O. GOTHERT.

VENETIAN BLIND.

APPLICATION FILED JAN. 2, 1912.

1,043,095.

Patented Nov. 5, 1912.

2 SHEETS—SHEET 1.

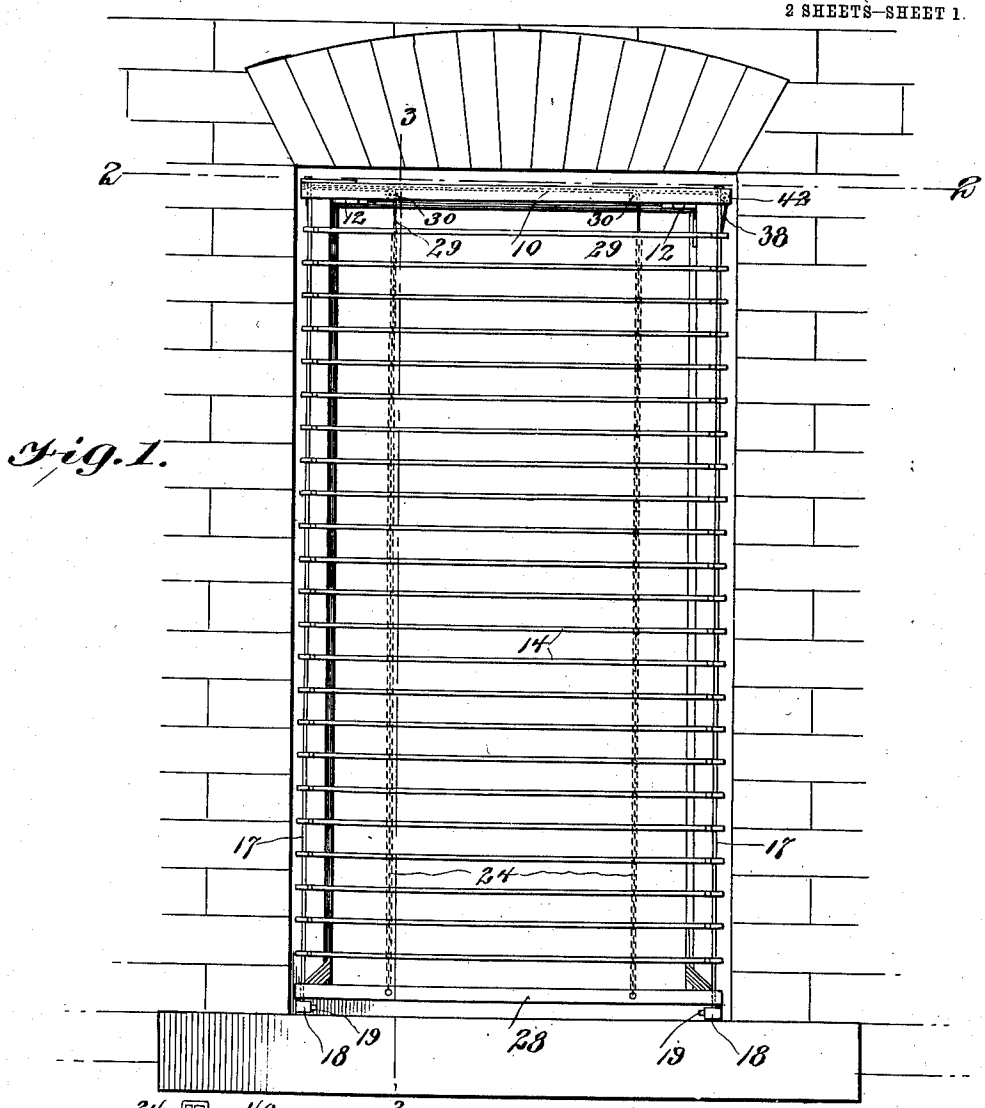

Fig. 1.

