No. 897,077. PATENTED AUG. 25, 1908.

A. FILZAMER.

CONSTRUCTION OF WROUGHT IRON WINDOWS.

APPLICATION FILED MAR. 24, 1906.

Fig. 1

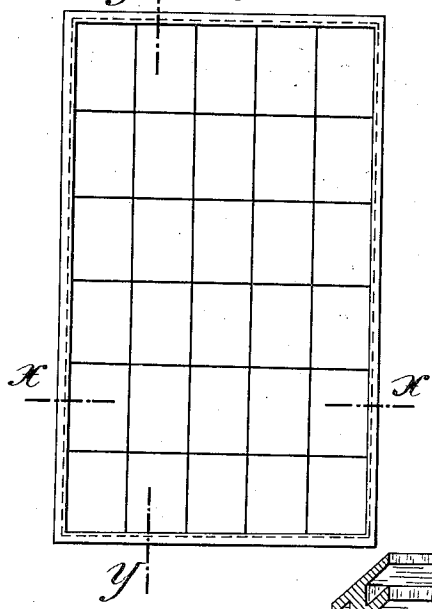


Fig. 4

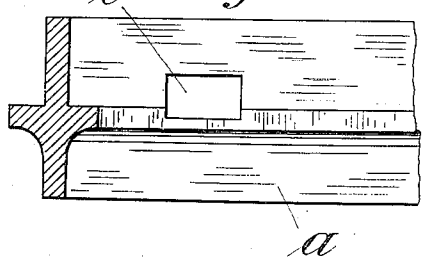


Fig. 5

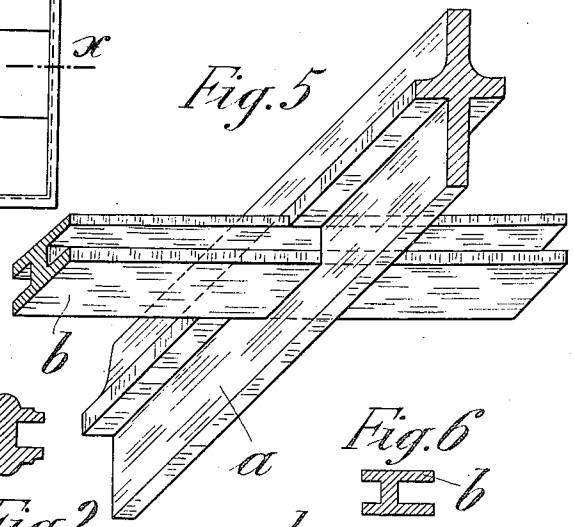


Fig. 7

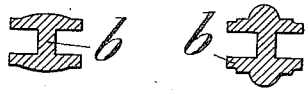


Fig. 6

Fig. 2

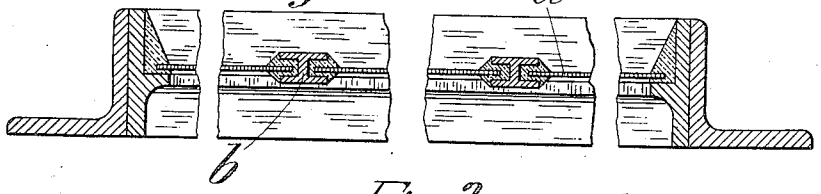
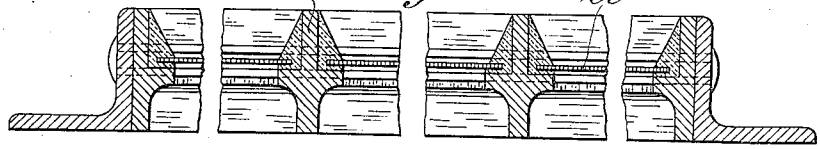


Fig. 3



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AUGUST FILZAMER, OF VIENNA, AUSTRIA-HUNGARY.

CONSTRUCTION OF WROUGHT-IRON WINDOWS.

No. 897,077. Specification of Letters Patent. Patented Aug. 25, 1908.

