

Oct. 2, 1951

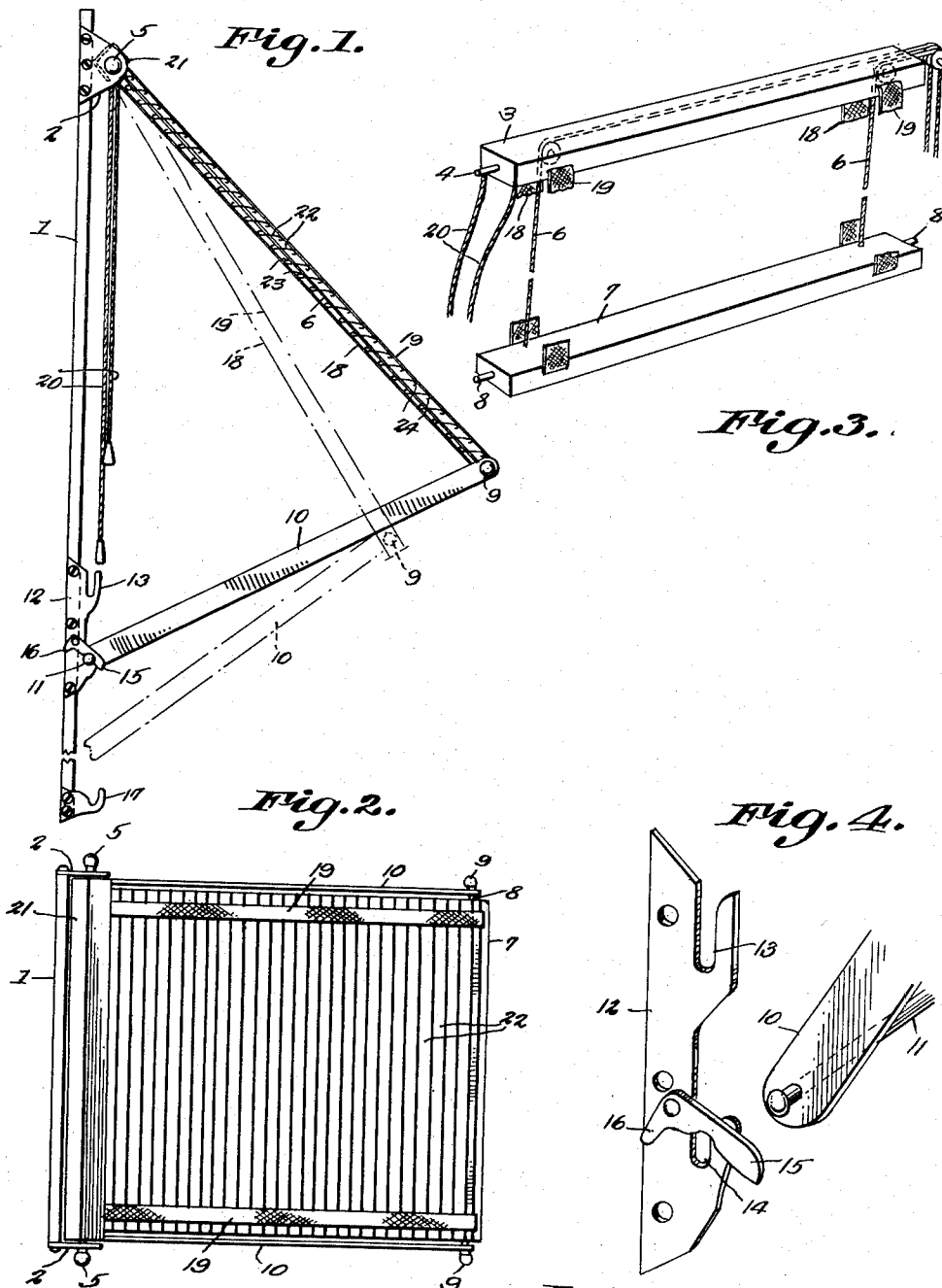
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2,570,018

COMBINATION VENETIAN BLIND AND AWNING

Filed June 28, 1950

3 Sheets-Sheet 1



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Fig. 5.

