H. A. PALMER.

LOCKING LATCH.

APPLICATION FILED JUNE 23, 1913.

1,085,292.

Patented Jan. 27, 1914.

Fig. 1

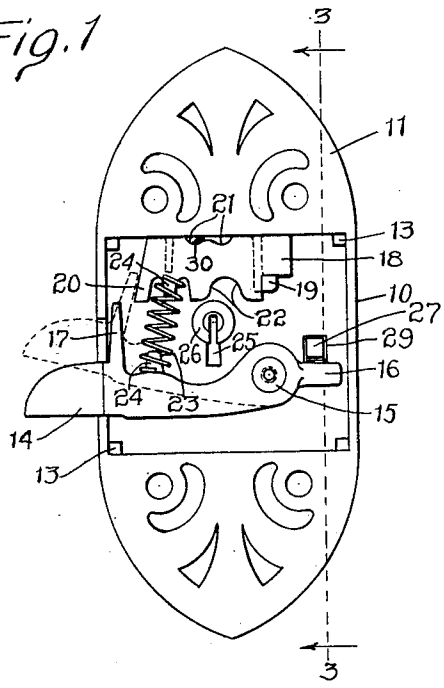


Fig. 2

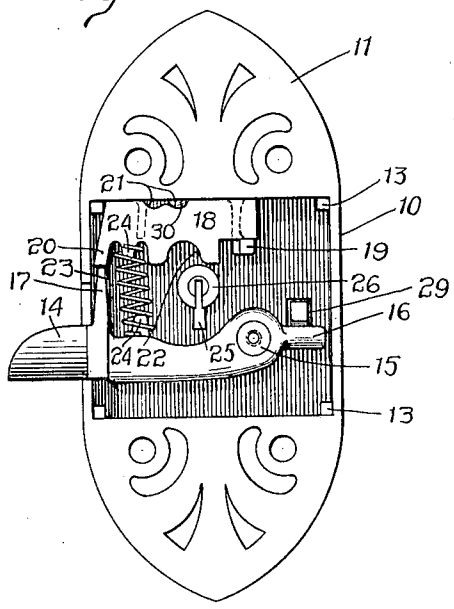
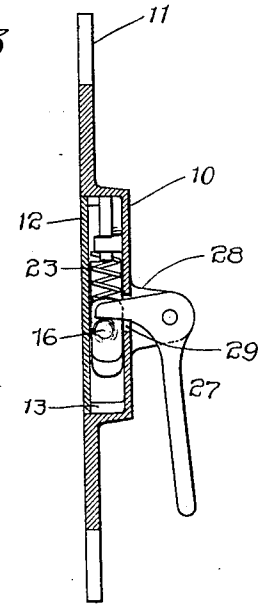


Fig. 3



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HARRY A. PALMER, OF MERIDEN, CONNECTICUT, ASSIGNOR TO FOSTER, MERRIAM AND COMPANY, OF MERIDEN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

LOCKING-LATCH.

1,085,292. Specification of Letters Patent. Patented Jan. 27, 1914.

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To all whom it may concern:

Be it known that I, HARRY A. PALMER, a citizen of the United States, residing at Meriden, county of New Haven, State of Connecticut, have invented an Improvement in Locking-Latches, of which the following is a specification.

This invention relates to locking latches adapted for general use and especially adapted for use on refrigerator doors and the like, and the invention has for its object to provide a device of this character which shall be strong and durable, and efficient and reliable in operation and in which the number of parts and the cost of construction shall be reduced to the minimum.

With these and other objects in view I have devised the novel combined latch and lock of which the following description in connection with the accompanying drawing is a specification, reference characters being used to indicate the several parts.

Figure 1 is a rear elevation of my novel locking latch detached, the tumbler being in the unlocking position; Fig. 2 a similar view, the tumbler being in the locking position, and Fig. 3 is a section on the line 3—3 in Fig. 1, looking in the direction of the arrows.

10 denotes a case which is provided with flanges 11 having holes for attaching screws, and 12 a cover plate which rests upon posts 13 in the case.

14 denotes the latch which is pivoted on a hub 15 projecting from the case and is provided with a tail-piece 16 and an upwardly projecting arm 17.

