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I., C. F. & H. C. ZIMMERMAN.

SHUTTER BOWER AND FASTENER.

APPLICATION FILED MAY 11, 1905.

Fig. 1.

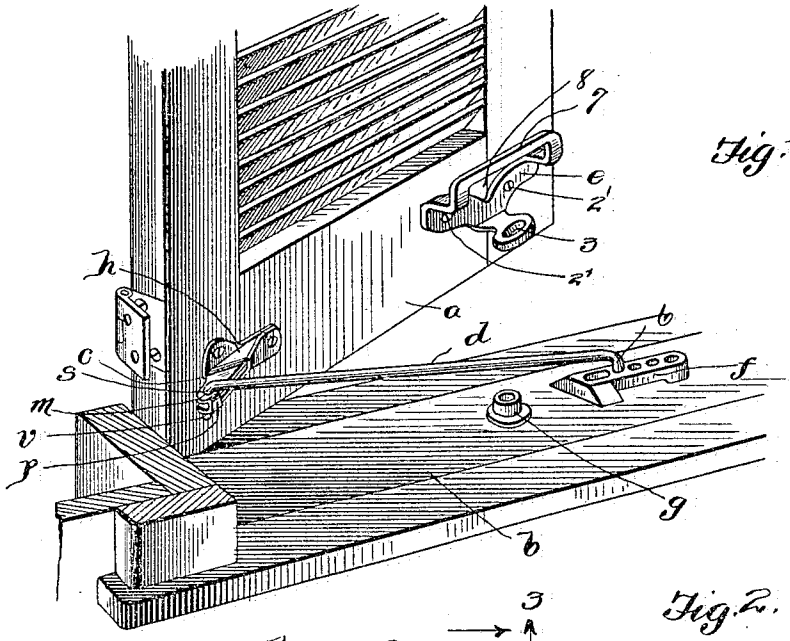


Fig. 2.

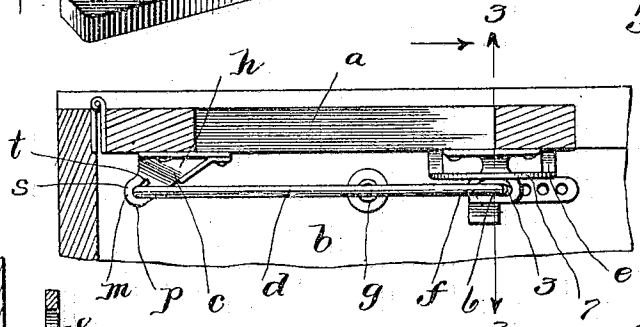


Fig. 3.

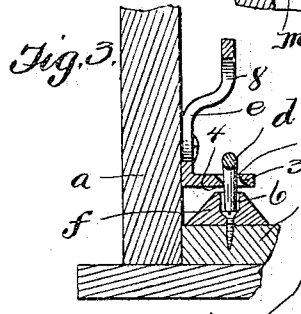


Fig. 4.

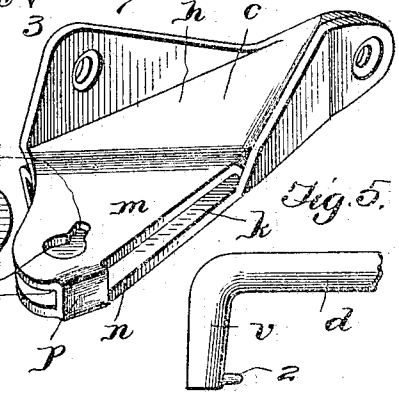
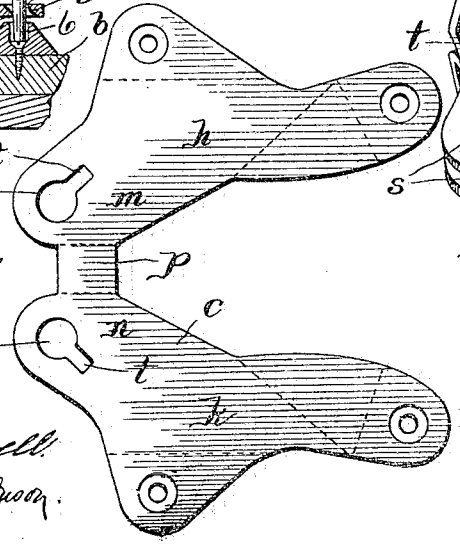


Fig. 5.

Fig. 6.



Witnesses

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SHUTTER BOWER AND FASTENER.

No. 809,884. Specification of Letters Patent. Patented Jan. 9, 1906.

Application filed May 11, 1905. Serial No. 259,916.

