

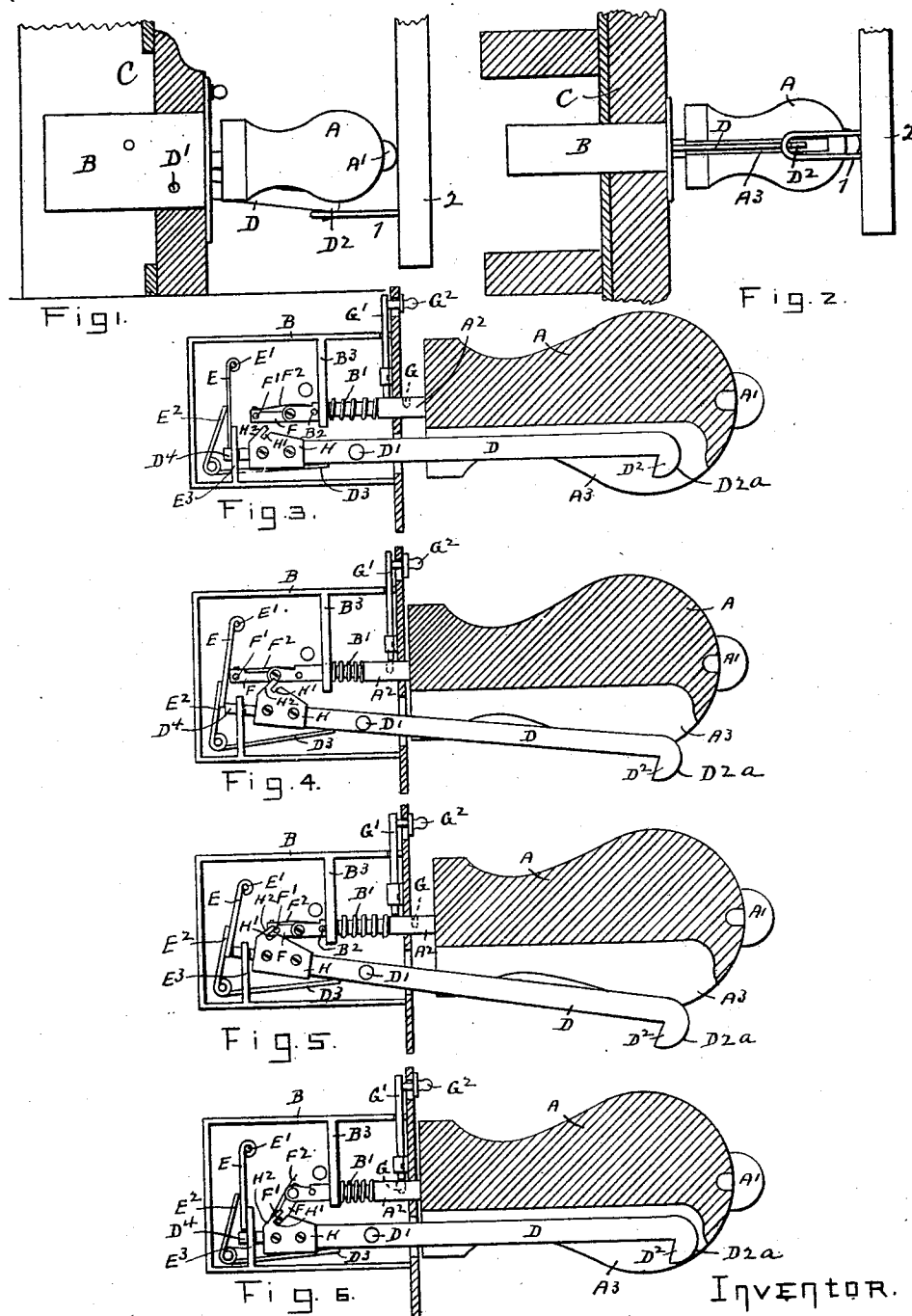
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P. CHANDLER.
COMBINED DOOR CATCH AND BUFFER.

(Application filed July 11, 1898.)

(No Model.)



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COMBINED DOOR CATCH AND BUFFER.

SPECIFICATION forming part of Letters Patent No. 632,043, dated August 29, 1899.

Application filed July 11, 1898. Serial No. 685,688. (No model.)

