

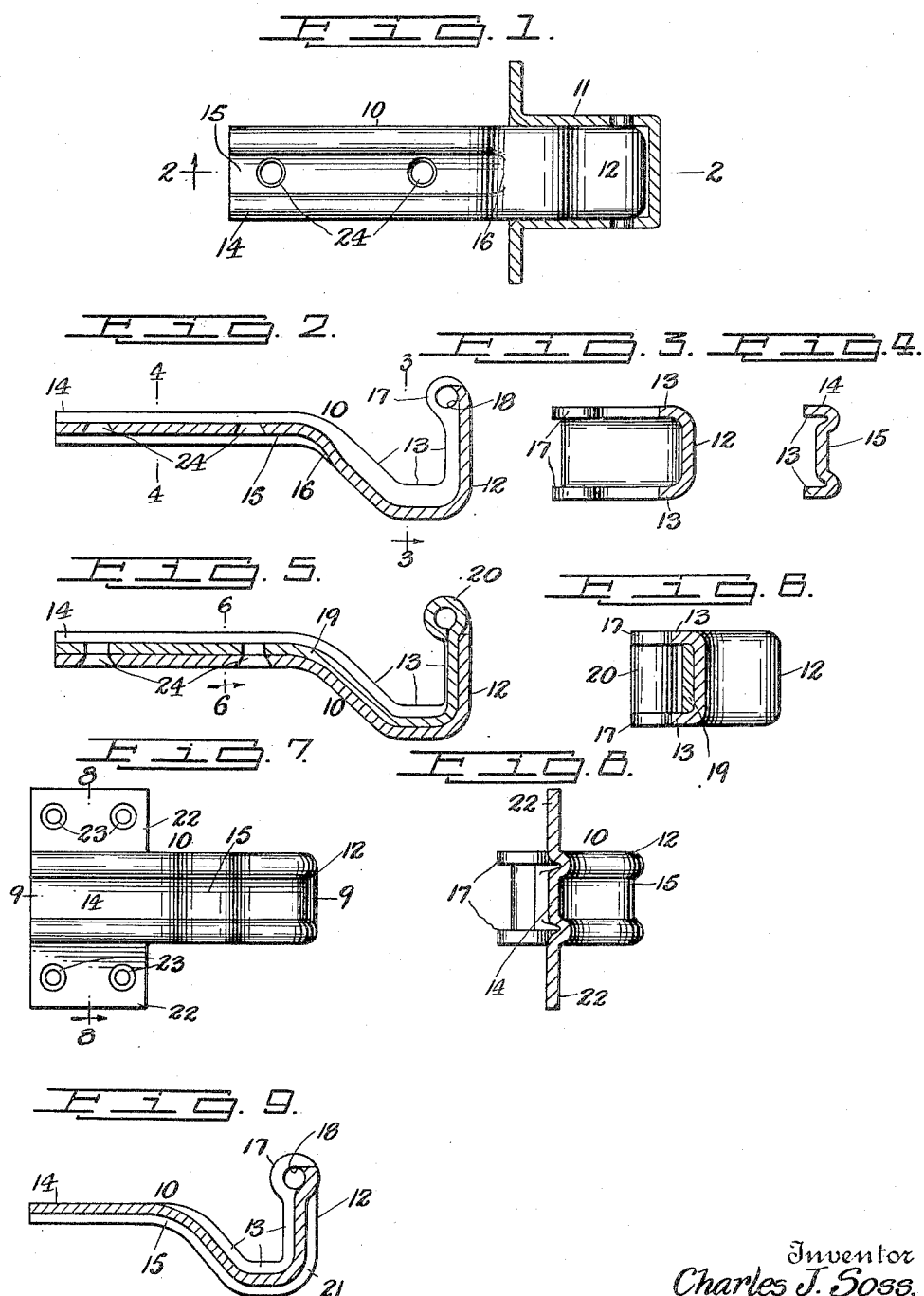
C. J. SOSS.

HINGE.

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1,363,370.

Patented Dec. 28, 1920.



Inventor
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UNITED STATES PATENT OFFICE.

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HINGE.

