March 12, 1968 J. P. ENGSTROM 3,372,522

DETACHABLE GRILL ASSEMBLY FOR WINDOW SASH

Filed Aug. 11, 1966

FIG. 1

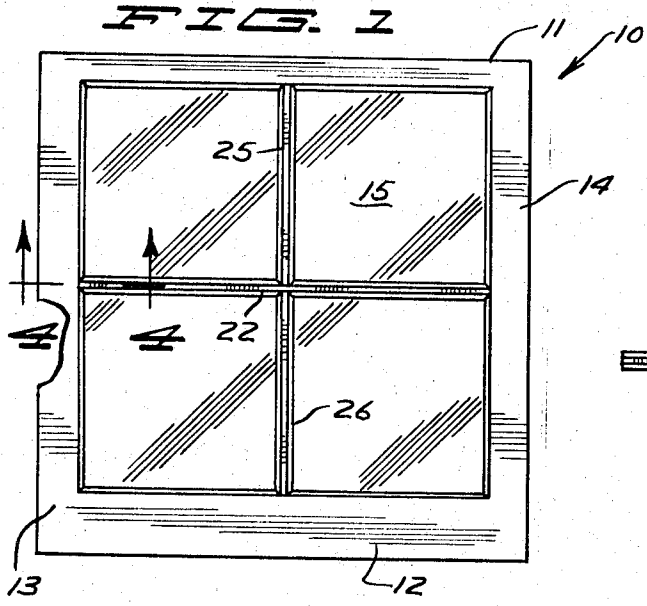


FIG. 2

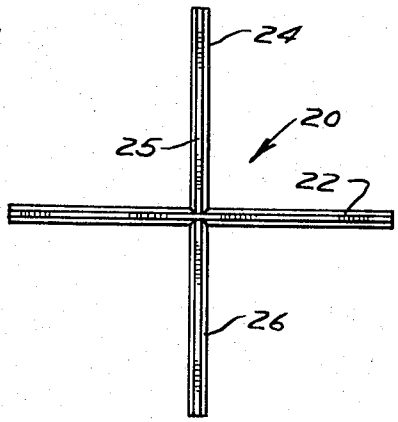


FIG. 3

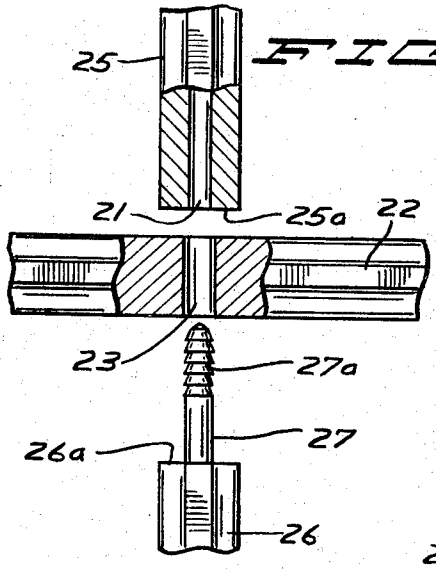


FIG. 4

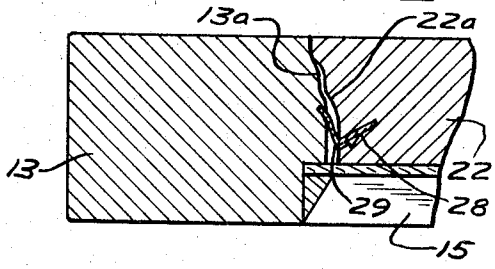


FIG. 5

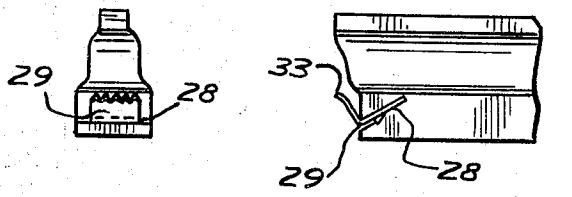


FIG. 6

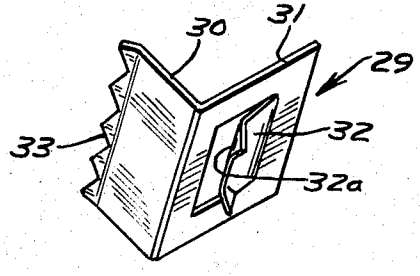
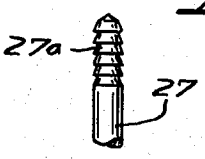


