No. 711,785. Patented Oct. 21, 1902.

G. H. PARKER.

SWINGING WINDOW HINGE.

(Application filed May 17, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1

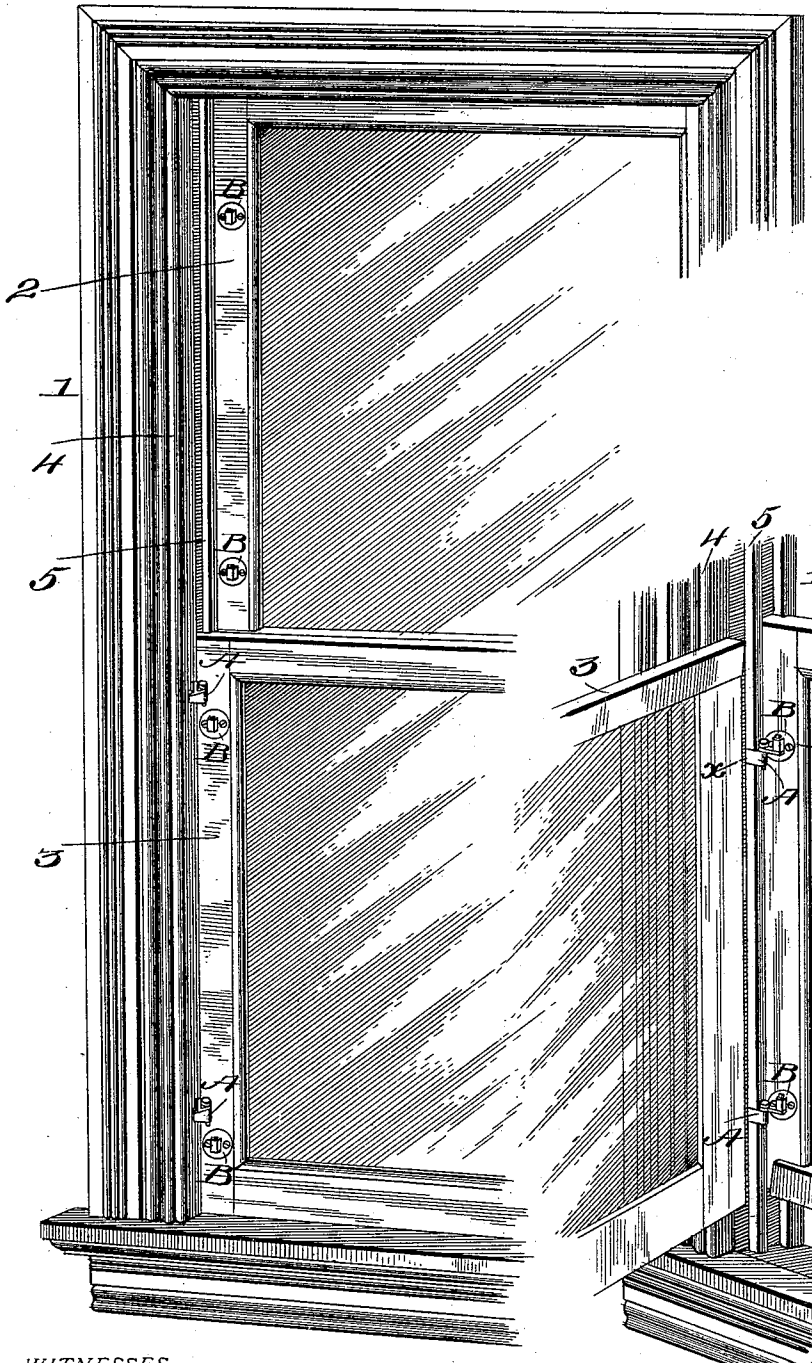


Fig. 2

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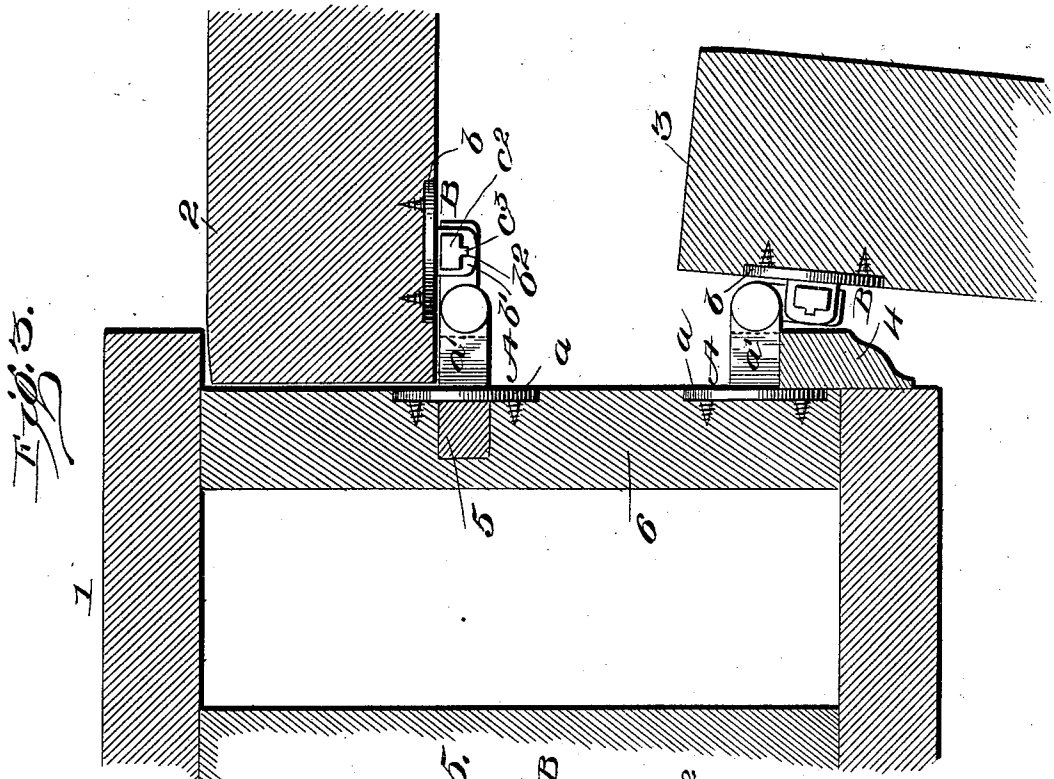


Fig. 5.

