

Nov. 14, 1933.

F. J. BURNS

1,934,696

SKYLIGHT BLIND

Filed July 13, 1932

2 Sheets-Sheet 1

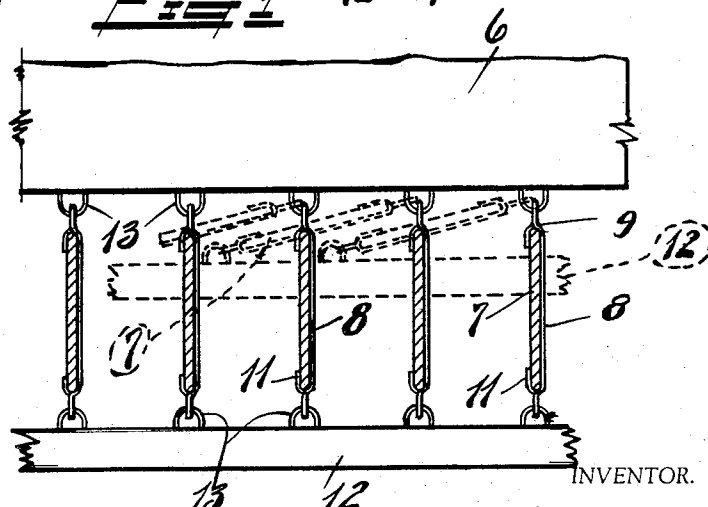
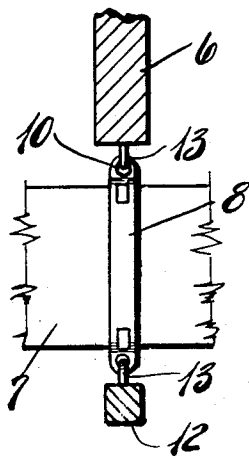
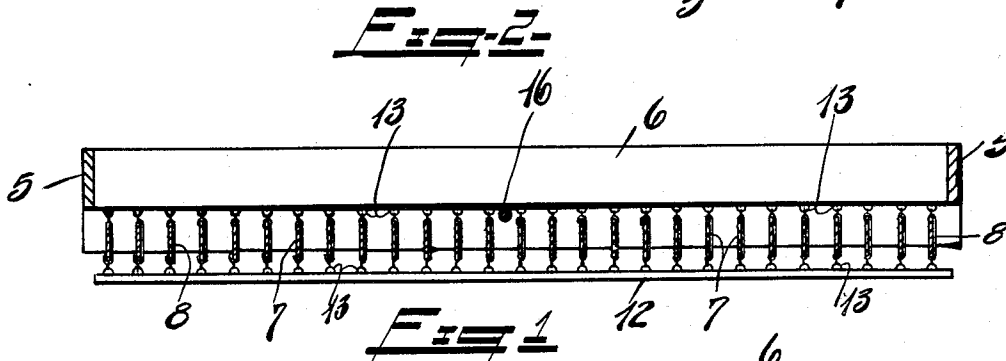
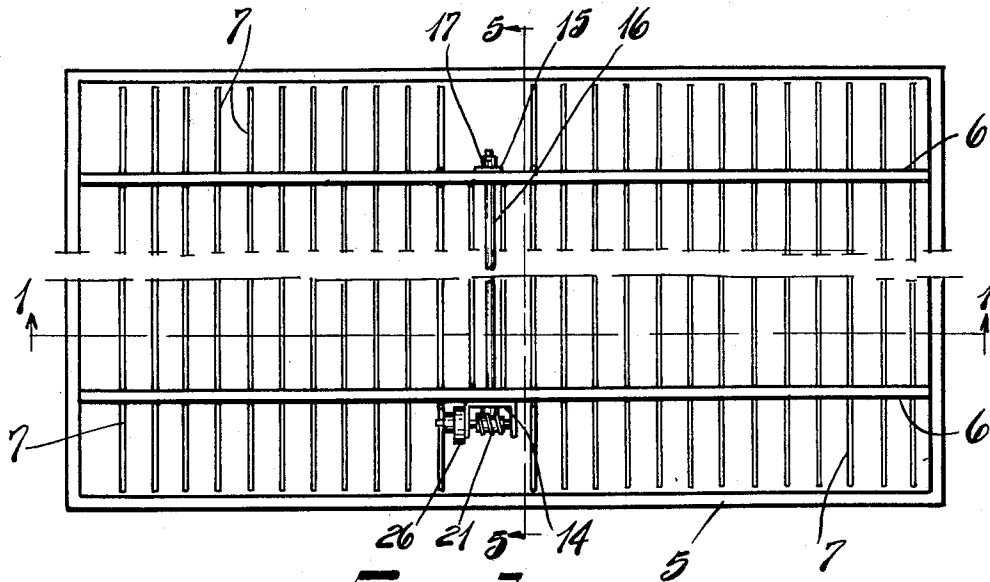