FIG. 7



INVENTOR.
JOHN P. ENGSTROM
BY Reifund Gregory
ATTORNEYS

United States Patent Office 3,372,522
Patented Mar. 12, 1968

3,372,522

DETACHABLE GRILL ASSEMBLY FOR WINDOW SASH

John P. Engstrom, Minneapolis, Minn., assignor to J.J.J. Specialty Co., Minneapolis, Minn., a corporation of Minnesota

Filed Aug. 11, 1966, Ser. No. 571,875
1 Claim. (Cl. 52—456)

ABSTRACT OF THE DISCLOSURE

A detachable sash grill assembly comprising a spring-like angled clip having a self holding portion inserted into an end of a grill bar and a toothed portion biting into an adjacent sash portion.

This invention relates to a grill structure for a window sash. More specifically, this invention relates to a grill assembly comprising portions adapted to be readily assembled to form a grill structure for detachable installation onto a window sash.

Grill structures are desirable as a decorative addition to a window sash. Detachable grill structures of various designs permit a dealer to carry a standard or basic type of window sash in inventory, and to such a sash there may be added a grill structure of whatever available design that may be desired. This permits a much smaller and less varied inventory of sash to be carried in stock than would otherwise be required if grill structures of various designs were permanently attached to the sash.

It is an object of this invention to provide a grill structure which is separate from a window sash and which is adapted for installation thereon.

It is another object of this invention to provide a grill structure in a disassembled condition adapted for ready assembly by hand and adapted for installation onto a window sash by hand.

It is also an object of this invention to provide a grill structure adapted for ready assembly by hand and including resilient retractable holding means for removably gripping the framework of a window sash.

These and other objects and advantages of the invention will be set forth in the following description made in connection with the accompanying drawings in which like reference characters refer to similar parts throughout the several views and in which:

FIG. 1 is a view in front elevation showing the invention herein in operating position;

FIG. 2 is a view in elevation showing the assembled device comprising the invention herein;

FIG. 3 is a view similar to that in FIG. 2 showing the device in exploded position on an enlarged scale with portions thereof broken away and partially in section;

FIG. 4 is a broken view in vertical section on an enlarged scale taken on line 4—4 of FIG. 1 as indicated;

FIG. 5 is a composite view showing a detail of structure broken away on an enlarged scale in side elevation and in end elevation;

FIG. 6 is a view in perspective on an enlarged scale showing a detail of the structure; and

FIG. 7 is a view in elevation on an enlarged scale showing another detail of the structure.

Referring to the drawings, a window sash **10** of conventional design is shown comprising a top rail **11**, a bottom rail **12**, side rails **13** and **14**, and a window pane **15**.

Mounted onto said sash, as shown in FIG. 1, is a grill structure **20**. It will be understood that said grill structure may be formed to be variously designed. Shown here is a grill structure of a basic design. Said grill structure

comprises a unitary bar **22** forming a transom and a vertical cross bar **24** which is formed to be split transversely and to comprise portions **25** and **26**, which portions are commonly known in the trade as mounts.

The bar **22** is provided with an aperture **23** centrally transversely therethrough, as shown in FIG. 3. The bar portion **26** is apertured axially at one end as indicated by the character **26***b* to receive a portion of a joiner pin **27** press fit therein. Said joiner pin is formed to have circularly grooved end portions forming rearward projecting teeth **27***a*, as shown in FIG. 7. Said joiner pin is thus formed at each end with only one end portion thereof being illustrated, and when press fit into an accommodating aperture this construction of the joiner pin makes a strong connection. Said joiner pin is thus secured to the bar portion **26**. Said aperture **26***b* will be somewhat smaller in diameter than the grooved portion of said joiner pin.