1,363,370.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES J. SOSS, a citizen of the United States, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Hinges, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to hinges and particularly to concealed or invisible hinges, and the object of this invention is to simplify the construction and formation of one of the butt members of the hinge by fashioning the same from sheet metal; a further object being to provide means for reinforcing said butt member of the hinge throughout its entire length, the reinforcing means being integral with the material of said butt member, or formed from an independent member secured thereto; and with this and other objects in view the invention consists in a hinge butt member of the class and for the purpose specified, constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is a side and sectional view of the separate butt members of a hinge made according to my invention;

Fig. 2 a partial section on the line 2—2 of Fig. 1;

Fig. 3 a section on the line 3—3 of Fig. 2;

Fig. 4 a partial section on the line 4—4 of Fig. 2;

Fig. 5 a view similar to Fig. 2 of a modified form of butt member;

Fig. 6 a section on the line 6—6 of Fig. 5;

Fig. 7 a view similar to Fig. 1 but omitting part of the construction and showing a modification;

Fig. 8 a section on the line 8—8 of Fig. 7; and,

Fig. 9 a section on the line 9—9 of Fig. 7.

In Fig. 1 I have shown at 10 a hinge butt member which is adapted to be secured to the door or swinging member and at 11 a hinge butt which is adapted to be secured to a door frame or stationary support. The hinge butt member 10, in the construction

shown in Figs. 1 to 4 inclusive, is composed of a single piece of sheet metal one end of which is bent into substantially hook-shaped form, as shown at 12 in Fig. 2, and said butt member, or the side edge portions thereof, are bent inwardly to form inwardly directed top and bottom flanges 13 which extend throughout the full length of said hinge butt member to form a substantially channeled or U-shaped butt member as shown in Fig. 3 of the drawing.

The arm portion 14 of the hinge butt member 10 is provided with an inwardly pressed portion 15 which extends partially into the hook-shaped end portion 12, as shown at 16, and said inwardly pressed portion serves to reinforce and strengthen the arm portion 14 of the butt member. The flanges 13 are enlarged at the free end of the hook-shaped end portion of the butt member to form ears 17 which are provided with apertures 18 to receive the pivot pin which secures the butt member 10 in connection with the butt member 11 in the usual manner.

In the construction shown in Figs. 5 and 6, the hinge butt member 10 is of the same general form as that shown in Figs. 1 to 4 inclusive, except that the inwardly pressed portion 15 is omitted and the butt member 10 is reinforced by a sheet metal strip 19 mounted within the channel of the butt member and between the inwardly directed flanges 13, and secured in position by riveting, welding or otherwise, and the end portion of the reinforcing strip 19 at the hook-shaped end of the butt member is fashioned into a cylindrical bearing 20 through which the usual pivot pin is adapted to pass, and this bearing serves to reinforce the connection of the butt member 10 with the pivot pin by increasing the bearing surface on said pin.

The construction shown in Figs. 7, 8 and 9 is approximately of the same form as that shown in Fig. 1, except that the inwardly pressed portion 15 is extended throughout the entire length of the butt member, or through the hook-shaped end of said butt member as shown at 21 in Fig. 9 of the drawing, thus reinforcing the butt member throughout its length. Another modification of the construction shown in Fig. 1 consists in providing laterally directed extensions 22 on the arm portion 14 of the

butt member which form the usual attaching plate for said butt member and are provided with screw-holes 23, while in the construction shown in Figs. 1 to 6 inclusive the 5 screw-holes 24 are formed in the arm 14.

From the foregoing it will be apparent that in all of the forms of construction shown, the hinge butt member 10 is substantially U-shaped or of channel form in 10 construction throughout its entire length, and said butt member is reinforced throughout its entire length by a depression formed therein, or by a reinforcing strip secured thereto, or the butt member may be only 15 partially reinforced by a depression or otherwise. It will also be apparent that the U-shaped formation of the butt member independent of a depression or reinforcing strip will materially reinforce and 20 strengthen said butt member, and while I have shown certain details of construction for carrying my invention into effect, it will be apparent that I am not necessarily limited to these details, and various changes 25 therein and modifications thereof may be made, within the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what 30 I claim as new and desire to secure by Letters Patent, is:—

1. A hinge butt member of the class described comprising a hook-shaped arm composed of a single piece of sheet metal fashioned into substantially channeled formation throughout its entire length, and means 35 for reinforcing said hook-shaped arm.

2. A hinge butt member of the class described comprising a hook-shaped arm 40 formed of a one-piece sheet metal blank of approximately the same dimensions throughout its entire length, the side edge portions of said blank being bent inwardly and one end portion thereof being bent into substantially hook-shaped form and said hinge butt 45 member being reinforced by an inwardly pressed portion.

In testimony that I claim the foregoing as my invention I have signed my name in 50 presence of the subscribing witnesses this 15th day of June 1920.

CHARLES J. SOSS.

Witnesses:

C. E. MULREANY,
H. E. THOMPSON.