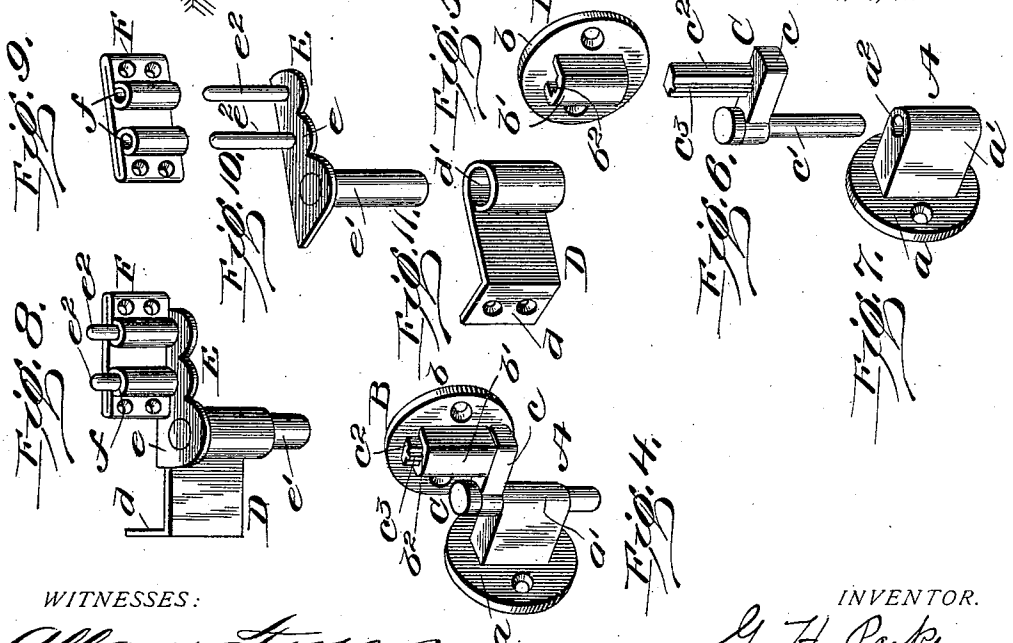


Fig. 9. Fig. 10. Fig. 11. Fig. 5. Fig. 6. Fig. 7. Fig. 8. Fig. 4.

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UNITED STATES PATENT OFFICE.

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SWINGING-WINDOW HINGE.

SPECIFICATION forming part of Letters Patent No. 711,785, dated October 21, 1902.

