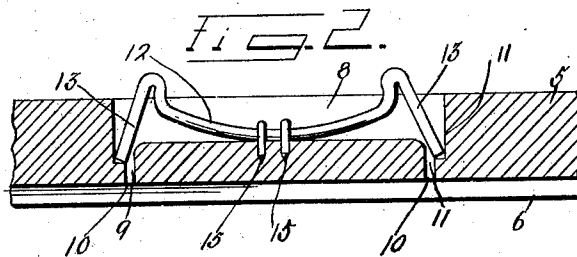
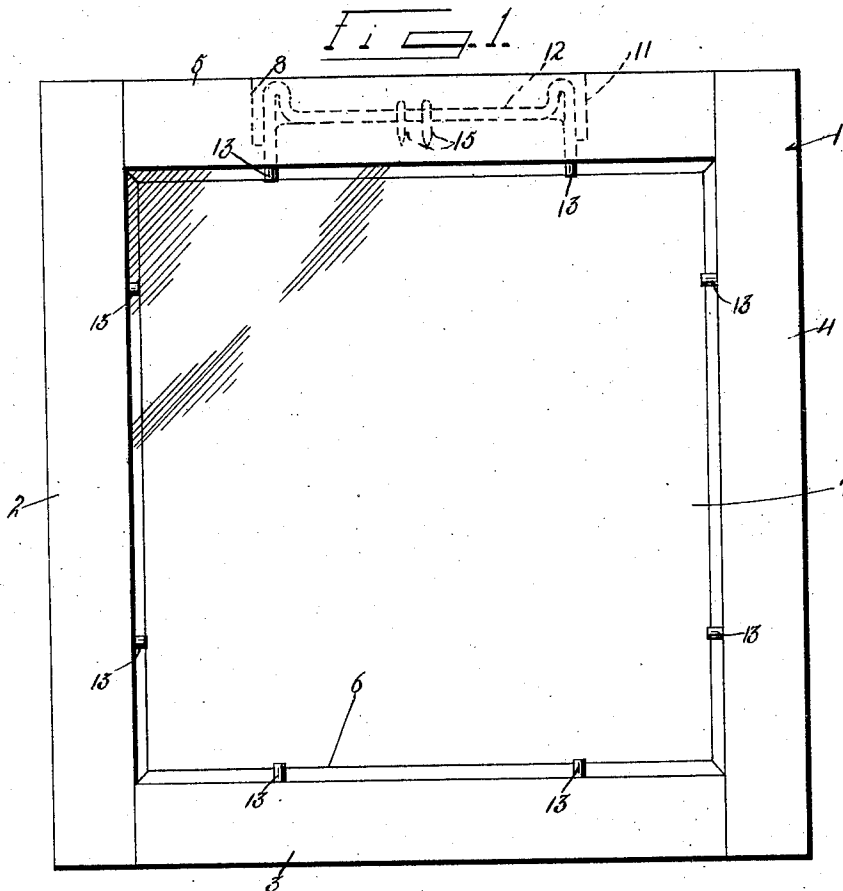


H. KNOBLAUCH.
WINDOW PANE HOLDER.
APPLICATION FILED NOV. 4, 1910.

987,076.

Patented Mar. 14, 1911.

2 SHEETS-SHEET 1.



Witnesses
J. E. Stahl
Frank A. Howard.

Inventor
H. KNOBLAUCH.
by *Charles Chandler*
By *Geo. T. Chandler*
Attorneys.

H. KNOBLAUCH.
WINDOW PANE HOLDER.
APPLICATION FILED NOV. 4, 1910.

987,076.

Patented Mar. 14, 1911.

2 SHEETS-SHEET 2.

Fig. 3

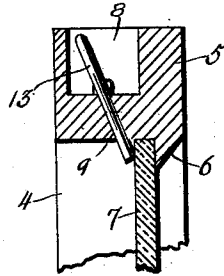
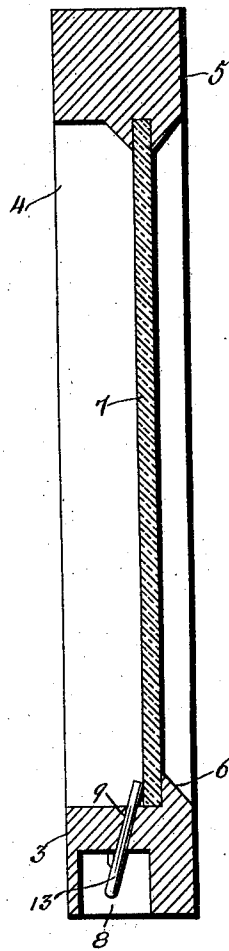


Fig. 4



Witnesses
J. E. Storkel.
W. J. Woodman.

