

Sept. 17, 1935.

H. A. KNIGHT

2,014,622

SASH PAIR FOR WINDOWS

Filed May 17, 1935

Fig. 1.

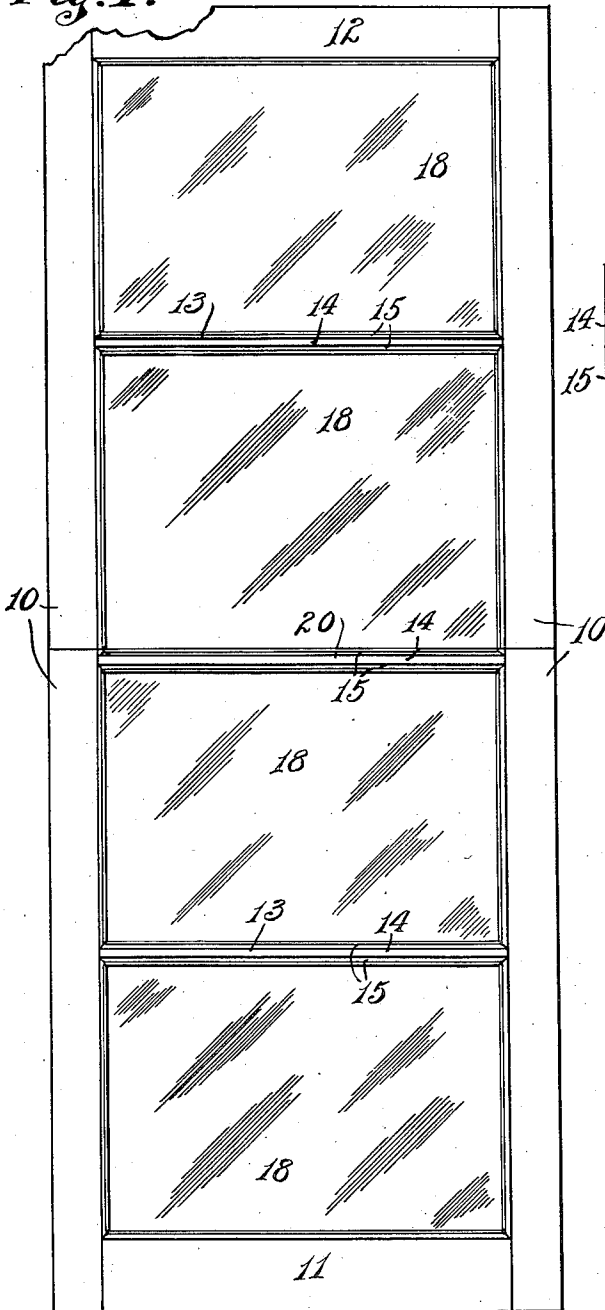
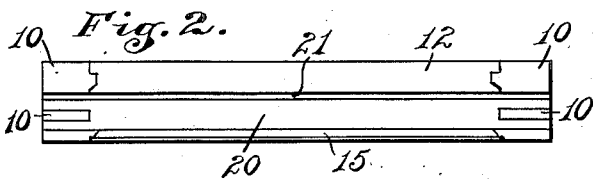


Fig. 3.

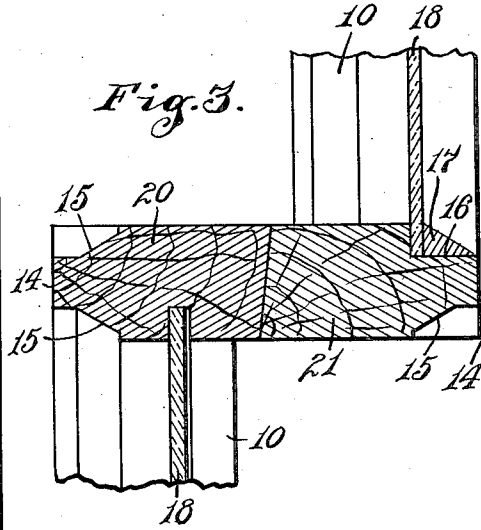
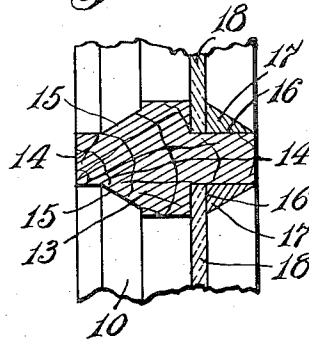


Fig. 4.



INVENTOR
Henry A. Knight,
BY Hood & Hahn.
ATTORNEYS

UNITED STATES PATENT OFFICE

2,014,622

SASH PAIR FOR WINDOWS

Henry A. Knight, Indianapolis, Ind.

Application May 17, 1935, Serial No. 21,927

2 Claims. (Cl. 20—56)

At the present time there are two well known, and sharply distinguishable, types of window sash, one being the "casement" type wherein the opening is closed by a single sash, generally hinged at one vertical edge; and the other being the "double sash" type, wherein the opening is closed by two coordinated sash, one or both being vertically movable relative to the other in the sash frame.

