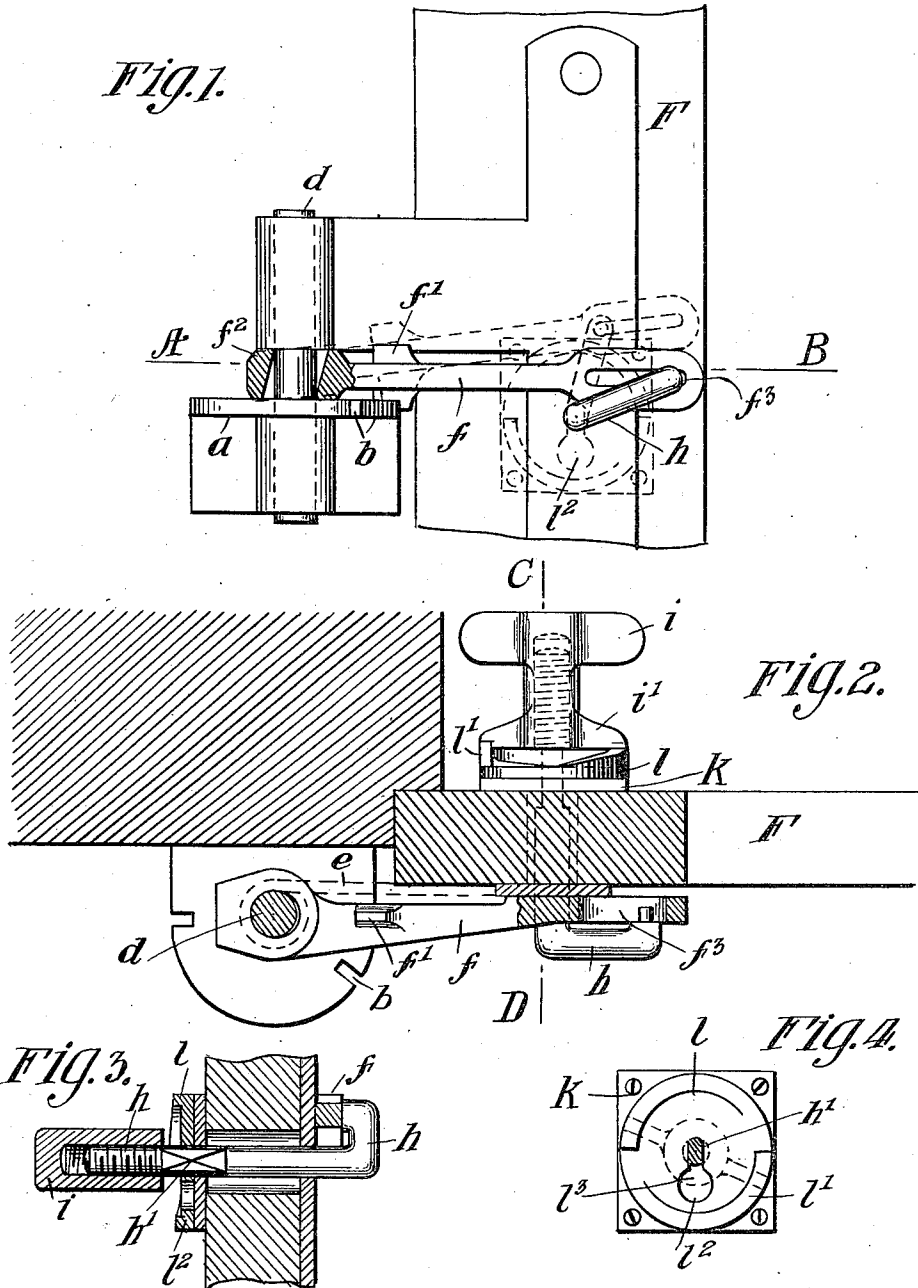


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FASTENING DEVICE FOR CASEMENTS AND OTHER HINGED SHUTTERS.
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1,013,501.

Patented Jan. 2, 1912.



Witnesses
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PAUL LEIST-WETTLER, OF SCHÖNENWERD, SWITZERLAND.

FASTENING DEVICE FOR CASEMENTS AND OTHER HINGED SHUTTERS.

1,013,501.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed May 26, 1911. Serial No. 629,751.

To all whom it may concern:

Be it known that I, PAUL LEIST-WETTLER, a citizen of the Swiss Republic, residing at Schönenwerd, in Switzerland, have invented certain new and useful Improvements in Fastening Devices for Casements and other Hinged Shutters, of which the following is a specification.

The object of this invention is to provide an improved device for fastening hinged shutters, more particularly outwardly opening casements and casement shutters, in closed and open position.

To this end the invention provides a device of the class wherein a fixed plate or segment having recesses arranged in an arc of a circle is used in combination with a catch connected to the hinged member, so that the latter can be fastened in closed, open, or partly open position by engaging said catch with one or other of said recesses. In order to be suitable for an outwardly opening casement a fastening device of this kind must have means for operating it from inside when the casement is shut, and one part of the present invention consists in providing such means.

Another part of the invention consists in an arrangement whereby automatic engagement of the catch with the fixed plate produces a very rigid connection between the plate and hinged member, instead of the somewhat loose connection which has hitherto characterized automatic catches in this class of fastening device. Looseness of connection is highly undesirable in the case of an outwardly opening casement, in view of the rattling to which it gives rise even in a slight breeze.