Application filed May 17, 1902. Serial No. 107,740. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. PARKER, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Swinging-Window Hinges, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in swinging or pivotal supports for window-sashes of the class constructed to permit a window-sash to be pivotally connected to the window-frame, so that said sash may be swung inwardly to permit access to both sides of the sash for cleaning the glass or for other purposes.

The invention consists in the features of construction, arrangement of parts, and combinations of elements, certain embodiments of which are set forth hereinafter and the novel features of which will be specifically pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a perspective of a portion of a window-frame having my improvement applied thereto, with the sashes in position therein as they appear when closed. Fig. 2 is a perspective of the lower part of the window, showing the lower sash swung inwardly and the upper sash in position to be swung inwardly. Fig. 3 is a section taken on the line $x\,x$ of Fig. 2 looking downwardly. Fig. 4 is a detail perspective of the parts used to pivotally connect the window sash and frame as they are shown in the preceding figures. Figs. 5, 6, and 7 are detail perspectives of the parts shown in Fig. 4 as they appear when separated from each other. Fig. 8 shows a modified form of construction. Figs. 9, 10, and 11 are details of the parts shown in Fig. 8.

Similar reference characters refer to similar parts throughout the several views.

Referring first to Figs. 1 to 3, inclusive, 1 designates the window-frame, 2 the upper sash, and 3 the lower sash. As shown, these sashes are adapted to have a sliding movement within the frame, the usual cords and weights (not shown) being used. The invention is particularly adapted for use in connection with sliding sashes; but it is not necessarily limited thereto. 4 designates the front stop, and 5 the parting-strip between the two sashes, while 6 is the pulley-style. It will be understood by those acquainted with this art that when it is desired to swing windows of this class the stop and parting-strip on one side of the window or sections thereof are removed, and suitable provision may be made for releasing the sash-cords from the sashes and securing the ends thereof. Such details are well known, and it is not necessary to illustrate or further describe them.

The essential features of this invention consist in the means for providing a pivotal connection between the window sash and frame, and, as shown, this means comprises a member (designated generally by A) adapted to be secured to the frame, a member B, adapted to be secured to the sash, and a member C, which provides a suitable connection between frame member and sash member. Frame member A has a base-plate a, which is preferably seated in a countersink in the pulley-style or in the frame, so that its outer surface is flush therewith, and a projecting lug a', which when in position projects outwardly through or at one side of the stop 4, as illustrated in Fig. 3, and is provided with a vertical socket or recess a^2. The sash member B consists of a plate b, adapted to be attached to the sash by screws or otherwise and countersunk therein, if desired, and a socket member b', which has a vertical socket therein, preferably angular in cross-section. Part C has a base or body member c, from one end of which extends downwardly a pintle or pivot-pin c', and from the other end of which or at any desired point along its length extends upwardly a pin c^2, adapted to fit the socket in the fixture B. The relation between these parts when in operative position is clearly shown in Figs. 2, 3, and 4, and the manner of using the device will now be clear. The frame member is properly attached in position, as shown in Fig. 1, and the sash member is located in position on the sash, preferably just below the frame member when it is to be used with sliding sashes, and in such position that when the member

C, which may be called a "pivot-key," is placed in position with the pivot-pin c' resting in the socket a^2 and the sash raised, so that the sash member is above the plane of the pin c^2, the key may then be turned around, and upon lowering the sash the socket b' will engage the pin c^2, and the sash will then be pivotally supported, so that it may be swung inwardly, as desired. When the lower sash has been swung out in this way, a pivot-key may be placed in the socket of the second frame member, located, as shown in Fig. 2, to project through the parting-strip, and the upper sash lowered until the pivotal connection between the upper sash and the frame is complete, and then the upper sash likewise may be swung in the desired direction. The exact positioning of the frame and sash members is immaterial so long as their relative position is such as to permit of the desired operation. The sash members may be placed at any desired points in the side piece of the sashes and the frame members suitably attached to the frame along the line of the front stop and the parting-strip, respectively.

The advantages of this construction over other devices known in the art for the same purpose lie in its simplicity, in the short-radius swing which is obtained, in the ease of adjustment, and the doing away with the necessity of frequent readjustment, which necessity is present in other devices. An important advantage further presents itself in the fact that the frame member and sash member are respectively secured rigidly in position with parts which project but very slightly, while the pivot-key can be placed in position or taken out readily without any adjustment, and when in position needs only vertical movement of the sash to engage or disengage it. It thereby constitutes a portable, detachable, and transferable pintle or pivot-key, which may be used in the nature of a pass-key with any number of windows.