In the first mentioned type the space between the stiles and top and bottom rails is generally subdivided by mullions, (horizontal, vertical, diagonal), into a plurality of glass receiving pockets, the mullions continuously between the bottom and top rail being so formed as to produce the same eye effect upon the observer. Such a window sash has heretofore been considered necessary in those types of architecture where vertical lines are to be accentuated.

In the other type, i. e. "double sash" window, the spaces between the stiles, bottom rail and top rail have been similarly subdivided by mullions; but it has heretofore been the almost universal custom to provide such sash with check rails (i. e. the top rail of the bottom sash and the bottom rail of the upper sash) having a vertical dimension considerably greater than the width of the mullions (i. e. vertical dimension of horizontal mullions and horizontal dimensions of vertical mullions). The vertical dimensions of such check rails have generally been somewhat less than the dimensions of the companion horizontal rails and stiles of the sash, but in all instances, so far as I am aware, the exposed vertical faces (i. e. the inner face of the top check rail and the outer face of the bottom check rail) have been plane surfaces in the plane of the stiles, although, of course, the outer faces of the check rails each have had one corner rabbeted to form part of a glass receiving pocket.

In such a construction, due to the coincidence and extent of the exposed face of the check rail with the plane of the stiles, the window closure, considered as a whole, has presented to the eye of the observer a vision-obstructing middle line which has destroyed vertical-line-accentuation value. Consequently double sash window closures have not been available to obtain the architectural effects which have heretofore been obtainable only with window sash of the "casement" type.

Window sash of the double sash type offer certain advantages which are not attainable with window sash of the casement type, and it has heretofore been considered impossible to attain

casement type architectural effects with window sash of the double sash type.

There has been a long felt desire to retain the advantages of double sash window closures and at the same time attain the architectural effects of casement type closures and as an attempted solution of the problem, the vertical dimensions of the check rails are somewhat less than the vertical dimensions of the bottom rail of the lower sash and top rail of the upper sash; but such a construction falls far short of the eye effect of the casement type sash.

The object of my present invention is to produce a window closure of the double sash type capable of substantially producing the eye effect of a casement type sash.

The accompanying drawing illustrates an embodiment of my invention:

Fig. 1 is an elevation of the inner face of a double sash type closure, embodying my invention;

Fig. 2, a top plan of the parts shown in Fig. 1;

Fig. 3, a transverse vertical section, on a larger scale, of the check rails of such a closure; and,

Fig. 4, a cross section, on the scale of Fig. 3, of one of the mullions.

In the drawing, 10, 10 indicate the stiles of the sashes, 11 the bottom rail of the bottom sash, 12 the top rail of the upper sash, and 13, 13 the mullions; all of ordinary dimensions and form.

As indicated in Fig. 4, the exposed inner faces of the mullions comprise a comparatively narrow medial surface 14 in the plane of the stiles and top and bottom rails, and flanking inwardly-converging surfaces 15—15, the surfaces 15—14—15 forming a bead or molding which may be said to be imposed upon the main body of the mullion; similarly the exposed outer surfaces of the mullions have comprised an intermediate narrow medial surface 14' and flanking rabbets 16, 16 to form portions of glass receiving pockets, putty 17 being applied to seal the glass 18 and to form exposed surfaces corresponding in general to the conformation of the mullion inclined surfaces 15, 15. The precise conformation of the flanking surfaces 15, 15 is varied in different types of sashes without noticeable architectural effect except upon close inspection.

In my improved sash the check rail 20 of the lower sash is formed at its inner surface to correspond with the conformation of the mullions, i. e. there is a narrow medial surface 14 in the plane of the stiles and flanking inclined surfaces 15, 15 and the maximum vertical dimension of this

check rail is approximately equal to the maximum vertical dimension of the horizontal mullions. The check rail 21 of the upper sash is formed at its outer face to provide a comparatively narrow medial surface 14, a lower flanking surface 15, and an upper flanking rabbet 16, and the maximum vertical dimension of this check rail corresponds to the maximum vertical dimension of the other check rail.

When mating upper and lower window sash are thus formed the architectural effect produced thereby is substantially the same as the architectural effect produced by a casement type sash, but at the same time all of the advantages of a double sash type window closure are retained, at a cost no greater than the cost of production of the ordinary type of double sash closures, because the exposed faces of the check rails, i. e. the comparatively narrow medial strip and the flanking portions, may be simultaneously formed, by appropriate cutters, as readily and as cheaply as the plane surface exposed faces of the ordinary type of check rails can be formed.

I claim as my invention:

1. A mating pair of window sash of the double sash type comprising a plurality of horizontal mullions, wherein the check rails have vertical dimensions approximating the vertical dimensions of the horizontal mullions, the inner face of the lower sash check rail corresponding with the inner faces of the horizontal mullions and the outer face of the check rail of the upper sash comprising a narrow medial strip flanked by a subtending surface not in the plane of said medial strip or a plane at right angles thereto and corresponding with an internal face of a mullion and by a supertending rabbet corresponding with the outer exposed face of a horizontal mullion.

2. A mating pair of window sash of the double sash type comprising a plurality of horizontal mullions, wherein the check rails have vertical dimensions approximating the vertical dimensions of the horizontal mullions and their normally exposed faces comprising a narrow medial plane face flanked by edging surfaces not in the plane of said medial strip or a plane at right angles thereto and approximating conformation of adjacent mullions.

HENRY A. KNIGHT.