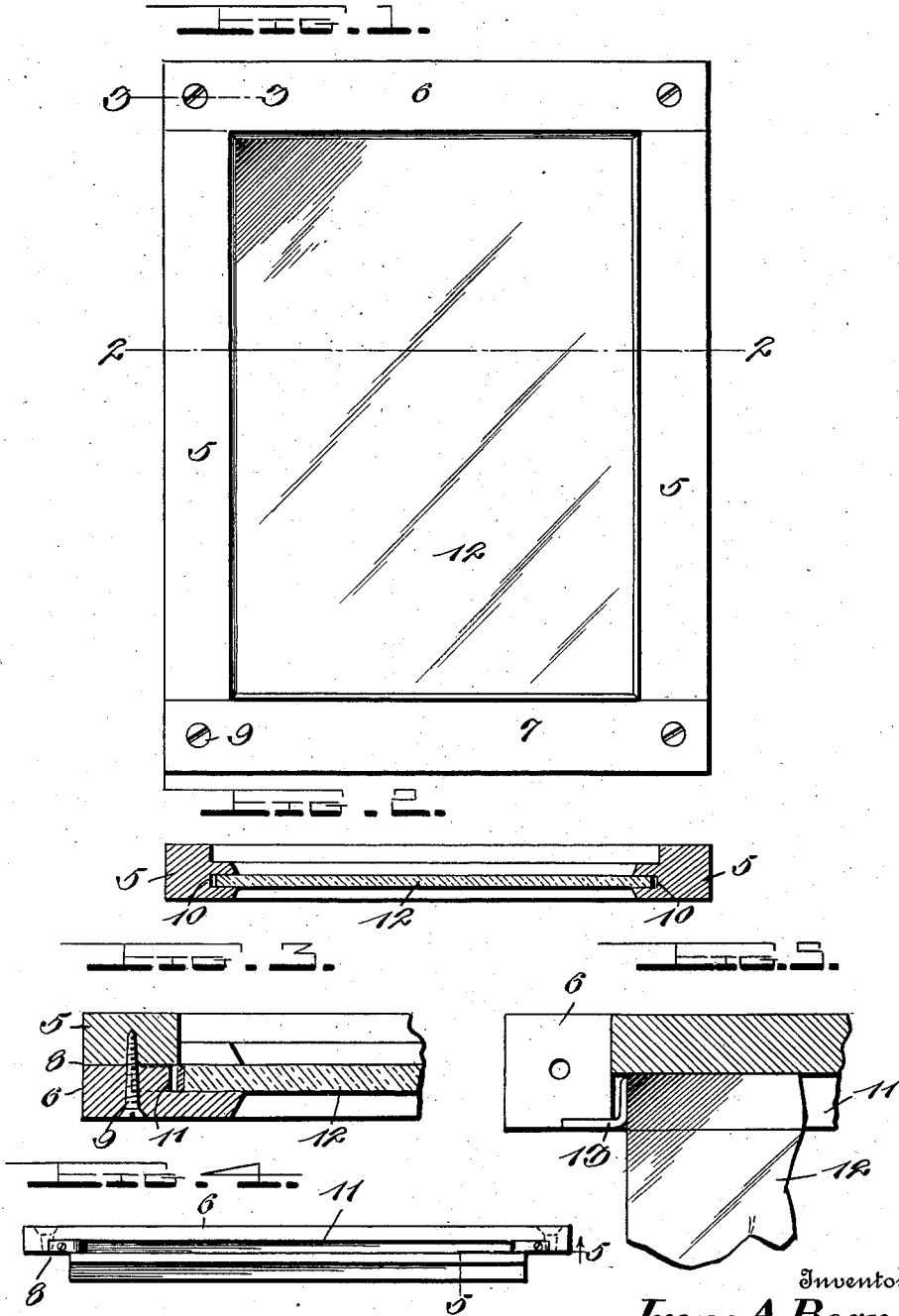


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WINDOW.

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1,027,584.

Patented May 28, 1912.



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WINDOW.

1,027,584.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, IRENE A. BEAN, a citizen of the United States, residing at Lonepine, in the county of Johnson and State of Arkansas, have invented certain new and useful Improvements in Windows, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in windows and has for its object to provide a sash frame of such construction that the glass pane may be easily and quickly arranged therein or removed from the frame and the use of putty or similar securing material entirely eliminated.

