(No Model.)

S. H. BASS.

WINDOW FRAME AND SASH.

No. 492,655. Patented Feb. 28, 1893.

Fig. 1

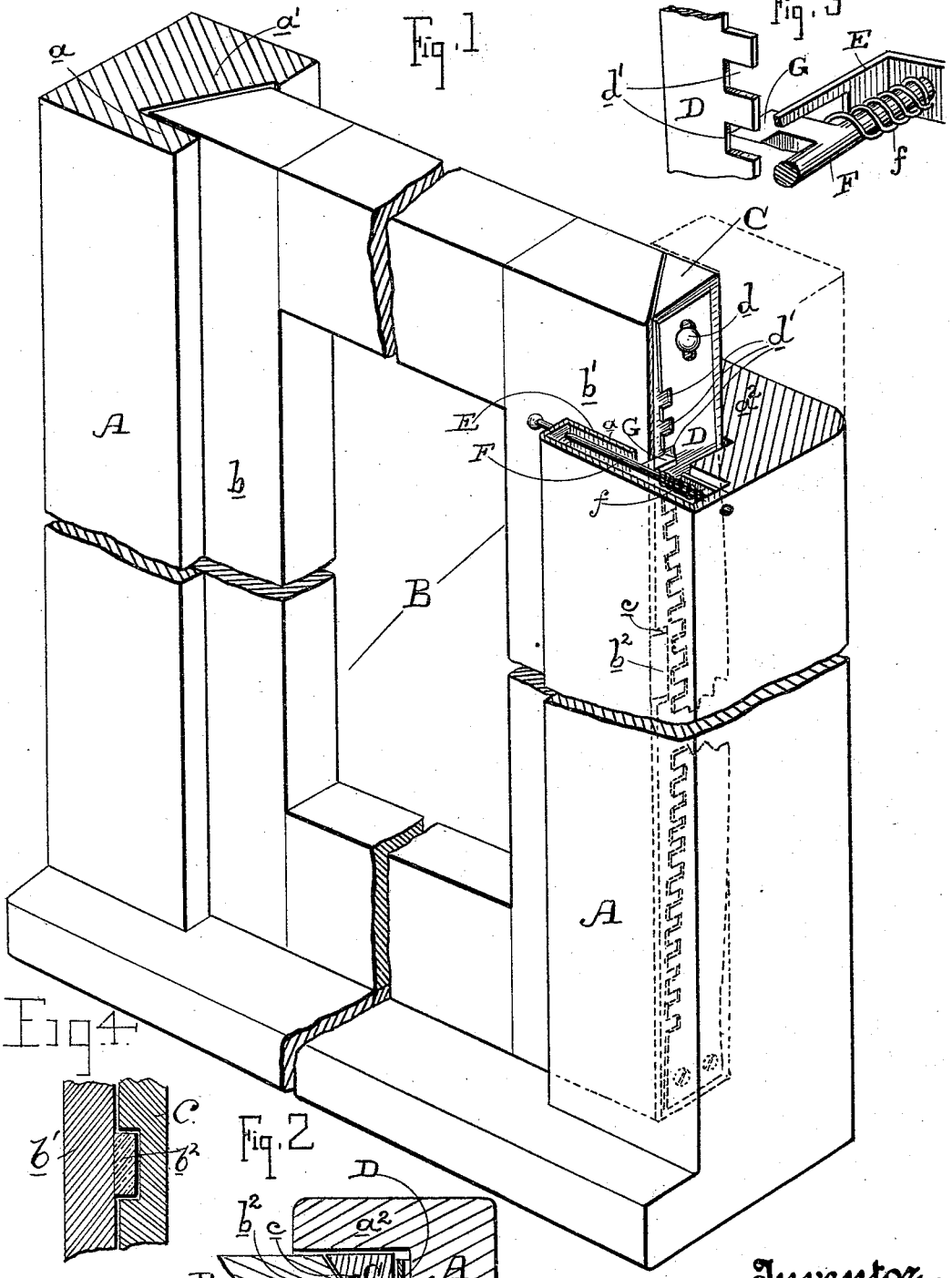
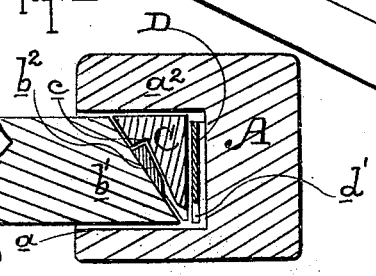


Fig. 3

Fig. 4.

Fig. 2



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UNITED STATES PATENT OFFICE.

SAMUEL H. BASS, OF OAKLAND, CALIFORNIA.

WINDOW FRAME AND SASH.

SPECIFICATION forming part of Letters Patent No. 492,655, dated February 28, 1893.

Application filed August 26, 1892. Serial No. 444,206. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL H. BASS, a citizen of the United States, residing at Oakland, county of Alameda, State of California, have invented an Improvement in Window Frames and Sashes; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of window frames and sashes, and it consists in the novel constructions, arrangements and combinations of the parts, hereinafter fully described and specifically pointed out in the claims.

The object of my invention is to provide for keeping the sash tight and snug in its frame, to exclude dust and to prevent rattling, at the same time avoiding any binding or cramping due to swelling.

Though applicable to all window frames and sashes, the invention is particularly applicable to car windows in that a tight dust and weather-proof joint is made, avoiding rattling and at the same time permitting the sash to be readily raised and lowered, and fastened in any place to which it may be adjusted.

