(No Model.) 2 Sheets—Sheet 1.

C. ZIMMERMAN.

SHUTTER BOWER AND FASTENER.

No. 564,548. Patented July 21, 1896.

Fig. 1.

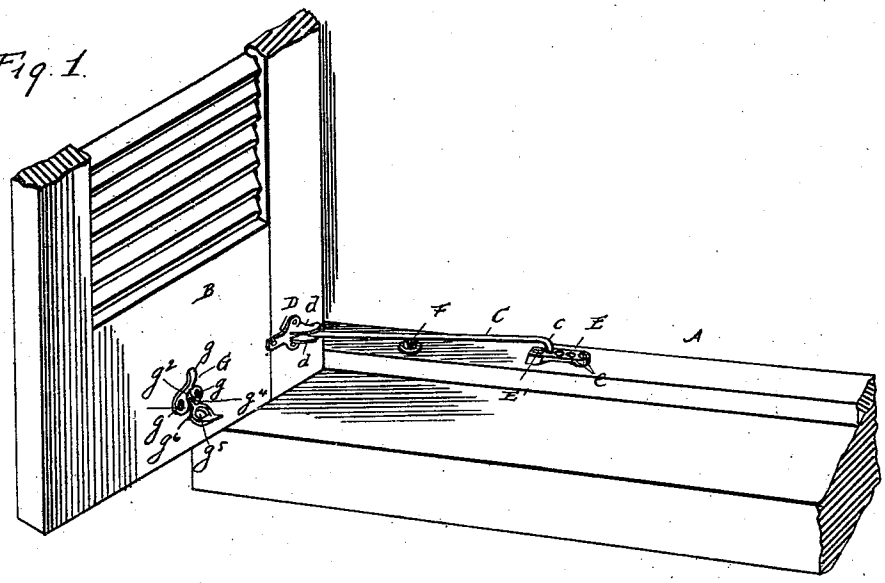


Fig. 2.

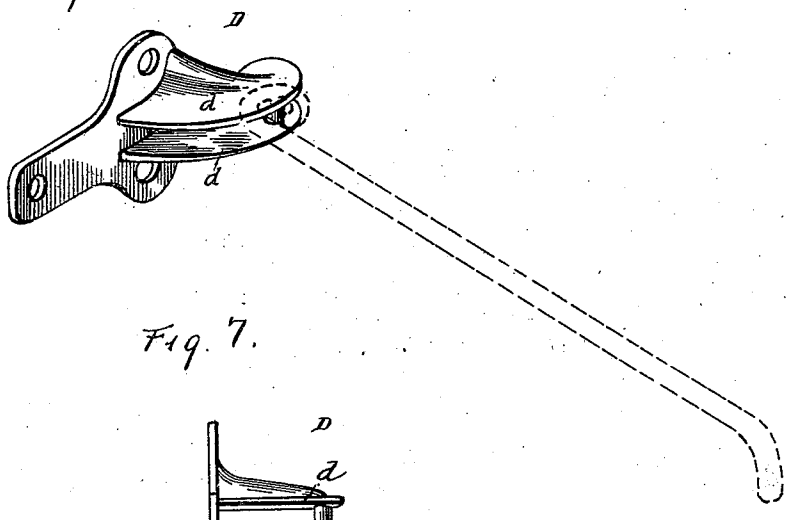
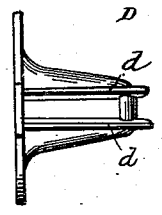


Fig. 7.



WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

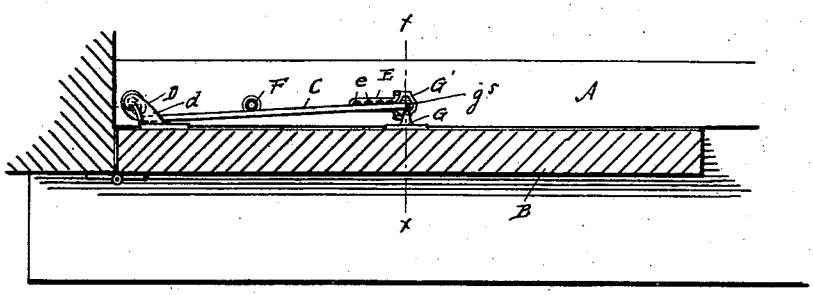


Fig. 5.