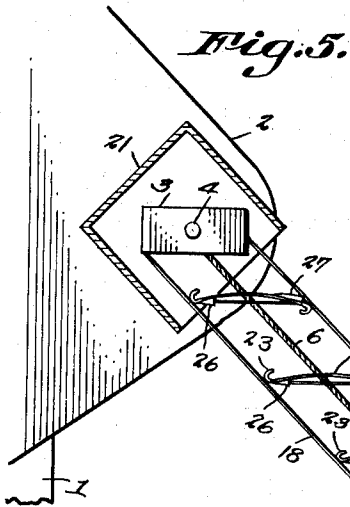


Fig. 6.

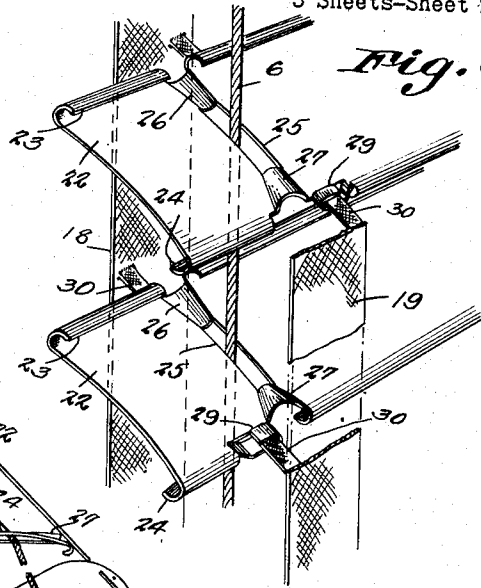


Fig. 11.

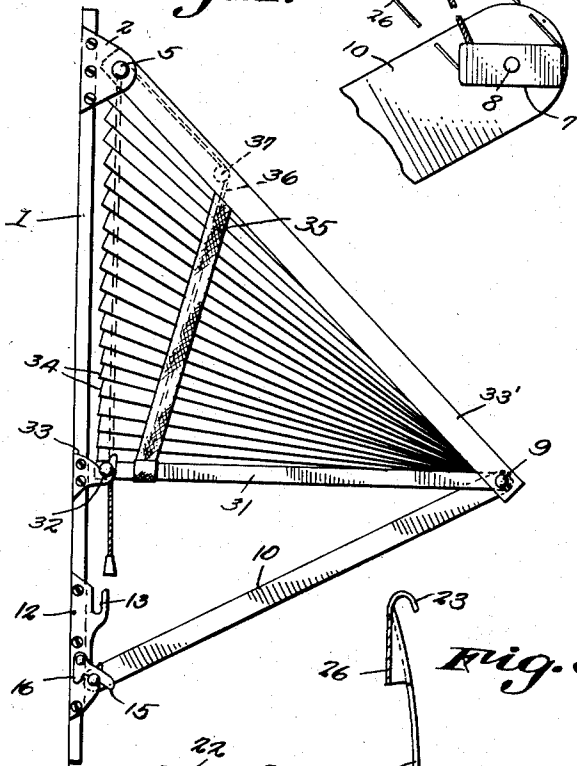


Fig. 7.

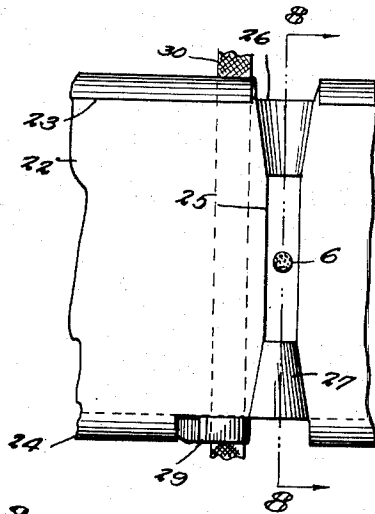


Fig. 8.

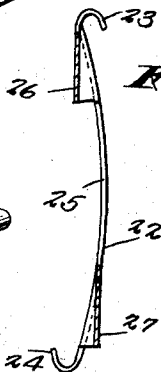
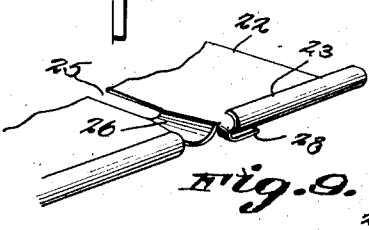


Fig. 9.