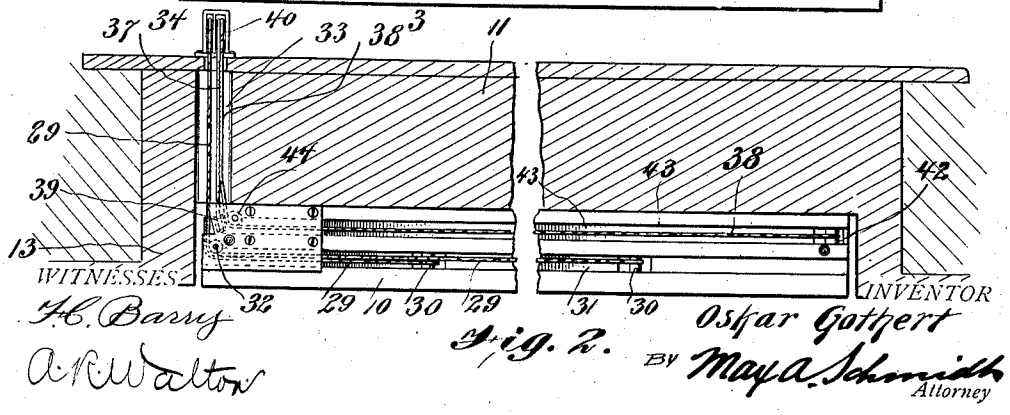

Fig. 2.

WITNESSES

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Fig. 3.

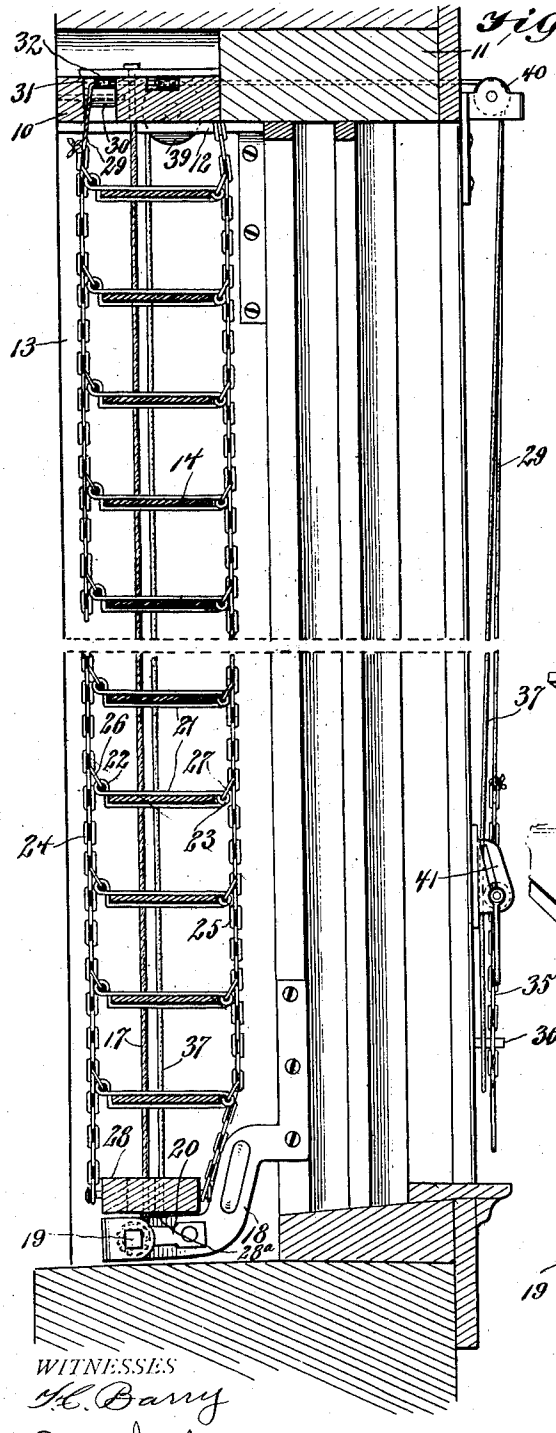


Fig. 4.

