

F. J. FISHER.
 CONCEALED HINGE.
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1,058,740.

Patented Apr. 15, 1913.

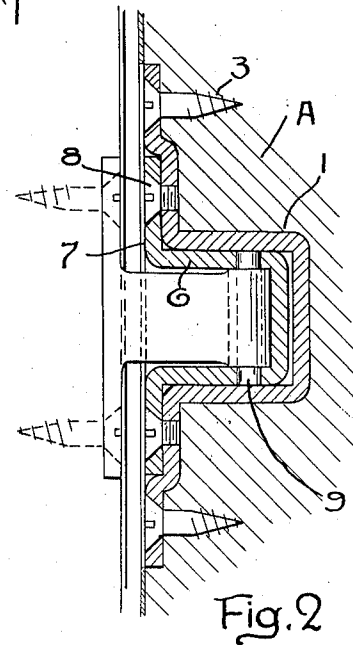
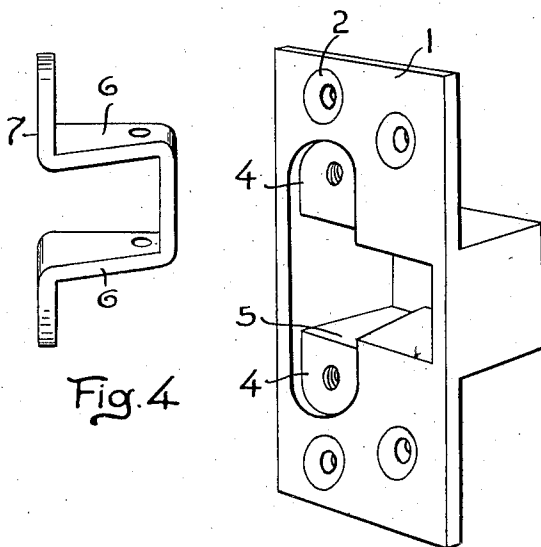
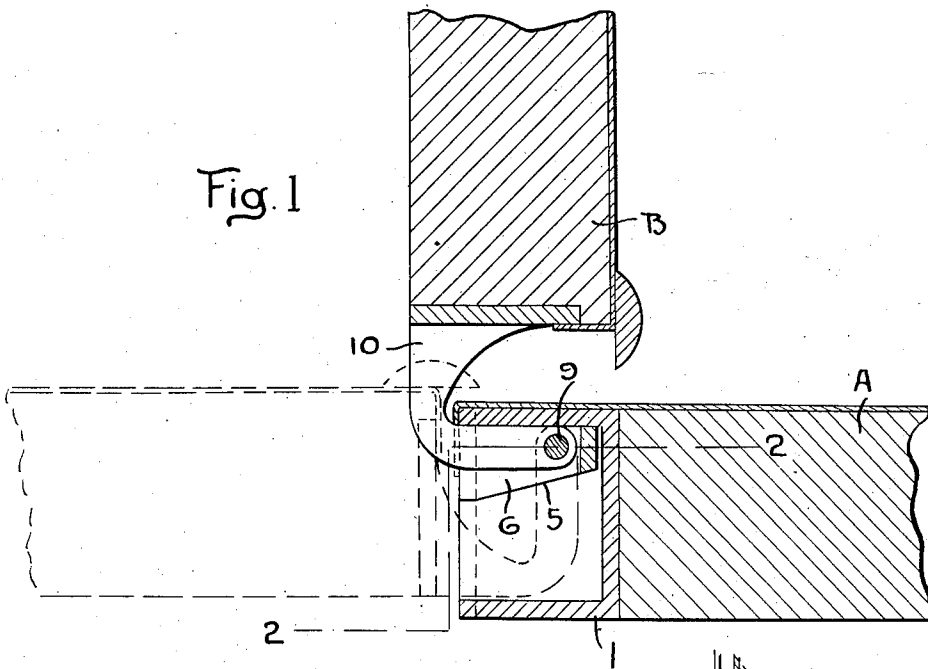


Fig. 3

WITNESSES
Robert N. [Signature]
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CONCEALED HINGE.

