E. S. HUBBELL.

DOOR LATCH.

APPLICATION FILED MAY 16, 1912.

1,055,535. Patented Mar. 11, 1913.

FIG. 1

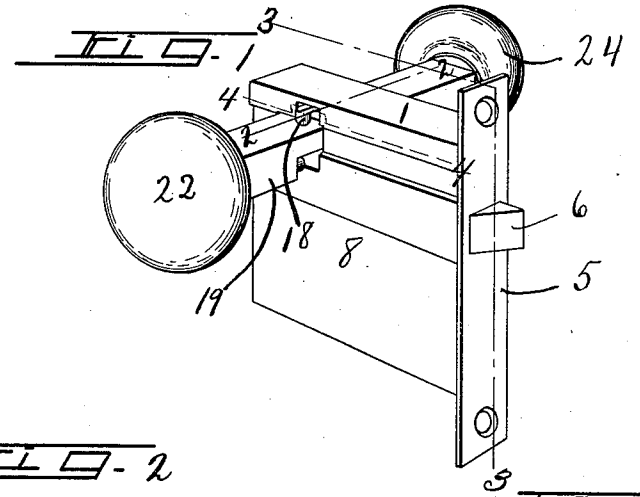


FIG. 2

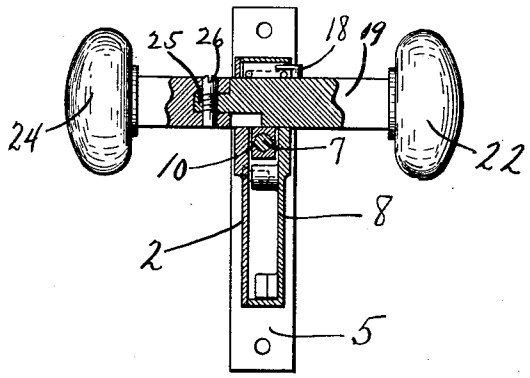


FIG. 3

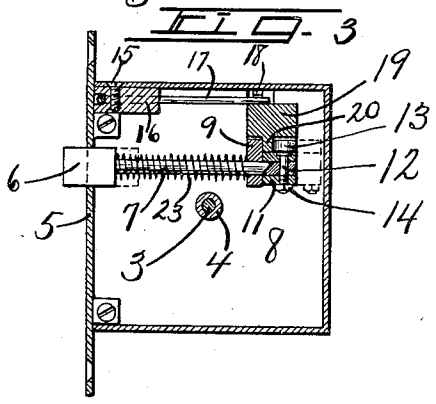


FIG. 4

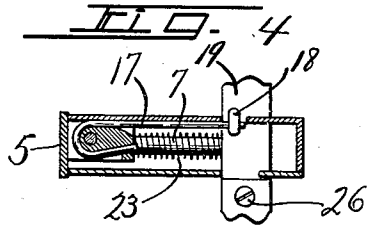
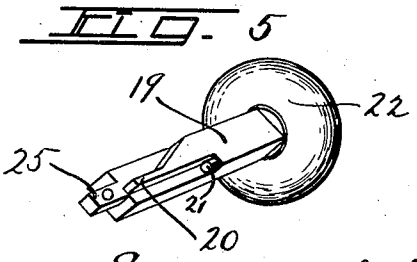


FIG. 5



Witnesses:

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DOOR-LATCH.

1,055,535. Specification of Letters Patent. Patented Mar. 11, 1913.

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To all whom it may concern:

Be it known that I, EDWARD S. HUBBELL, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Door-Latches, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to door latches and pertains more particularly to that class of latches constructed with a knob on either side of the door.

The object of my invention is to provide means of simple and inexpensive construction whereby the latch may be withdrawn from the adjacent casing and the door opened by simply pushing on one knob or pulling on the other. Heretofore in constructing latches operating in a similar manner it has been customary to have a spring acting directly on the latch for forcing it back into engagement with the adjacent casing and indirectly returning the knob to its normal position. In order to move the knob by moving the latch it was necessary to employ a very strong spring and even then the action upon the door spindle was not positive.

