(No Model.) 2 Sheets—Sheet 1.

N. H. COLWELL.

LATCH.

No. 535,790. Patented Mar. 12, 1895.

Fig. 1.

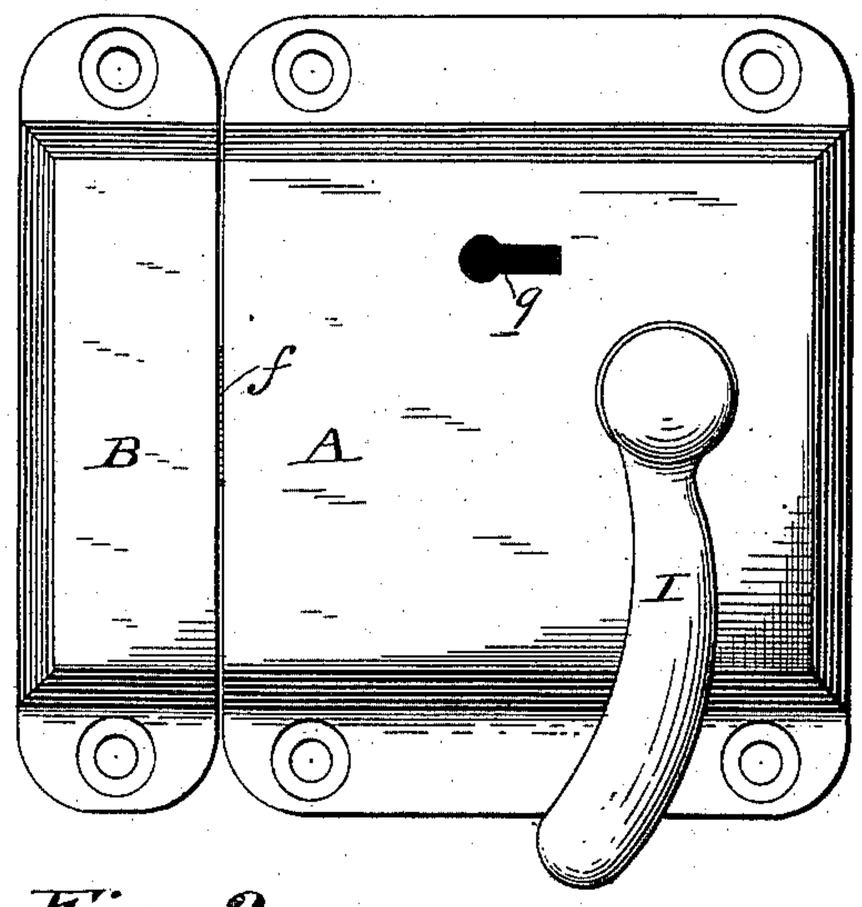


Fig. 2.