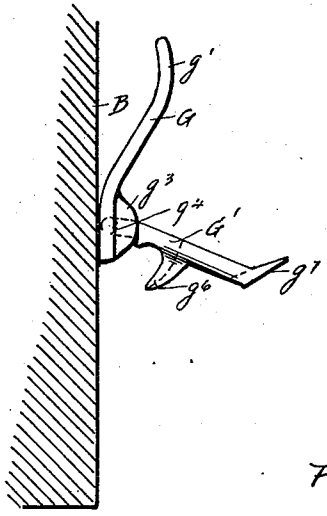


Fig. 6.

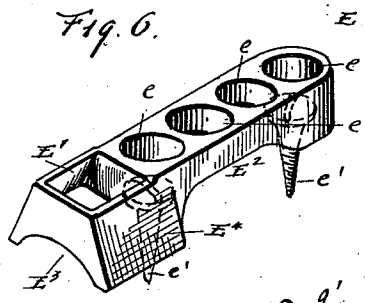


Fig. 4.

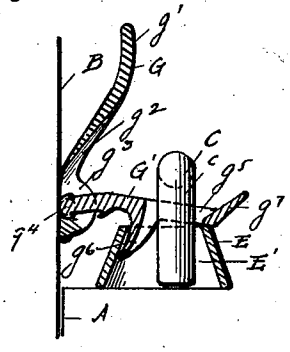
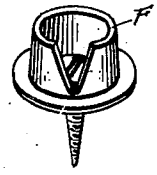


Fig. 8.



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UNITED STATES PATENT OFFICE.

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SHUTTER BOWER AND FASTENER.

SPECIFICATION forming part of Letters Patent No. 564,548, dated July 21, 1896.

Application filed October 17, 1895. Serial No. 565,984. (No model.)

To all whom it may concern:

Be it known that I, CHARLES ZIMMERMAN, a citizen of the United States, and a resident of Frederick, in the county of Frederick and State of Maryland, have invented certain new and useful Improvements in Shutter Bowers and Fasteners; and I do 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.

Figure 1 of the drawings is a representation of a perspective view showing the invention in application. Fig. 2 is a perspective view of bracket D, with bowing-rod in dotted lines. Fig. 3 is a sectional view showing double-locked positions of parts. Fig. 4 is a section on line *x x*, Fig. 3. Fig. 5 is a side view of shutter pull and catch. Fig. 6 is a perspective view of sill-plate. Fig. 7 is a front view of bracket D. Fig. 8 is a perspective view of single socket.

This invention is more particularly designed to be an improvement upon the shutter bowers and fasteners shown and described in the patent to Zimmerman and Zimmerman, No. 420,180, dated January 28, 1890, in the patent to Walling, No. 445,210, dated January 27, 1891, and in my own patent, No. 537,334, dated April 9, 1895, and especially in the last two of these patents in which double locks are employed.

The object of the present invention is mainly to provide a shutter bower and fastener of this character having an improved double automatic lock, wherein both the locks are made by the engagement of the locking parts with one and the same cavity or socket of the sill-plate, and wherein the parts are so arranged that the pivotal catch which engages said cavity or socket to constitute one of the locks is adapted also to catch the bowing-rod and throw its hooked end into engagement with itself and with the said cavity or socket to form the second lock.

With this object in view the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, the letter A designates the sill of a window-casing, and B the shutter, which is hinged to the side post of such casing in the usual manner.

C designates the bowing-rod, having the hooked end *c*. D is the bracket on the shutter to which the said rod is pivoted. E is the sill-plate, which has a series of sockets *e* therein to receive the hooked end of the said rod in holding the shutter bowed to a greater or less extent, and which is also formed with the cavity or socket E′, with which the rod and catch engage to form the double lock.

F is a single socket affixed to sill and which is engaged by the bowing-rod to hold the shutter in wide-open position.

G G′ is the combined shutter pull and catch.

