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W. K. CROFFORD.

DOOR HOLDER FOR SHIPS' CABINS.

APPLICATION FILED MAY 24, 1901. RENEWED JAN. 27, 1905.

Fig. 1.

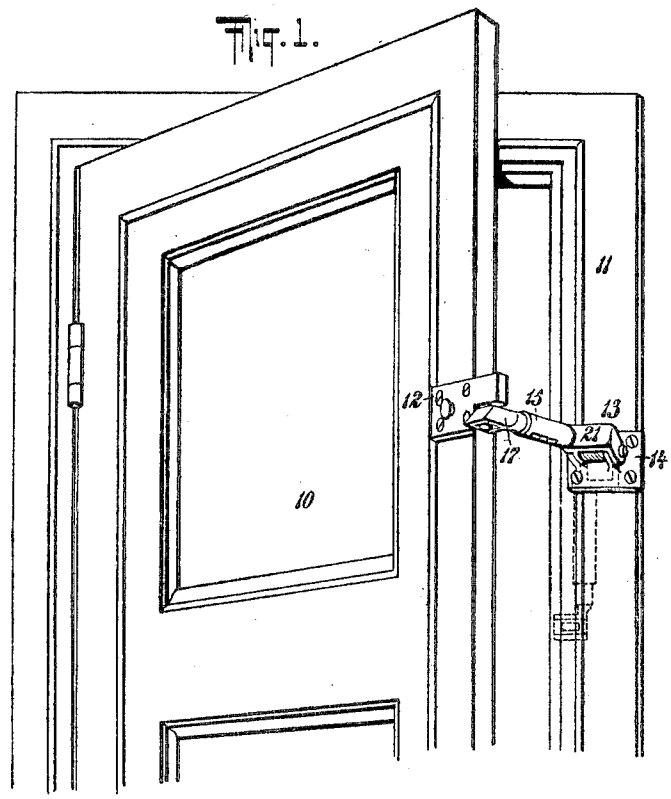


Fig. 5.

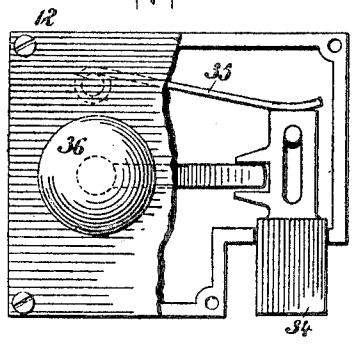


Fig. 2.

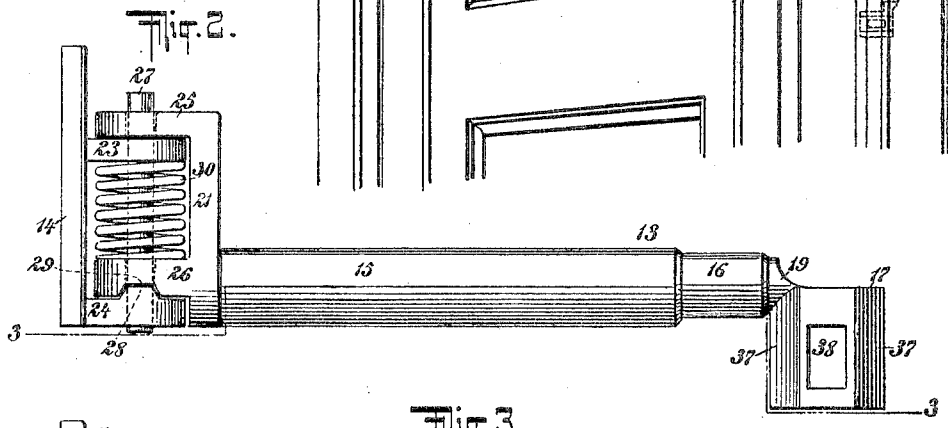


Fig. 3.

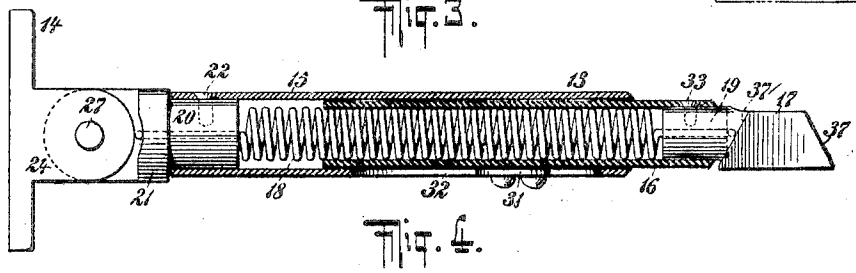
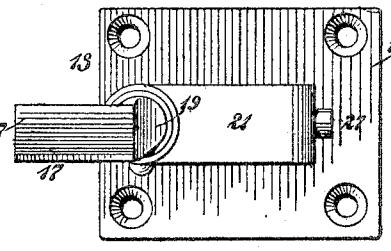


Fig. 4.



