindle.

The herein-described indicator may be used without connecting it with a door-bolt, and with other word-symbols upon its reciprocating plate—"Out" and "In," for instance—and the spindle-turning finger-plate E will in this case be mounted on either end of the spindle which carries the cam, and as will readily be understood.

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

1. The combination, in an indicator, of a slideway or casing, an indicator-plate carrying word-symbols, as "Vacant" and "Occupied," and fitted for reciprocation in said slideway, a spindle, and a cam device held thereto and operating the plate, substantially as herein set forth.

2. The combination, in an indicator, of a slideway or casing, an indicator-plate carrying word-symbols and fitted for reciprocation

in said slideway, a spindle, a cam device held thereto, and a bolt connected to the spindle and operated therefrom simultaneously with the movement of the indicator-plate, substantially as herein set forth.

3. The combination, in an indicator, of a casing, H, slotted at *h*, a reciprocating plate, G, having a slot, *g*, and fitted in the casing, a spindle, D, and a cam-plate, F, fitted to the spindle and in the plate-slot *g*, substantially as herein set forth.

4. The combination, in an indicator, of a casing, H, slotted at *h*, a reciprocating plate, G, having a slot, *g*, a spindle, D, a cam-plate, F, on the spindle and in the plate-slot *g*, and a bolt connected to the spindle and operated therefrom simultaneously with the movement of the indicator-plate, substantially as herein set forth.

JOHN D. VAIL.

Witnesses:

JOHN I. BLAIR,  
E. H. FREEMAN.