The bracket D is formed with the upper and lower inwardly-projecting flanges *d d*, between the inner end portions of which the rod C is pivoted. The space between the said flanges gradually decreases toward the base portion of bracket, and such space is also somewhat wider at the front than at the back, both of which features are caused by the inclination of the upper face of the lower of said flanges and of the lower face of the upper flange. The purpose of this double inclination is to cause the hooked end portion of the rod C to be elevated as it swings inwardly, so that it will rise above the sill as the shutter closes.

The sill-plate E consists of a narrow plate, which is enlarged somewhat at that end wherein is formed the cavity or socket. The under side of said plate is cut away, as indicated at E^2 E^3, whereby the sockets *e* E′ are open at the bottom to permit the escape of water, dirt, and the like. The screws *e′*, which secure the bracket in place, are seated in the extreme end sockets *e*, which are seldom used for the engagement therewith of the bowing-rod. This leaves the two intermediate sockets *e* and the cavity or socket E′ entirely unobstructed. The approach to the said socket or cavity is inclined, as indicated at E^4.

The combined shutter pull and catch con-

sists of the pull portion G, having the screw-seats g, the pull projection g', the vertical slot g^2, and the bearings g^3 for the pivot-head g^4 of the catch G′, which is arranged to play freely in the said slot g^2. The catch G′ is formed with an opening g^5 therethrough, at the inner edge of which is a downward-bent projection g^6, which is concaved somewhat on its inner face. This projection is designed to engage with the under beveled wall of the socket or cavity E′ to form one of the locks. At the outer end of the catch G′ is an upwardly-beveled projection g^7.

The operation is as follows: In closing the shutter the hooked end of the bowing-rod, being elevated above the sill, comes into contact with the upwardly-inclined approach E^4 of the socket or cavity E′. At this time the beveled projection g^7 of the catch G′ comes underneath the hooked end of the bowing-rod, and raises the same as said catch rides up the incline until it drops through the opening g^5 thereof and into engagement with the socket or cavity E′, the projection g^6 at the same time dropping into engagement with the said socket or cavity. The projection g^7 also forms a thumb-seat by which the said catch and thereby the rod may be raised out of engagement with the socket or cavity E′, the simple action disengaging both locks. This automatic action is of great importance when the shutter is closed from the outside or from the inside by taking hold of the pull only with the rod hanging loose, or when, as is often case, the shutter is opened carelessly without engaging the rod with one of the sockets, and said shutter is blown to by the wind. It is in this feature that the present invention has an important advantage over the fastening shown in the said Patents Nos. 420,180 and 445,210, where the lock is not automatic. The present invention is also an improvement over the fastenings of the Patents Nos. 445,210 and 537,334 in the construction of the double lock, and in the fact that both locks are made by engaging a common hole or recess in the sill-plate, whereby the release of one effects the release of the other, and whereby one lock is a guard for the other. Other advantages are found in the construction of the sill-plate and the bracket D.

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

1. In a shutter bower and fastener of the class described, the combination of the bowing-rod having the hooked end, the sill-plate having the socket or cavity E′ designed to be engaged by said end, and led up to by an inclined approach, and the pivoted catch having an opening therethrough for said hooked end, a projection designed to engage said socket or cavity, and a projection designed to engage said hooked end, substantially as specified.

2. In a shutter bower and fastener, of the character described, the combination with the shutter-bracket having an inclined or cam face, the bowing-rod pivoted to said bracket and having a hooked end, a sill-plate formed with sockets e and with a socket or cavity E′, led up to by an inclined approach, a shutter-pull, and a catch pivoted to said pull, said catch having a projection designed to engage the said hook end, an opening therein through which said end engages the said socket or cavity, and a projection which is also designed to engage said socket or cavity, substantially as specified.

3. In a shutter bower and fastener, the combination with a hooked bowing-rod, and with a sill-plate having sockets of the slotted shutter-pull G, and the catch G′ pivoted at one end within the slot of said shutter-pull, said catch having the bent, downward projection g^6 adapted to engage one of said sockets, the upwardly-beveled projection g^7 at its forward end designed to engage the hook of said bowing-rod, and the opening g^5 through which said hook is designed to drop into engagement with the said socket, substantially as specified.

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

CHARLES ZIMMERMAN.

Witnesses:

MARSHALL FOUT,

J. MARSHALL MILLER.