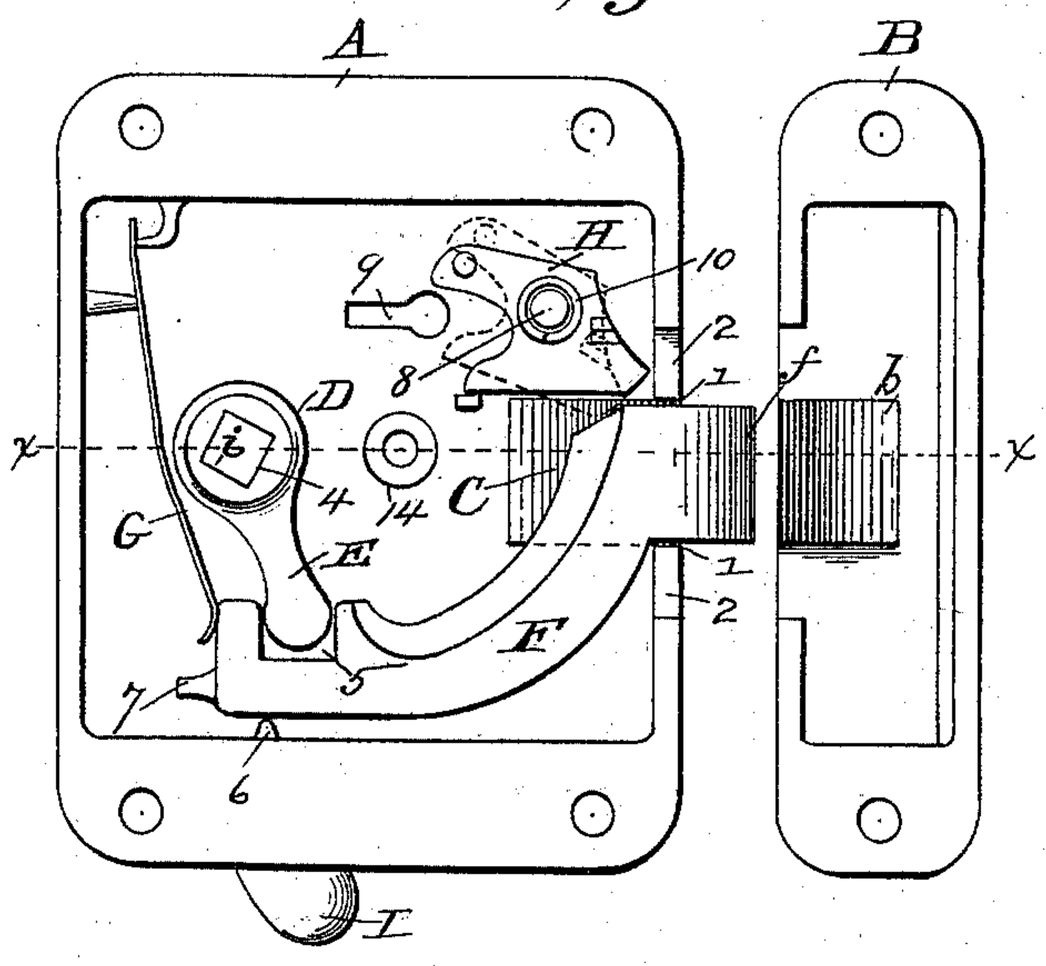


Fig. 3.

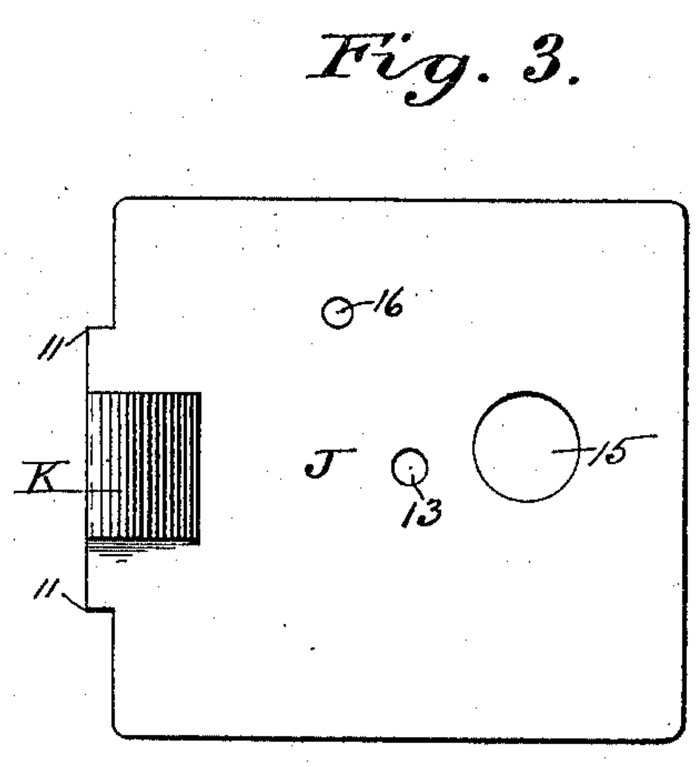
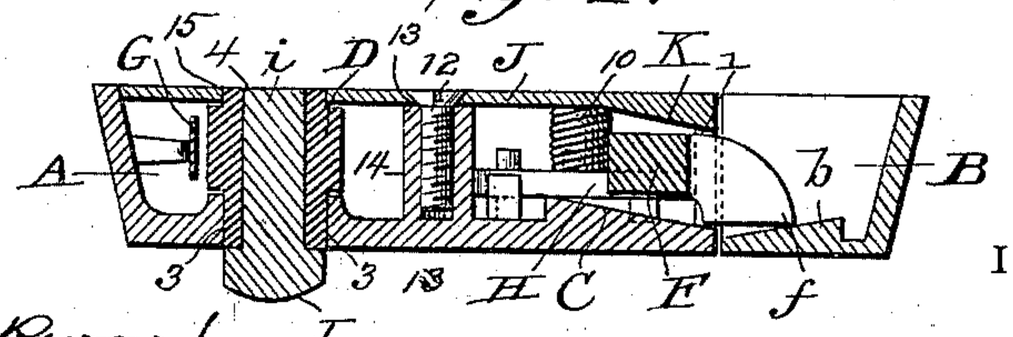