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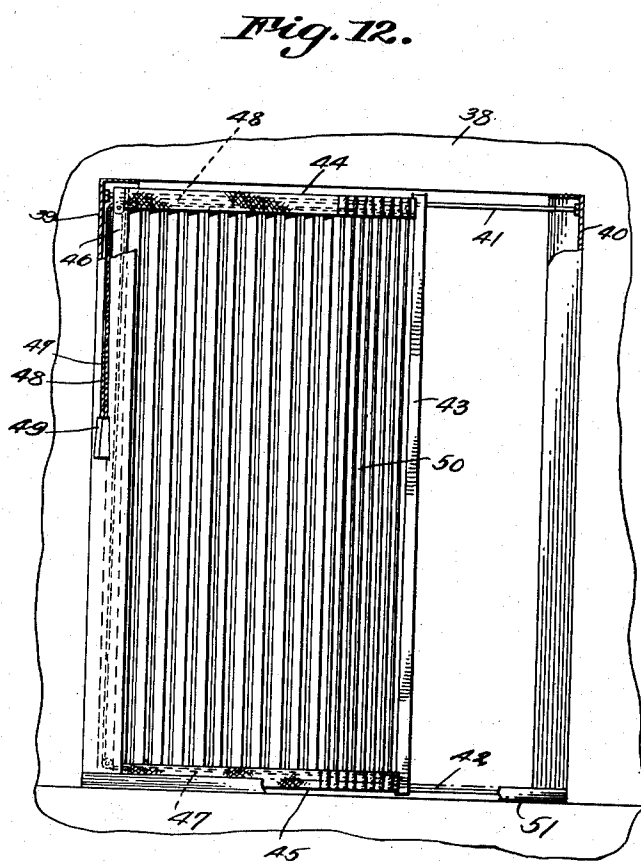
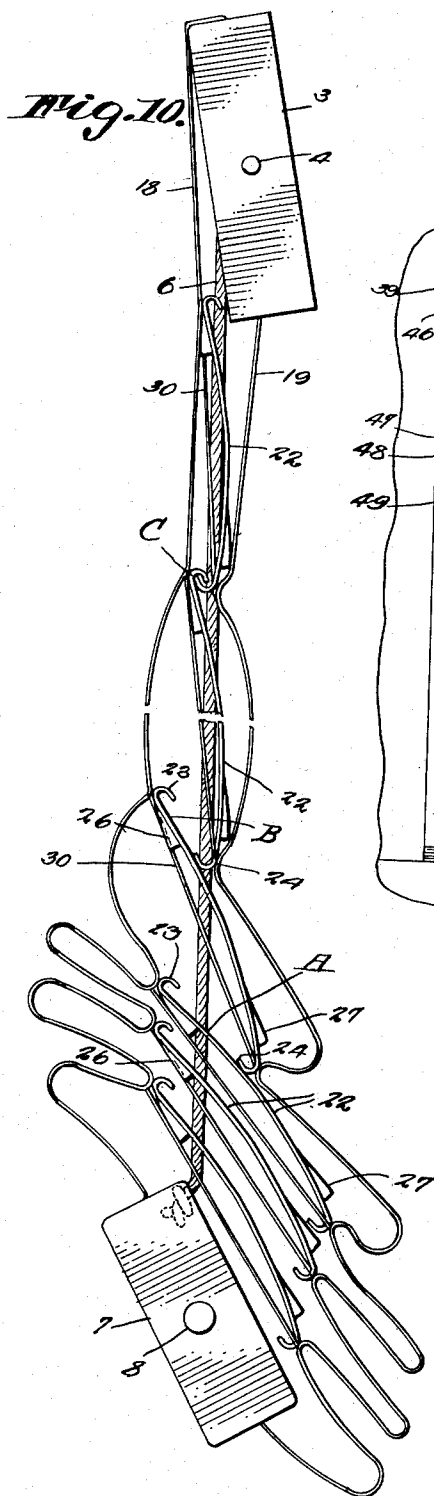
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2,570,018

COMBINATION VENETIAN BLIND AND AWNING

Filed June 28, 1950

3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,570,018

COMBINATION VENETIAN BLIND AND
AWNING

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Application June 28, 1950, Serial No. 170,824

3 Claims. (Cl. 160—62)

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This invention relates to a combination out-door Venetian blind and awning.

By way of background, the individual benefits or desirable characteristics of both Venetian blinds or awnings are already well known, but heretofore, it has been customary to manufacture these as separate and distinct products and the net result has been that a purchaser has been confronted with the problem of purchasing either one or the other or, at considerable expense, both Venetian blinds and awnings.

One of the main objects of the present invention, accordingly, is to provide a combination Venetian blind and awning, operable to provide, at the option of the user, either the position, appearance, and functional characteristics of a Venetian blind, or alternatively the position, appearance, and functional characteristics of an awning.

