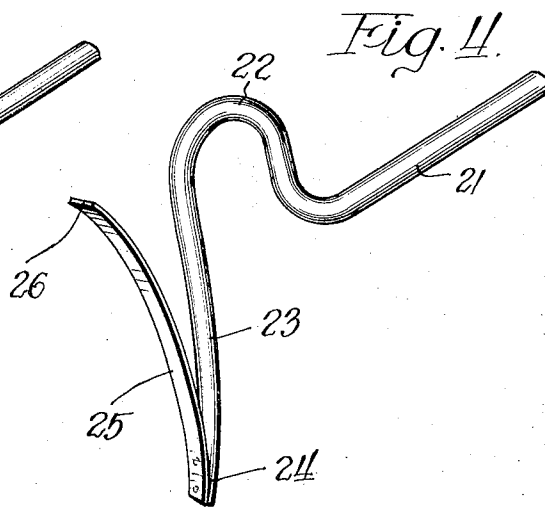
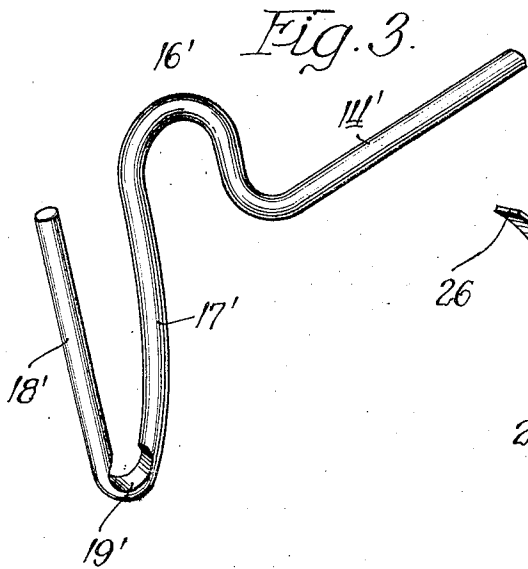
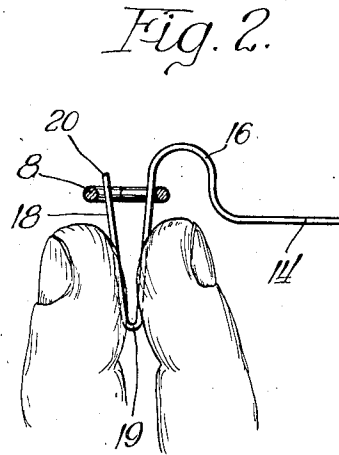
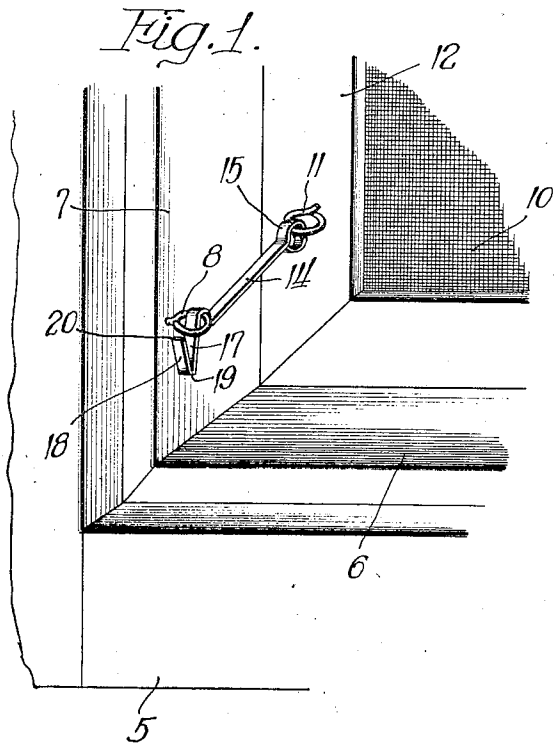


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E. F. CHAMBLESS
SCREEN SECURING MEANS

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SCREEN SECURING MEANS

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3 Claims. (Cl. 292—107)

This invention relates to screen securing means, being more particularly directed to securing means employed to attach screens, storm windows or the like to window or door frames, although the particular novel features of the invention are not to be limited to this specific use, as the invention may equally well be applied to gate or door latching means or the like.

