W. H. DICK.

DOOR HINGE.

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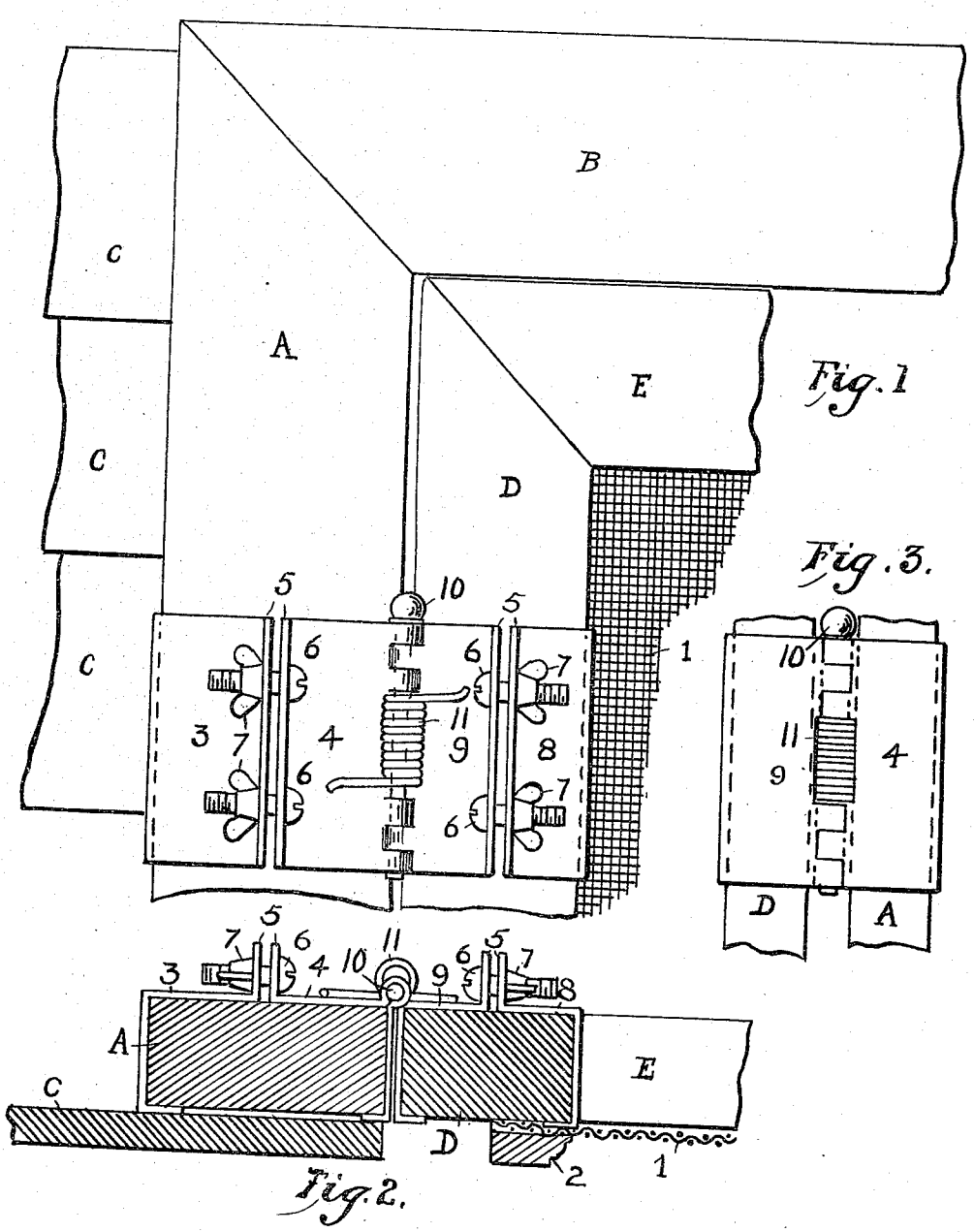


Fig. 1

Fig. 3.

Fig. 2.

WITNESS:

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DOOR-HINGE.

1,183,543. Specification of Letters Patent. Patented May 16, 1916.

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To all whom it may concern:

Be it known that I, WILLIAM H. DICK, a citizen of the United States, and residing in the township of Elizabeth, in the county of Allegheny and State of Pennsylvania, have invented or discovered new and useful Improvements in Door-Hinges, of which the following is a specification.

My invention consists in a new and improved hinge for swinging door and window screens and for other temporary closures.