To all whom it may concern:

Be it known that I, PERLEY CHANDLER, a citizen of the United States, residing at Barre, Washington county, and State of Vermont, have invented certain new and useful Improvements in a Combined Door Catch and Buffer, of which the following is a specification, accompanied by drawings representing a combined door catch and buffer embodying my invention.

Figure 1 is a side elevation of my combined door catch and buffer. Fig. 2 is a bottom view of the same. Fig. 3 is a vertical central sectional view showing the door-catch in position to engage the door when it is swung against the buffer. Fig. 4 is a vertical central sectional view showing the door-catch in position to engage the door with the buffer pushed back by the pressure of the door against it. Fig. 5 is a vertical central sectional view showing the buffer in its normal position with the door-catch in position to engage the door. Fig. 6 is a vertical central sectional view showing the door-catch withdrawn into the recess of the buffer with the buffer locked back, holding the door-catch in an inoperative position.

Similar letters and numerals refer to similar parts in the different figures.

The object of my invention is to provide a combined door catch and buffer adapted to receive the impact of the door when it is swung open and also to automatically engage the door and hold it open, with means for either permanently latching the door open or holding the door-catch in an inoperative position, so that the device can be used simply as a buffer; and it consists in the construction and arrangement of parts, as hereinafter described, and set forth in the annexed claims.

Referring to the drawings, A denotes the buffer, preferably provided with a block of rubber A' in its end to receive the contact of the door. The buffer A is mounted upon a spindle A², capable of sliding in bearings in a shell or case B, which incloses the door-catch-actuating mechanism and is inserted in a mortise formed in the base-board C. The spindle A² is pushed outwardly by a spiral spring B', which normally holds the buffer A a short distance away from the base-board, its

outward movement being limited by a pin B³ striking against a fixed partition B³ in the case B. The buffer A is provided with a recess A³ on its under side adapted to receive the door-catch D, which is pivoted upon a stud D', held in the case B and having its outer end D^{2a} rounded and provided with a hook D², adapted to engage a staple 1, projecting from the side of a door 2.

D³ is a spring exerting a pressure upon the catch D to throw the hook D² out of the recess A³ and into position to engage the staple 1 on the side of the door.

E denotes a latch pivoted upon a stud E' and having its free end adapted to bear against the end D⁴ of the catch D and hold it against the tension of the spring D³ with the hook D² of the catch inclosed within the recess A³.

E² denotes a spring bearing against the latch E, by which it is moved into contact with the end D⁴ of the door-catch.

Pivoted to the end of the sliding spindle A² is a pawl F, having a projecting pin F' and provided with a spring F², attached to the pawl and bearing against the side of the sliding spindle A² for the purpose of holding the pawl normally in alinement with the sliding spindle A². The spindle A² is provided with a hole G, (represented by broken lines,) adapted to receive the end of a spindle G', sliding in suitable ways within the case B and provided with a projecting knob G², by which the spindle G' is pushed into the hole G for the purpose of locking the sliding spindle A² and holding it against the tension of the spiral spring B', as hereinafter described.

Attached to the pivoted catch D is a plate H, provided with a notch H', adapted to be engaged by the projecting pin F', carried by the pawl F, and having an inclined or cam surface H² to allow the pin F' to slide by the end of the plate H into position to engage the notch H'.

Assuming the normal position of the operative parts as represented in Fig. 3, the operation of my improved device is as follows: When the door is swung open against the rubber block A' in the end of the buffer, the sliding spindle A² is pushed into the case B, compressing the spring B' and carrying the end of the pawl F against the latch E, which

moves it against the tension of the spring E³ out of engagement with the end D⁴ of the pivoted door-catch D and allowing the spring D³ to rock the door-catch D upon its pivotal stud D' and move the hook D² out of the recess A³ and into engagement with the staple 1, which is in position when the door is in contact with the buffer to be engaged by the hook D². The position of the operating parts will then be represented in Fig. 4, which shows the pawl F in contact with the latch E, which has been raised out of engagement with the end D⁴ of the latch D. When the hook D² is moved out of the recess A³ by the spring D³, the opposite end D⁴ is moved toward the pawl F, carrying the notched edge of the plate H into the position shown in Fig. 4 and in front of the pin F'. The release of the buffer A from the pressure of the door allows the spiral spring B' to move the sliding spindle A² outwardly, causing the pin F' to slide over the inclined surface H² of the plate H and drop into the notch H', as represented in Fig. 5, with the latch E resting upon the end D⁴ of the pivoted door-catch D and hook D² of the door-catch D in position to engage the staple 1 of the door. When the door is engaged by the hook D², as shown in Fig. 2, it is released by pushing it against the buffer A to move the sliding spindle A² inwardly, when the engagement of the pin F' with the plate H will reverse the motion of the pivoted catch D and carry it into the position shown in Fig. 6, allowing the latch E to be carried against the end D⁴ of the door-catch D, thereby releasing the door and locking the door-catch in position with its hook D² inclosed in the recess A³, as represented in Fig. 6.