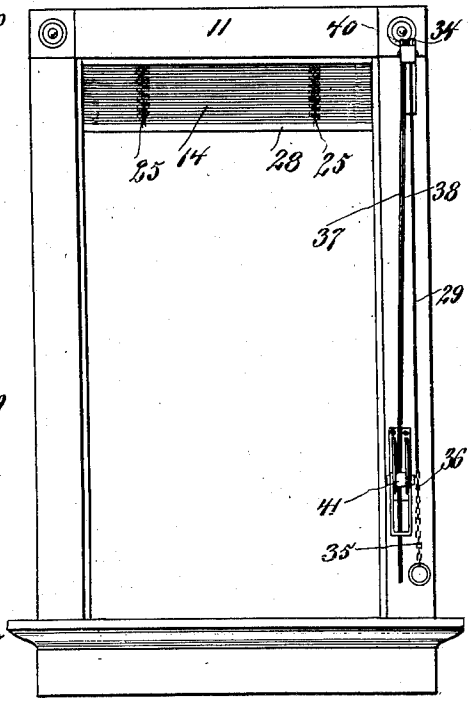


Fig. 5.

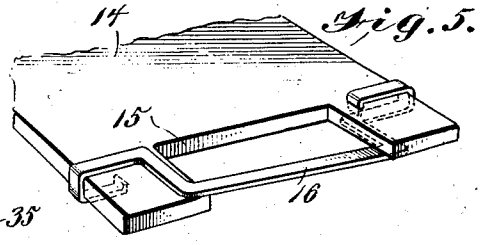
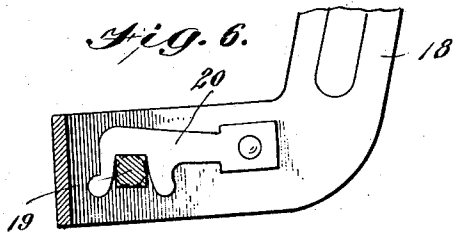


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

OSKAR GOTHERT, OF REDFIELD, SOUTH DAKOTA.

VENETIAN BLIND.

1,043,095. Specification of Letters Patent. Patented Nov. 5, 1912.

Application filed January 2, 1912. Serial No. 669,030.

To all whom it may concern:

Be it known that I, OSKAR GOTHERT, a subject of the Emperor of Germany, residing at Redfield, in the county of Spink and State of South Dakota, have invented certain new and useful Improvements in Venetian Blinds, of which the following is a specification.

This invention relates to that class of window blinds known as Venetian blinds, and its object is to provide in a blind of this kind improved supporting and adjusting means for the blind slats, together with a novel construction and arrangement of parts to be hereinafter described and claimed.

In the accompanying drawings forming a part of this specification—Figure 1 is a front elevation of the blind. Fig. 2 is a horizontal section on the line 2—2 of Fig. 1. Fig. 3 is a vertical section on the line 3—3 of Fig. 1. Fig. 4 is an elevation looking from the inside of the window and showing the blind in elevated position. Fig. 5 is a perspective view of one end of a blind slat. Fig. 6 is a sectional detail of the winding device hereinafter referred to.

Referring specifically to the drawings, the supporting and operating devices of the blind are carried by a cross-bar 10 which extends across the window opening at the top thereof and on the outside of the window, in front of the head 11 of the sash-frame. The cross-bar is supported by brackets 12 which are secured to the jambs 13 of the sash-frame.

The slats of the blind are indicated at 14. In each end of the slats is a recess 15 which is closed at its outer end by a light metal strip 16, said strip being secured to the slat by being bent at one of its ends over the front longitudinal edge of the slat, from which the strip extends rearward across the top of the slat to the inner end of the recess, at which point an outward bend is made and the strip is then extended across the outer end of the recess, and bent to extend beneath the rear portion of the slat. The strip is then bent inward to the inner end of the recess, and thence rearward over the rear longitudinal edge of the slat so as to bring its end on top of the latter. The respective ends of the strip are driven into the slat, which, together with the bends over the edges of the slat, securely fastens the strip in place on the slat. The front end of the strip is driven into the slat from the bottom, and the rear end from the top thereof.

