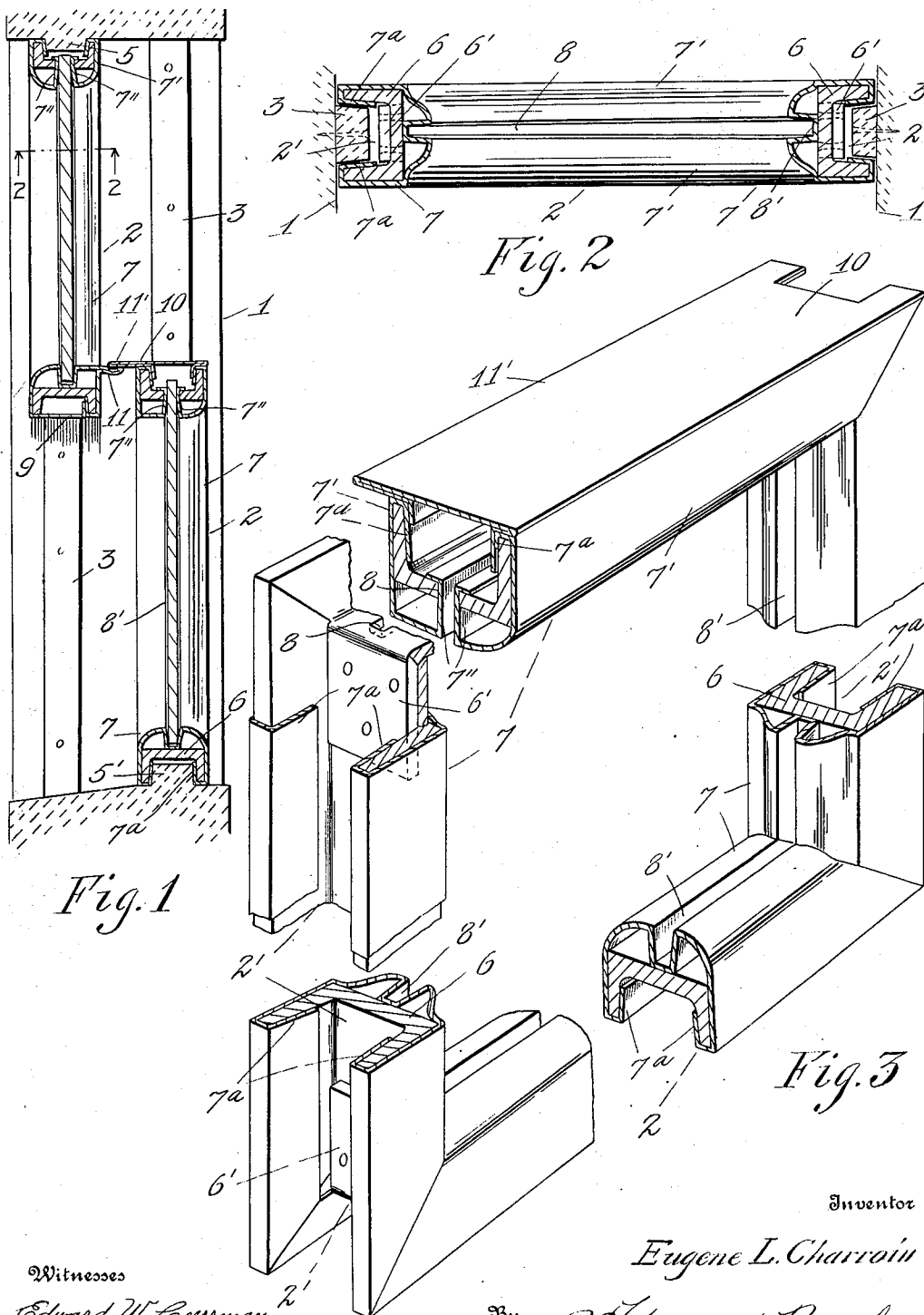


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E. L. CHARROIN.
SASH CONSTRUCTION.

APPLICATION FILED MAR. 14, 1908.



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SASH CONSTRUCTION.

No. 844,301.

Specification of Letters Patent.

Patented Feb. 12, 1907.

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To all whom it may concern:

Be it known that I, EUGENE L. CHARROIN, a citizen of the United States of America, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Sash Constructions, of which the following is a specification.

My invention relates to improvements in sash constructions, having more particular reference to those of the fireproof type; and the primary object thereof is to provide an improved structure which will embrace but few parts, thereby enabling it to be manufactured at a comparatively low cost, and which will be strong, durable, and very efficient in operation.

With the above and other desirable objects in view the invention consists of the construction, arrangement, and combinations of parts hereinafter described, and succinctly defined in the appended claims.

Referring to the drawings, in which like numerals of reference indicate like parts throughout the several views, Figure 1 is a vertical cross-section through a window-frame having sash constructed in accordance with my invention arranged therein. Fig. 2 is a section taken on line 2 2 of Fig. 1, and Fig. 3 is an enlarged fragmentary detail view in perspective of one of the sash removed from the window-frame.

