June 4, 1929. H. T. THOMPSON 1,716,356

STORM WINDOW FASTENER

Filed Feb. 29, 1928

Fig. 1.

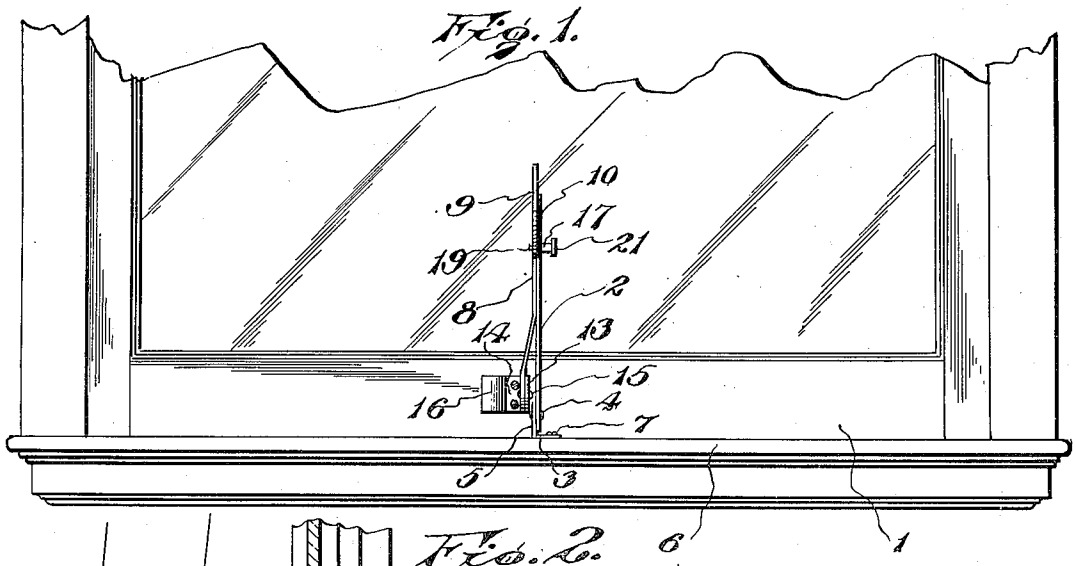


Fig. 2.

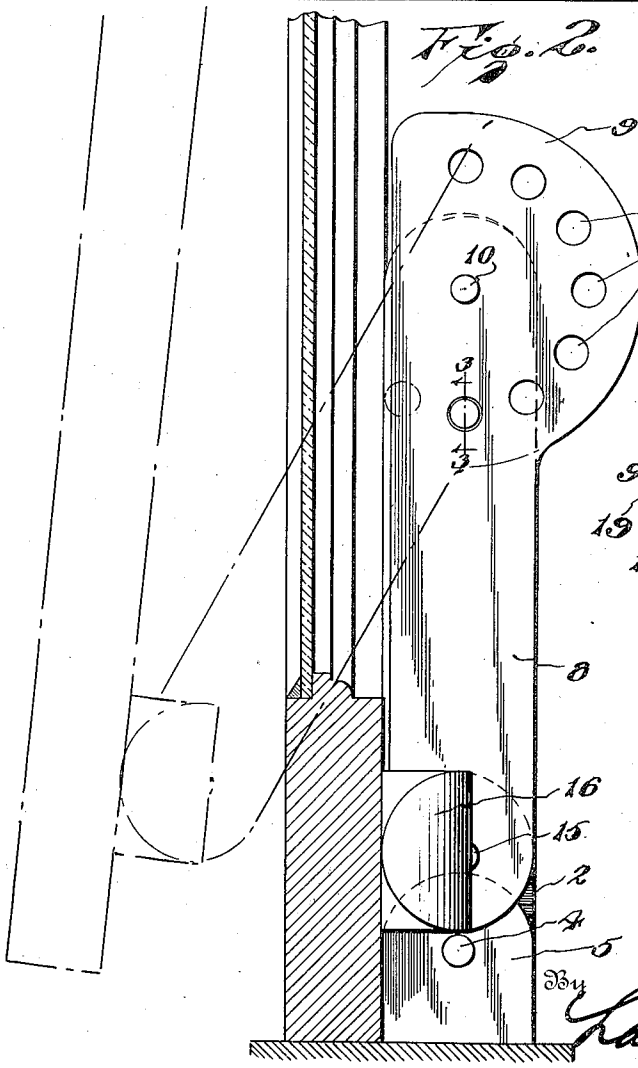
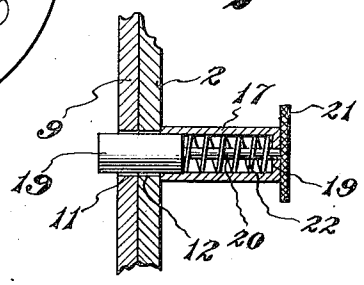


Fig. 3.



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Patented June 4, 1929. 1,716,356

UNITED STATES PATENT OFFICE.

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STORM-WINDOW FASTENER.

Application filed February 29, 1928. Serial No. 257,972.

This invention relates to builder's hardware and more particularly to a fastener by means of which a window hinged at its top and adapted to be swung outwardly when opened may be securely fastened when shut or supported in an opened or partially opened position.

One object of the invention is to provide a window fastener of this character, which may be readily applied to a window and will be efficient in its operation and not unsightly in appearance.

Another object of the invention is to connect the fastener with the window by an element which also constitutes a finger hold adapted to be grasped when opening or closing the window and thereby prevent danger of the window slipping and its glass broken by a jar received due to the window slamming shut.