Inventor
H. KNOBLAUCH.

By *[Signature]* *[Signature]*

Attorneys

UNITED STATES PATENT OFFICE.

HENRY KNOBLAUCH, OF HARRIMAN, TENNESSEE.

WINDOW-PANE HOLDER.

987,076.

Specification of Letters Patent. Patented Mar. 14, 1911.

Application filed November 4, 1910. Serial No. 590,705.

To all whom it may concern:

Be it known that I, HENRY KNOBLAUCH, a citizen of the United States, residing at Harriman, in the county of Roane, State of Tennessee, have invented certain new and useful Improvements in Window-Pane Holders; and I do hereby 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.

My invention relates to improvements in window pane holders and my object is to improve the construction and increase the efficiency of devices of this character.

A further object is to provide a form of spring fastener which will be entirely concealed in the frame of the window, and, a still further object is to provide a catch which will retain the spring fastener in inoperative position.

In the accompanying drawings, which illustrate the preferred embodiment of the invention, Figure 1 is a front elevation of a sash frame with my improved pane holders applied thereto, and Fig. 2 is a detail sectional elevation of a portion of one bar of the sash frame showing the method of applying my catch. Fig. 3 is a transverse section through the line 3—3 of Fig. 2. Fig. 4 is a section showing a modified form of my improved sash frame.

Referring more specifically to these views, in which similar reference numerals designate corresponding parts throughout, 1 indicates in general a conventional square sash made up of four frame members 2, 3, 4, and 5, each of said members being rabbeted out on its inner edge to form the shoulder 6. The glass 7 rests against these shoulders as in the usual form of construction, with this difference however that in an outside or wall window the shoulder is designed to be on the external side of the sash. On the peripheral faces of the sash bars are formed a plurality of cavities 8 and at the end of each cavity, or more properly slot, two drilled openings are formed. The first of these, here designated as 9, extends completely through the sash members, its inside opening 10 being spaced about the thickness of the pane of glass from the shoulder 6, and it is designed that this drilled opening 9 should be inclined inwardly to the plane of the glass. The second opening extends only

partially through the sash bar, and its bottom surface forms a shoulder or notch 11.

A piece of spring wire 12 has its extremities bent to form the hook members 13, and these terminals as well as the body of the wire are of a diameter slightly less than the bore of the openings 9. In assembling the sash, the wires 12 are introduced into the slot 8, occupying when in position the bottom and end portions of the slot, as best shown in dotted lines in Fig. 1. Adjacent to the central portion of the body 12 a pair of staples 15 secures said body to the bottom of the slot.

The sash may be conveniently shipped as now described. When it is desired to assemble the complete sash by putting in the panes, the terminals 13 are pushed up out of the openings 9 and it will be seen that the spring of the body portion will tend to throw these terminals outward so that they will engage the shoulders 11 and be prevented from returning to the normal position. The glass may then be placed in position against the shoulder 6 and by pressing inwardly against the terminals 13 they may be disengaged from the notches 11 when their natural spring tendency will be asserted and they will return to the position shown in Fig. 1. The slight inward inclination of the openings 9 will guide said terminals against the outer surface of the glass and cause the same to be pressed against the shoulder 6 to form a weather-proof and non-rattling joint. When the glass becomes broken, or if for any reason it becomes necessary to replace the same, the simple operation of pressing in the terminals 13 may be repeated and the old glass thus readily freed.

Although I have shown and described the catches as being made double ended it will be readily understood that the same may be made with one point inturned to form a securing means, the other point serving as a hook or catch in the method described, and it is also readily apparent that one bar of the sash may be formed with a glass receiving channel and the opposite bar with one or more of my fastening devices, all without departing from the spirit of the invention.

What I claim is:

1. A window-pane holder, comprising a sash member having an opening there-through, the axis of said opening being approximately parallel to the plane of said

5 window pane, and a resilient member secured to said sash member parallel to the length thereof and having an in-turned extremity adapted to pass through said opening and engage the face of said pane.

10 2. A window-pane holder, comprising a rabbeted sash member having an opening therethrough the axis of said opening being approximately parallel to the plane of said window-pane, the upper portion of said opening being enlarged to form a shoulder, and a resilient member secured to said sash

member parallel to the length thereof and having an in-turned extremity adapted to pass through said opening and engage the face of said pane or to be retained in an inoperative position by engaging said shoulder. 15

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

HENRY KNOBLAUCH.

Witnesses:

J. S. CRINKLEY,

J. C. FOREMAN.

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