Referring to the accompanying drawings for a more complete explanation of my invention,—Figure 1 is a perspective view of my frame and sash, parts being broken and parts in section. Fig. 2 is a detail cross section. Fig. 3 is a perspective detail to show the engagement, of catch *f* and the notches of spring D. Fig. 4, is a detail view showing the construction by which the movable bar C is connected to the sash.

A is the frame in which is mounted the sash B. The frame has side grooves for the sash B, said grooves having the usual inside stops *a*. The outer stop *a'* on one side is beveled as shown, and the back surface of the stile *b* of the sash on that side is similarly beveled. On the other side, the outer wall a^2 of the sash groove is straight, but the stile *b'* of the sash on that side is beveled as shown, the longer edge of the bevel extending behind the inside stop *a* while its shorter edge does not quite reach to the edge of the straight outer wall a^2. There is thus left between the beveled edge of the stile *b'* and the bottom wall of the sash groove a triangular space in which is seated an independent triangular bar C, the inclined face or hypotenuse of which bears against the bevel of the stile *b'* of the sash. This bar forms the outer stop of the sash groove, and thus on this side, as well as on the other, the sash fits against a beveled surface, its own contacting surface being also beveled. This triangular bar C is independent of the frame whereby it can be forced inwardly against the sash by means of the spring to be presently described. It may not have a vertical movement as the sash in that case can slide up and down upon it as upon the outer stop *a'* at the other side, but I prefer to make said bar slide up and down with the sash, and for this purpose I connect it therewith in such a manner that while the two move up and down together, they are independent upon transverse lines in order to allow the full effect of the bevel contact to be obtained. This connection between the sash and bar may be of any suitable description. A simple way is to attach a contact block b^2 to the bevel face of the sash stile *b'* and have this block fit in a notch *c* made in the bar C. It will thus be seen that the sash will carry the bar up and down with it but the connection will allow for an independent lateral movement of the sash on the bar.

Secured to the lower end of the bar C is a spring D, which is bowed upwardly and is slotted over a pin *d* at the top of the bar, whereby said spring may be pressed in and out yielding freely on its slotted connection at the same time that said end is properly secured. This spring lies between the bottom wall of the sash groove in the frame and the back of bar C. Its effect is to force said bar outwardly against its beveled bearing on the sash, and to force the entire sash over so that the beveled surface of its other stile *b* bears snugly against the beveled outer stop *a'* of the frame. Thus the sash is kept constantly pressed against its beveled bearing surfaces. In order to secure it in any position, I have made in the side of the spring D, at one edge, a vertical series of notches *d'*.

Mortised into the side of the casing or frame A, near its upper portion, is a plate E in which is mounted a push rod F, the end of which projects outwardly and parallel with the face of the sash and frame and within reach of the operator. A spring *f* holds the push rod out,

Upon said rod is a beveled catch G which, under the influence of the spring *f*, is adapted to engage any of the notches in spring D, and to be relieved from said notches when the push rod is forced inwardly. The catch is so beveled that it will allow the sash to be raised without catching, but not to be lowered except by relieving it of the notches.

It will be seen from the construction as heretofore described that the main function of the spring D is to force the sash constantly over to its seat in the frame and hold it there, thus forming a close dust and weather-proof joint and preventing any rattling.

In order to avoid cramping and binding, due to the swelling of the sash, the bearing surfaces of said sash and the opposing surface of the frame against which it bears are made beveled whereby the expansion of the sash due to swelling will not have the effect of cramping or binding it on the bearing surfaces.

The beveled bearing surface on one side in the frame is a fixed one, but on the other side, in order to provide for the effect of the spring, the bearing surface of the frame is a movable one adapted to be acted upon by the spring. This is effected by the independent bar C which in its effect upon the sash may be regarded as the outer stop of the frame itself. The bar being movable, the spring can keep it forced up against the beveled stile of the sash, and can thus keep the sash snug and tight between its beveled bearing surfaces under all conditions.

The connection between the independent bar C and the sash, as heretofore mentioned, is such that the movement sidewise of the sash may be independent of the bar, but its movement up and down will carry the bar with it. This I have found to be the best construction for the reason that it equalizes the power of the spring on the sash during its entire movement, and no matter in what position it may be, as it will bear steadily and fully upon it and press the bar against it equally.

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

1. The combination of the frame having the sash grooves the outer stop of one of which is beveled on its inner surface, the sash having the back surface of one of its stiles beveled an independent bar seated in the other sash groove and having a beveled inner surface fitting against the beveled stile of the sash, a spring pressing behind said bar to hold it against the sash and to press the sash closely to its seat, said spring provided with a series of notches and a push rod with a catch to engage said notches substantially as herein described.

2. The combination of the frame having the sash grooves the outer stop of one of which is beveled on its inner surface, the sash having the back surface of one of its stiles beveled, an independent bar seated in the other sash groove and having a beveled inner surface fitting against the beveled stile of the sash, said bar being engaged with the sash to move vertically therewith and laterally independent thereof and a spring pressing behind said bar to hold it against the sash and to press the sash closely against its seat, substantially as herein described.

3. In a window frame and sash having the beveled bearing surfaces as described, the combination of the independent beveled bar C having a notch, the block on the sash stile fitting said notch whereby the bar moves vertically with the sash and the latter may move sidewise independently, and the spring secured to and bearing back of the bar, substantially as herein described.

4. In a window frame and sash having the beveled bearing surfaces as described, the combination of the movable beveled bar C, the pressure spring behind it having the notches and the spring-controlled push rod with catch in the window frame for engaging the notches of the spring, substantially as herein described.

In witness whereof I have hereunto set my hand.

SAMUEL H. BASS.

Witnesses:
S. H. NOURSE,
J. A. BAYLESS.