Fig. 4.



Witnesses:

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(No Model.) 2 Sheets—Sheet 2.

N. H. COLWELL.

LATCH.

No. 535,790. Patented Mar. 12, 1895.

Fig. 5.

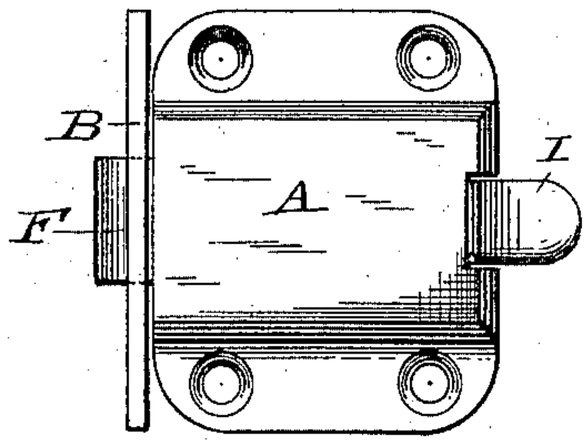


Fig. 6.

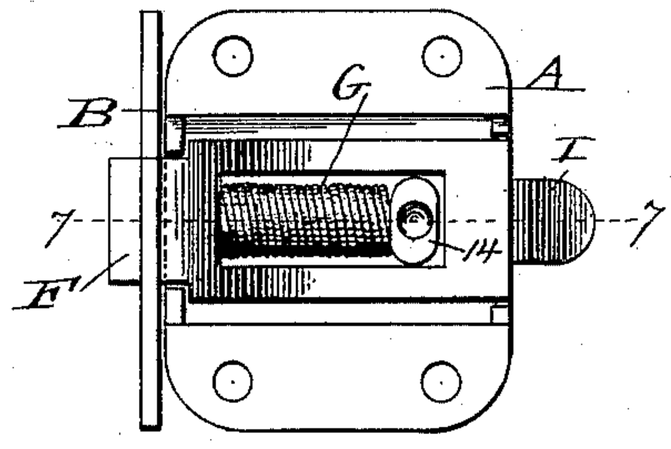


Fig. 7.

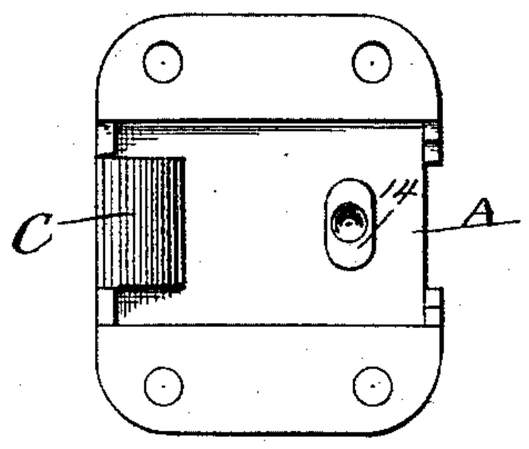


Fig. 8.