Application filed March 24, 1906. Serial No. 307,863.

To all whom it may concern:

Be it known that I, AUGUST FILZAMER, manufacturer, a subject of the Emperor of Austria-Hungary, and resident of Vienna, Austria-Hungary, X. Erlachgasse 149, have invented a certain new and useful Improvement in the Construction of Wrought-Iron Windows, for which I have applied for patents in Austria-Hungary and Germany, and of which the following is a specification.

The objects of my invention are improvements in the construction of wrought iron windows, in which one of the sash-bars, which is of H-section is passed through the other sash-bar, which is of the section usually employed in window construction, in such manner that the last mentioned sash-bar is perforated only in the central portion of its breadth, without materially weakening it. Its rigidity is thus maintained by means of the considerable breadth of material which remains between the edges of the aperture and those of the flange, while the portion through which the first mentioned bar is passed, is moreover, so chosen that the recesses for the reception of putty on the latter bar are in the same plane as the grooves which are provided for the same purpose upon the former bar, and passed between its flanges and its bridge.

By means of the form of construction adopted as the result of the peculiar cross sections employed, the sagging and buckling of the sash-bars is entirely prevented in consequence of which the scantling of the sash-bars can be diminished; while the cost of production of windows in accordance with this invention is rendered considerably less than that of windows constructed in the usual manner.

In the accompanying drawings Figure 1 is a diagrammatic representation of a wrought iron window the horizontal sash-bars of which are of the usual form, while its vertical sash-bars are of H-section; Figs. 2 and 3 are respectively a horizontal section on the line *x—x*, and a vertical section on the line *y—y* of Fig. 1, both drawn to an enlarged scale; Fig. 4 illustrates the manner in which the sash-bars of ordinary form are perforated; Fig. 5 illustrates the intersection of a bar of the kind last mentioned with a bar of H-section; and Figs. 6 and 7 show modified forms of cross section which may be adopted in the case of the H shaped bar.

In the appended drawings, *a* indicates the iron sash-bars provided for the reception of the H-shaped sash-bars *b* with rectangular slotted apertures *c* which are so arranged as to form in the flange of the sash bars *a* recesses whose section corresponds with that of the flange of an H-shaped sash-bar. The flanges of the bars *a* are but slightly weakened by the formation of these recesses. The face of the groove of the H-shaped sash-bar which is adjacent to the flange of the ordinary sash-bar *a* is in the same plane as the corresponding face of the recess provided on the bar *a* for the reception of putty and the support of the window frame which is pressed against it. The apertures in the sash-bars *a* may correspond with that of the cross section of the sash-bars *b* which are passed through them, that is to say, these apertures may also be H-shaped. The window pane *d* which is cut somewhat narrower than the distance between the bridges of two adjacent H-shaped sash-bars *b* is first entered obliquely into the groove formed between the flanges of one of these bars, then pushed back against the flange of the bar *a*, and finally slid horizontally until it engages with the groove of the opposite bar *b;* and when thus brought into position it is secured by putty inserted in the grooves of the H-shaped sash-bars and the recesses of the other sash-bars.

To facilitate the placing of the window panes in position, it is best that the cross-section of the H-shaped bar, should be that shown in Fig. 6 wherein the bridge does not occupy a central position. Sash-bars of this cross section are so arranged that all the deeper grooves are turned in the same direction; and the window pane is first inserted into the deeper groove of the one bar and thereupon pushed back and slid into the shallow groove of the opposite bar.

The H-shaped sash-bar may of course be decorated in any desired manner as shown

in Fig. 7, this, however, does not constitute an essential feature of the invention.

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

In wrought iron windows, the combination of a sash-bar *b* of H-shaped cross-section with a cross-bar *a* having an opening *c* for the sash-bar *b*, the bridge of the sash-bar *b* being located out of the center of the flanges of the same.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

AUGUST FILZAMER.

Witnesses:

ALFRED KLOSS,

ALVESTO S. HOGUE.