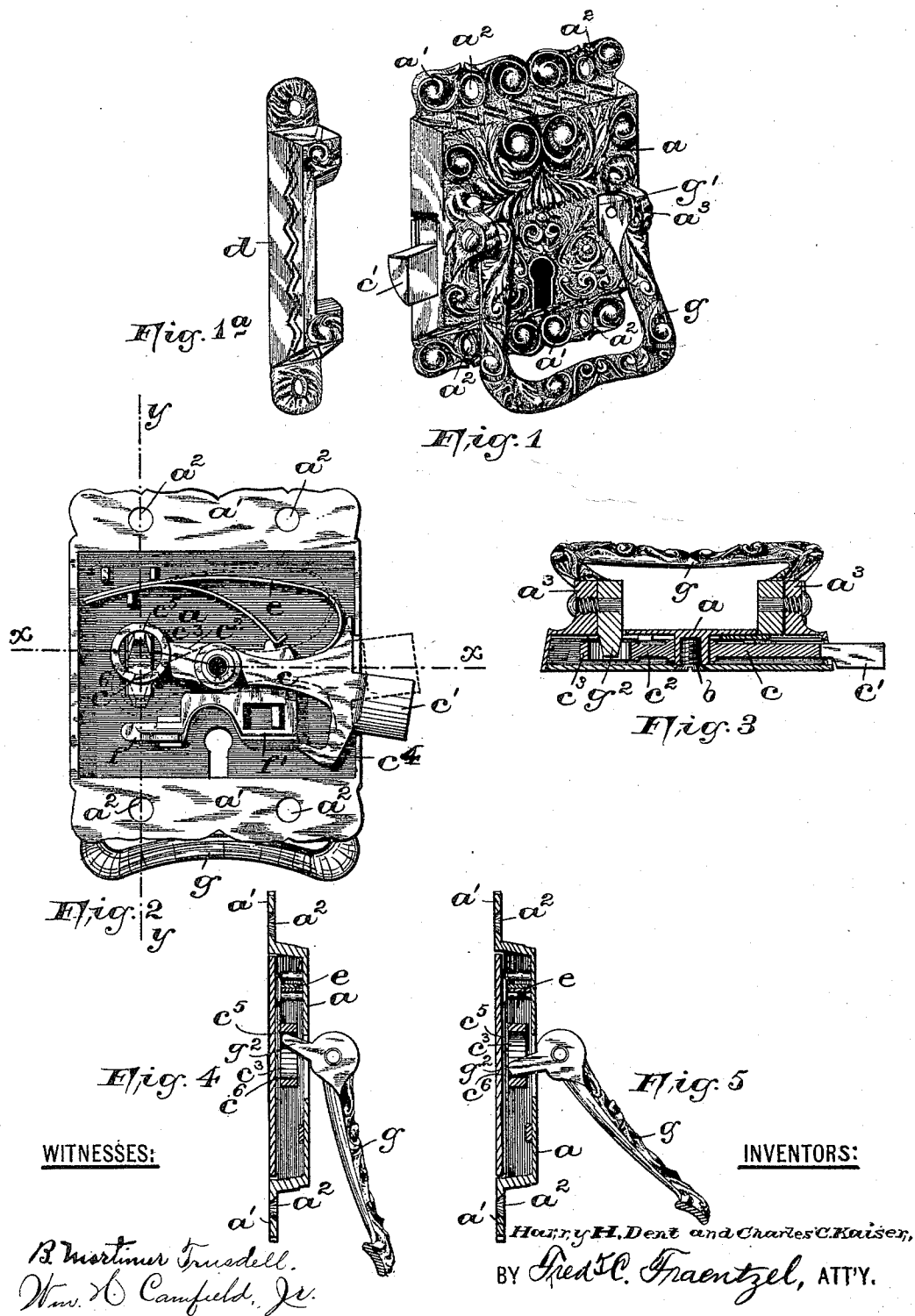


(No Model)

H. H. DENT & C. C. KAISER.
RIM LATCH LOCK.

No. 585,260.

Patented June 29, 1897.



UNITED STATES PATENT OFFICE.

HARRY H. DENT AND CHARLES C. KAISER, OF ALLENTOWN, PENNSYLVANIA.

RIM LATCH-LOCK.

SPECIFICATION forming part of Letters Patent No. 585,260, dated June 29, 1897.

Application filed November 25, 1892. Serial No. 453,041. (No model.)

To all whom it may concern:

Be it known that we, HARRY H. DENT and CHARLES C. KAISER, citizens of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Rim Latch-Locks; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of our invention is to provide a novel rim latch-lock especially adapted for the doors of refrigerators and which is of a simple construction and very durable when in use, such lock being provided with a suspended handle pivotally connected with the face-plate of the casing and can be partially lifted away from the casing for the placing of the fingers around the handle portion and by a simple pulling action the handle can be made to operate the latch.

The invention therefore consists, essentially, in the combination, with a latch-lock casing having a bolt or slide therein and an opening in its face-plate and a latch-dog in said casing, of a drop-handle pivotally attached to the said face-plate, said handle being provided with an arm or lift extending through the opening in the face-plate adapted to engage with said latch-dog to operate the same when the drop-handle is worked to open or close the door.

In the drawings herewith accompanying, in which similar letters of reference are employed to indicate corresponding parts, Figure 1 is a perspective view of a rim latch-lock embodying the principle of our invention, and Fig. 1^a is a similar view of a keeper or nosing used in connection with the latch-lock. Fig. 2 is a perspective view of the latch-lock from the rear of Fig. 1. Fig. 3 is a horizontal section taken on line *z* in Fig. 2, clearly illustrating the manner of pivoting the drop-handle to the face-plate and showing the arm or lift on said handle in operative engagement with the latch-dog. Fig. 4 is a vertical section taken on line *y* in Fig. 2, illustrating the drop-

handle and its arm or lift in their normal positions. Fig. 5 is a like section taken on said line *y* in Fig. 2, illustrating the drop-handle in its lifted position and the arm connected therewith just about to operate the latch-dog.

