April 19, 1949. W. M. KELLOGG 2,467,431

COMBINED SCREEN AND VENETIAN BLIND UNIT FOR WINDOW FRAMES

Filed Feb. 27, 1947 2 Sheets-Sheet 1

FIG. 1

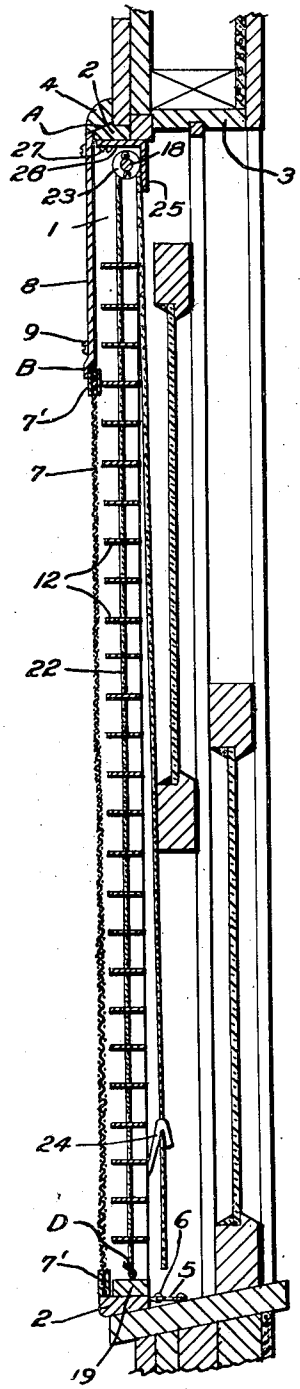
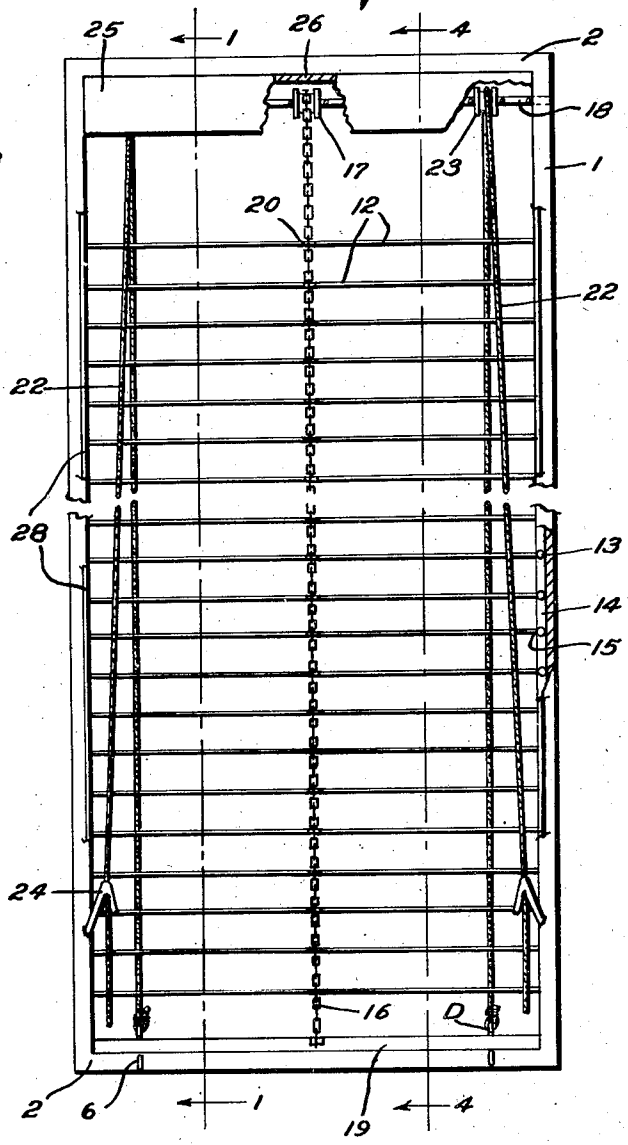


