

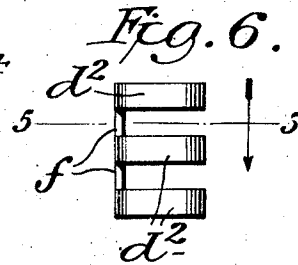
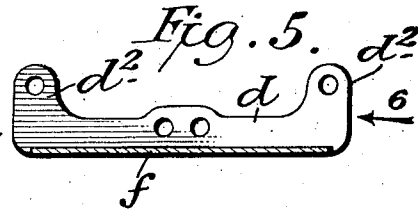
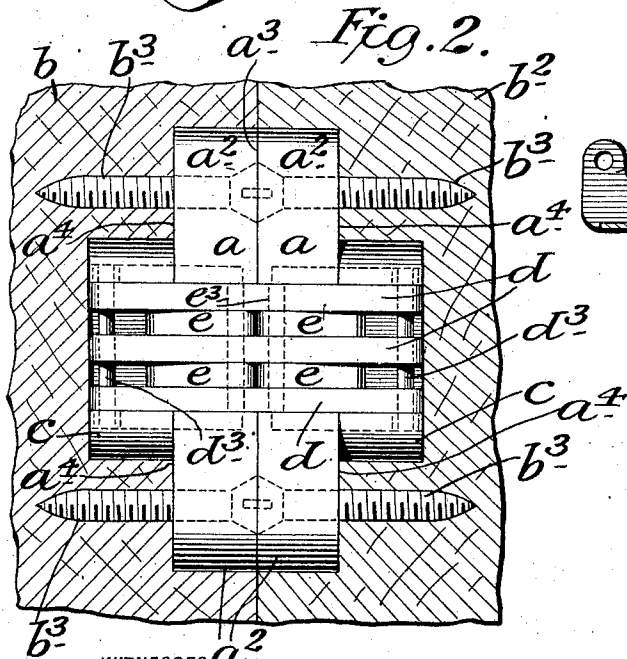
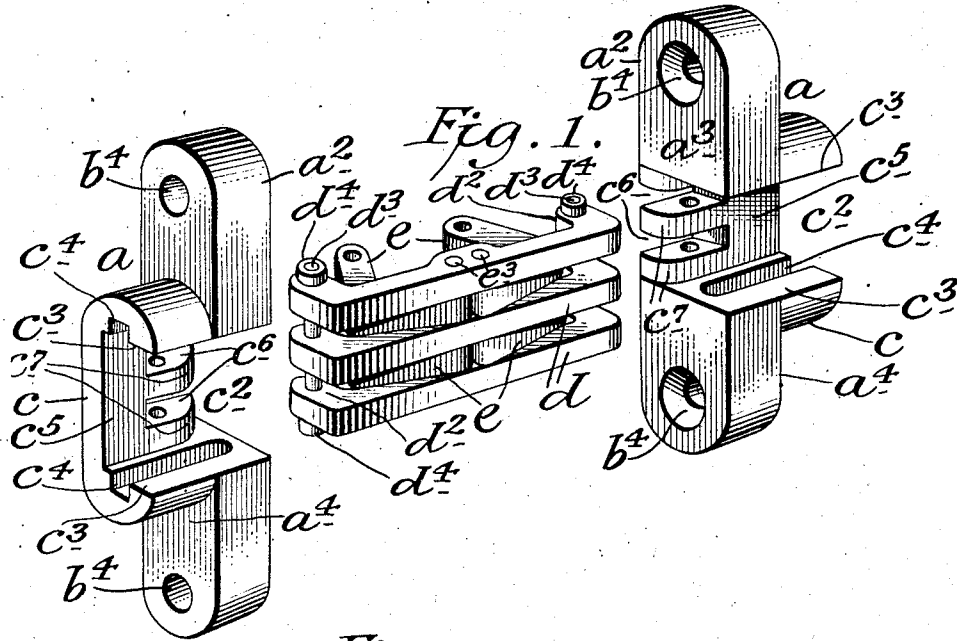
J. SOSS.
HINGE.

APPLICATION FILED SEPT. 1, 1911.

1,011,512.

Patented Dec. 12, 1911.

