

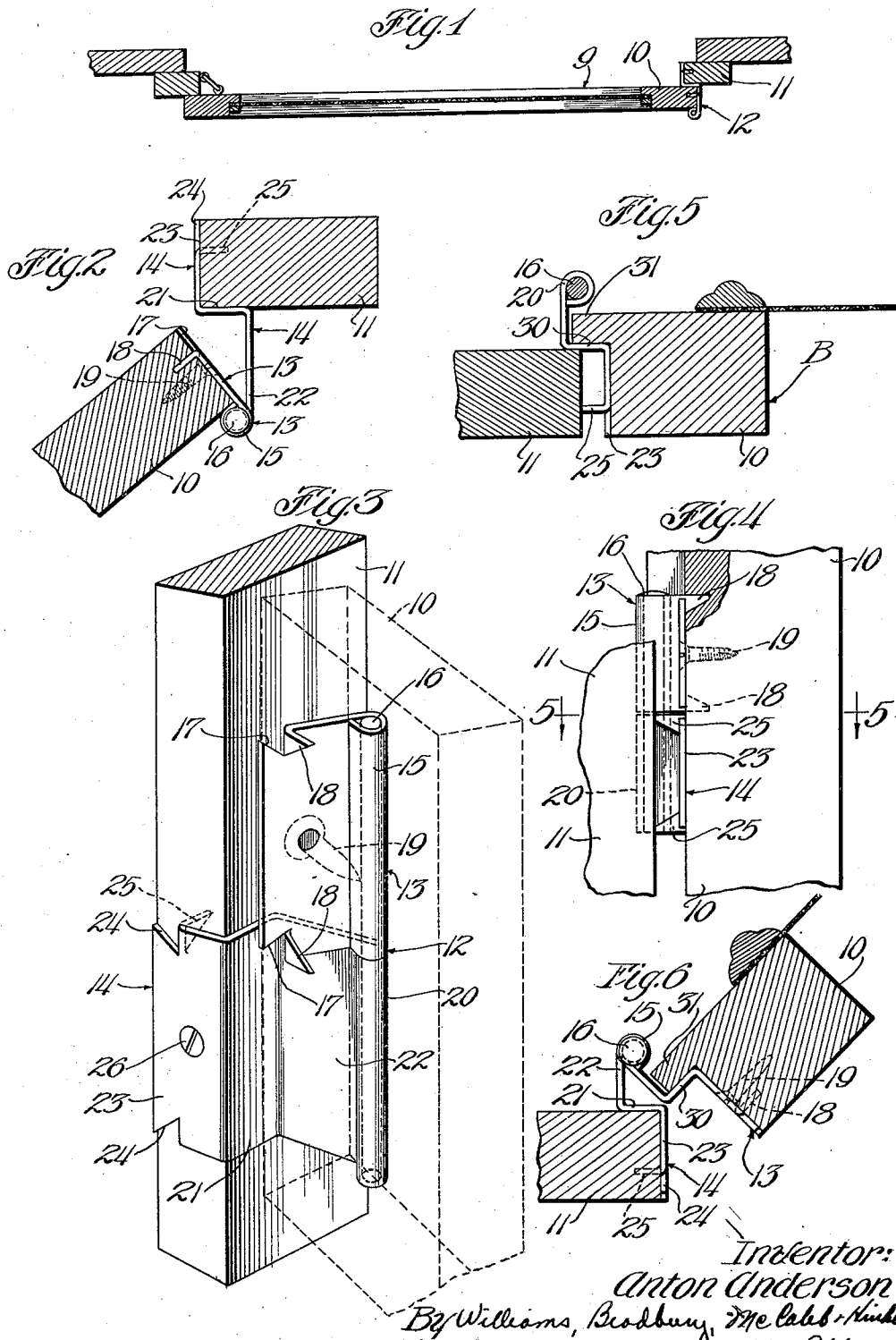
Sept. 1, 1931.

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1,821,606

HINGE

Filed May 16, 1929



UNITED STATES PATENT OFFICE

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HINGE

Application filed May 16, 1929. Serial No. 363,499.

My invention relates to hinges, and more particularly to a hinge for window screens and other swinging closures which are attached to a building.

5 An object of my invention is to provide a hinge member which is attached to the closure or screen at the time it is fabricated, and which will make the alignment of the closure relative to the building, a simple operation.

10 Another object is to provide a hinge member carried by a swinging type closure or screen, which will permit the closure or screen to be temporarily secured to the building in the desired alignment, until the assembler has an opportunity to secure the hinge permanently to the building by means of screws, etc.

Other objects and advantages of the present invention will be more particularly apparent from the following detailed description.

In the drawings:

Fig. 1 is a plan sectional view showing a window screen secured to a frame by means of my hinge member;

Fig. 2 is an enlarged cross-sectional view showing a window screen temporarily secured to the frame by my hinge member;

Fig. 3 is an enlarged perspective view, partly diagrammatic, showing a window screen permanently secured to the frame by my hinge member;

Fig. 4 is a fragmentary, rear elevational view of a window screen equipped with a modified form of my hinge member, showing the relation of the parts before the hinge has been temporarily secured to the frame;

Fig. 5 is a cross-sectional view taken on the line 5—5 of Fig. 4;

Fig. 6 is a cross-sectional view of a window screen equipped with the type of hinge shown in Figs. 4 and 5, showing the relation of the parts after the hinge has been temporarily secured to the frame.