In providing instrumentalities of this general type, it is desirable that they be so constructed that the securing means cannot be accidentally displaced out of engagement, in order to prevent small children, domestic animals or the like from disengaging the latching member accidentally, and thus becoming subjected to the danger of falling out of a window or the like, or opening a gate or door which it is desired to maintain closed. Also, to minimize the possibility of an unauthorized person tearing the screen or the like for a short distance adjacent the securing means, and then endeavoring to disengage the securing means to gain admission to the premises, it is desirable that some positive type of self-locking securing means be provided.

The present invention attains these desired ends by providing securing means including a latching member which is engaged with an eyelet or other fixed member in such manner that it cannot be disengaged without manual manipulation thereof and the exertion of considerable pressure upon certain restricted portions of the member in a predetermined manner.

This objective is attained without materially increasing the cost of the ordinary type of latching member now on the market, and without requiring any departure from the ordinary eyelet which is now employed as a receiving means for the latching member. The method of engaging the latching member of the present invention is no different than that heretofore employed.

Another object of the present invention resides in the provision of a simple and economical type of securing means which is readily constructed and may be readily engaged and disengaged.

Other objects and advantages of the present invention will appear more fully from the following detailed description, which, taken in connection with the accompanying drawing, will disclose to those skilled in the art the particular construction and operation of a preferred form of the invention.

In the drawing:

Figure 1 is a perspective view of one form of securing means disposed in operative position;

Figure 2 is an elevational view showing the method of disengaging the securing means shown in Figure 1;

Figure 3 is a perspective view of a modified form of latching member; and

Figure 4 is a perspective view of a second modified form of the invention.

Referring now in detail to the drawing, in Figure 1 I have shown the ordinary window frame indicated by the reference numeral 5, provided with the inner members 6 and 7 defining the window opening. Disposed in proper position in the member 7 is an eyelet member 8, which is threaded into the member 7 in the usual manner. It is to be understood that the specific form of eyelet provided is optional, and any of the ordinary types of eyelets now in use may be employed in this connection without departing from the invention.

A screen indicated generally at 10 is adapted to be disposed in abutting engagement with the outer defining edges of members 6 and 7, and is provided with a second eyelet member 11 threaded into the member 12 forming one defining edge of the screen 10. The eyelet 11 is of usual form, and may be threaded or otherwise secured in the member 12.

A latching member indicated generally at 14 is provided with a substantially closed looped end portion 15 engaging in the eyelet 11, and providing for pivotal movement of the latching member 14 with respect thereto. The opposite end of the latching member 14, as clearly shown in Figure 2, is provided with a bight portion 16, and with a depending engaging portion 17 adapted to extend into the opening defined by the eyelet 8. The portion 17 extends downwardly from the bight portion 16 of the member 14, and is then doubled back to provide an upwardly extending portion 18 defining a substantially V-shaped member formed integral with and extending from the bight portion 16 of the member 14.

In operation, the latching member 14 is engaged with the eyelet 8 by merely forcing the lower end 19 of the member downwardly through the eyelet opening, whereby the upper end of portion 18 passes beneath the eyelet 8 and, because of the resiliency of the member, springs outwardly into a position outside of the eyelet 8, preventing disengagement of the latching member 14, as shown in Figure 1.

The portions 17 and 18 of the latching member 14 normally have their upper ends spaced apart a distance greater than the diameter of the eyelet opening into which they are engaged, so that when the restraining pressure of the eyelet 8 is removed from the portion 18 by the end thereof passing below the eyelet, the portion 18 springs outwardly, whereby the ring portion of the eyelet 8 is disposed between the portions 17 and 18 of the latching member, preventing upward movement of the latching member out of the eyelet. Thus, any attempt to disengage the securing means by exerting pressure against the under surface of the member 14 will be ineffec-

tive to release the securing means from engagement with the eyelet, and thus a small child or a domestic animal, such as a dog or cat, will not be able to force the latching member out of engagement to release the securing means.

In order to effect release of the latching member, the portions 18 and 17 are manually pressed into proximity to each other, so that the end 20 of the portion or leg 18 is disposed at a distance from the leg portion 17 such that the two leg portions 17 and 18 of the member 14 are not spaced apart a distance greater than the internal diameter of the eyelet 8. This is shown in detail in Figure 2. By this means, the portions 17 and 18 can be forced upwardly through the eyelet 8, and release of the latching member 14 can thus be effected.