FIG. 2



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FIG. 3

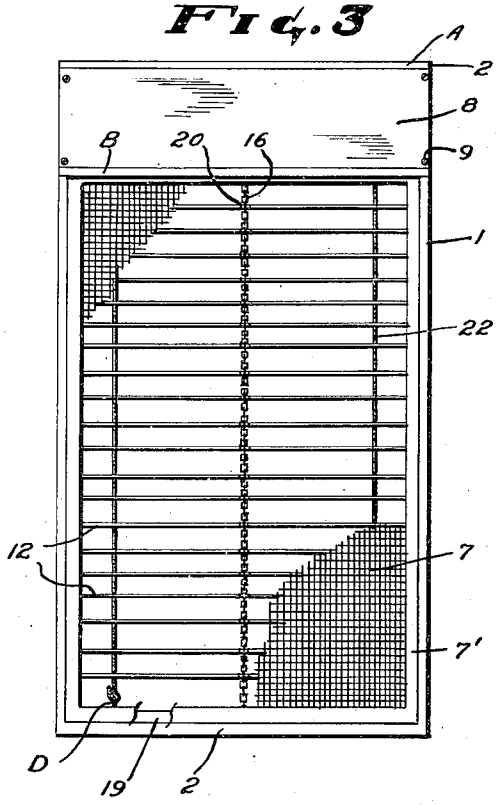


FIG. 4

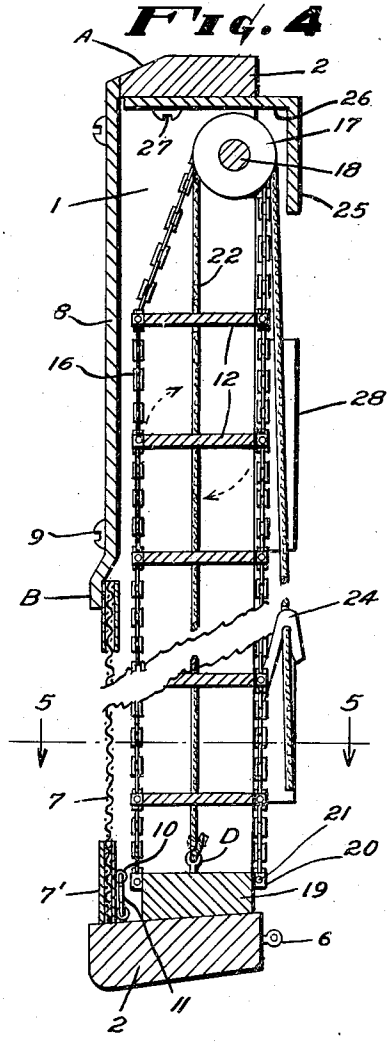
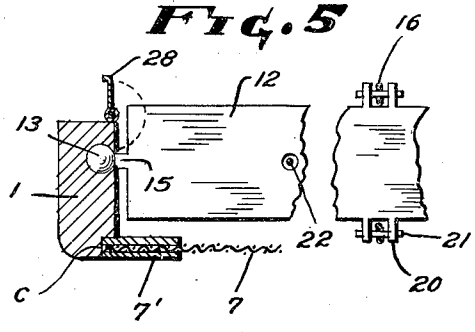


FIG. 5



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COMBINED SCREEN AND VENETIAN BLIND UNIT FOR WINDOW FRAMES

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Application February 27, 1947, Serial No. 731,378

1 Claim. (Cl. 160—34)

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This invention relates to a combined screen and Venetian blind unit for window frames, and has for its principal object to provide a Venetian blind structure to be applied externally of a window as a guard therefor against breakage by outside objects and as a protection or closing means for the window when the same may become broken by an internal object, and furthermore, serving as a shade at night and as controlling means for light and air ventilation during any kind of weather as provided by the adjustability of the Venetian blind slats.

A further object is to provide a combined screen and Venetian blind unit for window frames, wherein the screen is applied externally of the Venetian blind structure as a shield against flying particles or insects coming through the window when the same is open, while the blind structure is arranged between said screen and the window sash and having slats rockably carried by vertical frame members, and means to rock the slats as closing and opening means therefor.

A still further object is to provide the unit in such a way so that the slats may be raised upwardly and stacked upon each other when their use are not desired, said slats when upwardly positioned having means to enclose the same whereby the slats will be obscured from view externally.

A still further object is to construct the components of the unit from metal, or some other durable material, whereby the elements of the weather will have little effect upon said components.

A still further object is the provision of a unit of the class described that will be to some extent a bar against burglary, as the structure of the unit when closed will require considerable mutilation prior to permitting entry of a person therethrough, said unit however capable of being easily removed by its disengagement of its fastening means as internally applied, whereby the unit may be cleansed periodically. A still further object of the unit disclosed is to position the Venetian blind structure externally of the window so that the usual drapes, or curtains, may be suspended internally of the window as decorating means therefor without contact and interference with the blind unit.

These and other objects will hereinafter be more fully explained, reference being had to the accompanying drawings, forming a part of this specification, and in which like characters will apply to like parts in the different views.

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Referring to the drawings:

Fig. 1 is a vertical section through a window frame, and a combined screen and blind unit as taken on line 1—1 in Fig. 2.

Fig. 2 is an inside view of the screen and blind unit, parts being removed for convenience of illustration.

Fig. 3 is a reduced outside view of the unit, the screen being partially shown.

Fig. 4 is an enlarged broken vertical section through the unit, taken on line 4—4 in Fig. 2, and parts being removed for convenience of illustration.

Fig. 5 is a horizontal cross section through a corner of the frame taken on line 5—5 in Fig. 4.

