G. B. KOHLER.

WINDOW SASH.

APPLICATION FILED JAN. 20, 1914.

1,242,815.

Patented Oct. 9, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

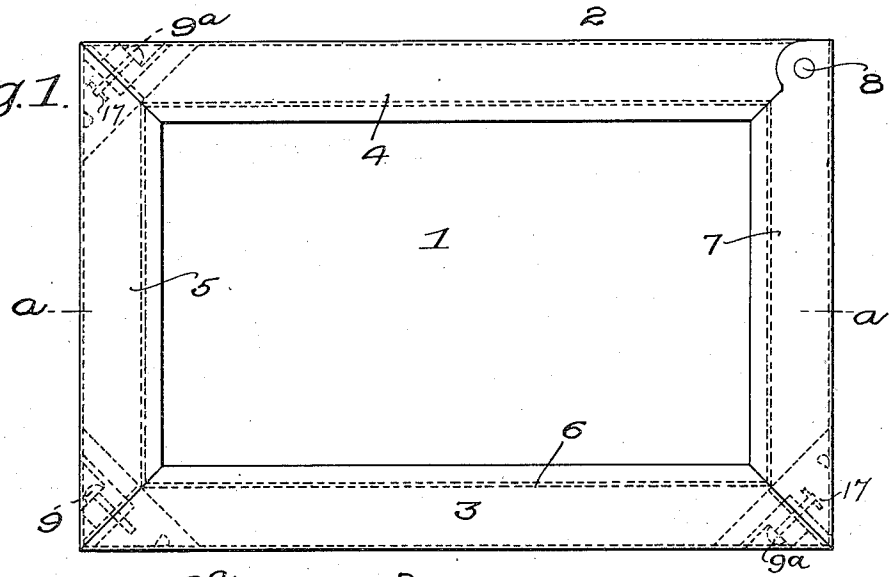


Fig. 2.

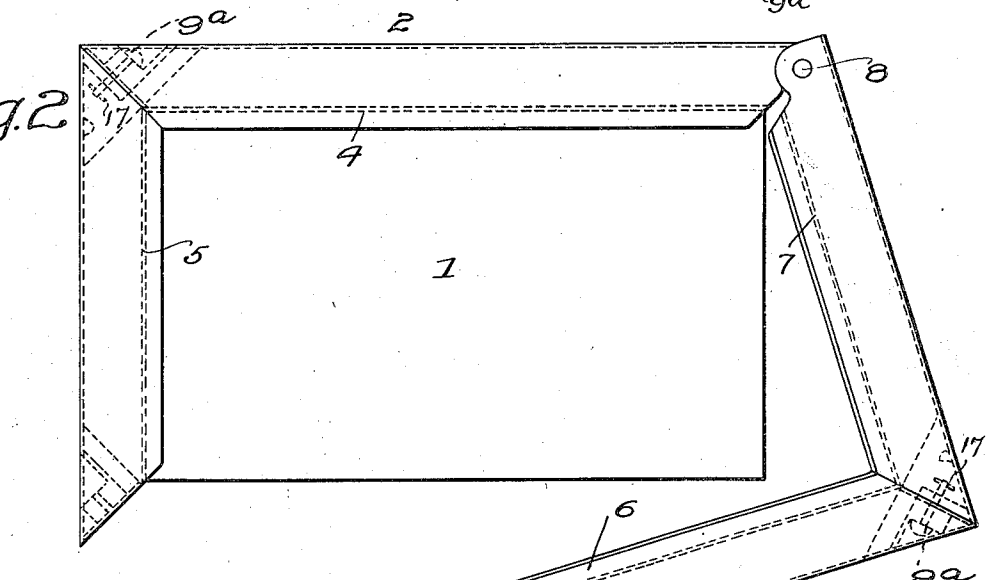
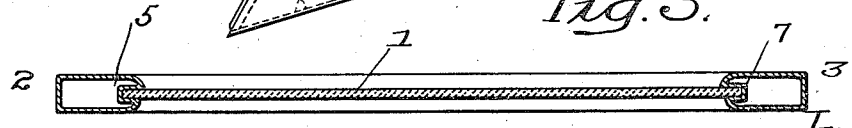


