No. 625,678. Patented May 23, 1899.

H. G. HILZHEIM.

HINGE.

(Application filed Dec. 31, 1898.)

(No Model.)

Fig. 1.

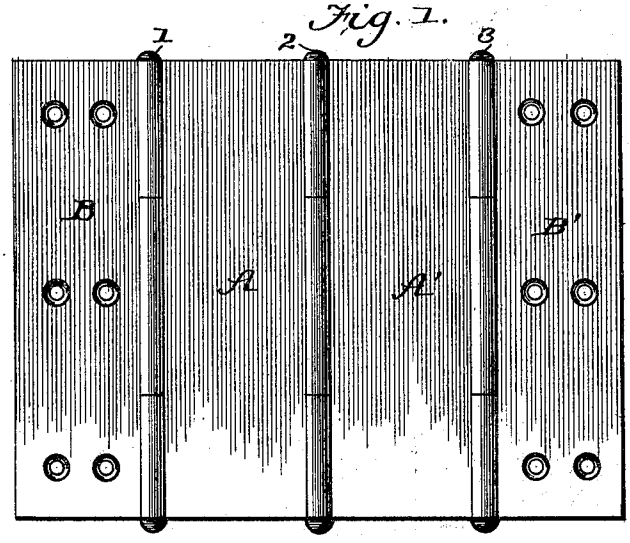


Fig. 2.

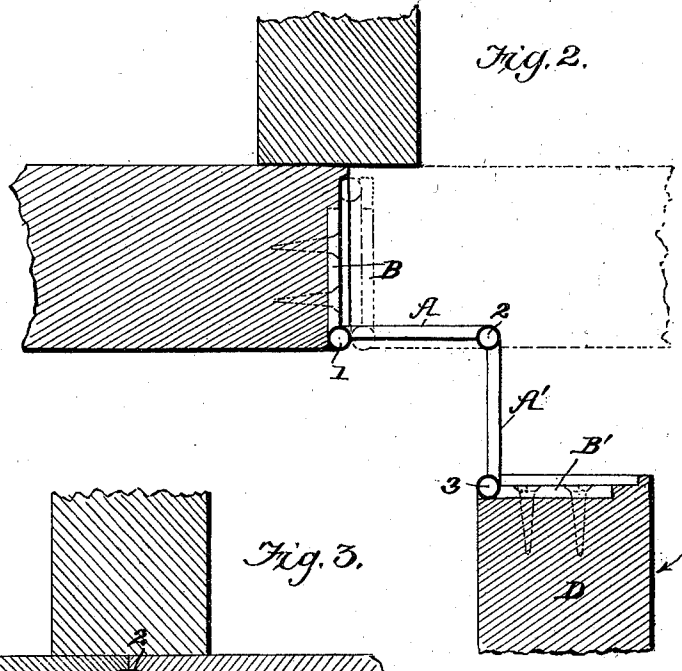
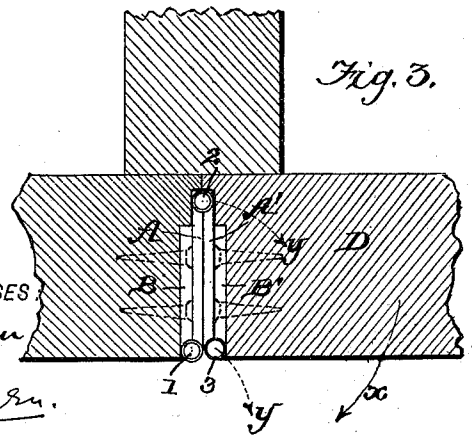


Fig. 3.



WITNESSES:

Jos. A. Ryan

Edw. W. Byrn.

INVENTOR

Hyman G. Hilzheim

BY Munn & Co.

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HYMAN GRAY HILZHEIM, OF JACKSON, MISSISSIPPI.

HINGE.

SPECIFICATION forming part of Letters Patent No. 625,678, dated May 23, 1899.

Application filed December 31, 1898. Serial No. 700,851. (No model.)

To all whom it may concern:

Be it known that I, HYMAN GRAY HILZHEIM, of Jackson, in the county of Hinds and State of Mississippi, have invented a new and useful Improvement in Hinges, of which the following is a specification.

My invention is in the nature of a hinge which, while being universally applicable, has the special advantage of being entirely concealed when the door is closed and of permitting the door to open around a projecting casing. This gives it special advantages for the doors of safes, whose hinges are thus protected from being tampered with, or for piano-tops, the doors of houses, and the doors of all kinds of cabinets, furniture, and boxes that require a nice finish without the projections of unsightly hinges.

It consists in a hinge made with four leaves or sections and three pivotal joints or points of articulation, the outer leaves being somewhat narrower than the inner leaves and having screw-holes and free outer edges for connection with the door and the jamb, respectively, as will be hereinafter fully described with reference to the drawings, in which—

Figure 1 is an inside face view of the hinge opened flat. Fig. 2 is a sectional view of the same in relation to an opened door, and Fig. 3 is a similar view showing the same in relation to a closed door.

In the drawings, A A′ are two metal leaves which are hinged together upon a pintle-pin 2, and B B′ are two other leaves, of which B is hinged to A by a pintle-pin 1, and B′ to A′ by a pintle-pin 3. These pintle-pins are preferably made detachable. The two middle leaves A A′ are of the same length and same width, and the two outer ones are of the same length as A A′, but are somewhat narrower. The object of this is to give room for the joint at 2 to project beyond the outer edges of the outer leaves B B′ when folded, as in Fig. 3. The outer leaf-sections B B′ of the hinge are provided with countersunk screw-holes for their attachment to the door and jamb by means of ordinary screws, and the outer longitudinal edges of the outer sections are free or disconnected terminal edges that are designed to connect the one with the movable door and the other with the stationary jamb.

In applying this hinge the edges of the door and also of the jamb are chiseled out deep enough to receive the leaves of the hinge, taking care when putting on the hinge to have both the outer knuckles 1 and 3 facing toward the inside of the room or on the side toward which the door swings in opening.

When my hinge is applied to house-doors, it not only conceals the hinges from view, but is especially suited to such fine residences as have heavily-molded casings, as the hinge will throw the door around the mold and still let the door come back parallel with the wall. That this may be better understood it will be seen, referring to Fig. 3, that when the door D starts to open in the direction of the arrow x its first tendency is to rotate about the center 1. This throws the centers 2 and 3 in the direction of the arrows y y until they assume the position shown in Fig. 2, in which position the door is now free to turn about its outer center 3, which is entirely away from the jamb and any projecting mold of the casing. It will thus be seen that the door moves about two traveling centers 2 and 3.

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

1. A hinge adapted to be embedded entirely within the joint between the door and its jamb composed of four articulated leaves having three centers of motion, the leaves all being of the same length and the outer ones being of the same dimensions and having terminal edges and screw-holes and being made narrower than the two inner ones substantially as and for the purpose described.

2. The combination with a door and its casing having recessed meeting edges; of a hinge composed of four articulated leaves having three centers of motion, the two outer terminal leaves being of the same dimensions with relation to each other but narrower than the two inner ones and provided with screw-holes and seated in the recesses of the door and jamb entirely within the plane of the door, so as to be concealed, and having two of its centers of articulation on the side of the door toward which it swings in opening, and the other intermediate center of articulation on the opposite side substantially as and for the purpose described.

HYMAN GRAY HILZHEIM.

Witnesses:

JAMES SWAN,

A. A. FOLKES.