Another important object is to provide in a combination Venetian blind and awning a slat construction and tilting means therefor operable to effect interlocking of the slats to present a solid, unbroken, and wind and rain proof expanse to the elements.

Still another object is to provide side portions in a structure as described adjustable to either close or open the awning at its sides, as desired, said side portions being formed in a Venetian blind construction.

Yet another object is to provide a vertically slatted Venetian blind construction.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawings

Fig. 1 is a side elevational view of a combination Venetian blind and awning, the dotted lines indicating another position thereof.

Fig. 2 is a top plan view.

Fig. 3 is a fragmentary perspective view showing the head and foot rails apart from the rest of the construction.

Fig. 4 is an enlarged exploded perspective view of a supporting bracket and a portion of a cross bar and arm normally supported thereby.

Fig. 5 is an enlarged vertical section through the Venetian blind portion of the structure, the slats being illustrated in opened position.

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Fig. 6 is a fragmentary perspective view of the slats in opened position.

Fig. 7 is a fragmentary top plan view of one of the slats.

Fig. 8 is a section on line 8—8 of Fig. 7.

Fig. 9 is a fragmentary perspective view of the top portion of a slat.

Fig. 10 is an enlarged side elevation of the slatted portion of the blind, the upper portion thereof being illustrated in closed position and the bottom portion being illustrated in raised or collapsed position.

Fig. 11 is a side elevational view of a modified construction illustrating side blinds.

Fig. 12 is a front elevation, portions being broken away, of a vertically slatted modified form.

Referring to the drawings in detail, secured to opposite sides of the upper part of a conventional window frame 1 are the forwardly extended brackets 2 between which extend the head rail assembly 3 having at its opposite ends the trunnions 4 extending through suitable openings formed in the brackets, heads or knobs 5 being provided on the trunnions to hold the parts assembled.

Extending downwardly from the head rail 3 adjacent opposite ends thereof are the drop cords 6, connected at their lower ends to the opposite end portions of the foot rail 7, that has the trunnions 8 at opposite ends thereof, extending through suitable openings formed in the outer ends of a pair of vertically swingable support arms 10, heads 9 being provided on said trunnions to prevent accidental disassembly.

The cords 6 extend upwardly into the head rail assembly 3 and are passed over conventional pulleys, the free ends of said cords extending downwardly so as to be simultaneously grasped for the purpose of raising or lowering the foot rail relative to the head rail.

As may be noted, both of the cords 6 are secured to the foot rail adjacent one longitudinal side edge of said rail.

At their inner ends, the vertically swingable support arms 10 are connected by a cross bar 11, adapted to be engaged by brackets 12 disposed at opposite sides of the window frame 1 a substantial distance from the upper end of said frame. The brackets 12 each have an upper recess 13 and a lower recess 14. A pivoted finger 15 is mounted upon the bracket 12 and is adapted to close the recess 14 normally, the pivoted finger having a stop projection 16 adapted to engage the wall on which the window frame 1 is mounted,

said wall not being shown, or some adjacent portion of the window frame so as to limit downward swinging movement of said finger 15.

By reason of the illustrated arrangement, it may be noted that normally the cross bar 11 will be received in the recess 14, with the finger 15 extending thereacross. If, now, the cross bar 11 is raised, it will swing the stop finger 15 upwardly. As soon as the cross bar clears the upwardly swung finger 15, the finger will swing back down across the recess 14 to close said recess. The lowering of the cross bar 11 will now cause the cross bar to strike the stop finger and slide downwardly to a position as illustrated in chain-dotted lines in Fig. 1, the cross bar 11 ultimately coming to rest in a lower bracket 17.

Considering this action further, it may be noted that if the pull cords 6 are operated so as to pull the foot rail the maximum distance toward the head rail, the first movement of the arms 10 will be a swinging movement of the arms in an upward direction, the arms pivoting upon the cross bar 11 mounted in the recesses 14. As continued upward movement of the foot rail occurs, the arms 10, now almost vertical, will be pulled upwardly, so as to pull the cross bar 11 up out of the recesses 14.

If, subsequently, it is desired to use the Venetian blind in position vertically against the window, in the customary manner that all Venetian blinds are used, the cross bar is lifted out of the recess 14 and can be dropped into the recessed brackets 17.

The blind is capable of being dropped to its maximum extent to permit complete covering of the window by a Venetian blind arrangement.