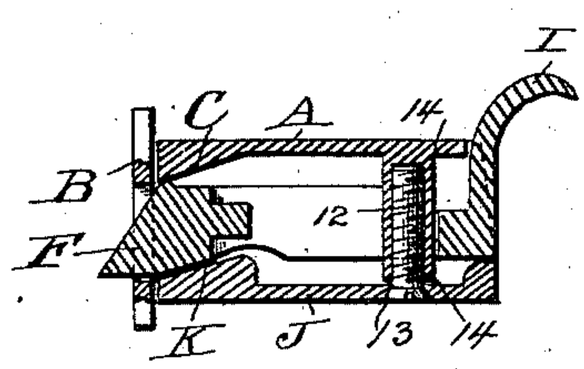
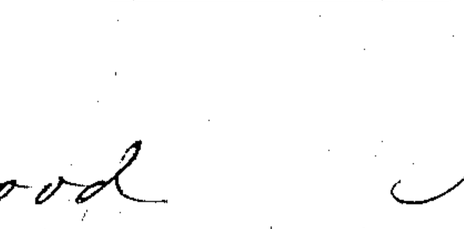


Fig. 9.



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UNITED STATES PATENT OFFICE.

NICHOLAS H. COLWELL, OF KENTON, OHIO.

LATCH.

SPECIFICATION forming part of Letters Patent No. 535,790, dated March 12, 1895.

Application filed December 6, 1894. Serial No. 530,995. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS H. COLWELL, a citizen of the United States, residing at Kenton, in the county of Hardin and State of Ohio, have invented certain new and useful Improvements in Door-Fastenings, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in door-fastenings of that kind in which a sliding latch engages with a keeper.

The object of my invention is to produce a door-fastening device, whether said device be simply a door-catch or a combined latch and lock, having a sliding latch, that will cause the door, when closed, to fit snugly against the jamb, such fastening device being well adapted for use on refrigerators, cupboards, and other like articles.

The invention will first be described in connection with the accompanying drawings, and then pointed out in the claim.

Figure 1, Sheet 1, of the drawings is a front elevation of a combined latch and lock embodying my invention. Fig. 2 is a plan view of the same, viewed from the rear, the back-plate removed, and the keeper out of position. Fig. 3 is a plan view of the back-plate. Fig. 4 is a longitudinal vertical section of the combined latch and lock taken on the line *x x*, Fig. 2, assuming the back-plate and keeper to be in place. Fig. 5, Sheet 2, is a front elevation of a door-catch embodying my invention. Fig. 6 is rear elevation of the same, with the back-plate removed. Fig. 7 is a plan view of the door-catch casing. Fig. 8 is a longitudinal vertical section of the door-catch, taken on the line *y y*, Fig. 6, the back-plate being in position. Fig. 9 is an inner plan view of the back-plate of the door-catch.

Referring to Sheet 1 of the drawings, A represents the casing of a combined latch and lock, and B the keeper. In one end of the casing is formed a rectangular opening 1, through which the nose of the latch is adapted to slide; and on each side of this opening there is formed a shallow recess 2, to receive the tenoned end of the back-plate. On the inner side of the front face of the casing is formed an incline C, beginning at the end wall just inside the opening 1, and sloping in a rearward direction a suitable distance toward the center of the casing, as shown, this incline being about the same width as the opening 1. In the front of the casing is a round hole 3, in which is a revoluble hub D, through which there is a square socket 4, for the reception of the handle hereinafter described. Secured to or formed integral with this hub is an arm E for operating the latch.