Another object of the invention is to provide improved latch means through the medium of which a window engaging arm may be securely but releasably retained in a desired angular relation to a window sill engaging standard and allow the latch to be easily moved to a releasing position.

Another object of the invention is to so mount the standard that it may swing from a vertical position to an inclined position as the window sash is swung outwardly to an open position.

The invention is illustrated in the accompanying drawing, wherein

Figure 1 is a view in front elevation showing the fastener applied to a window;

Fig. 2 is an enlarged view showing the fastener in side elevation and the window sash and sill in section, and

Fig. 3 is a fragmentary sectional view taken on the line 3—3 of Fig. 2.

The improved fastener is employed to secure a window sash in either a closed or an opened position. The sash 1 is of a conventional construction and is hingedly mounted at its upper end so that it may be swung outwardly from the closed position shown in full lines in Fig. 2 to a partially opened position, as indicated by dotted lines, or to a fully opened position. The fastener includes a standard 2 which is formed of strong sheet metal and has its lower end pivotally connected with a bracket 3 by a rivet or similar fastener 4 passed through the standard and upstanding ear 5 of the bracket. The bracket is also formed of strong sheet metal and is secured upon the window sill 6 by a screw or similar fastener 7 passed through an opening formed in the bracket and screwed into the window sill. An arm 8 which is also formed of strong sheet metal is disposed at one side of the standard 2 and has its upper end portion widened to provide a head 9 which is substantially semi-circular in shape and is pivotally connected with the upper end portion of the standard by a rivet or similar fastener 10. Openings 11 are formed in the head 9 and are spaced from each other and disposed along an arcuate path having the pivot or pin 10 as its center. An opening 12 is formed in the standard below the pivot pin 10 and is spaced from this pin a distance corresponding to the distance between the pin and each of the openings 11. It will thus be seen that when the arm is swung about the pin the openings 11 will successively register with the opening 12 and, therefore, when a latch is engaged in the opening 12 and one of the openings 11 the arm may be securely retained in a set position relative to the standard. The other end of the arm is pivotally connected with an outstanding lug 13 of a bracket 14 by a pin or rivet 15, and this bracket is secured to the lower cross bar of the window sash by screws or other suitable fasteners, as shown in Fig. 1. By this arrangement the arm and the standard may have swinging movement relative to the sash and window sill when the sash is swung outwardly beyond the position indicated by dotted lines in Fig. 2 and, therefore, binding will not take place which would prevent the window sash from being fully opened. A tongue or lip 16 projects from the portion of the bracket 14 which is secured to the window sash and is bent to form a finger hold which may be grasped when the window is to be opened or closed. Therefore, the window may be easily opened or closed and there will be no danger of its slipping and swinging shut at such speed that it will strike the window frame with a violent blow with resulting likelihood of the glass being broken.

The latch which is employed to securely but releasably retain the arm in a desired angular relation to the standard includes a cylindrical casing 17 which projects from the standard about the opening 12 and at its outer end is formed with a head 18. A plunger 19 is slidably received in the casing and provided with a stem 20 which projects through an opening formed centrally in the head 18 and

carries an actuating disk 21 at its outer end. A spring 22 is coiled about the stem within the casing with one end bearing against the head 18 and its other end engaging the inner end of the plunger 19. This spring serves to urge the plunger outwardly and, therefore, the plunger will be normally retained in position to pass through the opening 12 and one of the openings 11. It will thus be seen that the plunger may serve to securely retain the arm in an adjusted position and there will be no danger of the pin accidentally moving out of an operative position and releasing the arm.

When the window fastener is in use, the bracket 3 is secured to the window sill intermediate its width and the bracket 14 is secured to the lower cross bar of the window sash. When the window is closed, the plunger 19 passes through the lowest opening 11 formed in the head 9 of the arm and the sash will be secured in a closed position with the arm and standard disposed vertically. When it is desired to open the window, the disk 21 is grasped and the plunger drawn inwardly so that it moves out of engagement with the arm and the window sash can then be swung outwardly. After the sash has been swung outwardly to approximately the distance desired, the latch is released and the plunger will either immediately pass into another opening in the head of the arm or by moving the sash inwardly or outwardly a short distance an opening 11 may be brought into position to receive the plunger. If the sash is only opened a short distance as indicated by dotted lines in Fig. 2, the standard will remain substantially vertical but if the sash is swung outwardly beyond the position indicated by dotted lines an appreciable extent the standard will be swung outwardly with the arm and may assume a position in alinement therewith if the sash is fully opened. When it is desired to close the window, the finger hold 16 of the bracket is grasped with a finger of one hand and by moving the plunger to a releasing position with the other hand the sash may be allowed to swing inwardly toward a closed position and the latch then released so that it may secure the sash in a partially or fully closed position.

Having thus described the invention, I claim:

A window sash fastener comprising a standard, a base pivoted to the lower end of said standard and adapted to be secured to a window sill, an arm having one end pivoted to the upper end of said standard and provided with a series of sockets spaced radially from its pivotal connection with the standard, the standard being provided below the pivot with an opening with which the sockets in the arm may respectively aline, a bracket pivoted to the other end of said arm and adapted to be secured to a window sash, a laterally extending cylindrical casing fixed to said standard in alinement with the opening therethrough, a latch pin slidable in said casing, a stem projecting from the outer end of said pin through the outer end of the casing, a head on the outer end of said stem, and a spring in said casing bearing against the pin and the outer end of the casing yieldably retaining the pin in engagement with the opening in the standard and an alined socket of the arm.

In testimony whereof I affix my signature.

HELMER T. THOMPSON. [L. S.]