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UNITED STATES PATENT OFFICE.

WARREN K. CROFFORD, OF NEW YORK, N. Y.

DOOR-HOLDER FOR SHIPS' CABINS.

No. 797,562. Specification of Letters Patent. Patented Aug. 22, 1905.

Application filed May 24, 1901. Renewed January 27, 1905. Serial No. 242,892.

To all whom it may concern:

Be it known that I, WARREN K. CROFFORD, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Door-Holders for Ships' Cabins, of which the following is a specification.

The invention relates to improvements in door-holders for ships' cabins; and it consists in the novel features, combinations, and arrangements of parts hereinafter described, and particularly pointed out in the claims.

The object of the invention is to provide an adequate, convenient, and durable means for holding the door of a ship's cabin in a partly-open position for purposes of ventilation.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a door-holding device constructed in accordance with and embodying the invention, the said device being shown in its operative position holding the door of a ship's cabin partly open. Fig. 2 is a detached top view of the door-holder. Fig. 3 is a longitudinal section of same on the dotted line 3 3 of Fig. 2. Fig. 4 is a front end view of the door-holder; and Fig. 5 is an enlarged detached view, partly broken away, of a spring-latch carried by the door for coöperation with the door-holding device which is to be applied to the door-casing as indicated in Fig. 1.

In the drawings, 10 designates a customary form of door; 11, the usual door-casing or frame therefor; 12, a spring-latch casing applied to the outer edge of the door, and 13 the door-holding device to be applied to the door-casing 11 in position to coöperate with the spring-latch carried by the door for holding the door in a partly-open position.

The door-holder is more clearly illustrated in Figs. 2 and 3 and comprises the bracket 14, by which the holder is secured by screws to the door-frame 11, the tubular body 15, hinged at its inner end to said bracket 14, the inner tube 16, the plate or keeper 17, carried at the outer end of said tube 16, and the inclosed coiled spring 18 within the tubes 15 and 16 and secured at its opposite ends, the outer end of said spring 18 being secured to the plug 19, connected with the plate or keeper 17, while the inner end of the said spring 18 is secured to the plug 20, which is integral with the frame 21 and enters the inner end of the tubular body 15, being there secured by the screw 22 or other convenient means.

The bracket 14 is formed with the ears 23 24, and the frame 21 is formed with the ears 25 26, which ears 23 to 26, inclusive, are brought together upon the pin 27, so that the main body of the door-holder may have a hinged motion upon said pin 27, whereby the said holder may be moved to a horizontal position, as shown by full lines in Fig. 1, or to a vertical inoperative position, as indicated by dotted lines in Fig. 1. The upper surface of the ear 24 is formed with the lug 28, and the lower surface of the ear 26 is formed with the corresponding groove 29, the edges of said lug 28 and groove 29 being beveled or cam-shaped, as indicated in Fig. 2. The spindle 27 passes through free apertures in the ears 25 and 26, and between the ears 23 and 26 is applied the coiled spring 30, which exerts its tension to press the ear 26 against the ear 24 of the bracket 14. When the body of the holder is turned to a horizontal position, the lug 28 in the ear 24 will engage the groove 29 in the ear 26 and serve to yieldingly lock said body in a horizontal position. When it is desired to turn the body of the holder downward against the door-casing to the position indicated by dotted lines in Fig. 1, the groove 29 in the ear 26 will be turned from and at substantially right angles to the lug 28 of the ear 24, and at such time there will be a compression of the spring 30, due to the lateral movement of the frame 21 on the pin 27. The spring 30 will possess sufficient force to rather firmly hold the body of the holder against rattling when said body is turned downward against the door-casing and also sufficient force to maintain the said body in its horizontal position. When the body of the holder is turned to its horizontal position, the spring 30 will be aided in there holding it by means of the lug 28 and groove 29, then being in engagement with each other. The plug 20 may be cast integrally with the frame 21, and to this plug 20 the tubular body 15 is rigidly secured.