Reference-numeral 1 indicates the window-frame, and 2 the upper and lower sash provided in their side edges with grooves 2', in which guide-heads 3 on the window-frame are received and said sash thereby slidably mounted. One sash is provided in the upper face of its top rail with a groove for reception of a bead, as 5, while the other has the lower face of its bottom rail constructed in a similar manner for reception of another bead, as 5', provided on the sill of the window-frame. Otherwise, however, the two sash are substantially the same in construction, and a description of one will therefore suffice.

Reference-numeral 6 indicates the reinforcing-frame of the sash, the same consisting of top, bottom, and side walls, as now considered, formed of bars approximately U shape in cross-section and arranged with their open sides outward, and these bars can be secured together in any desired manner to provide a rigid structure, a preferred mode, however, consisting in having the web portions of the upper and lower bars extending

beyond the adjacent end portions of the side walls thereof and bent to form angular extensions 6', which are riveted, as shown, or otherwise secured to the web portions of the frame side bars, as clearly shown in Fig. 3.

Reference-numerals 7 indicate shell-like sections of sheet metal bent to the desired form and arranged over the several walls of the frame 6 with their edge portions bent at 7^a into the channels of said bars and their opposite side portions in even and firm engagement with the opposite faces thereof, and these sections form the top and bottom rails and the stiles of the sash, respectively. One of these sections (shown as that forming the top rail) is formed in two longitudinal parts 7', which bear on the side faces of the inclosed frame-bar and have their inner longitudinal portions bent over the inner face thereof and then again bent to form opposite portions or walls 7'', which project through a slot 8, formed in said bar, and have their projecting portions bent apart and down upon said bar. The other sections 7 have their inner ends closed and are approximately U-shaped in cross-section, and in these closed ends of the sections I form grooves by bending inwardly the metal, as clearly shown, said grooves 8' being adapted for reception of the sash-glass and having their bottom walls bearing on the adjacent bars of the reinforcing-frame. The grooves in those sections forming the stiles of the sash register with slot 8, so that the glass can be readily seated therein when inserted through said slot.

To give the sash a neater appearance, I close the outer portions of the channels of those bars in the meeting-rails of the upper and lower sash, that channel in the lower rail of the upper sash being closed by a portion 9 of the sheet-metal section 7 and the channel in the upper rail of the lower sash being closed by a removable closure 10. The lower rail of the upper sash is formed with an outwardly-projecting lip 11, which is overlapped by a lip 11', formed on closure 10, the two lips cooperating to form a guard, as is obvious.

By providing the U-shaped reinforcing-bars aside from materially reducing the weight of the frame those portions of the sections forming the opposite sides of the sash are held firmly and smoothly in their spaced-apart relation and, further, grooves for reception of the beads 3 and 5 5' are conveniently provided. The function of the beads 5 5'

engaging in the grooves of the adjacent sash-rails is obviously primarily to form a perfect joint between these portions of the respective sash and the window-frame, but in addition to this said beads will prevent to a marked degree rattling of the sash, they being slightly wedge-shaped in cross-section so as to bind slightly in the grooves in which they are received.

10 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is—

15 1. A sash consisting of shell-like rails and stiles formed of sheet metal and having their inner walls bent to form opposite portions between which the sash-glass is received, and internal reinforcing means for rigidly holding the side walls of said rails and stiles in their spaced-apart relation.

20 2. A sash consisting of metal shell-like rails and stiles, and a reinforcing means arranged in said rails and stiles and having opposite walls fitting snugly against the side walls thereof.

25 3. A sash formed of metal and provided with grooves for reception of the glass, said sash consisting of shell-like rails and stiles, and reinforcing means arranged therein, said reinforcing means fitting snugly between the opposite side walls of said rails and stiles so as to reinforce the same and having the metal forced inwardly in the formation of said grooves bearing thereagainst.

30 4. A sash consisting of a frame having top, bottom and side walls formed in their outer edge portions with grooves, and a sheet-metal facing fitted over said frame, the outer portion of said facing being secured in said

40 grooves and the inner portion thereof bent toward the adjacent walls of said frame to form opposite walls between which the sash-glass can be fitted.

5. A sash consisting of a frame formed of top, bottom and side walls, one of said walls being formed with a slot to permit of the insertion of the glass, and a facing fitted over the walls of said frame so as to be reinforced thereby and provided with seats for the glass alining with said slot.

50 6. A sash consisting of a frame formed of top, bottom and side walls, said top wall having its outer edge portion formed with a channel, a facing fitting over the walls of said frame and secured in said channel, and a closure removably secured in the outer portion of said channel of the top wall.

7. A sash consisting of a frame having its top wall formed in its upper face with a channel, a facing for the frame having portions projecting into said channel whereby it is secured, and a cover removably secured in said channel and having a lip projecting beyond one side face of the sash to form a guard, for the purpose specified.

65 8. The combination of the window-frame, guide-beads on the opposite sides thereof, a sash, and bars in the stiles of said sash provided with grooves, said guide-beads projecting into the grooves of said bars, for the purpose specified.

Signed at Seattle, Washington, this 5th day of March, 1906.

EUGENE L. CHARROIN.

Witnesses:

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