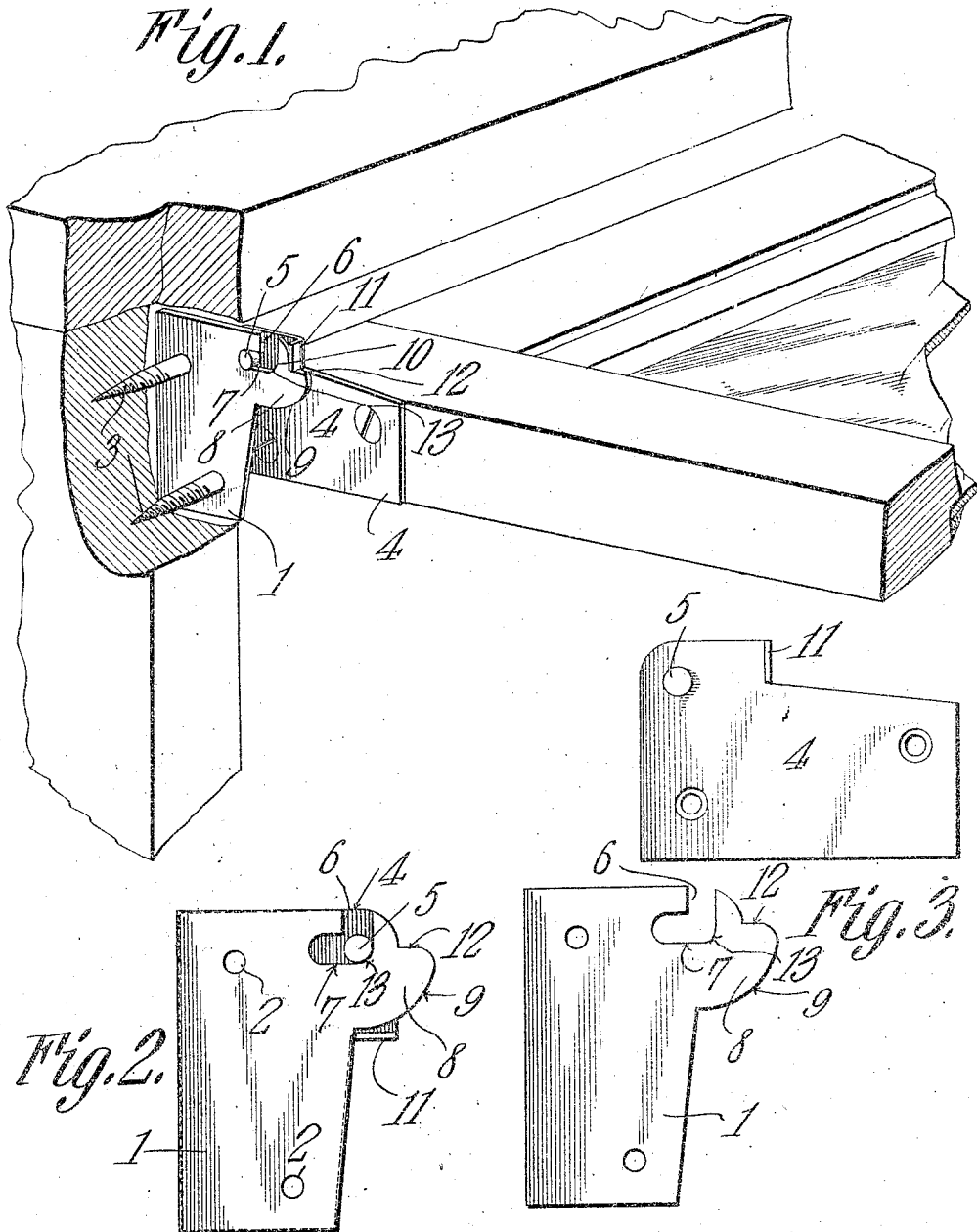


No. 891,235.

PATENTED JUNE 23, 1908.

J. DIEHL.
HINGE.

APPLICATION FILED JULY 1, 1907.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB DIEHL, OF SHEBOYGAN, WISCONSIN.

HINGE.

No. 891,235.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JACOB DIEHL, a citizen of the United States, residing at Sheboygan, in the county of Sheboygan and State of Wisconsin, have invented a new and useful Hinge, of which the following is a specification.

My present invention relates to improvements in hinges, and has for its object to provide an improved device of this character that is especially adapted for use on basement and other windows which it is desirable to retain in open position, the hinge in the present instance being so constructed that it provides a stop for supporting the window in an open or other desired position, and its cooperating members are capable of being readily detached and put together, although they are held from disengagement while the window, or other part to which they are attached, is in closed position.

Another object of the invention is to provide a hinge that may be manufactured cheaply and is not liable to get out of order, and to these and other ends, the invention comprises the various novel features of construction and arrangement of parts, which will be hereinafter more fully described and pointed out particularly in the appended claims.

In the accompanying drawing:—Figure 1 is a perspective view of a portion of a sash frame and the cooperating sash having a hinge applied thereto which is constructed in accordance with the present invention. Fig. 2 is a detail view of the hinge showing the members thereof in the relative positions they occupy when the sash is in closed position. Fig. 3 illustrates how the hinge members are attached and detached.

