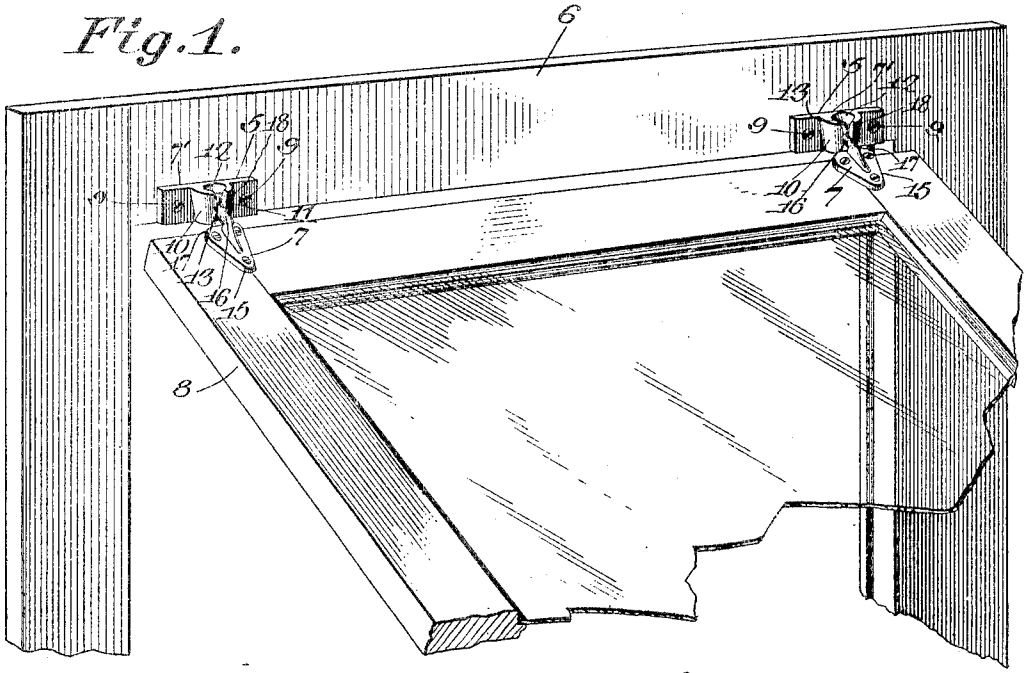
No. 797,185. PATENTED AUG. 15, 1905.

J. DIEHL.

STORM SASH HANGER.

APPLICATION FILED FEB. 20, 1905.

Fig. 1.



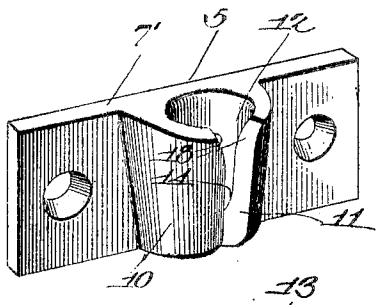
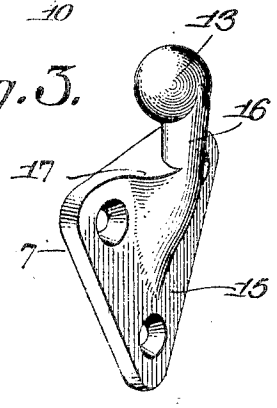


Fig. 3.



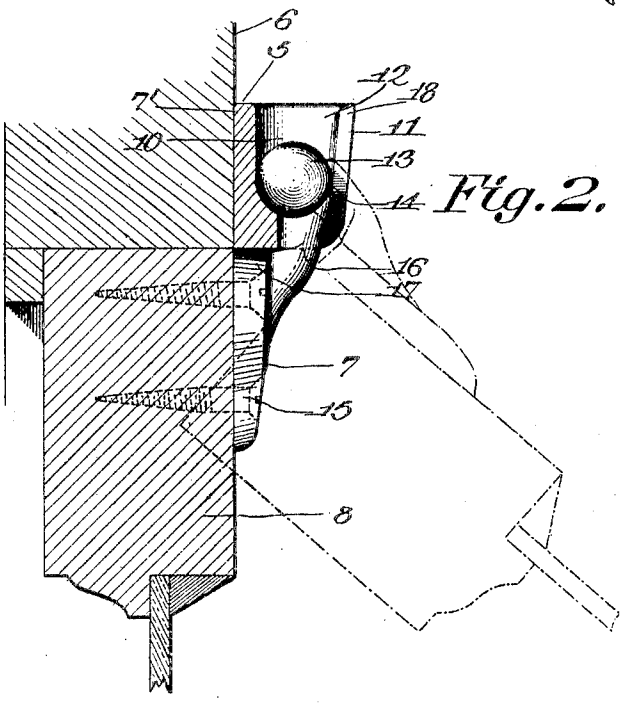


Fig. 2.

Witnesses

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STORM-SASH HANGER.

No. 797,185. Specification of Letters Patent. Patented Aug. 15, 1905.

Application filed February 20, 1905. Serial No. 246,557.

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 Storm-Sash Hanger, of which the following is a specification.

This invention relates to separable hinges such as are employed for hanging storm-windows, blinds, transoms, and the like, and has for its object to produce a comparatively simple and inexpensive device of this character whereby the window-sash or transom may be quickly hung or detached from its frame.