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

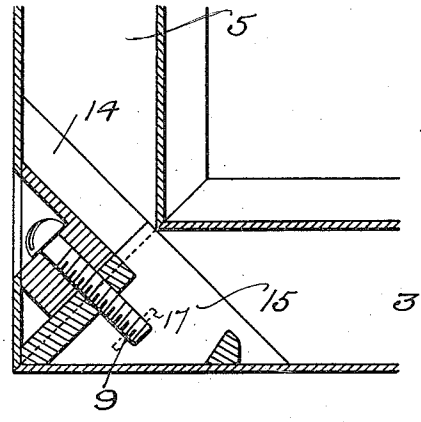


Fig. 5.

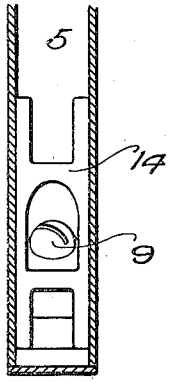


Fig. 8.

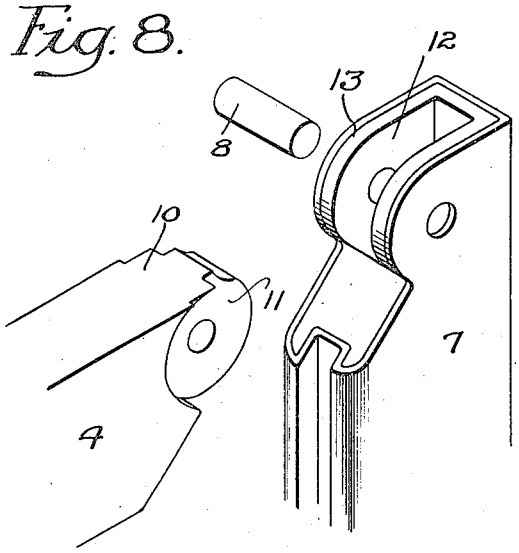


Fig. 6.

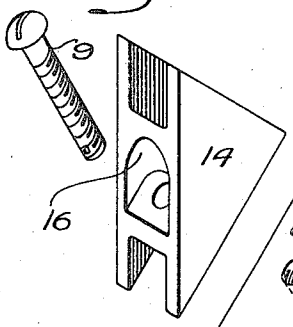


Fig. 7.

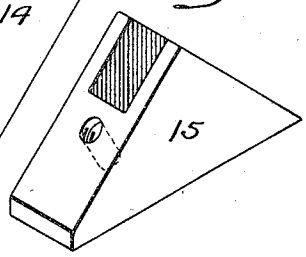
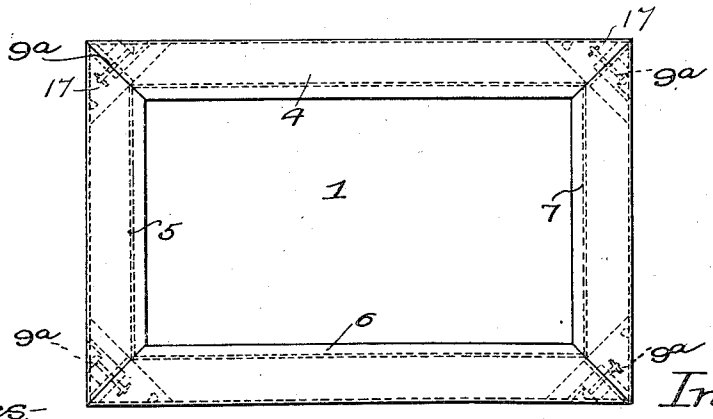


Fig. 9.



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UNITED STATES PATENT OFFICE.

GEORGE B. KOHLER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE J. G. BRILL COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

WINDOW-SASH.

1,242,815. Specification of Letters Patent. Patented Oct. 9, 1917.

Application filed January 20, 1914. Serial No. 813,219.

To all whom it may concern:

Be it known that I, GEORGE B. KOHLER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Window-Sashes, of which the following is a specification.

My invention relates to certain improvements in a metal sash for windows, particularly a sash for car windows.

The object of my invention is to make a sash in which the sections can be readily detached so as to allow for the ready insertion of a pane of glass within the sash; dispensing with the ordinary removable narrow strips which are impractical in a metal sash.

