

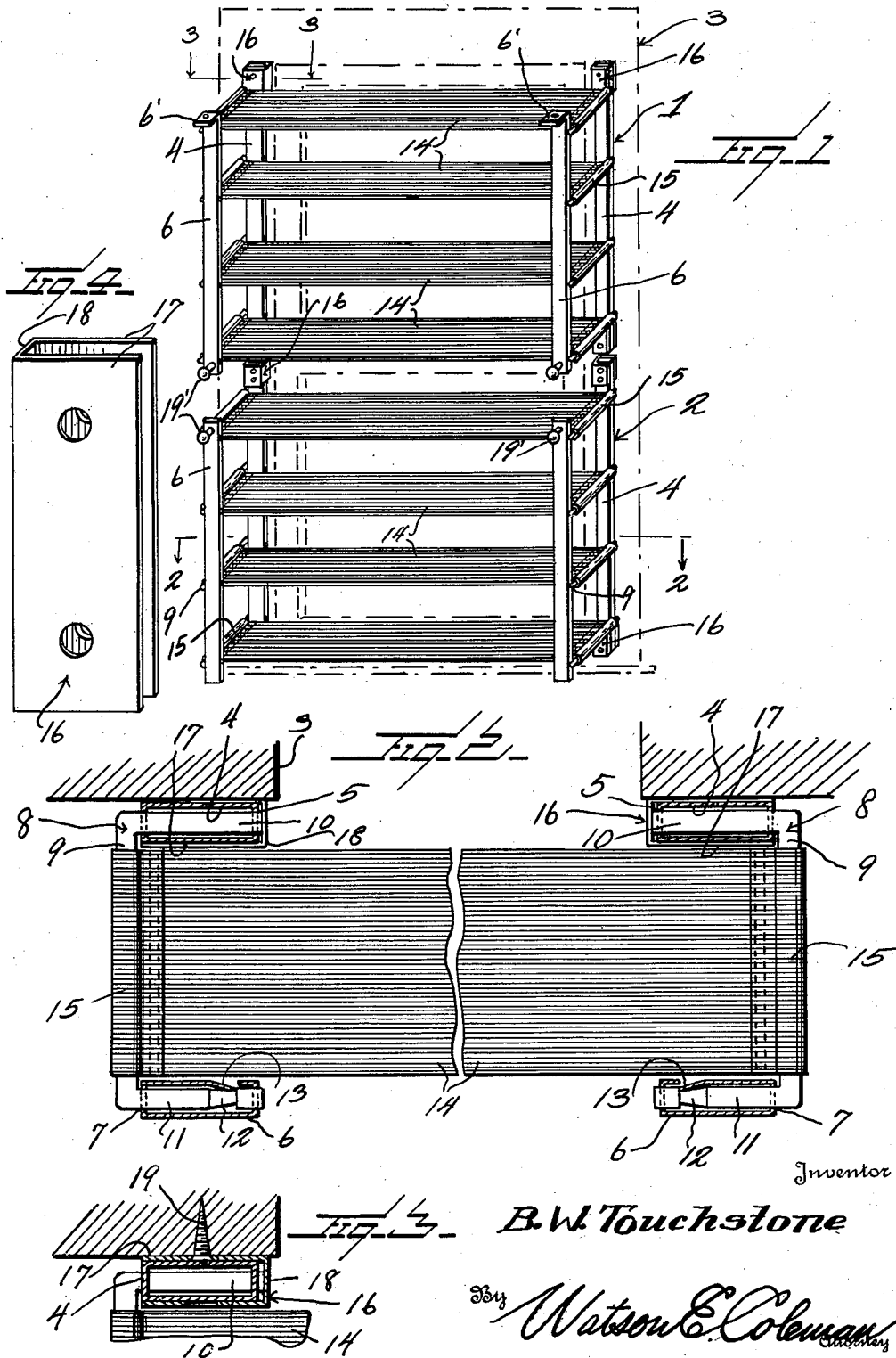
June 30, 1942.

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2,288,260

WINDOW BLIND

Filed April 12, 1940



UNITED STATES PATENT OFFICE

2,288,260

WINDOW BLIND

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Application April 12, 1940, Serial No. 329,215

3 Claims. (Cl. 139—62)

This invention relates generally to the class of blinds, shades or screens and pertains particularly to improvements in blinds for use over window openings.