Another and more specific object of the invention is to provide a sash frame, the stiles and rails of which are grooved to receive the edges of a glass pane, and means carried by the rails to engage the pane and securely hold the same against rattling.

A further object of the invention is to provide a device of the above character which is of simple construction, may be inexpensively manufactured and is of great convenience in practical use.

With the above and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a window sash embodying my improvements; Fig. 2 is a section taken on the line 2—2 of Fig. 1; Fig. 3 is an enlarged detail section taken on the line 3—3 of Fig. 1; Fig. 4 is an edge view of one of the sash rails; and Fig. 5 is a detail section taken on the line 5—5 of Fig. 4.

Referring in detail to the drawing, 5 designates the side stiles of a sash frame and 6 and 7 respectively indicate the upper and lower cross rails. The ends of the stiles and rails are cut away for about one-half of their thickness as shown at 8 to form lap joints, at which points the rails and stiles are detachably secured together by means of suitable fastening screws 9.

The stiles 5 of the frame are provided in their inner edges with the grooves 10 and the upper and lower rails are also provided in their opposed edges with the grooves 11. When the top and bottom rails are arranged upon the ends of the stiles, the ends of the grooves 11 in said rails are in line with the

grooves 10 in the stiles 5. The grooves in the stiles are formed in the thicker body portion thereof and open at the inner ends of the reduced lap portions of said stiles so that a glass pane 12 may be inserted into said grooves from the top or bottom of the frame. The vertical edges of the glass pane fit loosely in the grooves 10 of the side stiles and the upper and lower edges of the pane are similarly disposed in the grooves of the upper and lower rails 6 and 7 respectively.

To the reduced ends of the upper and lower rails of the frame, the leaf springs 13 are secured and the free resilient portions of these springs are disposed in the ends of the grooves in said rails. It will thus be seen that when the top and bottom rails are arranged upon the ends of the side stiles and secured thereto, the leaf springs will bear against the side edges of the glass pane at its upper and lower ends and serve to securely hold the same in position in the grooves and prevent the pane from rattling in the frame. At the same time, by having the edges of the pane loosely fitting in the grooves, the glass may be easily and quickly inserted between the side stiles.

From the above it will be seen that I have devised a very simple and effective means for mounting glass panes in window sashes whereby considerable time and labor are saved in replacing broken panes. The stiles and rails may be easily and quickly connected together, and the pane rigidly held therebetween without necessitating the application of additional securing means therefor such as putty or similar adhesive materials. The device is also extremely simple in construction and may be produced at small cost. It is also extremely convenient in practical use as it obviates the necessity of employing an experienced glazier for replacing the broken pane.

It will of course be obvious that while I have described the invention in connection with a window sash, the same principle is applicable to doors having glass panels and other analogous elements of building construction. The device is also susceptible of many other modifications in the form, proportion and arrangement of the parts without departing from the essential feature or sacrificing any of the advantages thereof.

Having thus described the invention what is claimed is:—

1. A window sash comprising upper and

lower rails, side stiles and means for detachably securing the rails and stiles together at their ends, said stiles and rails having longitudinal grooves in their inner edges, and means secured to the upper and lower rails and projecting into the grooves thereof at their ends to engage a transparent pane arranged within said grooves of the stiles and rails to hold the same and prevent its movement in the grooves.

2. A window sash comprising upper and lower rails and side stiles, means to detachably secure the stiles and rails together at their ends, said stiles and rails being provided with longitudinal grooves in their inner edges to receive the edges of a glass pane, said glass loosely fitting into said grooves, and a plurality of yieldable holding members arranged in the grooves of the

rails to bear against said glass and hold the same against rattling in said grooves.

3. A window sash comprising upper and lower rails, side stiles and means for detachably connecting the stiles and rails together, said stiles and rails being provided with longitudinal glass receiving grooves in their inner edges, and a leaf spring secured to each end of the upper and lower rails and disposed in the ends of the grooves in said rails to bear against the edges of the glass and yieldingly hold the same in position to prevent rattling thereof.

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

IRENE A. BEAN.

Witnesses:

G. W. BEAN,
A. N. RAGON.

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