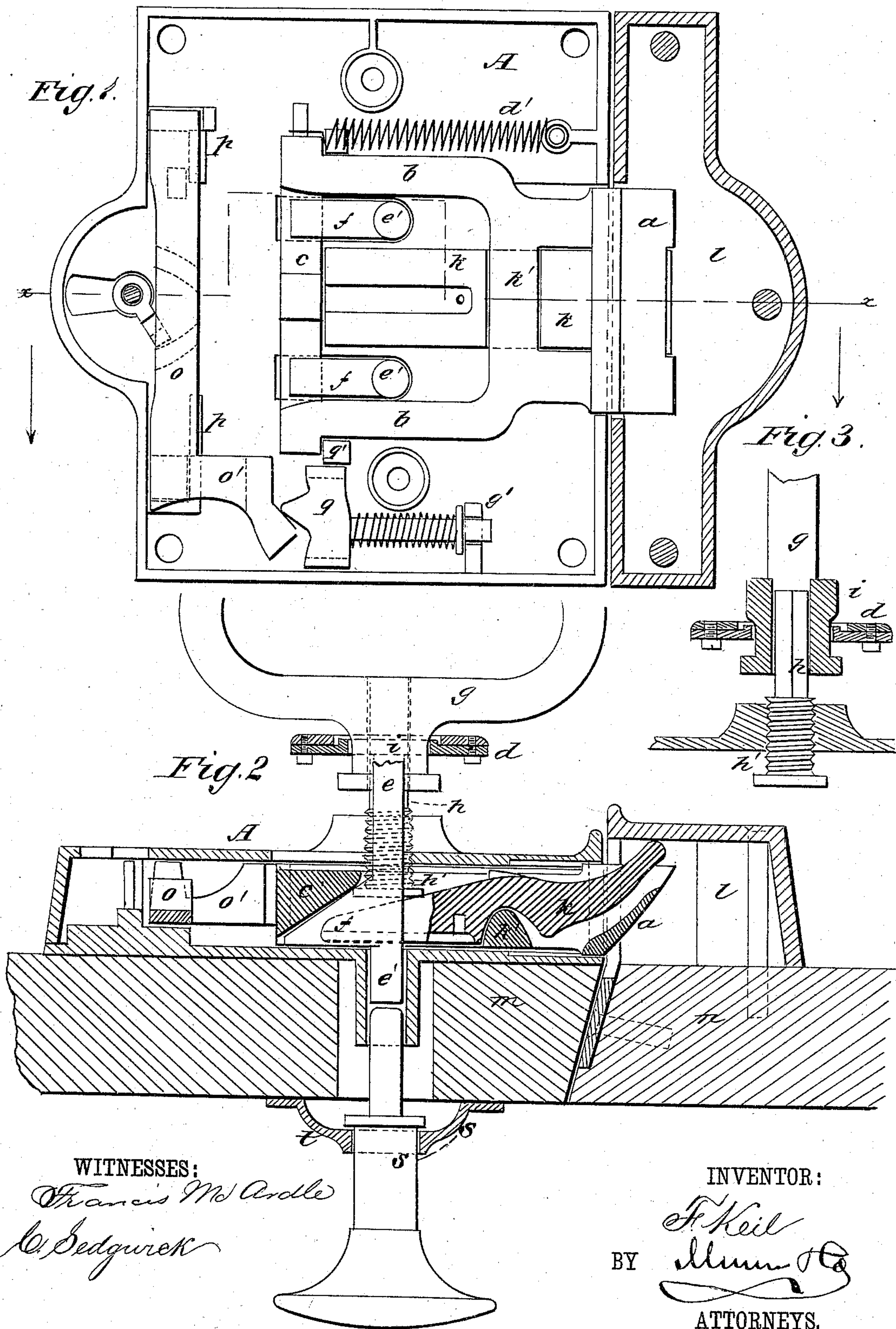


(Model.)

F. KEIL.  
Ice House Door Fastener.  
No. 241,668.  
Patented May 17, 1881.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

FRANCIS KEIL, OF NEW YORK, N. Y.

## ICE-HOUSE-DOOR FASTENER.

SPECIFICATION forming part of Letters Patent No. 241,668, dated May 17, 1881.

Application filed March 7, 1881. (Model.)

To all whom it may concern:

Be it known that I, FRANCIS KEIL, of the city, county, and State of New York, have invented a new and useful Improvement in Ice-House Locks, of which the following is a specification.

My improvements relate to locks and latches for securing doors of ice-houses and closing the joints thereof tightly.

10 The invention consists in a novel combination of latching and locking mechanism and the combination therewith of mechanism for wedging the door to its seat, as hereinafter described and claimed.