18 denotes a sliding tumbler which moves upon rests on the wall of the casing (see dotted lines, Fig. 2) and the rear end of which rests upon a stud 19. The tumbler is provided with a downwardly projecting locking arm 20, with locking recesses 21 and with a curved wall 22 which is adapted to be engaged by the bit of a key (not shown). The latch is normally retained in the locking position and the tumbler is retained in either the locking or the unlocking positions by a single coil spring 23, the ends of which bear respectively upon the latch and the tumbler and which is retained in place by lugs 24 on the latch and tumbler respectively which extend within the coils of the spring.

25 denotes a key hole and 26 a key hub which is adapted to oscillate in the case and cover plate, the ends of said hub being mounted, in the usual manner, in holes in the case and cover plate.

27 denotes an operating lever pivoted between ears 28 on the outer side of the case. The operating arm of said lever lies at an angle to the handle arm and projects through a slot 29 in the case and engages the tail-piece of the latch to operate the same.

The tumbler is moved from the unlocking position as in Fig. 1 to the locking position as in Fig. 2, and vice versa, by the engagement of the bit of a key (not shown) with the curved wall 22 on the tumbler. When the tumbler is in the position shown in Fig. 1, the latch may be readily lifted as indicated by dotted lines in Fig. 1 by swinging the handle arm of the operating lever outward. This causes the operating arm of said lever to bear upon the tail-piece of the latch and lift the latch as indicated by dotted lines in Fig. 1. When the tumbler is in the locking position as in Fig. 2, locking arm 20 on the tumbler will be in vertical alinement with arm 17 of the latch and will prevent the latch from being lifted by manipulation of the operating lever, and will likewise cover the opening in the case through which the latch projects. I thus avoid the necessity for a special form of keeper and render it impossible to push the tumbler back and release the latch.

30 denotes a locking lug on the case which is adapted to engage either of the locking recesses 21 in the tumbler to retain the tumbler in either the locking or the unlocking position. It will be noted that both the locking lug and the locking recesses are rounded so that when the power of the key is applied to move the tumbler in either direction the power of the spring will be overcome, the spring yielding sufficiently to permit the tumbler to be moved by the key and instantly returning the tumbler to its normal position, that is with one of the locking recesses engaged by the locking lug, the instant the longitudinal movement of the tumbler has been effected by the key. It will be noted furthermore that in the unlocking position of the tumbler locking arm 20 is wholly out of the way of arm 17 on the latch and permits the latter to be raised freely as indicated by dotted lines in Fig. 1.

Having thus described my invention I claim:—

1. A device of the character described comprising a pivoted latch having an upwardly projecting arm, a sliding tumbler having a downwardly projecting arm adapted to be placed in vertical alinement with the upwardly projecting arm of the latch to lock the latch against operation, and a spring engaging the tumbler and the latch and acting to hold the latch in the locking position and the tumbler in either the locking or the unlocking position.

2. A device of the character described comprising a case, a pivoted latch projecting through the case and having an upwardly projecting arm which covers the hole through which the latch projects, a sliding tumbler having a downwardly projecting arm adapted to be placed in vertical alinement with the arm of the latch to lock the latch against operation, and a spring engaging both the tumbler and the latch, substantially as described, for the purpose specified.

3. A device of the character described comprising a latch having a tail-piece and an upwardly projecting arm, means acting on the tail-piece to lift the latch, a sliding tumbler having a downwardly projecting arm adapted to be engaged by the arm on the latch to lock the latch against operation and a spring engaging the tumbler and the latch and acting to hold the latch in the locking position and the tumbler in either the locking or unlocking position.

4. The combination with a case having a locking lug, a latch pivoted to the case and having an upwardly projecting arm and a tail-piece, and means acting on the tail-piece to lift the latch, of a sliding tumbler having a downwardly projecting arm adapted to be engaged by the latch and having locking recesses adapted to be engaged by the locking lug, for the purpose set forth, and a spring acting on both the tumbler and the lug.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY A. PALMER.

Witnesses:
BLAINE COGGINS,
R. W. MILLARD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."