A further object, therefore, is to provide positive means for retracting the knob spindle to its normal position.

Having the above objects and uses in mind, my invention consists in the new and novel features of construction and operation hereinafter described in connection with the accompanying drawing forming a part thereof, in which—

Figure 1 is a perspective view of a door latch case. Fig. 2 is a cross section on line 2—2, Fig. 1. Fig. 3 is a cross section on line 3—3, Fig. 1. Fig. 4 is a cross section on line 4—4, Fig. 1. Fig. 5 is a perspective view of one part of the knob spindle showing the wedge-shaped portion on the lower side thereof.

1— is a shell having a removable face plate —2— held in position by screw —3— projecting into the internal threaded projection —4—.

The plate —5— has an opening therethrough for the latch end —6— on latch-bolt —7—. The plate —8— has an upright projection —9— having an aperture —10— therethrough for the passage of latch-bolt —7—. Upon the end of the latch bolt is fitted a stop —11—. Downward through this stop and the latch-bolt passes a bolt 12 having a circular washer —13— upon the top thereof and a nut —14— upon the bottom. Attached to the upper corner of the shell —1— by means of screw —15— is a metal plate —16— having an aperture for the passage of a spring rod —17—. This spring rod bears against a projection —18— upon the knob spindle —19—. The knob spindle —19— is constructed as best shown in Fig. 5 and provided with a projecting portion —20— wedge-shaped upon one side. —21— is a piece of rubber adapted to contact with the projection —9— and prevent any jar or noise caused by the meeting of the metal when the knob —22— is pushed inward. Upon the latch-bolt —7— is a spring —23— one end resting against the projection —9— and the other against the latch end —6—, tending to hold stop —11— against plate —9—. The knob spindle —19— is adapted to fit into the mechanism as best shown in Fig. 3, having the projecting portion —20— fitting between the upright —9— and the washer —13—, the wedge-shaped portion being on the side toward the washer —13—. The other portion —24— of the knob spindle is adapted to receive the extending portion —25— on spindle —19— and to be attached thereby by screw —26—.

By pushing knob —22— or pulling on knob —24—, the spindle —19— will be forced inwardly against the action of spring —17—; the wedge-shaped portion —20— will contact with the washer —13— and the stop —11— will be forced away from the upright —9— and the latch-bolt will be drawn backward against the action of spring —23— until the latch end —6— is withdrawn from a casing not shown and the door will open. Upon releasing the knob, spring —17— will force said knob back to its normal position, washer —13— and stop —11— will be released, spring —23— will force the stop end outward to the limit of its movement by contact with the upright —9— and again latch the door.

What I claim is:

1. A door latch comprising a casing having an apertured projection therein, a latch-bolt in said casing and passing through the aperture in the projection, a stop upon the end of said bolt, a spindle having a wedge-shape portion adapted to fit between said

projection and the stop on the bolt, and means tending to hold the spindle in normal position.

2. A door latch comprising a casing having an apertured projection therein, a latch-bolt in said casing and passing through the aperture in the projection, a stop upon the end of said bolt, a spindle having a wedge-shape portion adapted to fit between said projection and the stop on the bolt, a projection on said spindle, and a spring mounted in said casing and bearing against the projection on the spindle.

3. A door latch comprising a casing having an apertured projection therein, a latch bolt passing through the aperture in the projection, a stop upon the end of said bolt, a washer rotatably mounted upon said stop, and a spindle having a wedge shaped portion adapted to fit between the projection on the casing and the washer on the stop.

In witness whereof I have hereunto set my hand on this 10th day of May 1912.

EDWARD S. HUBBELL.

Witnesses:
E. A. THOMPSON,
E. S. TUCKER.