(No Model.)

C. W. KERLER.

LATCH.

No. 538,078. Patented Apr. 23, 1895.

Fig. 1.

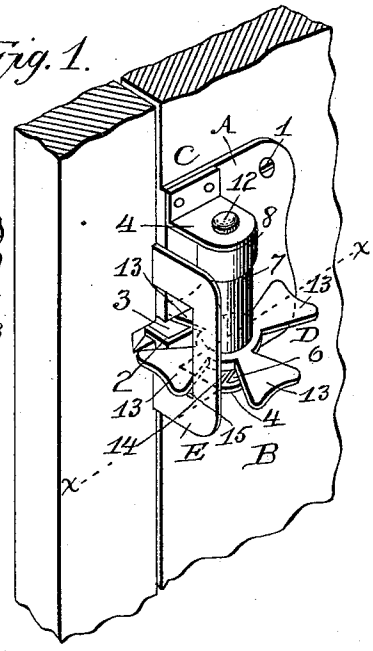


Fig. 2.

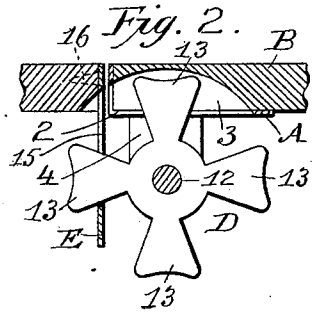


Fig. 3.

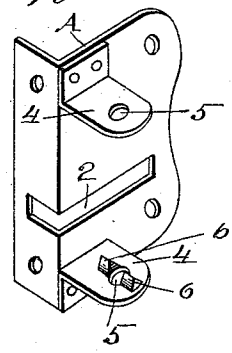


Fig. 4.

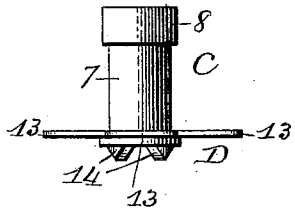


Fig. 5.

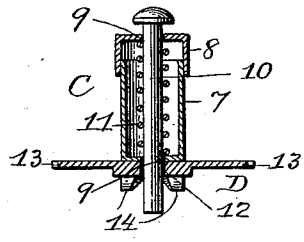
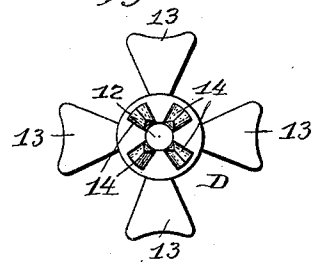


Fig. 6.



Witnesses:

Jos. H. Blackwood

D. W. Gould

Charles W. Kerler Inventor.

By W. W. Tallmadge

Attorney.

UNITED STATES PATENT OFFICE.

CHARLES W. KERLER, OF LEAVENWORTH, KANSAS, ASSIGNOR OF ONE-HALF TO JOHN SHAUER, OF SAME PLACE.

LATCH.

SPECIFICATION forming part of Letters Patent No. 538,078, dated April 23, 1895.

Application filed February 27, 1895. Serial No. 539,909. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. KERLER, a citizen of the United States, residing at Leavenworth, in the county of Leavenworth and State of Kansas, have invented a new and useful Latch, of which the following is a specification.

My invention relates to an improved latch for use on doors, gates, or the like, and it has for its object to produce a latch that will be automatic in both latching and unlatching, very simple in construction, and thoroughly effective in operation.

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

Figure 1 of the drawings is a perspective view of my improved latch in place, showing only so much of the door and jamb as is necessary to illustrate the attachment and operation of the latch. Fig. 2 is a horizontal section on the line *x x*, Fig. 1. Fig. 3 is a perspective view of the base-plate. Fig. 4 is a view in elevation of the latch-casing. Fig. 5 is a vertical central section of the latch-casing. Fig. 6 is a bottom plan view of the catch.

Referring to the drawings, A is a right-angular base-plate set in the door B and secured thereto by screws 1, as seen in Fig. 1. In this plate slightly below the center is formed a slot 2, a corresponding groove 3 being cut in the door directly beneath the slot 2, permitting the necessary movement of the latch-arms, hereinafter described. In vertical alignment, one on either side of the slot 2, are two outwardly-extending lugs 4, having holes 5 therein, for supporting the operating mechanism. On the lower lug 4 are formed two toothed projections 6, in horizontal alignment in a line at a right angle to the base-plate A, as shown in Fig. 3, for a purpose hereinafter described.

C represents the latch-casing, comprising a body-portion 7, adapted to fit in a collar 8 so as to be capable of vertical movement therein, this body-portion and collar being closed at the lower and upper ends respectively with the exception of a small central hole 9, through which passes a pin 10, securing the parts together. Encircling this pin, and bearing at one end against the top of the collar and at the other end against the lower end of the body-portion, is a coil spring 11, serving to normally keep the body-portion in proper position.

D represents the catch, through the central portion of which there is a small hole 12 for the passage of the pin 10, this central portion being also provided with a plurality of radial arms 13, thus forming the catch preferably in the form of a Maltese cross, as clearly shown in Fig. 6. On the lower side of the central portion are four toothed-projections 14, corresponding in size and shape to the toothed projections 6 on lug 4, these teeth being so arranged that when in position they will lie normally one on either side of the teeth 6, as shown in Fig. 1.

E is the keeper, comprising a metal plate having a central opening 15, this plate being secured to the door-jamb, as shown, by screws 16.

The parts being assembled as shown and above described, the operation of my latch is as follows: When the door having my improved latch is closed, one of the arms 13 comes into contact with the outer edge of the keeper E, which forces the teeth 14 up the inclined teeth 6 until they pass over them and ride down the other side, this movement forcing the body-portion 7 upward into the collar 8 against the stress of coil spring 11, this spring, when the teeth 14 have ridden over the teeth 6, returning the body-portion to its normal position. As these teeth 14 ride over the teeth 6 the arm 13 next the one engaging the outer edge of the keeper is turned into the opening 15 in the keeper, thus latching the door. When desired to unlatch the door pressure on it will act to reverse the operation of the parts when closing, the arm 13 will be turned out of the opening 15 and the door can be opened.

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

1. In a latch, a base-plate adapted to be secured to the door, lugs in vertical alignment on the base-plate, one of said lugs being provided with toothed-projections, a catch hav-

ing toothed-projections adapted to coact with the toothed-projections on the lug, a pin passing through the lugs and catch, a keeper secured to the door-jamb, and spring mechanism carried by the base-plate permitting the toothed-projections on the latch to override the toothed-projections on the lug in either direction.

2. In a latch, a base-plate adapted to be secured to the door, lugs in vertical alignment on the base-plate, one of said lugs being provided with toothed-projections, a catch having toothed-projections adapted to coact with the toothed-projections on the lug, a pin passing through the lugs and catch, a body-portion mounted on the pin and bearing on the catch, a collar on the pin permitting vertical movement of the body-portion, a keeper secured to the door-jamb, and a spring carried by the body-portion and collar for operating the catch.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CHARLES W. KERLER.

Witnesses:
ALF GERCKEN,
AUG. KASTEN.