The inner sliding tube 16 is intended to move both inward and outward when required and will be guided in its movement by means of a small plate 31, secured to the tube 16 and adapted to play within the slot 32, formed in the tubular body 15. It is desirable that the tube 16 shall not rotate to any great extent within the tubular body 15, since if said tube

16 were thus permitted to rotate the plate or keeper 17 might lose its proper operative position. The plate or keeper 17 may be formed integrally with the plug 19, and said plate and plug are secured to the sliding tube 16 by means of a screw 33 or other convenient means. The plate or keeper 17 projects laterally to one side of the body of the holder, so that it may be engaged by the latch-bolt 34, confined within the latch-casing 12 and normally adapted to be projected therefrom by means of the spring 35. The latch-bolt 34 may be moved into the latch-casing 12 by means of a suitable knob or handle 36 in a well-known manner. The plate or keeper 17 has its opposite edges beveled, as at 37, and in the central portion of said plate or keeper 17 is provided the vertical aperture 38 to receive the lower end of the latch-bolt 34. The object in providing the beveled surfaces 37 on the plate or keeper 17 is during the movement of the door 10 to enable the latch-bolt 34 to ride upward upon the plate or keeper 17, so that said latch-bolt 34 may reach and enter the opening 38 in said plate or keeper 17.

In the employment of the invention, the parts being in position upon the door and door-casing, the body of the holder will be turned upward to its horizontal position and the door moved toward the plate or keeper 17 until the latch-bolt 34 rides upward upon said plate and enters the aperture 38 therein, in which position and condition of parts the door will be held in its partly-open position. The holder may be removed from the latch-bolt 34 by turning the holder downward or by means of the knob or handle 36 for the latch-bolt.

When the door of a ship's cabin is in a partly-open position, it is probably more than at any other time affected by the jarring and tossing of the vessel, and it is desirable that at such time the strain should be relieved as far as possible from the door and also that means be provided for avoiding the usual noises caused by the wrenching of the door, and with these purposes in view I provide the sliding sleeve 16 and inclosed spring 18, the latter permitting the inward motion of the sleeve 16, as well as the outward movement thereof, and being adapted to cushion the door and parts connected therewith both during the inward and outward thrusts of the door.

My invention is designed more particularly to meet the want which is probably experienced by almost all ocean travelers for adequate means to properly and conveniently hold the door of a ship's cabin in a partly-open position; but it is also applicable for holding the door in an entirely-open position. The holder 13 may be applied to the wall of the cabin in position to engage the latch-bolt 34 when the door is opened to its full limit.

I do not limit the invention to all of the details of construction shown and described; but the construction shown and described is the most efficient and desirable one at present known to me.

An obvious change in the construction within the scope of my invention would be the transposition of the plate or keeper 15 and latch-bolt 34. It is apparent that the latch-bolt 34 might be applied to the outer end of the holder 13 and the plate or keeper 17 placed on the door in position to be engaged by the latch-bolt then on the holder. The plate or keeper 17 and latch-bolt 34 comprise engaging means, one part carried by the door and the other part by the holder, and the transposition of such parts, as above referred to, would not be a departure from the spirit and scope of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a door-holder adapted to hold a door open and yieldingly resist the movement of the open door in either direction, an elongated body, a securing-bracket to which said body is hinged, means for, independently of the door, locking said body in vertical position when it is not in use and in projecting horizontal position when it is in use, and a locking device on the outer end of said body, combined with means to be engaged with said locking device when the door is open, for holding the door in an open position, and a spring adapted when in its normal condition to cushion said devices against the thrusts exerted by the jarring of the open door in either direction; substantially as set forth.

2. The door-holder comprising the body having the sliding section, the spring connected with said section and capable of compression and expansion under the force applied to said section, and a locking device on the outer end of said sliding section, combined with the spring latch-bolt to be engaged with said locking device when the door is open, for holding the door in an open position; substantially as set forth.

3. The door-holder comprising the body having the sliding section, the spring connected with said section and capable of compression and expansion under the force applied to said section, and the laterally-projecting keeper on the outer end of said section and having the receiving-aperture and inclined edge leading thereto, combined with the bolt to be engaged with said keeper when the door is open, for holding the door in an open position; substantially as set forth.

4. The door-holder adapted to hold a door open and yieldingly resist the movement of the open door in either direction, said holder comprising the body having a sliding section, the securing-bracket to which said body is hinged, means for, independently of the door, locking said body in a substantially horizontal position, a locking device on the outer end

of said section, and an interposed spring in its normal condition cushioning said locking device against jar in either direction under the thrusts that may be exerted against it when the holder is in use, combined with means to be engaged with said locking device when the door is open, for holding the door in an open position; substantially as set forth.

5. The door-holder comprising the body having the sliding section, the frame at the inner end of said body and having the ears 25, 26, the securing-bracket having the ears 23, 24 to coöperate with said ears 25, 26, the pin 27 passing through said ears, the spring 30 on said pin between the ears 23, 26, a locking device on the outer end of said body, and an interposed spring cushioning said locking device, combined with means to be engaged with said locking device when the door is open, for holding the door in an open position; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 22d day of May, A. D. 1901.

WARREN K. CROFFORD.

Witnesses:

CHAS. C. GILL,

GUNDER GUNDERSON.