40 Removing the pressure of the door from the buffer A allows the spiral spring B' to force the buffer outwardly and bring the operative parts of the mechanism into their normal position, as shown in Fig. 3, when the impact of the door against the buffer-block A' will move the latch E and release the door-catch, as already described.

The action of the sliding spindle A² will cause the door-catch D to be alternately moved into the recess A³ of the buffer and locked therein and moved out of the recess A³ into position to engage the staple 1 of the door, so that the pressure of the door against the buffer serves to cause the door to be engaged by the hook D² and released therefrom.

By engaging the spindle G with the hole G' the sliding spindle A² and buffer A are locked against longitudinal movement. If the buffer A is locked in position, when the hook D² is in the position shown in Fig. 4 the staple 1 will pass over the rounded end D^{2a} and be engaged by the hook D², which must then be released by hand in order to close the door; but if the buffer is locked in position when the hook D² is inclosed within the recess A³, as shown in Fig. 6, then the

door-catch is rendered inoperative and the device can be used as a door-buffer alone.

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

1. In a combination door buffer and catch, the combination of a sliding door-buffer arranged to be moved in one direction by the impact of the door, a spring by which the motion of the buffer is reversed, a pivoted door-catch adapted to engage the door, a spring by which said catch is carried into an operative position to engage the door, a latch by which said door-catch is locked in an inoperative position, and operative mechanism by which said latch is released by the movement of said buffer, substantially as described. 70 75 80

2. The combination of a sliding buffer, a pivoted door-catch having a hook at one end arranged to engage the door when in contact with the buffer, a pawl carried by said sliding buffer adapted to engage the opposite end of said door-catch and disengage it from the door, substantially as described. 85 90

3. In a combined door-buffer and door-catch, the combination of a sliding door-buffer, a pivoted door-catch, and intermediate actuating mechanism by which said pivoted door-catch is alternately carried into and out of operative position by each sliding movement of said buffer, substantially as described. 95

4. The combination of a sliding buffer, a pivoted pawl carried by said buffer, a pivoted door-catch provided with a notch to be engaged by said pawl, whereby the door-catch is rocked on its pivot, a latch for retaining said door-catch, means for releasing said latch, and a spring for reversing the motion of said door-catch, substantially as described. 100 105

5. The combination of a sliding buffer arranged to be moved in one direction by the impact of the door, a pivoted door-catch, a spring for moving said door-catch into an operative position to engage the door, means for moving said door-catch into an inoperative position by the sliding movement of the buffer, a latch for retaining said catch in an inoperative position, means for releasing said latch by the sliding movement of the buffer and means for locking said buffer against a sliding movement, substantially as described. 110 115

6. The combination of a sliding buffer, a pivoted door-catch, intermediate connecting mechanism between said sliding buffer and said pivoted catch, whereby said pivoted catch is alternately carried into and out of operative position by each sliding motion of said buffer, and means for locking said buffer against sliding movement and thereby permanently maintaining said catch either in or out of operative position, substantially as described. 120 125

7. The combination of a sliding buffer, a pivoted door-catch adapted to engage the door when in contact with said buffer, a retaining- 130

- latch by which said catch is held in an inoperative position, a notched plate carried by said catch, a pivoted pawl carried by said buffer and adapted to alternately engage said notched plate and actuate said pivoted catch, or said retaining-latch and release said catch and a spring by which said catch is carried into an operative position, substantially as described.
- 10 8. The combination with a sliding buffer arranged to be moved in one direction by the impact of the door, of a spring by which the motion of said buffer is reversed and a door-catch arranged to engage the door when in contact with said buffer, said buffer and said door - catch being operatively connected whereby the sliding motion of said buffer is made to alternately carry said door-catch into and out of operative position, substantially as described.

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