Screen doors and similar temporary closures are usually mounted by means of hinges attached by screws driven into the door and the building. When the screens are removed, the screw holes present an unsightly appearance. After the screens have been put up and taken down a few times, the holes become ragged and enlarged, aggravating the marred appearance of the permanent woodwork, and requiring either the use of larger screws or the shifting of the hinges, leaving the old screw holes exposed.

The object I have in view is the provision of a hinge which may be installed without the use of screws or nails driven into the wood, and which when removed, leaves no holes or marred places in the woodwork.

Another object I have in view is the provision of such a hinge which is adjustable to fit any width of door frame plate or door plate, thus enabling the device to be made up in large quantities in standard form.

For the accomplishment of these purposes, I have devised a hinge structure, each member of which is made up of a pair of plates which encompass the opposite edges of the door frame or door plate or bar, and which are drawn together by means of tension members, such as screw bolts, the two members being hinged together, as by a pintle.

In the accompanying drawings, Figure 1 is a broken front elevation showing a screen door mounted in a door frame by means of my improved hinge; Fig. 2 is a horizontal section of the same along the line II—II in Fig. 1, and Fig. 3 is a broken edge view showing the door opened and swung back parallel with the building.

The following is a detailed description of the drawings.

A represents the vertical wooden plate or finish of the door-frame and B represents the top horizontal plate of the same.

C represents the outer wall of the building, against which the plate A is secured, shown in the drawings as clapboards.

D represents one of the vertical bars of the screen door. E represents the top horizontal bar of the same.

1 represents the wire screening held stretched on the door as by means of the usual molding 2.

The hinge comprises two main elements, one mounted on the plate A and the other mounted on the bar D.

The former is composed of two metal plates 3 and 4, which may be conveniently stamped of heavy sheet metal. The plate 3 fits against the outer face of the plate A and is bent or hooked to fit around the rear edge and in against the rear face of said plate A between the same and the wall or clapboards C, thus hooking snugly over the edge of plate A. In installing the plate 3, it may be readily driven into place with light hammer blows. The plate 4 fits against the outer face of said plate A and is similarly hooked about the opposite edge of said plate A. The adjacent edges of the metal plates 3 and 4 are provided with outwardly extending vertical flanges 5 which are pierced so as to be drawn together by tension means, such as the screw bolts 6 and thumb nuts 7. It is thus evident that with but little trouble and no undue marring of the woodwork the element may be quickly fixed on any width of door frame plate.

The element mounted on the door is similarly comprised of metal plates 8 and 9. The plate 8 is provided with a hooked outer end which encompasses the inner edge of the wooden door bar D and is inserted under the screening 1 and molding 2, while the plate 9 has its outer end similarly hooked over the outer edge of the door bar D. The adjacent edges of the plates 8 and 9 are provided with the outwardly extending vertical flanges 5 which are drawn together, to clamp the hinge element on the door, by means of the screw bolts 6 and the thumb nuts 7. It is evident that the hinge element may be readily clamped snugly on any width of door bar and removed therefrom in a few moments without marring the door.

The outer corners of the plates 4 and 9 are looped and cut out to form alternate sockets for the pintle 10, thus pivoting the two elements together. To form a spring

hinge, the helical spring 11 is coiled about the pintle 10 and has its ends bearing against the outer faces of the plates 4 and 9, respectively.

It is evident from the foregoing, that my hinge may be quickly applied to or removed from any door frame and door of either wood or metal without the use of special tools and without marring the wood or metal of the door frame, or door. The hinge may be adjusted to any width of door frame plate or door bar.

The structure is inexpensive to manufacture as it may be stamped out of metal at a uniform size.

What I desire to claim is:—

1. In combination with a support, a hinge element for the purpose described composed of a pair of plates mounted on the outer face of said support and having their opposite ends bent to hook around the opposite edges of said support, and means for drawing the adjacent ends of said plates together whereby said element is clamped rigidly on said support.

2. In combination with a support, a hinge element for the purpose described composed of a pair of plates mounted on the outer face of said support and having their opposite ends bent to hook around the opposite edges of said support, outwardly extending flanges on the adjacent ends of said plates and clamping means engaging said flanges whereby said plates are drawn together and said element is rigidly mounted on said support.

3. A hinge, adapted for use on a door and door frame, comprising two elements adapted to be secured to the door and door frame, respectively, and each composed of a pair of plates having their opposite ends bent to hook around the edges of the vertical side bar of the door or of the door frame, as the case may be, the adjacent edges of each pair of plates being provided with outwardly extending flanges and tension means connecting said flanges together, whereby the elements are clamped rigidly in place.

Signed at Clairton, Penna. this 18th day of March, 1916.

WILLIAM H. DICK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."