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HANDLE STRUCTURE FOR SCREEN SASHES

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2 Claims. (Cl. 160—371)

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This invention relates in general to a handle mounting for a screen frame and more particularly to a type thereof which may be quickly and easily attached to a screen frame during assembly thereof without special attaching means.

In the provision of combination screen and storm window units, as shown in United States Patent No. 2,291,726, the interior surface of the screen sash must be very close to the exterior surface of the storm window sash. Thus, if the screen sash is provided with a conventional handle, there is likely to be interference between such handle and the storm sash unless a special frame construction is provided, which has proven to be both inconvenient and expensive. Present types of special handle constructions have also been found either unreasonably expensive or inconvenient to operate.

Accordingly, a primary object of this invention is to provide a handle and a handle mounting structure for a screen sash wherein the handle will normally be completely free from interference with a closely adjacent storm sash, but wherein said handle can be readily moved into a position affording easy manual gripping thereof.

A further object of the invention is to provide handle means, as aforesaid, which will be of maximum simplicity.

A further object of the invention is to provide handle means, as aforesaid, which can be readily assembled upon the screen sash frame at the same time that the screen panel is mounted thereon.

A further object of the invention is to provide a handle, as aforesaid, which can be assembled upon the screen sash frame without the use of additional or special attaching means.

Other objects of this invention will become apparent to persons acquainted with articles of this type upon reading the following specification and referring to the accompanying drawings.

In the drawings:

Figure 1 is a fragmentary, broken, side view of the lower portion of a screen sash as appearing from the interior side thereof.

Figure 2 is a sectional view taken along line II—II of Figure 1.

Figure 3 is a sectional view taken along the line III—III of Figure 1.

Figure 4 is a sectional view substantially as taken along the line IV—IV of Figure 1.

In meeting the objects above set forth, as well as others incidental thereto, I have provided a U-shaped wire handle whose legs extend through suitable slots in the inner edge of a conventional screen framing element.

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The free ends of said legs are bent to assume positions parallel with, and adjacent to, the spline which secures the edge of the screen panel in a channel longitudinally disposed in the side of said screen framing element. The said bent ends occupy the normally empty space between the periphery of the conventionally cylindrical spline and an undercut corner of the channel.

For the purpose of convenience in description, the terms "inner" or "inwardly" and "outer" or "outwardly," as used herein, will have reference to the geometric center of the screen sash. The terms "interior" and "exterior" will have reference to those sides of the screen normally viewed from the inside and outside, respectively, of the building in which the sash is installed.

As shown in Figures 1, 2 and 3, the conventional frame element 1 is provided with a screen and spline receiving channel 2 opening on the exterior side of said element adjacent to the inner edge thereof. The inner wall 3 of the channel 2 is undercut, in the conventional manner, to provide more positive securement of the edge of the screen panel 5 in the channel 2 by the spline 6. Said spline 6, which is preferably cylindrical, may be made of any convenient conventional material, such as rubber, vinyl plastic or soft metal. The particular frame element 1 disclosed herein for illustrative purposes has a hollow chamber 4 which is not material to the invention. Further, although said frame element herein disclosed is extruded, it will be understood that a rolled frame element may also be utilized.

Two handle slots 10 and 11 (Figures 1, 3 and 4), which may be identical with each other, are provided in the inner edge of the frame element 1. These slots preferably extend through the inner wall 3 of the channel 2 and outwardly therefrom along the bottom wall 7 of said channel 2 a distance slightly greater than the diameter of the wire in the handle 12, and are slightly wider than the diameter of the handle wire.

The handle 12 is comprised of a U-shaped piece of wire whose substantially parallel legs 15 and 16 are bent at the free ends thereof away from each other to form the pivot members 13, which pivot members are preferably coaxial with each other and parallel with the central portion 14 of the handle 12.

In assembling the handle 12 with the frame element 1, the legs 15 and 16 are inserted into the slots 10 and 11, respectively, and the pivot members 13 thereof are positioned adjacent to the inner wall 3 of the channel 2. An edge of the screen panel 5 and the spline 6 are then in-

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served into the channel 2, in any conventional manner, whereby the pivot members 13 of the handle 12 are snugly but rotatably held in the corner of the channel 2 formed by the junction of the inner wall 3 and the bottom 7 thereof. Thus, the handle may extend inwardly, as shown in solid lines in Figures 1 and 3, thereby being disposed for storage purposes entirely between the planes defined by the interior and exterior surfaces of the frame element 1, or it may be readily pivoted outwardly into the broken line position 12a (Figures 3 and 4) for manual grasping to effect movement of the screen sash.

It will be observed (Figure 4) that when said handle 12 is disposed in the gripping position 12a, it can be manually and firmly grasped thus insuring positive movement and/or adjustment of the sash frame to which it is attached.

It will also be seen that the handle and mounting structure to which this invention relates is also applicable to installation on the side and top elements of a conventional screen sash of this type in which all of the sash elements are normally identical in cross-sectional contour.

Accordingly, I have disclosed a structure meeting the objects and purposes above set forth. It will be evident that numerous variations may be made in this structure, particularly in the details of the frame element 1 with which the handle is to be used. However, these variations, as well as others similar thereto, will be understood to lie within the scope of the hereinafter appended claims, excepting as said claims by their own terms expressly limit otherwise.

I claim:

1. In a handle and handle mounting for a screen sash frame having a frame element with a longitudinally disposed channel opening on a side thereof, and adjacent to the inner edge thereof,

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said channel having an inner wall and a bottom, and being narrower at its mouth than at its bottom, and having the edge of a screen panel held within said channel by means of a spline, the combination comprising: a U-shaped, wire handle having a central portion, a pair of parallel legs extending in the same direction from opposite ends of said portion and being perpendicular thereto, and coaxial pivot members parallel with said central portion and extending from the free ends of said legs; means providing a pair of slots in the inner edge of said element, said slots extending through said channel inner wall and into said channel bottom a distance slightly greater than the diameter of said legs, and said slots being spaced from each other the same distance as said legs for slidable reception of said legs therein, said pivot members being pivotally disposed within the corner of said channel formed by the junction of said inner wall and said bottom and being between said junction and said spline; whereby said handle is held by said spline within said corner and may be pivoted into and out of a position disposed adjacent to said panel and entirely between planes defined by the interior and exterior surfaces of said frame element.

2. The combination described in claim 1 wherein the spline is comprised of a resilient material.

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REFERENCES CITED

The following references are of record in the file of this patent:

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Number	Name	Date
1,092,442	Higgin	Apr. 7, 1914
2,291,726	Kaufman	Aug. 4, 1942