2 SHEETS—SHEET 1.



WITNESSES
A. R. Appleman
Frank J. Atlee

INVENTOR
JOSEPH SOSS.
BY *Edgar Tate & Co.*
ATTORNEYS

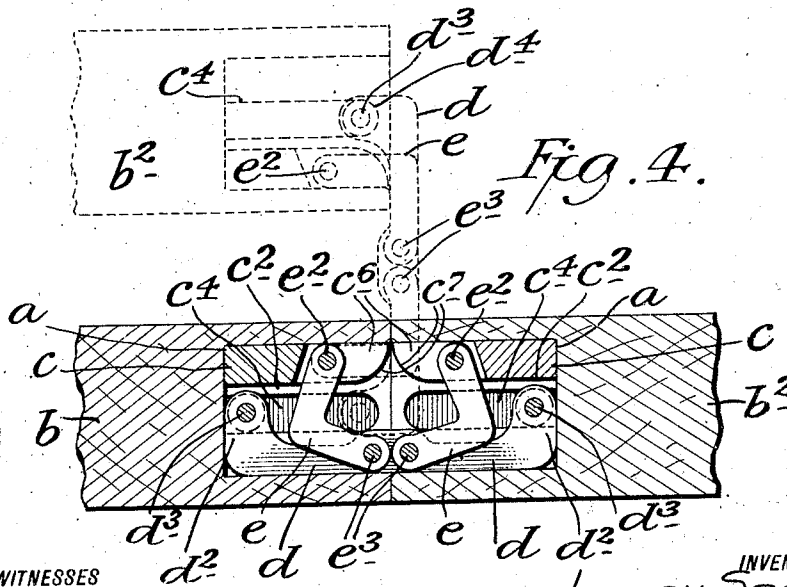
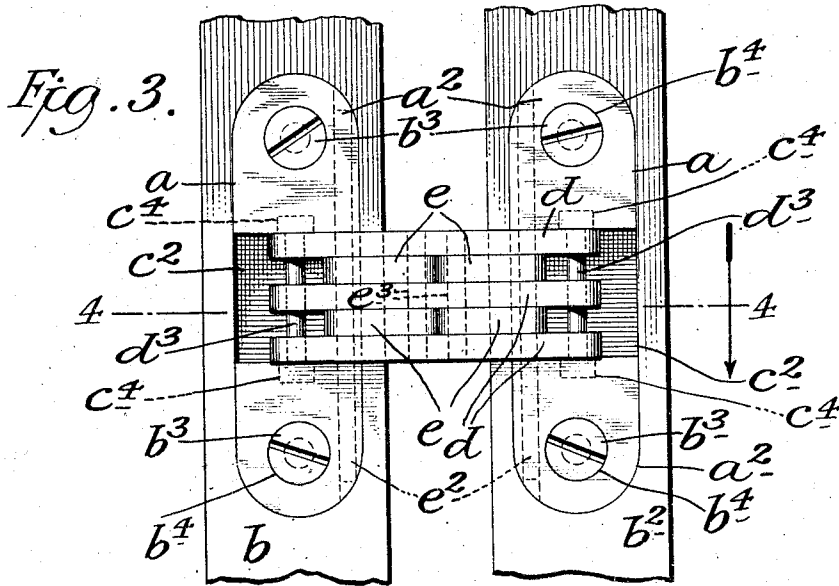
J. SOSS.
HINGE.

APPLICATION FILED SEPT. 1, 1911.

1,011,512.

Patented Dec. 12, 1911.

2 SHEETS-SHEET 2.



WITNESSES

A. R. Appleman
Frank J. Atlee

INVENTOR.

JOSEPH SOSS.

BY

Edgar Bates & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

JOSEPH SOSS, OF BROOKLYN, NEW YORK.

HINGE.

1,011,512.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed September 1, 1911. Serial No. 647,231.

To all whom it may concern:

Be it known that I, JOSEPH SOSS, a citizen of the United States, and residing at Brooklyn, in the county of Kings 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 for doors, and particularly to what are known as invisible hinges of the class described and claimed in U. S. Letters Patent #825,943 granted to me July 17, 1906 and #880,697 granted to me March 3, 1908, and the invention described and claimed herein while being, in particular, an improvement on the construction described and claimed in the last of the above named patents, is designed to render hinges of this class more strong and durable and also more simple in construction and effective in operation, and one of the objects thereof is to provide a hinge of the class specified which in addition to being used on doors, may also be used on or in connection with gates, window sashes, piano covers, wardrobes, closets and in various kinds and classes of cabinet work.

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 perspective view showing the separate parts of my improved hinge disconnected; Fig. 2 a sectional view showing a part of a door and a part of a door frame and showing the method of applying my improved hinge, the view of the hinge being a back view thereof and the door being in a closed position; Fig. 3 a view similar to Fig. 2, but showing the door swung through an arc of 180 degrees and showing part of the construction broken away; Fig. 4 a section on the line 4—4 of Fig. 3 and showing the door closed, in full lines, and in an open position, in dotted lines; Fig. 5 a section on the line 5—5 of Fig. 6, and; Fig. 6 a view looking in the direction of the arrow 6 of Fig. 5, said Figs. 5 and 6 being a modification of the construction of certain parts shown in the other figures of the drawing.