The invention consists of a rectangular frame comprised of vertical bars 1, and horizontal bars 2 substantially integrally formed at the upper and lower ends of the vertical bars to provide a sturdy frame structure, said frame being externally applied to a window frame 3 in the same location as that of a conventional screen. Said frame of my invention is secured removably at its upper end in any suitable manner such as by a retaining strip 4 that is applied rigidly to the window frame and seating upon the slanting top portion A of the frame to retain the same from outward movement, while the lower end of the frame is secured internally of the window frame by a hook and an eye 5 and 6, respectively, fastened to the window frame and lower horizontal bar of the rectangular frame.

The major portion of the opening of the rectangular frame is enclosed by a screen 7, and the minor portion by a plate 8, said plate being secured at the upper end of said frame by screws 9, while the lower extremity of the plate has an offset portion B under which engages the upper extremity of the screen as shown in Fig. 4 to retain the same therein. The screen is supported rigidly by strips of metal 7' secured adjacent the periphery of the screen on both of its sides as a frame therefor, said screen being removably secured to the lower bar of the rectangular frame by an eye and a hook 10 and 11 applied to the screen and lower bar, respectively. It will also be seen that the vertical bars of the frame may be provided with an offset inwardly as at C in which the side peripheral edges of the screen will seat as means to prevent inward deflection of said screen.

Positioned inwardly of the screen and being carried by the vertical side bars of the frame are a plurality of horizontally positioned slats

12 spaced apart vertically, the ends of the slats, each having a ball 13 formed thereon to rockably and slidably engage in grooves 14 that are positioned in the confronting sides of the vertical bars substantially their entire length, said grooves having a diameter equal to that of the ball to retain the same therein for permitting sliding and rocking movement of the neck 15 as carrying means for its respective ball.

To rock the slats is through the medium of a chain 16, said chain being carried and engaging over a flanged roller 17 that is rotatable on a horizontal shaft 18 which has its ends rigidly secured in the vertical bars of the rectangular frame at their upper extremities. The chain depends downwardly from the roller, the lower ends of said chain being secured to oppositely disposed edges of a lowermost slat 19 which is similar as slats 12 but being increased in thickness to avoid deflection when the slats are raised upwardly as later described. It will be seen that the slats have their respective side edges secured to the chain in equal spaced relation therealong, whereby when the chain is gripped by an operator, the slats may be rocked to a desired slant, and also the slats may be rocked by gripping a slat to rotate the same on its longitudinal axis, which in turn will rock the other slats, correspondingly. The side edge of each slat is secured to its associated link of the chain by a pair of ears 20 integrally joined to said slat, and between which the link will engage, and through which a pin 21 extends as securing means for the chain to said slats.

The slats may be raised upwardly in stacked relation, if so desired, by pulling downwardly the free end portion of a pair of cables 22, said cables engaging over their respective flanged rollers 23 that are journalled on shaft 18, the fixed portion of the cables running through the slats and being fixed at their lower extremities to the lower slat 19 by any suitable means such as by an eye D as shown in Fig. 4. By pulling the free end of the cables downwardly, the lower slat will move upwardly to contact its adjacent slat, which in turn engages its next succeeding slat, and so on, until all slats are contactingly engaged and positioned rearwardly of the plate 8 as obscuring means for the slats from an external view. To retain the slats, upwardly positioned, is by forcing the free end of the cables into their respective hooks 24 that are secured adjacent the lower end of the vertical bars, said hooks having their members diverging outwardly to permit wedging of the cables when forced inwardly therebetween. It will be understood, however, such method of fastening the free end of the cables may be varied as preferred by the manufacturer.

As a means to partially obscure the rollers and the shaft from view internally of a room, there

is provided a member, angle-like in cross section, one leg, as at 25, depending downwardly to enclose the rollers, while leg, as at 26, of the angle is secured to the inner side of the upper bar of the rectangular frame by screws 27 as shown in Fig. 4.

To lock the slats, against opening from a closed position and as positioned in overlapping relationship, is through the medium of one or more leaves 28, which are hingedly connected to the inner peripheral edge of the vertical bars, said leaves being adapted to rock inwardly to engage on the slats and retain the same closed against force that may be applied externally on said unit.

While the invention illustrates the free manipulating ends of the cables externally applied of the window, the same may be run through the building, if so desired, without departing from the spirit of this invention, and furthermore while the invention otherwise is shown and described specifically, the details such as to the exact type of material, proportion, and arrangement of components thereof may be varied as lie within the scope of the appended claim.

Having fully described my invention what I claim as new and desire to secure by Letters Patent is:

In a combined screen and Venetian blind unit for window frames comprising a rectangular frame consisting of vertical bars, and horizontal bars at the upper and lower ends of said vertical bars, a screen to partially enclose the frame, a plate to enclose the remaining portion not enclosed by the screen, said plate being secured adjacent the upper extremity of the frame, a plurality of horizontally positioned slats, means in the vertical bars to rockably and slidably carry the ends of said slats, means for rocking the slats about their longitudinal axis, means to raise the slats upwardly in stacked relation to position the same rearwardly of said plate for obscuring the slats from an external view, and means to lock the slats when the same are suspended and slantingly rocked to overlapping relationship.

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