In said hereinabove-described views, *a* indicates the face-plate of the latch-casing having a rim or flange *a'*, provided with screw-holes *a²* for securing the latch-casing to the surface of the door.

Within the latch-casing is pivoted the latch-dog *c* by means of a screw or pivotal pin *b* in such a manner that its dog *c'* projects from the casing and is adapted to engage with a suitable keeper or nosing *d*. The said latch-dog *c* is provided at its opposite end *c²* with a suitable tailpiece *c³*, which is preferably ring-shaped, as will be seen more especially from Fig. 2. Said latch-dog is normally pushed down by means of a suitable spring *e* for the purpose of holding the dog *c'* in its proper position to engage with the keeper or nosing *d*, and beneath the latch-dog we have arranged a suitably-constructed slide or bolt *f*, which can be moved back and forth by means of a key having an arm *f'*, which can be moved above a finger *c⁴* of the latch-dog, and thereby holding the latter in its locked position.

As will be evident from Figs. 1 and 3, the face-plate of the latch-casing is formed with a pair of outwardly-projecting ears or lugs *a³*, between which is pivoted a suitable drop-handle *g*, which is retained in its proper position by the flat portions *g'*, which normally bear against the outer surface of the face-plate. In said face-plate *a* is formed an opening *a⁴*, as shown in Figs. 3, 4, and 5, through which extends the arm or lift *g²*, formed directly behind one of the pivotal supports on said handle. Said arm or lift *g²* bears normally against the upper and inner edge *c⁵* of said ring-shaped tailpiece *c³*, as will be evident from Figs. 2 and 4. When the handle *g* is raised to the position indicated in Fig. 5, said arm or lift *g²* passes down against the lower and inner surface *c⁶* of said ring-shaped tailpiece, as shown, and when the handle is pulled up still farther said arm or lift *g²* forces the latch-dog *c* to assume the operated position indicated in dotted outline in Fig. 2,

when the tailpiece is depressed, thereby lifting the dog c' out of its engagement with the keeper or nosing d and allowing the door to be opened.

5 Instead of the tailpiece c^2 of the latch-dog being ring-shaped, it is evident that the same may be slotted to permit the movement of the lift g^2 therein.

One of the principal and most essential features of the present invention is the construction of the latch-dog provided at or near its inner end with the perforation or ring-shaped tailpiece c^3 , into which the arm or lift g^2 extends, whereby this great advantage is derived that the latch-dog or bolt can be operated by both motions of lifting and pressing down of the handle g . Thus in closing the door the handle necessarily is pressed down, and should the latch-dog c' bind against the nosing or keeper d on account of the swelling of the door, when the spring e would not be of sufficient strength to force the dog c' down to its locked position in the nosing or keeper, said latch-dog or bolt is forced down by the pressure on the handle g , its finger or lift g^2 thereby being caused to act as a lever within the ring-shaped tailpiece c^3 to force the end c^2 of the bolt upward and the dog c' down into its locked or holding position within the nosing, as will be clearly understood.

Another feature of this construction is that the door of a refrigerator or other compartment can thus be firmly closed and forced against the door-frame and made to bind airtight.

The arm or lift g^2 may also be differently constructed, as will be understood, and we therefore do not limit ourselves to the exact construction and arrangements of parts herein shown, the essential features of the invention being an arm or lift on a pivoted handle, said arm or lift extending through an opening in the face-plate of the latch-lock and engaging with the tailpiece of a latch-dog, whereby the latter operates when the drop-handle is either raised or forced down.

Having thus described our invention, what we claim is—

1. A latch pivoted within a casing and a drop-handle pivoted on the outer side of the casing and provided with an extension projecting into the casing and in positive engagement

with the latch, whereby the latch may be operated in either direction by the handle, substantially as described.

2. A latch pivoted within a casing and a drop-handle pivoted on the outer side of the casing and provided with latch-operating means formed on and projecting from said handle so as to enter the casing and directly engage the latch, whereby the latch may be operated in either direction when the handle is raised or lowered, substantially as described.

3. In a combined latch and lock, a latch pivoted within a casing, a leaf-spring in engagement with and adapted to actuate one end of the latch, and a drop-handle pivoted on the outer side of the casing and provided with an integral extension projecting into the casing and in positive engagement with the latch, whereby should the spring become inoperative the latch can be both depressed and elevated by means of the handle, substantially as described.

4. In a combined latch and lock, a latch pivoted within a casing, a pivoted drop-handle adapted to operate the latch in either direction, said handle being provided with an integral extension in positive engagement with the latch, a spring for operating the latch in one direction independent of the handle, a keeper with which the latch engages and a locking-dog adapted to be moved to lock the latch, substantially as described.

5. In a combined latch and lock, the combination with a latch pivoted within a casing and a drop-handle adapted to operate the latch in either direction, said handle being pivoted on the outer side of the casing and provided with an integral extension projecting into the casing and in positive engagement with one end of the latch, of a locking-dog adapted to be moved within the casing into such position that it will render the latch immovable, substantially as described.

In testimony that we claim the invention set forth above we have hereunto set our hands this 21st day of November, 1892.

HARRY H. DENT.
CHAS. C. KAISER.

Witnesses:

CHAS. H. WACKERNAGEL,
ROBT. F. WINTERMUTE.