In the practice of my invention as shown in Figs. 1 to 4, inclusive, I provide a hinge which involves two main similar parts or holders a each of which comprises a main

plate member a^2 , said plate members a^2 being adapted to be abutted as shown in Fig. 2, and to be secured in a door frame b and a door b^2 by means of screws b^3 , and for this purpose the ends of the main plate members a^2 are provided with screw holes b^4 . For the purpose of this description the abutting surfaces a^3 of the main plate members a^2 , when said plate members are secured in position, will be called the faces of said plate members and the opposite surfaces a^4 the backs thereof, and the backs of said plate members are provided centrally with oblong body portions c the corresponding sides of which are cut out transversely to form main recesses c^2 which extend through the plate members a^2 and which form parallel top and bottom faces c^3 in which are formed grooves c^4 which range transversely of the plate members a^2 and which open backwardly through the body portions c , but do not extend through the front faces of the plate members a^2 , and the back walls c^5 of the recesses c^2 which extend forwardly to the faces a^3 of the plate members a^2 are provided with supplemental transverse recesses c^6 which open forwardly through the plate members a^2 , and in planes at right angles to the planes of the grooves c^4 , and the jaws formed by the recesses c^6 are beveled or rounded outwardly as shown at c^7 . I also provide oblong floating link members d , three of which are shown and which are placed transversely in the recesses c^2 as shown in Figs. 2, 3 and 4, and which are provided with forwardly directed end projections d^2 through which are passed pins d^3 movable in the grooves c^4 and provided with anti-friction rollers d^4 . I also provide attached and L-shaped link members e which are placed between the floating link members d , and one end portion of these L-shaped link members is pivoted in the recesses c^6 by means of pins e^2 which pass entirely through the plate members a^2 longitudinally thereof, and the other end portions of said L-shaped link members are pivoted between and to the floating link members d by pins e^3 and centrally of said link members d .

With this construction the door b^2 may be swung through an arc of 180 degrees as shown in Figs. 3 and 4, and at the same time said door is swung clear of the frame b , and while I have shown but three of the floating link members d and two pairs of L-shaped and attached link members e , it will be understood that any desired number of these

parts may be employed according to the size and strength of the hinge required, it being also understood that the size and dimensions of the plate members a^2 and the parts formed integrally therewith will be correspondingly changed or modified.

With the link members d and e formed and applied in the manner shown and described, said link members may be clearly seen when the door is open, and in order to prevent this result the link members d may be integrally connected by a back plate f as shown in Figs. 5 and 6 without in any way interfering with the operation of the hinge as a whole, and the plate f will conceal the link members e and also the link members d except at the extreme ends thereof.

My invention is not limited to the exact method herein shown and described of connecting the link members e with the link members d , all that is necessary in this connection being that said link members e be pivotally connected with the link members d centrally thereof so as to insure the operation of said parts as herein shown and described.

As shown, the ends of the main plate members a^2 and the ends of the back body portions c formed integrally therewith are rounded or made semicircular in form, the object of this being to facilitate the formation of the mortises in the door frame and door in which the separate hinge parts are secured.

The word "floating" used herein as descriptive of the link members d is intended to convey the idea that said link members have no direct or positive connection with the main parts or leaves of the hinge, such as a pivotal or similar connection, but instead thereof have only a sliding connection with said main parts or leaves in addition to the connection formed by the link members e .

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

1. A hinge comprising two main plate members the backs of which are provided with oblong projections in the corresponding sides of which are formed main transverse recesses which extend through said plate members and in the top and bottom walls of which are formed transverse grooves, the back walls of said recesses which extend to the front faces of said plate members being also provided with supplemental recesses, oblong floating link members mounted transversely of the sides of said plate members in the main recesses and provided with end portions or projections through which are passed pins movable in

said grooves, and L-shaped link members one end portion of which is pivoted to said floating link members centrally thereof and the other end portions are pivoted in said supplemental recesses.

2. A hinge comprising two similar main plate members, the backs of which are provided with oblong projecting-body portions, said body portions being provided in the corresponding sides thereof with main transverse recesses which extend through said plate members and the top and bottom walls of which are provided with grooves which range transversely of said plate members and at right angles thereto and which open backwardly through said body portions, but do not extend entirely through said plate members, the back walls of said recesses being also provided in their front edges with supplemental transverse recesses in planes at right angles to the planes of said grooves, oblong floating link members placed transversely of said plate members and in said main recesses and the ends of which are connected by pins which pass therethrough and the ends of which are movable in said grooves, and L-shaped link members one end portion of which is pivoted to said floating link members centrally thereof and the other end portions of which are pivoted in said supplemental recesses.

3. A hinge comprising two main parts, floating links slidably connected with said parts and other links pivoted to said parts and to said floating links.

4. A hinge comprising two main parts, floating links slidably connected with said parts and provided at their ends with pins which are passed therethrough and the ends of which are movable in grooves formed in said parts, and other links pivoted to said floating links and to said main parts.

5. A hinge comprising main attaching members, floating members slidably connected with said main attaching members, and devices connected centrally with said floating members and with said attaching members for limiting the movement of said floating members.

6. A hinge comprising main attaching members, floating members engaging said attaching members, and means for limiting the movement of said attaching members, consisting of L-shaped links pivoted thereto and to said attaching members.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 31st day of August 1911.

JOSEPH SOSS.

Witnesses:

C. E. MULREANY,
FRANK G. AT LEE.