I may provide each one of the upwardly-projecting pins c^2 of the key with a projection or projections c^3 to fit in a corresponding groove or grooves b^2 in the socket b', so that the key can be used only with those windows having the fixture B with grooves in the socket to correspond or mate with the projections c^3. Furthermore, I may vary the shape of the pin c^2 and the corresponding socket b', so that the key will fit only in its corresponding-shaped socket. The advantages of such construction, both as to cheapness and simplicity of the parts attached to the window and of the pintle or pass-key, which may be used with any number of windows, are obvious.

It will be apparent that changes may be made in the construction of the frame and sash members, or "brackets," as they may be termed, and of the pivot-key without departing from this invention. In Figs. 8 to 11, inclusive, I have illustrated a form in which these parts are made of folded metal, which may be readily shaped to the desired form. In these figures, D represents the frame member or bracket, having a plate d, by which it can be attached to the frame, and a socket d', formed by rolling or turning the end of the bracket over upon itself. The pivot-key E has a base-plate e and carries suitably connected therewith a pivot-pin e' and two projecting pins e^2, adapted to engage sockets in a sash member or bracket F, which sockets are formed by bending the ends of a plate over on itself and then further curving said ends backwardly to form sockets f, as shown. These pins e^2 may be provided with projections to fit in corresponding grooves in the sockets, as above described, and, if desired, these pins and the corresponding sockets may be differently spaced apart for different sets of windows, so the key made for that set of windows cannot be used on another set.

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

1. In a device of the class described, a member adapted to be attached to a window-frame, another member adapted to be attached to the sash of the window, and a third member constructed and adapted to form a slip-hinge connection with the first-mentioned member and a rigid but disengageable connection with the second member as and for the purposes set forth.

2. In a device of the class described, a member adapted to be attached to a window-frame, another member adapted to be attached to the sash and a single integral member constructed and adapted to form a slip-hinge connection between the first-mentioned member and a rigid but disengageable connection between the second member, said integral member being provided with pins, one of which forms a pivot and another adapted to engage a suitable socket in the sash member, the pin and socket being of such shape as to prevent a pivotal connection.

3. In a device of the class described, a detachable sash-hinge, comprising a member adapted to be attached to the window-frame, a member adapted to be attached to the sash, one of said members having an integrally-formed hinge part and the other having an integrally-formed engaging part, and a third integral member having a complemental hinge part and a complemental part adapted to detachably engage the engaging part of said second member, the said two complemental engaging parts being of special conformation interlocking to prevent motion except that of engagement and disengagement.

4. In a device of the class described, a detachable sash-hinge comprising a member adapted to be secured to the window-frame, a member adapted to be attached to the sash, one of said members having an integrally-formed hinge part and the other having an

integrally-formed engaging part, and a third integral member having the complemental part of the hinge and having a further part adapted to detachably engage the engaging part of said second member, the two said complemental or engaging parts being so shaped or arranged that only the particular form thereof can be used so as to engage and disengage each other and also to prevent motion except that of engagement and disengagement.

5. In a device of the class described, a frame member a sash member and a single integral member, adapted to complete a pivotal connection between the first and second members, said connecting member being provided with a pivot-pin adapted to engage a socket in one of said members, and another pin or pins in said connecting member, adapted to engage a socket or sockets on the other of said members, said pins and sockets being so formed or shaped as to prevent motion between the connecting member and the other member except that of engagement and disengagement.

6. In a device of the class described, a detachable sash-hinge, comprising a member adapted to be secured to the window-frame, a member adapted to be secured to the sash, one of said members having an integrally-formed hinge part, and the other having an engaging socket or sockets, and a third member having the complemental part of the hinge, and also having a pin or pins adapted to detachably enter the socket or sockets, the pin or pins and socket or sockets being so shaped or arranged as to prevent motion except that of engagement and disengagement, and so that only the particular third member can be used to engage and disengage the member to which it is fitted.

7. In a device of the class described, a detachable sash-hinge comprising a member adapted to be secured to the window-frame, a member adapted to be secured to the sash, one of said members having an integrally-formed hinge part and the other having an engaging socket, said socket having a groove or grooves therein, and a third member having the complemental part of the hinge and also having a pin having a projection or projections thereon adapted to detachably enter the said socket, the pin and socket being so shaped or arranged as to prevent motion except that of engagement and disengagement and the projection or projections and groove or grooves being so arranged as to permit only a particular third member to be used as, and for the purposes set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

GEORGE H. PARKER.

Witnesses:
H. M. SEAMANS,
I. C. DELANEY.