The primary object of the present invention is to provide a window blind of the slat type where- in these slats or strips are of a flexible nature and are supported in a novel manner whereby they may be readily adjusted to assume a spaced parallel relation one with the other in planes perpendicular to the window opening or may be shifted into positions where they lie substantially flat against the face of the window and in edge overlapping relation to form a complete covering body for the window opening.

Another object of the invention is to provide in a blind structure of the character stated, a novel means for mounting the structure whereby the resiliency of the strips of the blind functions to maintain the structure in operative position, the resiliency of the strips further facilitating the torsional flexing of the strips whereby the strips may be disposed at one side of a window opening substantially in closed position while maintaining an open position at the opposite side of the window opening.

A further object of the invention is to provide in a window blind structure employing a plurality of resilient strips, a novel mounting for such resilient strips whereby they will all be constantly maintained in stretched or taut condition and whereby they may be readily shifted from an opened position with respect to the window to a closed position with respect thereto.

A still further object of the invention is to provide a window blind structure formed in two sections for disposition one above the other in front of a window, the sections being independently movable whereby one may be disposed in closed position with respect to the window while the other one remains opened, or both may be closed or opened, as may be desired.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not to be confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:

Fig. 1 is a view in perspective of the blind structure embodying the present invention showing in broken outline a window frame associated with the structure.

Fig. 2 is a horizontal section taken substantially upon the line 2—2 of Fig. 1.

Fig. 3 is a sectional view on the line 3—3 of Fig. 1.

Fig. 4 is a perspective view of one of the supporting anchor members.

Referring now more particularly to the drawing, it will be seen that the blind structure embodying the present invention is formed in two units which are indicated by the numerals 1 and 2. These units are substantial duplicates of one another and are disposed one over the upper half of a window frame, which is indicated generally by the numeral 3 and the other unit over the lower half of the frame. Since the two units are substantially the same with one minor exception, it will be readily seen that a description of one will apply to the other. Each unit comprises two fixed bar members 4, each of which is here illustrated as being formed of thin material and in tubular form, as shown in Fig. 2, although it will be understood that these bars may be of solid construction, if desired. These bars 4 are of greater width than thickness as shown, and each is provided with a series of transverse openings 5 formed through the edges thereof.

Coacting with each of the fixed bars 4 is a shiftable bar 6 which constantly maintains a parallel relation with the adjacent bar 4 and each of these shiftable bars is also formed of sheet metal in the form of a flat tube, as shown in Fig. 2, the longitudinal edges of the material being brought together at the back of the bar, as illustrated. Each of these shiftable bars 6 likewise has a series of apertures extending there-through from one edge to the other, as indicated at 7.

Coupling each parallel pair of bars 4—6 is a series of links, each of which is generally indicated by the numeral 8. Each of these links comprises an arm portion 9, an angularly turned inner end pivot finger 10 and an angularly turned outer end finger 11, the fingers 10 and 11 of each link being extended in the same direction and in parallel relation, as shown. The pivot finger of each link is frictionally held against free turning in apertures 5 of the fixed supporting bar 4 while the outer finger 11 is frictionally held against free turning in the aperture 7 of the movable bar 6. As shown in Fig. 2, the outer finger 11 of each link is provided adjacent its free end with a notch 12 and an edge of the material from which the bar 6 is formed is pressed inwardly into this notch, as indicated at 13, so as to establish a locking connection between the shiftable bar and the finger 11 of the link, which prevents the bar from slipping off of the link finger but permits the finger to be turned with respect to the bar.

The links 8 of one pair of bars 4—6 are arranged in horizontally spaced relation with the opposite pair of bars and between each hori-

zontally spaced pair of links 8 there extends a relatively wide strip of material 14 which is of elastic character. These strips may be of any suitable material such as rubber or the stretchable tape-like material commonly sold as "elastic." Each of these strips 14 constitutes a slat of the blind and at each end is formed to provide a sleeve 15 through which an arm 9 of the adjacent link passes.