Referring more in detail to the drawings; in Fig. 1 is shown a window screen 9, the frame 10 of which is attached to a window frame 11 by means of my improved hinges, one of which is designated as a whole at 12.

My hinge member 12 comprises a pair of

stamped sheet metal plates 13 and 14, which are adapted to be secured to the screen frame 10 and the window frame 11, respectively.

The plate 13 has a portion of its body adjacent a side edge, rolled over as shown at 15, to receive a pin 16, the rolled over portion 15 preferably firmly embracing the pin 16 so it will be frictionally retained therein. The plate 13 is formed with two angular cuts 17 adjacent the corners of the unrolled sides, so that a portion of the plate between the cut 17 and the upper and lower ends of the plate may be bent at an angle to the plate 13 to form a pair of pointed prongs or teeth 18 which are adapted to secure the plate 13 to the frame 10 of the screen 9. In order more permanently to secure the plate 13 to the screen frame 10, a conventional type of wood screw 19 may pass through an aperture in the plate and engage the screen frame 10. The plate 13 is secured to the edge portion of the screen frame 10 so that the rolled over portion 15 will be adjacent the outside face of the frame.

The hinge plate 14 which is adapted to be secured to the window frame 11 also has a portion of its body adjacent a side edge rolled over as shown at 20, to receive the pin 16 carried by the plate 13 secured to the screen frame 10. The rolled over portion 20 preferably forms a circular passage within which the pin 16 may freely rotate. The plate 14 is provided with a right angled offset portion 21 which will permit the window screen frame 10 to overlap the window frame 11 shown in Fig. 2. So that the screen frame 10 will fit closely to the frame 11, the portion 22 between the offset 21 and the rolled over edge 20 is slightly wider than the thickness of the screen frame 10. The remaining portion 23 of the plate 14 projects at right angles to the offset 21 and in the opposite direction to that of the portion 22. This portion 23 is likewise provided with angular cuts 24 adjacent its corners, so that parts of the portion 23 may be bent at an angle to form a pair of pointed prongs or teeth 25 which are adapted to engage the window frame 11.

As already mentioned, my hinge is particularly adapted to aid the workman align

the window screen to the window frame and hang the window screen from the interior of the building. My hinge is ordinarily applied to the screen frame at the factory where it is fabricated, and is then shipped to the user. Ordinarily a small piece of wire will be employed to tie the plate 14 to the plate 13 so the former will not be lost during shipment.

The carpenter or workman places the screen frame in front of the window frame to which it is to be mounted, moves the screen frame to the proper position and then retains it in such position with one hand, and with the other hand, strikes the plates 14 of the hinges 12 a firm blow with a hammer, driving the prongs or teeth 25 into the frame 11. All of this can be done from the inside of the building. The screen is thus temporarily hung to the window frame (as shown in Fig. 2) until the operator has an opportunity to secure the plate 14 to the window frame by means of a wood screw 26, a single wood screw ordinarily being sufficient, since the two prongs 25 contribute to secure the plate 14 to the frame.

In Figs. 4, 5 and 6, I have illustrated a slightly modified form of my hinge which is adaptable to rabbeted screens which fit within the window frame, and are provided with a tongue which overlaps the window frame.

This hinge is generally similar to the hinge already described, except that the plate 13 which is secured to the screen frame is provided with an offset 30 to permit the tongue 31 of the screen to overlap the window frame 11.

Since the screen frame 10 fits within the window frame 11, it is impossible for the person attaching it to strike the plate 14 directly with a hammer, to drive the prongs 25 into the frame. Since the tongue 31 is adapted to fit closely against the outer face of the window frame 11, sufficient space may be provided between the side edges of the frame and the screen frame so that sufficient space is provided for the prongs 25 on the plate 14. The screen frame is held in the desired position by the assembler and the frame 10 of the screen is struck sharply with a hammer at the point indicated at B (Fig. 5), to drive the prongs 25 into engagement with the frame 11. The screen frame while thus temporarily hung, may be swung open as shown in Fig. 6, and one or more wood screws may be added to secure the hinge plate 14 more permanently to the frame 11.

While I have illustrated a preferred embodiment of my invention, many modifications may be made without departing from the spirit of the invention, and I do not wish to be limited to the precise details of construction set forth, but desire to avail myself of all changes within the scope of the appended claim.

Having thus described my invention, what

I claim is new and desire to secure by Letters Patent of the United States, is:

In a hinge formed of a pair of superposed and offset plates, one of said plates bent intermediate its ends to provide frame corner engaging portions substantially at right angles to each other, one of said portions having integral prongs extending parallel to the other portion and of less length than said other portion, whereby said prongs may be guided for insertion into the frame for drawing the right angular portions into supporting engagement with a frame corner, and the second plate having prongs and a pin-receiving eye, said eye serving to guide said last mentioned prongs for drawing the second plate into engagement with a frame corner.

In witness whereof, I hereunto subscribe my name this 15th day of April, 1929.

ANTON ANDERSON.