A further object of the invention is to provide a separable hinge comprising a pair of members, one of which is formed with a socket and the other with a spherical head, the latter member being provided with laterally-extending shoulders adapted to engage the base of the socket, so as to prevent accidental displacement of said members when the window-sash or transom is moved to open position.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportions, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of a portion of a window and its casing, illustrating my invention applied thereto. Fig. 2 is a vertical sectional view showing in full lines the window-sash in closed position and in dotted lines the sash in open position. Fig. 3 is a perspective view of the two members comprising the hinge detached.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In hanging or suspending the window I preferably employ a pair of hinges, each of which comprises a fixed supporting member 5, attached to the casing 6, and a swinging member 7, attached to the sash 8 and adapted to engage the member 5, the latter members being disposed upon the outer face and adjacent to the opposite end of the upper rails of the casing, while the members 6 are arranged in coincident relation upon the upper rail of the window-sash, as shown.

The fixed members 5, which are alike and preferably cast from iron or similar metal, each comprise a body portion 7′, provided with openings for the reception of screws or similar fastening devices 9, by means of which the members are rigidly attached to the casing 6. The body portion 7′ is provided with a central enlargement 10, having an outwardly-opening longitudinal slot 11 formed therein, which extends the entire length of the enlargement and communicates with a socket 12, adapted to receive the spherical head 13 of the movable member 7.

The side walls of the enlargement 10 and socket 12 are inclined or converging, as shown, and the base of said socket is preferably curved, as indicated at 14, to conform to the shape of the spherical head and to permit the latter to turn freely therein when the window-sash is moved to open and closed position. Attention is here called to the fact that by making the side walls of the socket converging it permits the ready introduction of the spherical head 13 and causes the latter to be guided to its seat in the base of the enlargement 10. The spherical head 13 is attached to the body portion 15 of the movable member by a vertical shank 16, the former being extended laterally on each side of said shank to form oppositely-disposed shoulders 17, adapted to engage the base of the enlargement and prevent accidental displacement of the members comprising the hinge during the opening and closing movement of the window-sash. It will thus be seen that the sash may be operated with perfect safety and that the same cannot be released until the shoulders 17 clear the base of the enlargement or socket, as shown in Fig. 1, in which event the shank is free to move in the longitudinal slot 11 and the sash moved vertically and detached from the casing. The side walls of the slot 11 are preferably inclined or beveled at the mouth thereof, as indicated at 18, to facilitate the introduction and removal of the movable member.

From the construction it is apparent that in practice when it is desired to hang or suspend the window-sash the spherical head of one of the movable members may be first seated in the socket of the adjacent fixed member and owing to its universal movement therein will permit of the sash being tilted or otherwise manipulated for seating the

spherical head of the other movable member into the socket of the opposite fixed member. It will also be observed that when the sash is in either open or closed position the oppositely-disposed shoulders by engagement with the base of the enlargement will effectually lock the sash against both lateral and vertical movement.

From the foregoing it will be seen that there is produced an extremely simple and efficient separable hinge or hanger admirably adapted for the attainment of the ends in view.

Having thus described the invention, what is claimed is—

1. The combination with a window and its casing, of supporting members carried by the casing and each comprising a body portion provided with an enlargement having a socket formed therein and provided with a longitudinal slot extending the entire length of the enlargement and communicating with said socket, and movable members carried by the window-sash, and provided with spherical heads fitting within said sockets, said heads having straight depending shanks for engagement with the longitudinal slots at the base of said enlargements.

2. The combination with a window and its casing, of supporting members carried by the casing and each comprising a body portion provided with an enlargement having a socket formed therein and provided with a longitudinal slot extending the entire length of the enlargement, and communicating with said socket, and movable members secured to the window-sash and provided with spherical heads fitting within the sockets, said movable members being provided with laterally-extending shoulders adapted to engage the base of the enlargement to thereby limit the lateral and vertical movement of the sash when in closed or partly-closed position.

3. The combination with a window and its casing, of supporting members carried by the casing and each comprising a body portion provided with an enlargement having a socket formed therein and provided with a longitudinal slot extending the entire length of the enlargement and communicating with said socket, said movable members being secured to the window-sash and provided with spherical heads fitting within said sockets, said heads having depending shanks which engage the longitudinal slots at the base of the sockets, and shoulders formed on the movable members on opposite sides of the shanks for engagement with the enlargements when the window-sash is in closed or partly-closed position.

4. The combination with a window and its casing, of supporting members carried by the casing and each comprising a body portion provided with an enlargement having a socket formed therein the side walls of which are converging, there being a longitudinal slot formed in the enlargement extending the entire length of the latter and communicating with said socket, movable members carried by the window-sash and provided with spherical heads fitting within said sockets, said heads being provided with depending shanks which engage the longitudinal slots at the base of the sockets, and shoulders formed on the movable members on opposite sides of the shanks for engagement with the enlargements when the sash is in closed or partly-closed position.

5. The combination with a window and its casing, of supporting members carried by the casing and each comprising a body portion provided with an enlargement having a socket formed therein, there being a longitudinal slot formed in the enlargement, the side walls of which are inclined or beveled and extend the entire length of the latter and communicate with said socket, and movable members secured to the window-sash and having spherical heads fitting within the sockets, said movable members being provided with laterally-extending shoulders adapted to engage the base of the enlargement thereby to limit the lateral and vertical movement of the sash when in closed or partly-closed position.

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,
GEO. H. DETLING.