The present invention provides a simple, strong and efficient device, which meets both the requirements indicated.

The invention is illustrated in the accompanying drawing, in which:—

Figure 1 is an elevation showing the device as viewed from the outside. Fig. 2 a horizontal section on the line A—B of Fig. 1, and Fig. 3 a vertical section on the line C—D of Fig. 2. Fig. 4 is an elevation of a cam plate forming part of the device.

In the drawing, *a* represents the fixed plate, with radial notches or recesses *b*; *d* is the fixed pin of the hinge *e* to which the window frame *F* is fixed, the knuckle of the hinge being slidable on the pin. The eye *f*² of the catch-lever *f* loosely engages the

pin *d* between the hinge knuckle and the plate *a*, the bore of said eye being of sufficient size to enable the lever to rock vertically. The catch-lever has a slot *f*³ and carries two wedge-shaped dogs *f*¹, the lower dog *f*¹ being adapted and arranged to engage the recesses *b*.

The frame *F* and the hinge-strap are traversed by a pin *h*, the outer end of which is bent upward and rearward to engage the slotted part *f*³ of the lever *f*, so that the latter can be vertically rocked by rotating the pin *h*. A wing-nut *i* with lateral projections *i*¹ is screwed to the inner end of the pin *h*. Between said nut and the frame *F* the pin *h* traverses a plate *k* which is screwed to the frame, and a cam-plate *l* having two cam-ridges *l*¹. The cam-plate has an eccentric hole *l*² for passage of the pin *h*, and a central slot *h*¹ adjoining this hole. The pin *h* has a constricted, flat-sided part *h*¹, adapted to fit into the slot *l*³. When the cam plate has been slipped on to the shank of the pin *h* the plate is moved perpendicularly to the shank so that the part *h*¹ enters the slot *l*³ and the pin cannot rotate in the plate, though still axially movable.

When the parts have been thus mounted, and the nut *i* is tightened up, the projections *i*¹ ride up the inclined surfaces of the ridges *l*¹, and the nut draws the pin *h* inward, and at the same time depresses the lever *f*, so that the lower dog *f*¹ on said lever is firmly pressed into whichever recess *b* it is over, say the innermost recess, as shown in Fig. 1. The lever *f* is by the same operation firmly clamped against the frame *F*, so that a rigid connection is made between the latter and the plate *a*. On unscrewing the nut *i* the projections *i*¹ abut against the perpendicular surfaces of the cam-ridges, and rotate the plate *l*, together with the pin *h*, and the latter rocks the lever *f* upward into the position indicated by dotted lines in Fig. 1, so that the dog is disengaged from the plate *a*, and the hinge and frame *F* are slightly lifted. If the frame *F* is then swung outward, the nut being left free to rotate, the weight of the frame acting on the catch lever *f* will cause the lower dog *f*¹ to enter the next recess *b* and make connection with the plate *a*. The wedge-shape of the dog *f*¹, together with the weight of the frame, insures absence of rattling.

Only one dog is essential to the working

of the device but the provision of two dogs enables the same appliance to be used alternatively for windows or shutters opening toward the right and the left.

5 What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. The combination, with a shutter and a hinge supporting said shutter, of a fixed
10 plate having recesses arranged in an arc of a circle centered at the axis of the hinge pin, a catch-lever provided with a dog, said lever being mounted on the hinge pin between the knuckle of the hinge and the plate, so
15 that said knuckle presses said lever against said plate, and said lever having rocking movement in planes perpendicular to the plate, and means actuatable from the inside of the shutter for rocking said lever for en-
20 gagement and disengagement of said dog.

2. The combination with a shutter and a hinge supporting said shutter of a fixed
plate having recesses in an arc of a circle centered at the axis of the hinge pin, a
25 catch-lever provided with a dog, said lever being rotatable about said axis and also having rocking movement enabling said dog to be moved into and out of engagement with
said recesses, a rotatable pin traversing said
30 shutter and having an arm which engages said catch-lever for the purpose of rocking same, said pin being screw-threaded at a part on the inside of the shutter, a nut on the screw-threaded part of said pin, and a

cam plate slidable but not rotatable on said
35 pin between said nut and the shutter, said nut and cam plate coacting so that on rotation of the nut in one direction the pin is rotated to move the catch-lever into engage-
40 ment, and is at the same time drawn inward to clamp said lever by means of said arm, whereas on rotation of the nut in the other direction the pin rocks the lever out of en-
gagement with the fixed plate.

3. In combination with a shutter, a hinge
45 comprising a fixed plate, said fixed plate having recesses in the edge thereof, a pin fixed to said plate, a catch-lever, lugs provided on said catch-lever, said lugs adapted to engage in the recesses provided in the
50 said fixed plate, said lever having an eye in one end thereof, the walls of said eye being angularly disposed, said eye adapted to loosely embrace the pin, an elongated eye in the opposite end of said catch-lever, an op-
55 erating pin, said pin having a screw-threaded portion and a right-angled portion, the right-angled portion adapted to engage in the elongated eye provided in the catch-lever, and means fixed to the shutter for op-
60 erating said hinge.

In witness whereof I have signed this specification in the presence of two witnesses.

PAUL LEIST-WETTLER.

Witnesses:

FRITZ LAUCNER,
CARL GUBLER.

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