15 In the accompanying drawings, Figure 1 is a face view of the lock with the inner face-plate removed. Fig. 2 is a cross-section of the same on line *xx* of Fig. 1, and Fig. 3 is a detail section of the spindle.

20 Similar letters of reference indicate corresponding parts.

A is the case of the lock.

25 *a* is the sliding latch-bolt, having a beveled face, and formed with the arms or forks *b* within the case, that are connected by a cross-bar, *c*, having a beveled surface from which beveled lugs *c'* extend between the arms *b*.

30 *d* is a ring at the outside of case A, attached on pins *e*, that project through apertures in the face-plate from wedges *f*, situate at the back of the beveled lugs *c'*.

35 *e'* are studs projecting from wedges *f* through apertures in the back plate of case A, whereby the wedges, pins *e*, and ring *d* are retained in position.

*d'* is a spring, acting to project the latch-bolt.

40 The handle *g*, as shown most clearly in Fig. 3, is upon a squared spindle, *h*, that is formed with a screw-threaded portion, *h'*, tapped through the face-plate of the case. The hub or socket-piece *i* of the handle is within the ring *d*, and has an annular groove in its surface, by which the ring retains the handle on the spindle, and endwise movement is allowed to the spindle independent of the ring. The inner end of spindle *h* bears upon one end of a lever, *k*, that is hung on latch-bolt *a*, as next described. The latch-bolt *a* is recessed to receive lever *k*, so that the lever lies between the bolt and the outer face-plate of case A, with its outer end extending to the end of the

bolt, or nearly so. The lever is formed with a cross-groove setting over a stud or projection, *h'*, of the bolt, on which stud the lever 55 rocks. The latch-bolt thus carries the lever *k*, and when projected the end of the lever lies next to the front of the keeper, (shown at *l*.) Then, by turning handle *g*, the spindle *h* is moved endwise by the screw, the lever *k* is 60 moved, and the outer end of the lever acting against the keeper forces the door tightly against the jamb. *m* shows a door carrying the lock, and *n* the jamb, the edges of which are beveled, so that a tight casing may be ef- 65 fected.

For locking the latch-bolt when projected a bolt, *o*, is fitted in case A, at the rear end of bolt *a*. This bolt *o* is sustained by studs *p*, so that it may slide transversely of case A, and 70 is formed with a right-angled portion, *o'*, for passing behind the latch-bolt. A spring-slide, *q*, sustained by studs *q'*, has a wedge joint or lug, that engages with the extension *o'* of bolt *o*, which is beveled, so that a slight force ap- 75 plied to the bolt *o* will move slide *q* back. The slide *q* thus serves to retain the locking-bolt in either position. The bolt *o* is recessed for receiving the ward of a key, which is to be inserted through a hole in the front plate of the 80 case, whereby the locking-bolt can be moved to bring the end *o'* behind the latch-bolt to prevent withdrawal of the same.

To withdraw the latch when unlocked, the handle *g* is to be pulled outward, when the 85 socket-piece *i*, engaging with ring *d*, will move the wedges *f*, and by pressure of the wedges on lugs *c'* the bolt will be forced back. At the back of the door a knob and spindle, *s*, are fitted to slide in a rose, *t*, and the inner end of 90 the spindle enters a boss that is formed on the back plate around the aperture which receives the guide-pin *e'* of one wedge *f*. By pressing the knob and spindle *s* inward the wedges are moved to withdraw the latch. These opera- 95 tions of pulling the handle *g* and pressing the inner knob open the door at the same time the latch is withdrawn. The doors being heavy, the latch will be moved before the door is started.

With a lock of this construction ice-house 100 doors can be readily handled for ordinary use, and can be locked and closed air-tight, as required.

Having thus fully described my invention,

I claim as new and desire to secure by Letters Patent—

1. The combination, in a latch-lock, of the  
5 spring-acted bolt *a*, provided with beveled lugs  
*c'*, the wedges *f*, ring *d*, connecting-pins *e*, han-  
dle *g*, provided with grooved hub *i*, and case  
A, substantially as shown and described.

2. The lever *k*, screw-spindle *h*, and handle  
10 *g*, combined with the recessed latch-bolt *a*, case  
A, and keeper *l* of a door-lock, substantially  
as and for the purposes set forth.

3. The combination, in a lock, of sliding  
latch-bolt *a*, having beveled lugs *c'*, wedges *f*,  
pins *e*, ring *d*, handle *g*, provided with socket-  
piece *i*, screw-spindle *h*, and lever *k*, substan- 15  
tially as shown and described, for operation as  
specified.

FRANCIS KEIL.

Witnesses:

GEO. D. WALKER,  
C. SEDGWICK.