Fig. 4

Fig. 3

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2 Sheets-Sheet 2

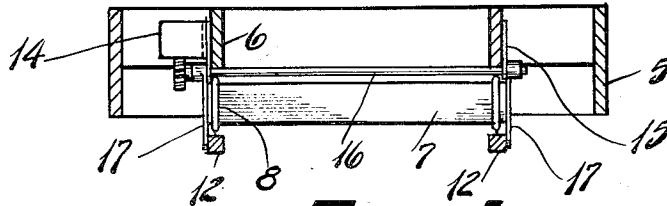


Fig. 5

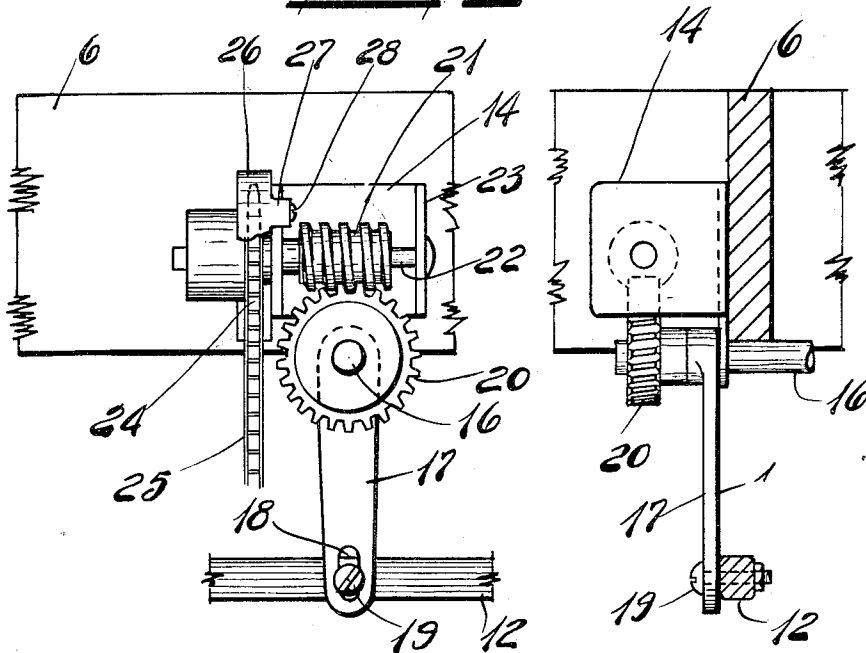
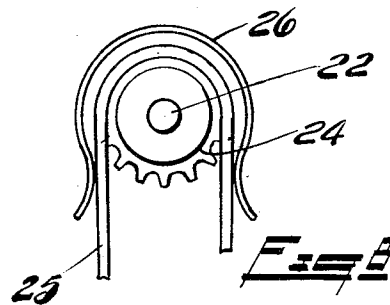
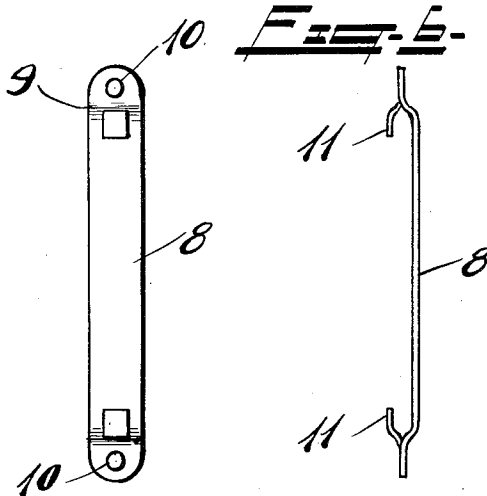