Considering now the slat formation, the head rail and foot rail are connected by pairs of tapes 18 and 19, these tapes being of elastic material. These tapes are utilized in the tilting of the slats, in a manner to be presently made apparent, and the tilting is accomplished by the tilting cords 20, conventional tilt mechanisms being provided in the head rail assembly 3 for this purpose. The head rail assembly, it may be noted, may be protectively enclosed by a head rail channel 21 secured at opposite ends to the respective brackets 2.

The slats utilized in the combination Venetian blind and awning are designated 22 and are each formed along one longitudinal edge with an upturned longitudinal flange 23 formed with a return bend so as to define a hook-like formation when viewed in cross section. Each slat is also formed, along its opposite longitudinal edge, with a downturned longitudinal hook-like flange 24. Adjacent, opposite ends of each slat, there is formed in the slat an oblong transversely extended cord-receiving opening 25, through which extend the respective cords 6. It is proposed that the slats close to a greater extent than is commonly the case in Venetian blind construction. Since the cords 6 interfere in conventional construction with full closing of the slats, there is formed between one end of the opening 25 and the top edge of the slat a transversely disposed indentation or recess 26 receiving cord 6 when the slat is swung to fully closed position. An oppositely expressed recess 27 extends transversely of the slat, from the other end of the opening 25 to the bottom edge of the slat, and also receives the cord 6 when the slat is swung to closed position.

At the intersection of said recesses with said edges of the slat, the flanges 23 and 24 respec-

tively, are cut away, and the material removed from the slat to provide said cut away portions is bent backwardly so as to provide a folded clamp member or ear 28 in back of the top edge of each slat, and a folded over clamp member or ear 29 at the bottom of each slat. These clamps are used to secure the slats to the cross tapes 30 extending between the respective tapes 18 and 19. As may be noted particularly from Fig. 6, the cross tape supporting one slat is disposed to one side of the cord 6, while the cross tape supporting the next slat above is disposed to the other side of the cord 6. This alternating arrangement is carried forth throughout the blind construction, and the clamping ears 28 and 29 are bent in alternating directions, considering one slat and the slat next above or below, to secure to the cross tape each of the slats, regardless of the location of said cross tape relative to the cord 6.

Referring now to Fig. 10, the operation whereby the slats move to interlocked positions to provide a substantially wind and rain proof and light proof surface or area, is there illustrated. As will be seen, at the lower end of this figure the slats are illustrated in collapsed or superposed relationship, while at the upper end the slats are illustrated as they appear when fully spread and interlocked. Intermediate positions are illustrated between said extreme positions of the slats.

Thus, when the foot rail 7 is dropped and tilted, initially one slat will be swung upwardly to vertical position while sliding transversely of the slat next below, and the slats will thus appear with their respective flanges 23 and 24 positioned as at A. Up to this point, the slats will not have interlocked, and the foot rail is lowered to its maximum extent and fully tilted without said interlocking action yet taking place.

When the foot rail has been fully lowered, the slats will appear as at B, and the foot rail is now grasped manually or swung downwardly by the weight of the support arms 10, to place the elastic tapes 19 under tension and distend them longitudinally.

When the tapes 18 and 19 are placed under tension in this manner, the top flange 23 of one slat will interlock with the bottom flange 24 of the slat next above as at C, and this will provide the desired light and element-excluding means.

When it is again desired to return the slats to the position illustrated at the lower end of Fig. 10, the tension placed upon the tapes 18 and 19 is relaxed, again returning the flanges 23 and 24 to the positions illustrated at B in Fig. 10, after which the slats may be pivoted away from each other in the usual manner by operation of the tilting mechanism.

Referring to Fig. 11, there is here illustrated a combination Venetian blind and awning construction formed identically to that heretofore described, with the exception that in the modification of Fig. 11, the structure is provided with side portions. To this end, side arms 31 are provided, connected at their inner ends by a cross bar 32 received in a bracket 33, the outer ends of said arms 31 being pivotally connected by means of the trunnions 8 of the foot rail 7, to the support arms 10 and also to upper supporting arms 33'. Arms 31 can replace arms 10 completely in this form and be received in bracket 13.

Slats 34 are provided which can be of flat cross section, these being supported by tapes 35 connected at opposite ends to the arms 31 and 33'.