In the accompanying drawings:

Figure 1 is a side view of my improved sash;

Fig. 2 is a view showing the sash partly opened for the removal or insertion of a sheet of glass;

Fig. 3 is a transverse sectional view on the line *a*—*a*, Fig. 1;

Fig. 4 is a sectional view of one corner of the sash showing the means of fastening the two sections of the sash together;

Fig. 5 is a side view of the sash illustrated in Fig. 4, with the rails in section;

Figs. 6 and 7 are perspective views of the two metallic corner pieces which are united by a screw;

Fig. 8 is a detached perspective view of the two hinge pieces, and

Fig. 9 is a view of a modified form of sash.

Referring to Figs. 1 and 2 of the drawings, the sash is made in two sections 2 and 3, and incloses the sheet of glass 1. The section 2 has a longitudinal rail 4 and a vertical rail 5. Each of these rails is grooved, as illustrated in Fig. 3, so as to receive the glass 1. The section 3 has a longitudinal rail 6 and a vertical rail 7. The two sections are pivotally connected by a pivot pin 8 so that one section can be moved away from the glass, as illustrated in Fig. 2, in order to release it and to allow for its ready removal or replacement. The sections are detachably connected at the corner opposite to the pivot 8, in the present instance by a screw 9. The rails of each section are preferably connected by screws 9^a and the entire sash can be dismantled, if desired.

The sash is made of a series of thin metallic strips shaped to form a groove for the reception of the edge of the glass, as illustrated in Fig. 3, and at each corner of the sash are triangular castings. One casting is secured to one rail of the sash and the other is secured to the adjoining rail. The screws 9, 9^a, extend through one of these castings and the threads of the screws mesh with the threads in the other casting. As the castings are brazed, or otherwise secured to the thin sheet metal rails, the parts are rigidly held together.

All of the corners may be secured by screws, as illustrated in Fig. 9, or a hinge joint may be used at one corner, as illustrated in Fig. 1. This hinge joint is made as shown in Fig. 8.

The triangular cast metal block 10 has a tongue 11 arranged to enter the recess 12 in the casting 13 and these two parts are pivotally connected by the pin 8. At a diametrically opposite corner are the two triangular castings illustrated in Figs. 6 and 7. The casting 14 is secured to the rail 5 and the casting 15 is secured to the rail 6. There is a diagonal hole in each of these castings. The hole in the casting 14 is plain, while the hole in the casting 15 is threaded. The casting 14 is recessed at 16 to receive the head of the screw 9. The screw passes freely through the hole in the casting 14 and is screwed into the hole in the casting 15, locking the two castings, and their rails, firmly together.

I preferably use similar castings to connect the rails 4 and 5 together, as well as the rails 6 and 7, employing screws 9^a, as indicated, thus making the entire frame of the sash detachable. These last mentioned joints, however, may be made permanent, if found desirable.

This invention is particularly adapted for the sash of a car window. The glass of a car window is extremely likely to be broken and repairs must be quickly made. The glass must be held firmly in place, consequently, a preferable construction is one in which the beads are an integral part of the frame. By making the sash detachable at the four corners, any one of the rails can be removed and the glass withdrawn and another glass inserted, or, as in the preferred form, Fig. 1, a single screw 9 can be removed and the part of the sash having the two rails may be turned on its pivot so as to release the glass to be removed enabling another sheet to be readily put in place and

secured in position by merely replacing the screw. The screws may have pins 17 to limit their movement so that they will not be lost. The pins are adapted to holes in the ends of the screws and may be removed when necessary. It will be noticed that one side of the groove in the sash is wider than the other side and this allows the glass to be placed in position from one side without passing through the sash.

I claim:

1. The combination in a metallic sash, of horizontal and vertical rails pressed to form grooves for the reception of a sheet of glass; two triangular sections secured to the rails and fitting against each other; and a bolt securing the two sections together.

2. The combination in a metallic sash, of horizontal and vertical rails pressed to form grooves for the reception of a sheet of glass; two triangular sections secured to the rails and fitting against each other; one section having a plain opening and the other section having a threaded opening; and a screw adapted to the openings and arranged to secure the two parts together.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

GEORGE B. KOHLER.

Witnesses:
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