Corresponding parts of the several figures are indicated throughout by similar characters of reference.

The hinge shown in the present embodiment of the invention is so constructed that its members may be interchangeably attached to the relatively fixed and movable parts, such, for instance, as the sash frame and the cooperating sash, and these members may be made in any desirable manner, such as by casting, or by punching from sheet metal, the latter method being employed in the present instance.

The hinge member 1 is provided with screw apertures 2 to receive screws 3 by

means of which it may be secured in operative position, this member of the hinge being shown, in the present instance, as applied to the sash frame or relatively fixed part, although, it may be understood, of course, that it may be applied to the sash, the member 4 being attached to the sash in the construction shown and is provided with a laterally extending pintle or projection 5 which serves as a pivot or axis about which the hinge members turn. One of the hinge members, the member 1 in this case, is provided with a slot or recess to receive the pintle, the recess extending inwardly from the upper edge of the hinge plate and forming a relatively straight vertically extending portion 6, and at the lower end of the latter the slot extends angularly inwardly to form a substantially horizontally extending portion 7. The edge of the hinge plate on which the slot is formed is preferably provided with an offset or enlargement 8, and the latter has its edge 9 formed concentrically with the intermediate curved edge of the corresponding portion of the slot. The curved edge of the slot is indicated by the reference numeral 13. The cooperating hinge member 4 is provided with a laterally offset lug or projection 11 which extends to the same side of the hinge member on which the pintle is located and it is adapted to cooperate with a shoulder 12 which is formed above the edge or surface 9 of the enlargement when the pintle enters the horizontal portion 7 of the slot.

In practice, a pair of the hinges are applied to the sash and frame, as usual, the pintles of the respective hinges resting in the lower portions of their respective guiding slots and providing a pivotal connection between the sash and sash frame that will permit the former to be opened and closed. Whenever it is desirable to retain the sash in open position for ventilating and other purposes, the sash is moved into open position and then moved edgewise toward the frame, the pintles being thereby moved to the ends of the horizontal portions 7 of the slots and causing the lug or projection 11 to engage the shoulder 12, the latter serving to prevent downward movement of the lug while the metal or wall at the upper side of the horizontal portion 7 of the slot prevents upward movement of the pintle so that the sash will be supported in horizontal position.

While the sash is moving toward open or

closed positions, accidental disengagement of the hinge members is prevented by means of the concentric portion 9 cooperating with the lug 11, the pintles being thereby confined within their respective slots. However, the hinge member may be readily disengaged, when so desired, by lifting the opposite ends of the sash while the latter is in horizontal or open position, the pintles being in alinement with the vertically extending portion 6 of the respective slots, and the lug 11 being out of alinement with the supporting shoulder 12.

While the sash is in closed position, the hinge members are positively locked in cooperative relation, the lug 11 cooperating with the edge 9 at the underside of the offset enlargement of the cooperating hinge member, so that a relative vertical movement of the hinge members cannot occur.

A hinge constructed in accordance with my present invention is capable of supporting or otherwise retaining sashes and similar devices in open or other predetermined positions without the necessity of employing separate hooks or catches for the purpose, and it is so constructed that the component members thereof may be easily attached and detached, although accidental disconnection cannot occur, and the parts of the hinge are so constructed that they may be manufactured inexpensively.

What is claimed is:—

1. A hinge composed of two cooperating members, one member having a slot with an extension at an angle thereto and a shoulder spaced from the slot and the other member having a pintle adapted to the slot and a projection spaced from the pintle and adapted to engage the shoulder when the pintle is seated in the angle extension of the slot.

2. A hinge embodying a pair of cooperating members, one of the latter having a pintle thereon and the other member having an angularly shaped slot extending inwardly from one of its edges, a portion of one of the members being provided with a surface concentric with the intermediate curved edge of the corresponding portion of the slot, and a projection on the other member cooperating

with the said concentric surface for retaining the pintle in the said slot.

3. A hinge embodying a pair of cooperating members, one of said members having a pintle and the other member being provided with a slot having vertically and horizontally extending portions, the metal adjacent to the slot having an edge concentric to the intermediate curved edge of the corresponding portion of the slot, and a lug on the other hinge member cooperating with the said concentric edge to retain the pintle in cooperative relation with the said slot.

4. A hinge embodying a pair of hinge members one of which has a pintle thereon and the other member having a slot extending inwardly from one of its edges said slot being provided with an angularly extending portion, a supporting shoulder formed on the said member having the slot, and a lug on the member having the pintle arranged to be set into and out of cooperative relation with the said shoulder by a relative longitudinal movement in a portion of the said slot.

5. A hinge embodying a pair of hinge members, one of said members having a laterally projecting pintle and a lug adjacent thereto, and the other member having a slot therein provided with a vertically extending portion extending inwardly from the upper edge thereof and a horizontally extending portion, the member adjacent to the slot being provided with a surface concentric with the intermediate curved edge of the corresponding portion of the slot, and adapted to cooperate with the said lug to retain the pintle in the said slot, and a shoulder at the upper end of the said surface and adapted to receive the lug while the pintle is in the horizontal portion of the slot for preventing a relative turning movement of the hinge members.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JACOB DIEHL.

Witnesses:

F. H. DENISON,
THOMAS H. LYNCH.