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respectively. Pull cords 36 are attached to the lower arms 31 adjacent the inner ends of said arms, and extend in longitudinal alignment with the tapes 35, to the arms 33, said arms 33 being provided with the pulleys 37 over which said pull cords 36 are trained, the pull cords 35 then being trained over suitable pulleys provided in the head rail assembly and then being extended downwardly to provide a depending cord adapted to be grasped by a user for the purpose of folding the side portions of the awning upwardly if desired. The front ends of the slats, it may be noted, are all pivotally joined by the pivotal connection 8 previously described.

Referring now to Fig. 12, a vertically slatted blind construction is here illustrated, adapted to be mounted in a door opening provided in the wall 38 of an ordinary building structure.

At opposite sides of the door opening there are provided vertically disposed housings 39 and 40 of channeled formation, horizontally disposed upper and lower guide rods 41 being secured at opposite ends to and extending between said housings. A vertically disposed foot rail 43 is strung at top and bottom upon said rods 41, 42 so as to be slidable from one side of the door opening to the other while being retained in a vertical position.

Secured to the top and bottom ends of the foot rail 43 are the top and bottom tapes 44 and 45 respectively, the other ends of which are secured to a stationary head rail 46 tiltably mounted in vertical position within the channel 39.

Connected to the top and bottom ends of the foot rail 43 and passed over suitable pulley arrangements within the head rail 46 are the pull cords 47, 48, these being provided with depending weights 49 for the purpose of exerting a tension upon the structure tending to pull the foot rail to the left in Fig. 12.

As a result of this construction, it is necessary simply that the foot rail 43 be manually gripped for the purpose of urging it to door covering position against the pull of the weights 49. The weights are so adjusted as to be sufficient to pull the foot rail back to door exposing position when the foot rail is released. Any conventional door latch is used to hold it releasably in its closed position.

It will be understood that the slats 22 are mounted between the tapes by a construction such as that illustrated hereinbefore and are of the interlocking type.

A bottom flange 51 can be provided, to cover the exposed portion of the lower end of the blind.

I believe it is further worthy of note, with respect to the slat arrangement, that in some instances the cords 6 can be disposed fully beyond the respective end edges of the slats, and in such instances the openings 25 and the cord recesses 26 and 27 might be dispensed with.

I believe it is further worthy of note that various means might be provided for attaching the slats to the cross tapes, and the positive or

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fixed connection of the slats to said cross tapes can be effected by some means such as rivets or their equivalents.

What is claimed is:

1. A combination Venetian blind and awning comprising a Venetian blind unit pivotally connected to a window frame at its upper end, said unit being swingable in a vertical plane toward and away from said frame, a pair of arms pivotally connected at their outer ends to the lower end of said Venetian blind unit, said Venetian blind unit being contractable in overall length whereby said arms are drawn upwardly, and pivot brackets receiving the inner ends of said arms, the inner ends of said arms being removable from said brackets responsive to upward pull exerted upon the arms by the Venetian blind unit.

2. A combination Venetian blind and awning comprising a Venetian blind unit pivotally connected at its upper end to a window frame, for swinging of said unit to a vertical plane toward and away from said frame, a pair of arms respectively connected at their outer ends to the lower end of said Venetian blind unit, said arms each being swingable through a vertical plane and being adapted to be pulled upwardly responsive to contraction of the blind unit as to overall length thereof, and a bracket mountable upon said frame and having a plurality of vertically spaced recesses, said bracket including a pivoted finger adapted to close one of said recesses.

3. In a Venetian blind and awning combination, awning side portions comprising arms pivotally connected together at their outer ends and spaced apart and pivotally connected at their inner ends to a window frame, the pivotal connection of one of the arms being separable from the window frame for swinging of said arm toward and away from the other arm, tapes connecting said arms, a plurality of Venetian blind slats having a common pivotal connection with the pivotal connection of said arms to each other, and a pull cord extending from said shiftable arm and passed through said other arm for drawing said shiftable arm toward the other arm.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,636,200	Vetterlein	July 19, 1927
1,645,947	Duncanson	Oct. 18, 1927
1,841,065	Simon	Jan. 12, 1932
1,858,801	Bolard	May 17, 1932
2,233,515	Burke	Mar. 4, 1941
2,244,012	Johnson	June 3, 1941
2,254,705	Morse	Sept. 2, 1941
2,317,659	Williams	Apr. 27, 1943
2,339,878	Reid	Jan. 25, 1944
2,377,746	Bell	June 5, 1945
2,504,771	West	Apr. 18, 1950