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J. F. BENSON

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FITTING OF WINDOW FRAMES IN BUILDINGS

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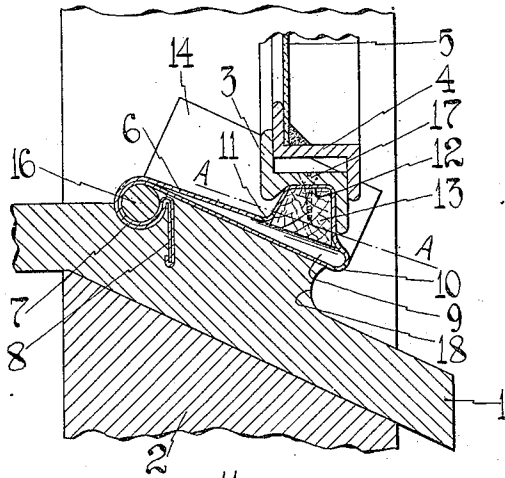


Fig. 1.

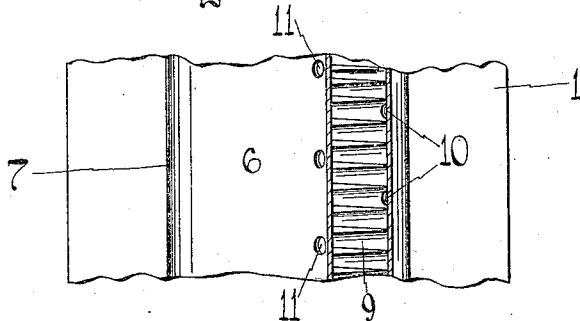


Fig. 3.

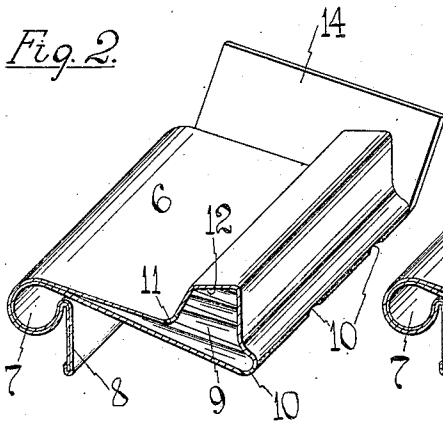


Fig. 2.

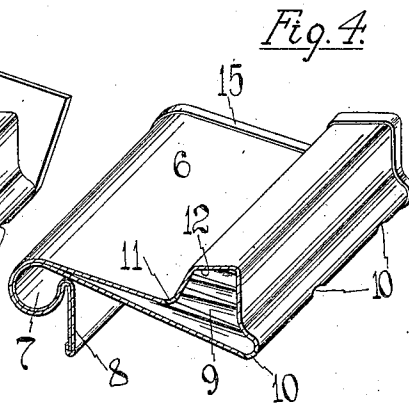


Fig. 4.

Inventors:
J. F. Benson,
By Eugene Parry, Clerk & Associates
Attys.

UNITED STATES PATENT OFFICE.

JOHN FRENCH BENSON, OF AUCKLAND, NEW ZEALAND.

FITTING OF WINDOW FRAMES IN BUILDINGS.

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This invention relates to the fitting of window frames, particularly metal window frames in buildings, and has for its object the provision of means for preventing the disfigurement of and damage to walls at present caused by the result of condensation on the inside of the windows, and also by the admission of water through the latter.

At the present time the fitting of metal window frames in concrete and brick walls, unless performed with care and skill, is not such as will prevent the admission of water under stress of weather, between the window frame and window sill, with the result that considerable damage is done to the walls.

The present invention provides means whereby water obtaining admission as above mentioned, and also water passing through the window and between the sash and the window frame, as well as the result or products of condensation on the inside of the window, are trapped and led outside the building, without disfiguring the walls.

The invention although primarily intended for use in conjunction with metal window frames and concrete or brick walls, can also be applied to the fitting of wooden window frames in concrete, brick or wooden structures.

The invention consists in fitting on the upper surface of a window sill, a downwardly and outwardly sloped water collector adapted to receive water at a point below the inside of the window, and to discharge said water exteriorly of the window and the wall in which the latter is fitted.

The invention will be particularly described in conjunction with the accompanying drawing, where it is illustrated as applied to the fitting of a metal window frame in a concrete wall.

Figure 1 is a part cross sectional elevation of a wall, having a metal window frame and a metal window sash fitted therein while,

Figure 2 is a part perspective view of the water collector,

Figure 3 is a sectional plan view of the latter on the line A—A Figure 1 with the subsill or bar removed and

Figure 4 is a similar view to Figure 2 showing alternative means for closing the ends of the water collector.

In the drawing 1 represents the window-sill, 2 the wall of the building, 3 a metal window frame secured in said wall, 4 a metal window sash and 5 the glass in the latter.

