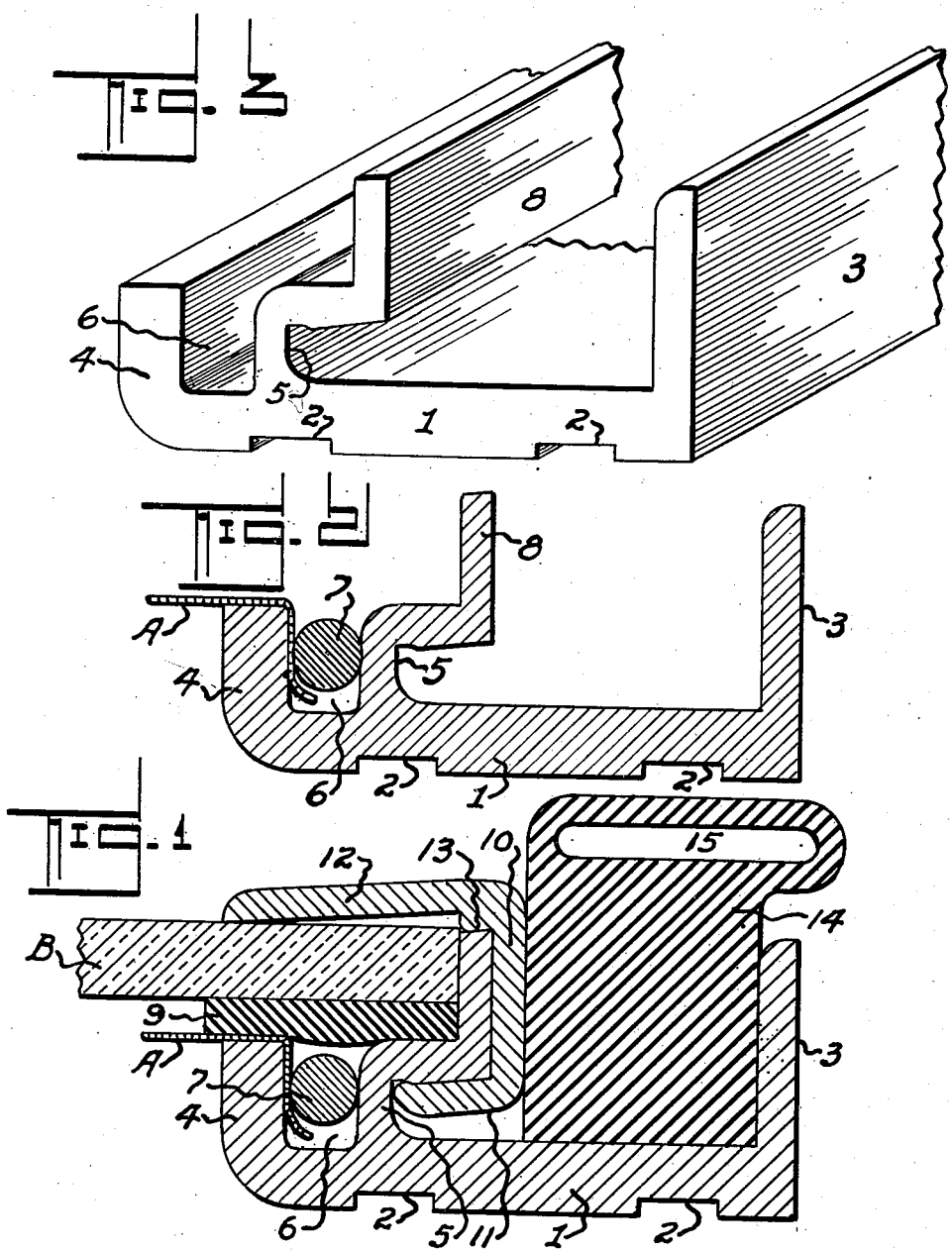
Nov. 21, 1939. A. L. HERRMANN 2,180,415

COMBINATION STORM SASH AND SCREEN FRAME CONSTRUCTION

Filed June 11, 1938 2 Sheets-Sheet 1



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COMBINATION STORM SASH AND SCREEN FRAME CONSTRUCTION

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FIG. 4

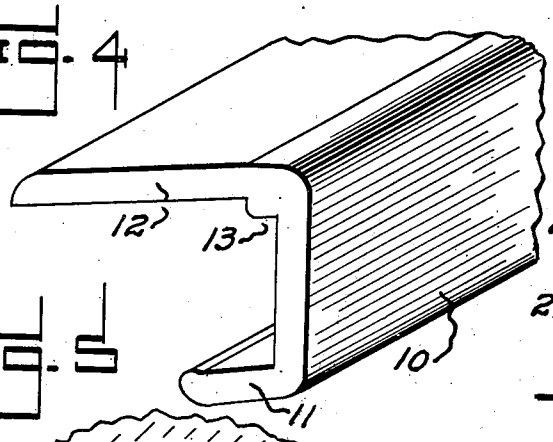


FIG. 5

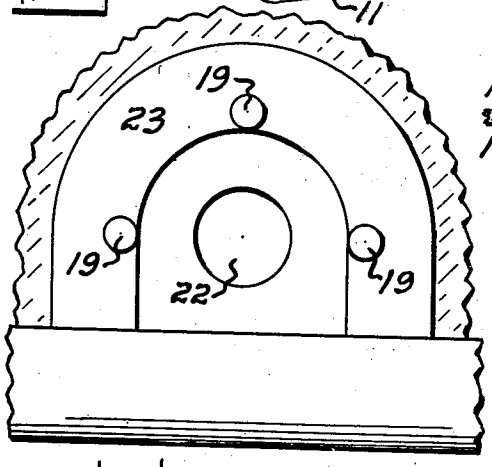


FIG. 6

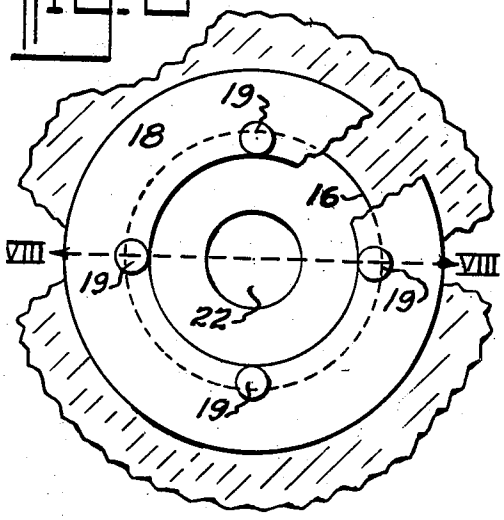


FIG. 7

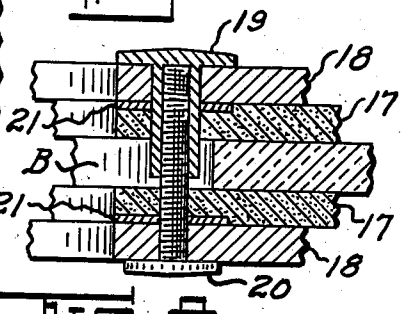


FIG. 8

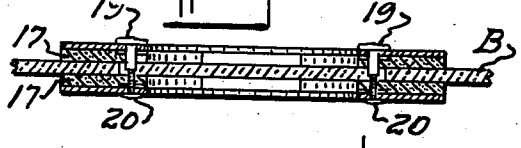


FIG. 9

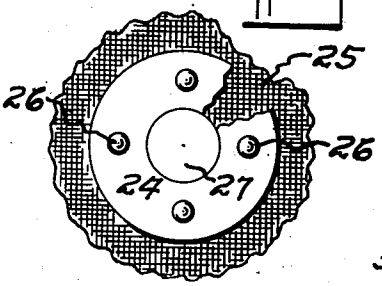
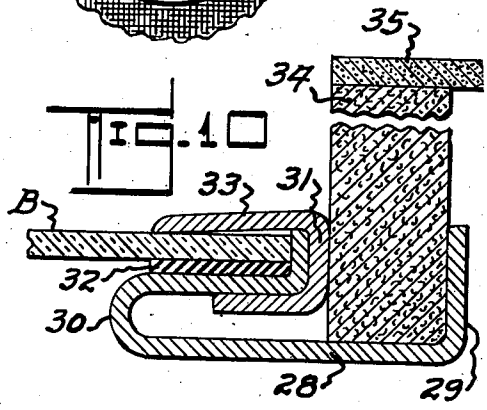


FIG. 10



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COMBINATION STORM SASH AND SCREEN FRAME CONSTRUCTION

Arthur L. Herrmann, Detroit, Mich.

Application June 11, 1938, Serial No. 213,117

2 Claims. (Cl. 189—64)

One of the objects of the present invention is to provide a frame of a particular construction which is adapted to accommodate screen wire and storm sash.

Another advantage of the invention and an outstanding feature thereof is the provision employed whereby the customary operating handle of various types of sash may pass through the glass and screen wire of the present framework without altering or interfering with the operating handle in any manner whatsoever.

With the foregoing in mind, it will become readily apparent that the invention possesses further advantages, all of which will be clearly revealed during the course of the following detailed description, illustrated throughout the accompanying drawings, and more fully pointed out in the appended claims.

With reference to the drawings—

Figure 1 is a superenlarged sectional assembly of the combination aluminum frame with the use of the extruded rubber cushion.

Figure 2 is a superenlarged sectional view of a rail of the aluminum frame in the act of accommodating the screen wire only.

Figure 3 is a superenlarged insometric view of a rail of the aluminum frame cut squarely and broken as indicated.

Figure 4 is also a superenlarged isometric view of an end portion of the glass retaining aluminum rail.

Figure 5 is an elevation of one type of the sash operating handle passage; and Figure 6 is a similar elevation of another type of said passage.

Figure 7 is an enlarged sectional assembly of one of the collar fastening studs.

Figure 8 is a section taken directly upon line VIII—VIII of Figure 6.