F represents the latch, the nose *f* of which is beveled on its rear side and flat on its front side, the latter bearing on the incline C. In the tail end of the latch there is formed a notch 5, into which enters the free end of the operating-arm E, the latch being held in engagement with said arm by a stud 6 formed in the casing, and limited in its rearward movement by a stud 7 projecting from its rear end. A spring G, bearing against one end of the latch, serves to hold the nose of the latch normally in engagement with the keeper.

H is a locking-dog, pivoted on a stud 8 projecting inward from the casing, and adapted to be thrown into a position to lock the latch against rearward movement, as indicated in dotted lines in Fig. 2, by means of a key inserted through a keyhole 9. A coil spring 10 placed over the stud 8 and bearing against the locking-dog and the back-plate serves to prevent accidental movement of the former.

I is the handle, which is provided with a laterally-extending stud *i*, adapted to enter the socket 4 in hub D, and by this means move the operating-arm E and through it the latch F.

J is the back-plate, which is tenoned at its forward end, as at 11, to fit in the recessed portion 2 of the casing. On this tenoned end is an incline K sloping in a rearward direction toward the center of the plate, as shown. This plate is secured to the casing by a screw 12 passed through a hole 13 in the plate and taking into an interiorly screw-threaded stud 14 secured in the casing, the hub D passing through a hole 15 in the back-plate. Another hole 16 in the back-plate receives the end of the key.

When the parts are assembled as described, and illustrated on Sheet 1 of the drawings, the front side of the nose of the latch will bear on the incline C in the casing, and its

rear side will bear against the incline K on the back-plate, from which it follows that as the nose of the latch is projected into the keeper it will be forced by the inclines in the forward direction, with relation to the front of the casing, thus causing the door, when closed, to fit snugly in place against the jamb; also that as the beveled nose of the latch works between the inclines, the size of the opening 1 in the casing can be limited to the relative size of the latch-nose; and it will also be noticed that as the latch is retracted its nose will gradually move rearwardly with relation to the front of the casing, thus breaking the frictional contact between the nose of the latch and the keeper, permitting the latch to be easily drawn back into the casing.

As an auxiliary means for causing the latch to closely shut the door, an upwardly-sloping incline *b* may be formed in the keeper B, as clearly shown in Figs. 2 and 4.

On Sheet 2 I have illustrated a fastening device embodying my invention designed to be used on the inner side of doors of refrigerators, cupboards, &c. In this case I make use of the same inclines excepting that they are reversed with respect to the inclines shown in the combined latch and lock, the nose of the latch being also beveled on the opposite side.

The various parts of the door-catch are lettered to correspond with similar parts of the combined latch and lock, A representing the casing; B, the keeper; C, the incline in the casing; F, the latch; G, the operating-spring; I, the handle, in this case formed integral with the latch; J, the back-plate; K, the incline on the back-plate; and 12 the screw passed through hole 13 in the back-plate and taking into the interiorly screw-threaded stud 14 in the casing, for securing the back-plate in place.

The operation of this door-catch will be apparent from the description of the operation of the combined latch and lock taken in connection with the various views on Sheet 2 of the drawings.

I wish it distinctly understood that, as above indicated, the gist of my invention resides in a fastening device having a latchway sloping from the latch opening rearward toward the center of the casing, in which the nose of a sliding latch works and by which it is caused to move toward or away from the front of the casing when the latch is respectively projected or retracted; and therefore, aside from this feature, I do not limit my invention to the construction of either of the fastening devices shown and described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a door-fastening device, a casing having a latch-opening in one wall and an incline extending rearward from said opening toward the center of the casing, a back-plate secured to the casing and having an incline facing the incline in the casing and corresponding with it, a latch whose nose is located between said inclines and passes through the latch-opening in the casing, a keeper with which the nose of the latch is in normal engagement, and means for retracting the latch.

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

NICHOLAS H. COLWELL.

Witnesses:
WM. H. MCPHERSON,
GERTIE RUBINS.