In assembling the grill structure, the portion of the joiner pin **27** projecting from the bar portion **26** will be passed through the aperture **23** of the bar **22** and into the bore **21** extending inwardly of the adjacent end portion of the bar **25**, as indicated in FIG. 3. In this manner the bars **22** and **24** are assembled into a cross bar relationship and are held together by said joiner pin **27** in an integral relationship. The rearward projecting teeth at the ends of the joiner pin make such a strong connection that the bar portions **25** and **26** may be regarded as being permanently connected.

The adjacent ends **25***a* and **26***a* of the bar portions **25** and **26** will have a configuration adapted to correspond with the configuration of the respective engaged surface portions of said bar **22**.

Formed into the free or remote ends of said bars **22** and **24** are transverse kerfs or slits. Only one such slit designated by the character **28** is here described and this is representative of the other slits. Said slit **28** is here shown as an upwardly angled open-ended slit. Said slit is preferably angled upwardly to provide a stronger construction.

Disposed into said slits are holding members or clips of which a representative clip is indicated by the character **29**. Said clip as here shown comprises a plate member formed of a suitable resilient sheet metal having angled wall portions **30** and **31**. Said wall portion **31** has a tongue portion **32** struck therefrom projecting to one side thereof.

Said tongue is shown as having a substantially rectangular projecting portion with the free end corner portions being angled as at **32***a* to provide tooth portions to bite into an adjacent side of a slit. Said wall **31** will be disposed into a slit **28**, as shown in FIG. 5.

The other wall **30** of said clip has a saw-toothed free end portion **33** with said teeth being angled somewhat downwardly with reference to the normal position of said clip, as shown in FIG. 5. Thus when said clip is in operating position as shown in FIG. 4, said teeth **32***a* will bite into the edge portion of the adjacent engaged rail portion of the window sash.

Upon being assembled as above described, said grill structure will be positioned as shown in FIG. 1. It will be understood that the bars **22** and **24** will be of a length to span the window pane of the sash upon which the grill structure will be installed. The lower portions of the ends of the bars **22** and **24** will be somewhat undersized, as indicated by the character **22***b* with reference to the bar **22**. The undercutting of the lower portions of the ends of the bars provide a small space for movement of said clip **29** whereby the teeth **32***a* bite into the adjacent rail portion of the sash. For removal of the grill structure, a narrow blade as of a pen knife may be inserted between the edge of the rail and the wall **30** of the clip to

spring or press the teeth **33** away from the adjacent rail portion and out of engagement therewith whereby the bar portion of the grill structure may be raised. With a second clip being thus disengaged from a second rail portion, the grill structure may be readily removed from the window sash. To install the grill structure, it is very simply pressed downwardly into position and the toothed portions of the clips bite into the adjacent rail portions of the sash. With the clips **29** in operating position, the grill structure is strongly secured to the window sash.

Thus it is seen that I have provided a simply constructed detachable grill structure for a window sash which may be disassembled into a small package and which may be readily assembled by hand and installed in operating position.

It will of course be understood that various changes may be made in the form, details, arrangement and proportions of the parts, without departing from the scope of applicant's invention which, generally stated, consists in a device capable of carrying out the objects above set forth, in the parts and combinations of parts disclosed and defined in the appended claim.

What is claimed is:

1. A detachable grill assembly for a window sash having in combination,

a pair of elongated bars secured together in a crossed relation and being of respective lengths to extend between and abut opposing rails of said sash,

the end portions of said bars respectively having inwardly extending slits,

holding means for said end portions each comprising a resilient plate member forming a pair of angled walls,

one of said walls having a tongue struck therefrom projecting outwardly of the plane thereof, the free end corner portions of said tongue angled out of the plane thereof, said wall being disposed within one of said slitted end portions of said bars self held therein by said tongue, and

the other of said walls having a toothed end portion angled out of the plane of its wall in a direction away from said first mentioned wall, said toothed end portion biting into the sash portion adjacent said slitted end portion of said bar for engagement therewith.

References Cited

UNITED STATES PATENTS

1,117,053	11/1914	Humphries	52—456
2,150,651	3/1939	Ewing	287—54
3,131,440	5/1964	Leeser	52—456
3,254,465	6/1966	Brengman et al.	52—455

FOREIGN PATENTS

287,018	3/1928	Great Britain.

KENNETH DOWNEY, *Primary Examiner.*