Figure 9 is a broken view showing the sash handle operating lever passage as applied to screen wire.

Figure 10 is an enlarged sectional assembly showing a modified form of the invention wherein the frame rail and the glass retaining rails are composed of rolled bronze, with the use of fibre and sponge rubber in substitution for extruded rubber.

The invention comprises principal frame composed of aluminum and having base 1 and ornamental channels 2 spaced therein as shown. Outer wall 3 rises perpendicular from the plane of base 1 and is a part thereof. A portion of base 1 is deflected upwardly and forming thereby inner wall 4, and spaced from said inner wall is central wall 5 being formed as clearly indicated in Figures 1 to 3 inclusive. Space 6 intermediate walls 4 and 5 is adapted to accommodate wire rod 7, and it is seen that the purpose of this wire or rod is to wedge the end of screen wire A and firmly gripping the same within said space as indicated.

Central wall 5 has upwardly disposed extension 8 and glass B abutting the same with layer of rubber 9 arranged intermediate walls 4 and 5 and said glass.

The glass retaining rail has vertically disposed body 10, lower leg 11 and upper leg 12 as shown, and with particular reference to Figures 1 and 4 it is clear that leg 12 has enlarged portion 13 where shown which is adapted to bear upon the top edge of extension 8 of the central wall as indicated, and the edge of said leg likewise bearing upon the top surface of glass B, and by virtue of extruded rubber section 14 interposed between wall 3 of the frame rail and body 10 of the glass retaining rail the glass is positively held in position most clearly indicated in Figure 1.

Referring now to Figure 1 it is clear that the upper portion of extruded section 14 is hollow as at 15, and it is further seen that part 15A of said hollow portion normally projects beyond the outer surface of wall 3 of the principal frame rail. In this manner the combination frame indicated in Figure 1 will be completely sealed thereby preventing air passing through the space intermediate this frame and the window frame to which it is secured.

In the various well known types of steel sash an operating handle is provided and is usually hinged so as to normally drop, but when used it is raised to the position where it projects considerably at right angles from the sash, and for this reason it is necessary to make provision whereby the handle may extend through the storm sash or screen so that it may be used without interfering with the proper operation of either of these elements.

This is effectively accomplished as clearly indicated in Figures 6, 7 and 8 wherein it is disclosed that glass B is cut as upon line 16 leaving a circular opening therein and rubber gasket 17 disposed upon each side of the glass with metal plates 18 upon said gaskets, and these elements being firmly clamped upon the glass by internally threaded sleeve 19 with externally threaded stud 20 engaging said sleeve, also crimped washers 21 where indicated.

Referring more particularly to Figure 6, opening 22 through gaskets 17 is for passage of the

sash operating handle, however this handle is not shown in the drawing.

When it is necessary for the sash operating handle to pass through the glass or screen wire near the frame rail as indicated in Figure 5, metal plates are somewhat modified as at 23 and gaskets 17 likewise modified, and the method for clamping these elements to the glass is identical with that shown in Figure 7.

In Figure 9 the method for accommodating the sash operating handle through screen wire consists of metal plate 24 disposed upon each side of screen wire 25 and securely clamped to the wire by rivets 26 where indicated. Opening 27 is for passage of the sash operating handle.

With particular reference to Figure 10 in which a modified form of the invention is shown the principal frame of rolled bronze has base 28 and outer wall 29, and it is seen that the metal is doubled back as at 30 and terminating to upstanding portion 31. Glass B with layer of rubber 32 and glass retaining rail 33 are all in the position as shown, and in this view fibre 34 is disposed intermediate wall 29 and glass retaining rail 33 thus holding the same in position as indicated. Sponge rubber 35 is used where shown so as to effect the same sealing qualities as shown in Figure 1. The purpose of the use of fibre 34 is to increase the extension of the frame with respect to the building for the accommodation of certain types of window sash.

In conclusion it is understood that the disclosure herewith is merely illustrative of the principle involved, and any probable changes made will fall directly within the scope of the claims.

Having thus fully described my invention, what I claim as new is:

1. In a combination storm sash and screen frame construction, a principal frame composed of a plurality of rails, each of said rails having a base, an outer wall and an inner wall, a central wall spaced from said inner wall, means for holding the end of screen wire within the space intermediate said inner wall and central wall, a layer of rubber positioned upon the screen wire and said central wall so as to cushion a sheet of glass positioned immediately thereupon.

2. In a combination storm sash and screen frame construction, a principal frame composed of a plurality of rails, each of said rails having a base, a perpendicular outer wall, an inner wall and a central wall all rising perpendicular from said base, a portion of said central wall extended toward said outer wall, a glass retaining rail, said rail having an enlarged portion therein adapted to bear upon the top of said extended portion, the top leg of said rail adapted to bear upon a sheet of glass, a layer of rubber intermediate said glass and the extended portion and screen wire, the end of said screen wire disposed within the space intermediate said inner wall and central wall, also a wire within this space adapted to wedge the screen wire firmly within the construction.

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