1,058,740.

Specification of Letters Patent.

Patented Apr. 15, 1913.

Application filed January 29, 1913. Serial No. 744,817.

To all whom it may concern:

Be it known that I, FRED J. FISHER, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Concealed Hinges, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to concealed hinges and has for its object a concealed hinge in which a pin-carrying plate is releasably secured to the mortise casing and which has a tapering or wedge-like engagement with the mortise casing so that as it is screwed into the mortise casing it is wedged into engagement therewith so as to be entirely free from rattling.

In the drawings:—Figure 1, is a horizontal section of a portion of the body, a portion of the door and the hinge. Fig. 2, is a vertical section on the line 2—2 of Fig. 1. Fig. 3, is a perspective of the mortise casing. Fig. 4, is a perspective of the pin-carrying plate.

A represents a portion of the body and B indicates a portion of the door. The body is recessed for the reception of the mortise casing 1 which comprises a metal member which is drawn by proper dies into the shape shown in Fig. 3, in which the face portion is a plate and the middle portion is drawn into the shape of a box into which the hinge arm withdraws. The plate portion is provided with suitable countersunk holes 2 for the reception of screws 3 by which it may be secured to the portion A of the body. The face of the plate 1 is recessed or countersunk at 4 on either side of the opening to the box-like portion of the casing.

The floor and the top wall of the casing are cut away at 5 by a recess that narrows toward the rear of the casing, forming a tapering or wedge-like recess. Into this tapering or wedge-like casing fits the horizontal portions 6 of the pin-carrying plate 7. This pin-carrying plate is made of a stamping bent in the form shown in Fig. 4,

that is, U-shaped with plate portions at the ends of the U-shaped arms. These plate portions fit into the recesses or countersunk portions 4 of the plate 1 and are secured thereto by the screw studs 8. The plate portions of the pin-carrying plate and the recesses 4 are shown somewhat oval shaped, although it is not essential that they be given this contour. It will be noticed that the horizontal portions 6 of the pin-carrying plate 7 are tapering and are of a contour complementary to that of the tapering or wedge-like recesses 5 in the floor and top wall of the box-like portion of the mortise casing. It will thus be seen that the two tapering members having a wedging engagement and that by tightening the screws 8 that the horizontal portion 6 may be driven and wedged into engagement with the top wall and the floor of the box-like portion of the mortise casing.

Inasmuch as the pin-carrying plate carries the hinge pin 9 this member is subject to considerable lateral strain and it is quite essential that it be made free from liability of rattling. This I effect by the wedge-like arrangement of the engagement of the pin-carrying plate and the floor and top wall of the mortise casing. I deem this important for it secures the two members together beyond the possibility of loosening so that objectionable rattle is eliminated.

Referring to Fig. 1, it will be noticed that the contour of the hinge arm 10 and the arrangement of the hinge pin 9 is such that when the door B is in perpendicular relation with respect to the body A that the portion of the hinge arm adjacent the hinge pin 9 lies directly against the outer wall of the mortise casing so that this forms an effective stop for the door and prevents its swinging beyond the perpendicular plane.

What I claim is:—

1. A concealed hinge, having in combination, a mortise casing provided with a tapering recess, a pin-carrying plate securable in the mortise casing and provided with a tapered portion that fits into the tapering recess of the mortise casing so that the pin-carrying plate may be wedged into engagement with respect to the mortise casing, substantially as described.

2. A concealed hinge, having in combination, a mortise casing provided with a box-like portion having a recess in the floor and a recess in the top wall, both of which are tapered and a pin-carrying plate comprising a somewhat U-shaped member having horizontal tapering portions that may be wedged into the tapering recesses of the

ceiling and floor of the casing, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

FRED J. FISHER.

Witnesses:

STUART C. BARNES,
AMELIA C. KOEHN.