The upper surface of the window sill 1 slopes downwardly and outwardly of the wall 2 and has secured thereon the water collector 6, the latter being formed by a sheet of suitable metal of appropriate dimensions and gauge being doubled or folded upon itself and being given a roll formation 7 near its edges which are secured together by doubling one edge over the other to provide a downwardly projecting stiff rib or flange 8 which extends the full length of the collector 6, and the sill 1.

Prior to bringing the sheet of metal into the hollow and doubled or folded formation illustrated it is treated by stamping or otherwise to produce in that portion of the metal which ultimately forms the bottom of the collector 6 a series of corrugations or grooves 9, while that portion of the metal which ultimately provides the top of the collector 6 is treated so that the finished article will have a hollow rib or bar 12 on its upper surface, adjacent the outer and lower edge of the collector. At the same time holes 10 are made in the metal so that they will be located at the lower ends of the corrugations or grooves 9 in the finished article while holes 11 are made in the metal so that they will be located at the inner side of the hollow rib or bar 12, on the upper portion of the collector 6.

A bar 13 of wood or other material is fitted in the hollow rib or bar 12, over the corrugations or grooves 9, the collector 6 being closed at each end by a plate 14 which can be a portion integral with the bottom of the collector 6, and bent up and soldered or otherwise secured to the latter or a flanged cap or cover 15 (Figure 4) can be formed and passed upon the collector end and be secured thereon by soldering or otherwise.

A rod 16 of wood or metal is inserted in the roll formation 7, which with the rib or flange 8 is embedded or let into the sill 1 at the top of the upper inclined surface thereof, and securely holds or anchors the collector 6 to the sill, the rod 16 if necessary being made to extend into the wall 2 at the sides of the window opening in order to further secure the collector 6 in position.

The window frame 3 has its lower horizontal member grooved to fit over and on the rib or bar 12 of the collector and is secured thereto by screws 17 screwed through same into the bar 13.

With the collector 6 formed and secured in position as illustrated, water formed as the result of condensation on the inside of the

window and/or water passing inwards through the latter, drops on to the collector 6, down which it runs to the said holes 11, said water passing into the collector 6 through said holes, to be conveyed by the downwardly and outwardly directed corrugations or grooves 9 to the holes 10 which discharge it on to the sill 1 exteriorly of the window.

10 Preferably the sill 1 is formed with a step or edge 18 over which the collector 6 projects so that there will be no obstruction to the holes 10 with less liability of the latter becoming clogged or closed by the accumulation of dirt on the sill.

The corrugations or grooves 9 down which the water runs to the escape holes 10 are preferably made to increase in width downwards and enable the water to pass below the bar 13.

20 What I do claim and desire to obtain by Letters Patent of the United States of America is:—

1. Means for the purpose set forth comprising a water collector, secured on a window sill between the latter and a window frame said collector having a roll and a flange embedded in the window sill inside the window and containing holes in its top portion on the inside of the window for the reception of water therefrom and also containing holes for the escape of water exteriorly of the window.

2. Means for the purpose set forth comprising a water collector, secured on a window sill between the latter and a window frame, to slope downwardly and outwardly of said sill; a roll and a flange at the top of said collector adapted to be embedded in the sill; holes in the top of the collector for admitting water to the interior thereof from the inside of the window, and holes in the outer edge of the bottom of the collector for enabling water to escape therefrom exteriorly of the window.

3. Means for the purpose set forth comprising a water collector, secured on a window sill between the latter and a window frame so as to extend interiorly and also exteriorly

of the window, said collector being adapted to receive water from the inside of the window and containing openings for the escape of said water exteriorly of the window, the collector being provided with a rib or bar formation on and to which the lower horizontal member of the window frame is fitted and secured.

4. Means for the purpose set forth comprising a water collector, secured on a window sill between the latter and a window frame so as to extend interiorly and also exteriorly of the window, said collector being adapted to receive water from the inside of the window and containing openings for the escape of said water exteriorly of the window, the collector being corrugated or grooved, and being provided with a rib or bar formation over said corrugations or grooves, on and to which rib or bar formation, the lower horizontal member of the window frame is fitted and secured.

5. Means for the purpose set forth according to claim 1, wherein the top portion of the collector is provided with a rib or bar formation on and to which the window frame is fitted and secured and wherein the holes in said top portion are on the inside said rib or bar formation, and wherein the holes for the escape of water are outside said rib or bar formation.

6. Means for the purpose set forth comprising a water collector, secured on a window sill between the latter and a window frame so as to extend interiorly and also exteriorly of the window, said collector being adapted to receive water from the inside of the window and containing openings for the escape of said water exteriorly of the window, the collector projecting over a step on the sill, and wherein the openings for the escape of water are formed in the projecting portion of the collector.

7. Means for the purpose set forth according to claim 2, wherein the bottom of the collector contains corrugations which increase in width towards the lower edge of the collector containing the water escape holes.

In testimony whereof I affix my signature.
JOHN FRENCH BENSON.