To all whom it may concern:

Be it known that we, IDA ZIMMERMAN, CHARLES F. ZIMMERMAN, and HARRY C. ZIMMERMAN, citizens of the United States, and residents of Frederick, in the county of Frederick and State of Maryland, have made a certain new and useful Invention in Shutter Bowers and Fasteners; and we declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of our invention as applied. Fig. 2 is a horizontal section through the shutter in closed position, having our invention applied thereto. Fig. 3 is a section on the line 3 3, Fig. 2. Fig. 4 is a perspective view of the bracket *c*. Fig. 5 is a detail view of the outer end of brace-rod *d*. Fig. 6 is a plan view of the blank for the bracket *c*.

The invention relates to shutter-workers; and it consists in the novel construction and combinations of devices, as hereinafter set forth.

In the accompanying drawings, illustrating the invention, the letter *a* designates the lower end of a shutter, and *b* a portion of the window-frame sill. To the lower end of the shutter, near the hinge side, is attached a bracket *c*, to which is connected a brace-rod *d*. To the free side of this lower end is attached a pull-plate *e*. To operate in connection with such pull-plate and the brace-rod are the sill-catches *f* and *g*.

Referring to the bracket *c*, this is a two-branch bracket, designed to be stamped out of strong sheet metal, and it consists of two horizontal branches *h* and *k*, having their outstanding arms *m* and *n* parallel to each other, and connected at their ends by a tie and brace portion or bridge portion *p*, which is designed to hold them firmly in relative position. Each of these arms is provided near its end with a round perforation *s*, having an offset *t* extending obliquely inward and forward or outward toward the inner end of the base of the bracket, said offsets being alined when the bracket is bent into form. The brace-rod is bent at its pivotal end to provide a short downward-directed or vertical arm *v*, which has, near its lower and smaller end, a stud or projection 2, which projects or is directed toward the other end of the rod. This stud 2 is designed to pass through the offsets of the apertures *s* when the rod is being attached to the bracket, and when said bracket is secured to the shutter the angular relation of the stud and the offset to the aperture prevents the rod from being detached from the bracket, owing to the interference of the shutter to bringing the stud and offsets in line. The arms or branches *h* and *k* of the bracket are separated from each other by a distance of about half an inch, or sufficient to provide bearings for the pivotal arm of the brace-rod at a proper distance to hold such arm in approximate horizontal position, thereby preventing it from sagging down when disconnected from the sill-catch. This bracket is a right and left bracket, and it is reversible for attachment to the shutter of the other side of the window. The bracket is reversed by turning it upside down.

The sill-catches are of the usual character.

The pull-plate *e* consists of a middle portion having perforations at 2′ for attachment-screws, whereby it is secured to the shutter. The lower end of the pull-plate projects horizontally from the middle portion and is provided with an elongated catch-hole 3, whereof the front and rear walls are oblique, being beveled downward and forward in order to provide lower and upper angular edges, (indicated, respectively, at 4 and 5.) The brace-rod is designed to have at its normally free or detachable distal end a short catch-arm 6, which, being passed through the hole 3 of the pull-plate and into one of the recesses of the sill-catch, serves to hold the shutter closed. In this position the angular edges of the hole 3 of the pull-plate serve to coöperate with the separated bearings provided in the bracket for its pivotal arm to hold the brace-rod securely and in such a steady manner that it will not be liable to rattle. The angular edges of the hole in the pull-plate also serve to engage the free arm 6 of the brace-rod when it is used in connection therewith for operating the shutter. From the middle attachment portion of the pull-plate extends upward and forward in a curved manner the pull-loop 7, which is made with a wide elongated opening 8 of sufficient extent to admit several fingers in order to facilitate the operation of

moving the shutter in adjusting the same, which is often quite difficult, especially on a windy day.

Having described the invention, what we claim, and desire to secure by Letters Patent, is—

1. In a shutter-worker, the combination with a brace-rod having a pivotal end provided with a stud directed toward the other end of the rod, of a double-branch bracket having parallel arms connected at their ends by a bridge portion, and provided with apertures having offsets oblique toward the base of the bracket, substantially as specified.

2. In a shutter-worker, the combination with a bracket having separate arms provided with apertures having oblique offsets, of a pull-plate having a forward projecting lower end provided with a catch-hole having beveled front and rear edges, and a brace-rod having pivotal and distal arms, substantially as specified.

3. In a shutter-worker, a pull-plate having a middle attachment portion, a lower forward projecting portion having a bevel-edge catch-hole, and a forward and upward projecting pull portion having a wide elongated aperture, substantially as specified.

4. In a shutter-worker, the combination with a brace-rod having an integral downward-directed pivotal end provided with a stud near its lower end directed toward the other end of said rod, of a double-branch reversible bracket provided with bearings for said pivotal end having alined offsets directed toward the base of said bracket, said stud being normally out of line with said offsets and prevented from coming in line therewith by the interference of the shutter with the brace-rod, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

IDA ZIMMERMAN.
CHARLES F. ZIMMERMAN.
HARRY C. ZIMMERMAN.

Witnesses:
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