In Figure 3 I show a modified form of latching member, which is formed of rounded stock, the member 14' of this embodiment being provided with the customary bight portion 16', and with the depending portion 17' corresponding to the portion 17 of the embodiment of Figures 1 and 2. Extending upwardly from the lower end of the portion 17' is the locking portion 18' of the latching member 14', which functions in the same manner as described in connection with the latching member 14. Preferably the portion forming the juncture between the portions 17' and 18' is reduced in cross-sectional area, as shown at 19', to provide for sufficient resiliency so that the member 18' may be pressed toward the portion 17' in order to effect disengagement of the latching member. Since there is no stress upon the portion 19', the reduction in cross-sectional area at this point produces no detrimental effect. In other respects, the member 14' functions in the same manner as the member 14, as will be obvious from the drawing, and needs no further description.

In Figure 4 I have provided a second modified form of latching member, this member being indicated at 21, and comprising the ordinary type of hook member now on the market, having the bight portion 22 and the lower extending hook portion 23. In order to modify this ordinary type of latching member into a structure that will accomplish the objects of the present invention, I preferably flatten the outwardly extending surface at the lower end of the hook portion 23, as shown at 24, and weld or otherwise secure to this flattened surface a flat resilient member indicated at 25, which normally extends outwardly of the hook portion 23 of the member 21 a distance such that the upper end portion 26 of the member 25 is spaced from the hook portion 23 a distance greater than the internal diameter of the eyelet 8. By flexing of the member 25 toward the hook portion 23 of the hook 21, the latching member may be released from the eyelet in the manner previously described.

It will thus be apparent that I have provided a novel type of latching member, which may be readily engaged, but can be disengaged only upon application of a considerable pressure to push the extending ends of the engaging portions into proximity to each other to allow them to be passed upwardly through the eyelet opening. Also, it will be noted that either the ordinary type of latching member now in use may be modified to provide this feature, or latching members may be formed having integral portions which are so constructed as to produce this function.

Since disengagement of the member can only be effected by pressure exerted upon the lower

depending portion of the latching member, it is obvious that accidental displacement of the latching member is prevented, providing protection for children or the like, and preventing such a latching member from being released by an unauthorized person attempting to insert a wire or the like through the screen member 10 to force the latching member 14 upwardly, which could be accomplished in devices of the prior art. Further, in the application of the invention to gates or doors, it will be obvious that the latching means provides an effective method of preventing dogs or the like from forcing the latching member out of engagement by merely pushing on the underside of the same, which has been known to occur in connection with devices of the prior art.

I am aware that modifications in certain details of design and construction of the invention disclosed herein may be made, and I do not intend to limit the invention to the specific features shown and described, but only as defined by the spirit and scope of the appended claims.

I claim:

1. A latch member having means at one end for pivotally mounting the same, a hook at the opposite end swingable into and out of latching engagement with an eye member and a tongue carried by said hook and yieldable in a direction and of a length to pass completely through said eye member in engagement of said hook with said eye member, said tongue lying completely without said eye member when said hook is in full engagement therewith and sprung to position to engage said eye member and prevent disengagement of the hook therefrom except by springing said tongue to position to pass through said eye member.

2. A latch member formed of a wire-like element having a loop at one end for pivotally mounting the same, the opposite end of said latch member being turned to form a hook swingable into and out of latching engagement with an eye member, a tongue turned up from the lower end of said hook and of a length to pass completely through said eye member in engagement of said hook with said member, and a connecting portion of reduced section between said hook and tongue whereby said tongue may be flexed toward said hook for passage through said eye member in engaging said hook with said eye member and in disengaging the same therefrom, said tongue lying completely without said eye member when said hook is in full engagement therewith and sprung to position to engage said eye member and prevent disengagement of the hook therefrom except by springing said tongue to position to pass through said eye member.

3. A latch member formed of a wire-like element having means at one end for pivotally mounting the same, the opposite end of said latch member being turned to form a hook swingable into and out of latching engagement with an eye member, and a separate upwardly extending spring tongue secured to said hook and yieldable in a direction and of a length to pass completely through said eye member in engagement of said hook with said eye member, said tongue lying completely without said eye member when said hook is in full engagement therewith and sprung to position to engage said eye member and prevent disengagement of the hook therefrom except by springing said tongue to position to pass through said eye member.