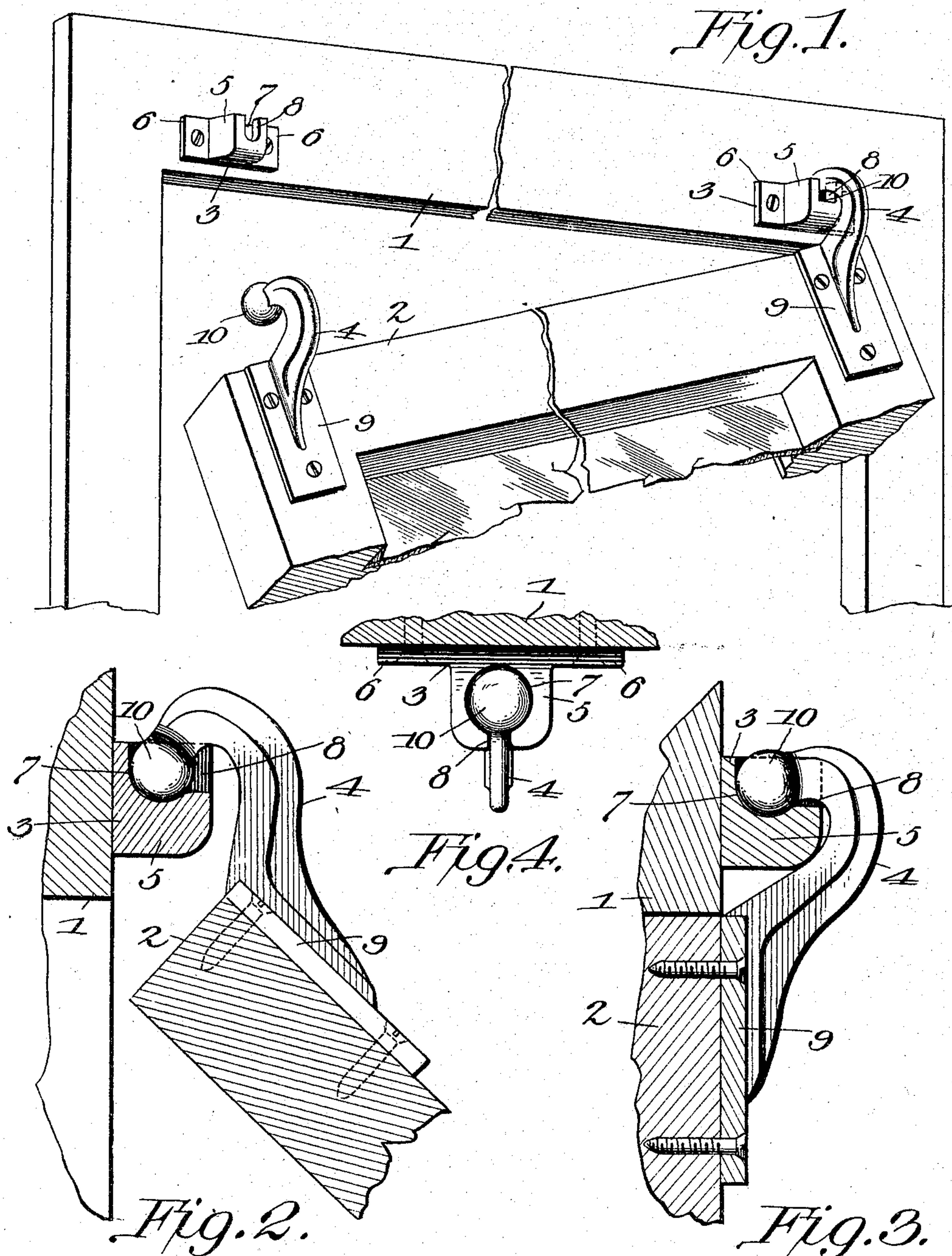


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PATENTED FEB. 14, 1905.