Fig. 6

Fig. 7



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Fig. 8

Fig. 9

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UNITED STATES PATENT OFFICE

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SKYLIGHT BLIND

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Application July 13, 1932. Serial No. 622,307

9 Claims. (Cl. 189—62)

This invention relates to blinds, and more specifically to skylight blinds for use in controlling the light emitted through skylight openings and the like.

5 One of the prime objects of the invention is to design a skylight blind which can be readily operated, which will not bind, and in which the slats are hingedly suspended so that they can be readily actuated.

10 A further important object is to design a slat holder which positively eliminates the possibility of splitting the slats when assembling, and which completely supports the slats in operation.

Another object is to provide a skylight blind 15 provided with relatively thin slat holders, so that the slats when in closed position lie in overlapping relation and form a tight shield for excluding direct rays of light.

A further object still is to provide simple and 20 substantial blind operating means which can be easily operated from a position remote from the blind, and which will serve to hold the slats and mechanism in any set or adjusted position.

With the above and other objects in view, the 25 present invention consists in the combination and arrangement of parts, hereinafter more fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes may 30 be made in the form, size, proportion, and minor details of construction, without departing from the spirit, or sacrificing any of the advantages of the invention.

In the drawings—

35 Fig. 1 is a part sectional side view of one of my skylight blinds, taken on the line 1—1 of Fig. 2.

Fig. 2 is a top plan view.

40 Fig. 3 is a fragmentary sectional view, the dotted lines showing the slats closed.

Fig. 4 is an enlarged detail view.

Fig. 5 is a transverse sectional view, taken on the line 5—5 of Fig. 2.

45 Fig. 6 is an enlarged fragmentary detail side view of the blind operating mechanism.

Fig. 7 is a front view thereof.

Fig. 8 is a detail end view of the sprocket and chain guard.

Fig. 9 is a view of the slat holder.

50 Fig. 10 is an edge view thereof.

55 Skylights are provided in modern buildings for controlling direct light rays and ventilation, and inasmuch as these skylights form a part of the roof structure of the buildings, the problem of light control is of major importance, primarily

due to the fact that the rays are direct (not reflected), as the skylight is located in the roof, and, further, because the light controlling means must be operated by remote control, and I have, therefore, designed a simple, substantial, and positive operating skylight blind, which can be readily and easily operated from the floor of the building in which it is installed, and which effectively controls the light rays in the desired manner.

Referring now to the drawings in which I have shown one embodiment of my invention, the numeral 5 indicates a horizontally disposed supporting frame which can be formed of any desired material, and this frame is adapted to be secured in the skylight opening (not shown) in any desired manner.

Longitudinally disposed members 6 are secured in said frame in spaced apart relation, and a plurality of slat members 7 are hingedly secured thereto, each slat being mounted in a slat holder 8, and which is formed as clearly shown in Figs. 9 and 10 of the drawings, the main body being relatively thin and flat, the end sections being slightly offset as shown at 9, and an opening 10 is provided at each end, a leg section 11 being punched in the holder directly adjacent each end, and is offset so that when the slats are placed in position, these legs can be folded over and bent flat to rigidly grip and support the slat in position. This holder eliminates the possibility of slats splitting as frequently occurs where conventional clipper hoops are used, and also eliminates splitting caused by operating, as there are no interfering projections; it also insures ease and accuracy of operation, as the tilting of the blind and the weight of the slats and bars is carried by the holders and not by the slats proper.