Associated with each of the units of the blind are channeled anchor members, each of which is indicated by the numeral 16. Each of these anchor members is in the form of a short flat channeled body having the relatively wide inner and outer side portions 17 and a narrow connecting edge portion 18, the side portions being disconnected at their opposite longitudinal edges. These anchor bodies are disposed in longitudinally alined spaced relation at the sides of the window frame, being secured thereto in any suitable manner as by the use of screws 19, their open edges directed outwardly or away from the center of the frame. In other words, the closed back edges of the anchors on one side of the frame are in opposed relation to the closed back edges of the anchors which are secured to the opposite side of the frame. These channeled anchor members are of a width between their inner and outer walls 17 sufficient to snugly receive a fixed bar 4 and when one of the bars 4 of one unit is engaged in a pair or more of the anchors 16, the opposite bar 4 of that unit must be pulled against the tension of the elastic strips or slats 14 to stretch such strips so that it may be engaged in the other anchors. By this means, the units are maintained in position by the elasticity of the strips and it will be readily seen that by shifting the outer bars 6 of the units, the links may be rocked upon the inner pivot fingers 10 so as to dispose the strips horizontally before the window frame or vertically, in which latter position they will have their longitudinal edges in adjacent or overlapping relation and thus cooperate to form an unbroken or substantially solid covering for the window opening.

The shiftable bar 6 may be provided at appropriate points with knobs 19' to facilitate their movement and the upper ones of the shiftable bars 6 may be provided with forwardly turned tongues 6' provided with apertures or other suitable means to facilitate the attachment of curtain rods thereto.

It will also be readily apparent that by the employment of two units such as are here illustrated, the lower half of a window opening may be covered while the upper half is left uncovered or vice versa, and by the provision of slats or strips of stretchable or resilient material, it will also be readily seen that one side of a unit can be shifted independently of the other side so as to twist the slats and thereby deflect in-flowing air in a desired direction.

What is claimed is:

1. A window blind, comprising two pairs of spaced parallel bars, anchor members connected with and carrying one bar of each pair, said anchor members being designed for attachment to the sides of a window frame, a plurality of link members for each pair of bars, each of said link members comprising a relatively long center portion and angularly turned end portions, one end

portion of each link member for each pair of bars being pivotally secured transversely of the said one anchor carried bar of each pair, the other angularly turned end portion of each link member being pivotally secured transversely of the adjacent other bar of the pair, each of the said other bars being longitudinally movable and pivotally connected with the adjacent anchor carried bar whereby the bars may be moved together and apart in their parallel relation, the link members of one pair of bars being disposed oppositely from the link members of the other pair of bars, and a relatively wide strip of elastic material connecting the central portions of each pair of link members and maintained in stretched condition therebetween and maintaining the connection between the anchor members and the bars engaged thereby.

2. A window blind, comprising two pairs of spaced parallel bars, anchor members connected with and carrying one bar of each pair, said anchor members being designed for attachment to the sides of a window frame, a plurality of link members for each pair of bars, each of said link members comprising a relatively long center portion and angularly turned end portions, one end portion of each link member for each pair of bars being rockably supported transversely of the said one anchor carried bar of each pair and maintained by frictional contact therewith against free turning, the other angularly turned end portion of each link member being rockably joined to and extending transversely of the adjacent other bar of the pair, each of the said other bars being longitudinally movable and connected with the adjacent anchor carried bar by said links whereby the bars may be moved together and apart in their parallel relation, the link members of one pair of bars being disposed oppositely from the link members of the other pair of bars, and a relatively wide strip of stretched elastic material connecting the central portions of each pair of link members, said anchor members being of channeled form and disposed with the open sides of the anchor members of one bar directed oppositely to the open sides of the anchor members of the other bar and said elastic strips functioning to pull the anchor member engaged bars together and into the anchor members.

3. In a blind construction of the character described, including two parallel bars one of which is adapted to be secured to a window frame and the other being shiftable, a pivotal coupling means between the bars whereby the shiftable bar may be moved toward and away from the secured bar and maintained in spaced parallel relation therewith, comprising a pair of elongated members each having an angularly extending pivot finger disposed transversely of and pivotally connected to a secured bar, a pivot finger carried by each elongated member in spaced parallel relation with the first finger thereof and extending transversely of and through the shiftable bar, the second-mentioned pivot fingers of the elongated members each having a notch cut therein, and locking means between the shiftable bar and the pivot finger attached thereto comprising a portion of the shiftable bar pressed into the notch of each finger engaged therewith.

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