J. DIEHL.  
SEPARABLE HINGE FOR STORM WINDOWS.  
APPLICATION FILED APR. 4, 1904.



Witnesses  
*E. H. Stewart*  
*D. J. Amore*

*Jacob Diehl,*  
Inventor,  
by *C. A. Snow & Co.*  
Attorneys



# UNITED STATES PATENT OFFICE.

JACOB DIEHL, OF SHEBOYGAN, WISCONSIN.

## SEPARABLE HINGE FOR STORM-WINDOWS.

SPECIFICATION forming part of Letters Patent No. 782,327, dated February 14, 1905.

Application filed April 4, 1904. Serial No. 201,543.

*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 Separable Hinge for Storm-Windows, of which the following is a specification.

My invention relates to separable hinges, such as are employed for hanging storm-windows, transoms, and the like, and has for its objects to produce a comparatively simple inexpensive device of this character which will permit of the window being readily and quickly hung, one in which the window will move freely in opening or closing, and one wherein the members of the hinge will be locked against lateral movement.

To these ends the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, 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 elevation showing the window in open position. Fig. 3 is a similar view showing the same closed. Fig. 4 is a detail top plan view of the members of the hanger in engagement.

Referring to the drawings, 1 designates a window-casing, and 2 the window-sash, these parts being of the usual construction and material.

In hanging or suspending the window, which is adapted in opening and closing to swing in a vertical plane, I employ a pair of fixed or supporting members 3, attached to the casing 1, and a pair of movable or swinging members or hangers 4, attached to the sash 2 and adapted for engagement, respectively, with the members 3, the latter being disposed upon the outer face and adjacent to the opposite ends of the upper rail of the casing, while the members 4 are arranged in coincident relation upon the upper rail of the sash. The fixed members 3, which are alike and preferably cast from iron or other metal, each comprise a body portion 5, from which extends a pair of opposite lateral ears 6, perforated for the reception of screws or other attaching devices by means

of which the members are secured to the casing, said body 5 being formed hollow to produce an upwardly-opening socket or seat 7, while the front wall of the body has formed therein an upwardly-opening slot or recess 8 for the purpose which will presently appear. The members 4, which are also alike and cast from iron or other metal, are each in the form of a substantially C-shaped hook, formed integral with and projecting above the upper end of a body or base plate 9, perforated for the reception of attaching-screws or the like by means of which the members are secured to the sash, the upper and outer free end of each member or hanger 4 having formed thereon a spherical head or ball 10, adapted to seat and work within the socket 7 of the adjacent member 3, while the neck of the member or hook immediately in rear of the ball 10 is of flattened form in cross-section to conform to and fit within the slot or recess 8, whereby when the sash is hung lateral movement thereof relative to the casing will be obviated.

From this construction it is apparent that in practice when it is desired to hang or suspend the window-sash the ball-like head 10 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 ball 10 of the other movable member into the socket of the other fixed member. Thus it is obvious that the window-sash may be readily and quickly suspended, inasmuch as there is no necessity for the operator exercising care to simultaneously engage both of the members 4 with their respective members 3, and, further, that after the sash has been hung it will swing freely in opening and closing and will when in the latter position be securely locked against lateral play by engagement of the shanks of the members 4 with the slots or seats 8.

It will be noticed that the shanks of members 4 remain in engagement with the slots 8 when the sash is closed, and therefore this form of hinge is particularly desirable for use

where two or more sashes are located in one casing, because no lateral play is permitted either during or after the closing of the sash.

From the foregoing it will be seen that I  
5 produce a simple efficient device admirably adapted for the attainment of the ends in view, it being understood that minor changes in the details of construction herein set forth may be resorted to without departing from  
10 the spirit of the invention.

Having thus described the invention, what is claimed is—

The combination with a window and its casing; of supporting socketed members carried

by the casing and provided with vertical slots, 15 and movable members carried by the sash and having ball-heads adapted to be seated in the sockets, said members being adapted to normally engage with the slots to secure the sash against lateral movement when in closed or 20 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,  
A. H. GRUBE.