Operating bars 12 are provided on the lower edges of the slats and are connected thereto by means of staple members 13 which engage the eye in the holder, similar staples connecting the upper edges of the slats to the member 6, each connection forming a loose hinge, so that there can be no binding of the parts.

Brackets 14 and 15 respectively are secured to the slat supporting members 6 by means of screws or the like, the bracket 14 being substantially U-shaped, and a main operating shaft 16 is revolvably mounted in said brackets, operating arms 17 being mounted on said shaft, the lower ends of said arms being slotted as shown at 18, and a bolt 19 serves to pivotally secure said arms to the operating bars.

A worm wheel 20 is mounted on the main shaft

16 as usual, and is driven by a worm 21 which is mounted on a shaft 22, said shaft being journaled in the wing sections 23, one end projecting beyond the wing to accommodate a sprocket 24 and over which a chain 25 is trained.

Several skylight blinds may be connected together by extending the main operating shaft, or additional shafts may be provided so that larger units or more units may be actuated from the same driving means. Such installation, however, is not shown, as it forms no part of the present invention.

A chain guard 26 partially surrounds the sprocket member 24, and ears 27 are formed integral therewith, so that it can be readily secured to the wing of the bracket by a screw 28 or the like, and it will be obvious that as the sprocket is driven, the main shaft 16 will also be rotated to actuate the operating arms for opening or closing the slats as desired.

From the foregoing description it will be clearly obvious that I have perfected a simple practical, and positive operating skylight blind, which is easy to install, and which requires a minimum of maintenance and repair.

What I claim is:

1. A skylight blind comprising a horizontally disposed supporting frame, a plurality of slat members loosely and hingedly hung therefrom, operating bars hingedly connected to said slats, and means for actuating said bars for adjusting said slats to various angular operative positions.

2. A skylight blind comprising a horizontally disposed supporting frame, slat holders loosely and hingedly hung from said frame, slats mounted in said holders, operating bars connected to the lower ends of said holders, and means for actuating said bars to adjust said slats to various positions.

3. A skylight blind including a supporting frame, slat holders hingedly hung from said frame, slats clamped in said holders, operating bars hingedly connected to the lower end of the holders, a main shaft journaled on the frame, and operating arms mounted on said shaft and connected to said bars for adjusting said slats when the shaft is rotated.

4. A skylight blind including a frame, slat holders hingedly connected thereto and comprising a relatively thin strip having opposed offset

leg sections formed integral therewith, slats secured by said leg sections, operating bars hingedly connected to said holders, and means for actuating said bars to adjust said slats to various positions.

5. A skylight blind comprising a supporting frame, a plurality of slat members hingedly hung from said frame, operating bars secured to said slats, operating arms pivotally connected to said bars, and driving means for actuating said bars to adjust said slats to various operative positions.

6. A skylight blind of the class described and including a frame, a plurality of slats hingedly hung from said frame in spaced apart relation, operating bars loosely and hingedly secured to said slats, a drive shaft journaled on said frame, operating arms mounted on said shaft and having connection with said operating bars, and means for driving said shaft to adjust said slats to various operative positions.

7. A skylight blind of the class described and including a frame, slats loosely and hingedly connected thereto in spaced apart relation, operating bars hingedly connected to the slats, a main shaft, operating arms mounted on said shaft, a worm wheel, a worm meshing therewith, and means for driving said worm and worm wheel for adjusting said slats to various operative positions.

8. A skylight blind of the class described and including a frame, slats hingedly hung from said frame in spaced apart relation, operating bars hingedly hung from the lower edge of the slats, a main shaft, operating arms mounted thereon, the lower ends being slotted and having pivotal connection with the operating bars, and means for driving said shaft for controlling the angular position of said slats.

9. A skylight blind of the class described and including a supporting structure, slats hingedly hung from said structure, operating bars hingedly hung from said slats, spaced apart brackets, a main shaft journaled therein, operating arms mounted on said shaft and loosely connected to said bars, a worm wheel on the shaft, a worm journaled on one of said brackets and meshing with said worm wheel, and means for driving said worm and worm wheel for actuating said operating arms to adjust said slats.

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