The slats 14 are guided in their upward and downward movement by wire cables 17 on which they are strung by passing said cables through the recesses 15. The cables extend vertically along the sides of the window opening between the sill thereof and the cross-bar 10. To the jambs 13, at the bottom thereof, are secured brackets 18 which carry spindles 19 on which the lower ends of the guides 17 are wound. The spindles are squared at one of their ends so that they may be readily turned by a wrench or other suitable tool to wind up the guides and thus keep the same taut. A pivoted latch 20 carried by the bracket and engageable with a squared portion of the spindle, locks the latter and thus prevents the guide from unwinding. The guides are made fast in any suitable manner at their upper ends to the cross-bar 10.

The slats 14 are connected in such a manner that they can be adjusted to allow the passage of more or less air and light. The connection is made as follows: Around each slat, adjacent to each end thereof, is bent a wire 21 so as to extend transversely around the slat. At the front longitudinal edge of the slat the wire is bent into an eye 22, and at the rear longitudinal edge of the slat the two ends of the wire are brought together and bent into registering eyes 23. Along the front and the rear of the blind extend chains 24 and 25, respectively. The chains 24 are loosely connected to the eyes 22 by links 26, and the chains 25 are connected to the eyes 21 by links 27. At the bottom of the blind is a cross-bar 28 to the front edge of which the lower end of the chain 24 is fastened, the upper end of said chain being connected to the top slat of the blind. The chain 25 is fastened at its lower end to the rear edge of the cross-bar 28, and at its upper end it is made fast to the cross-bar 10. The chains at each end of the slats are connected as herein described.

It will be evident from the foregoing that the slats 14 are suspended at their rear edges from the cross-bar 10 by means of the chains 25. The slats are so spaced apart that when their front ends drop down, said end of one slat overlaps the rear portion of the next slat below, thus closing up the space between the slats. A pull on the chains 24 swings

the slats upward and opens up the spaces therebetween. The slats can be swung to any angle so as to allow the passage of more or less air and light. The connection between the inner portions of the slats and the chain is a loose one and forms a pivot or hinge so that the slats may be swung as stated.

The following means are provided for adjusting the angle of the slats 14: To the eyes 22 of the top slat are fastened ropes 29 which extend upward through recesses in the cross-bar 10 and over pulleys 30 mounted in said recesses. After leaving the pulleys, the ropes extend horizontally through a groove 31 in the top of the cross-bar 10. The two ropes are connected, and one of them passes around a guide pulley 32 mounted in a recess in one end of the cross-bar, and then extends rearward through an opening 33 in the window frame to a pulley 34 mounted on said frame on the inner side thereof. The rope passes over the pulley 34 and then extends downward and carries at its lower end a chain 35 which is adapted to engage a pin 36 carried by and projecting from the window frame, said chain and pin being provided for holding the rope and thus locking the slats in adjusted position.

It will be seen from the foregoing that the angular position of the slats 14 is regulated by the rope 29 which is located inside the window and after the desired adjustment is made, the slats are held in that position by slipping the chain 35 over the pin 36. Upon releasing the chain, the slats drop down automatically to closed position.

For raising the blind as shown in Fig. 4, the following means are provided: To the cross-bar 28, at the ends thereof, are fastened as indicated at 28^a ropes 37 and 38 which extend upward through the recesses 15 to the cross-bar 10. One end of the cross-bar 10 carries a pulley 39 across which the rope 37 extends and then passes through the opening 33 and over a pulley 40 arranged alongside the pulley 34, and thence passes downward to a clamping device 41. The rope 38 extends over a pulley 42 at the other end of the cross-bar 10 and then is carried across the top thereof in a groove 43 to a pulley 44 located adjacent to the pulley 39 from which it passes rearward through the opening 33 and is connected to the rope 37 and extends over the pulley 40 and down to the clamping device 41, the latter thus serving to clamp both ropes. A pull on the ropes 37 and 38 elevates the cross-bar 28, and as the latter rises the slats 14 are gathered and bunched in superposed relation and carried to the top of the window opening as shown in Fig. 4, in which position the folded blind is held by the clamping device 41. The ends of the cross-bar 28 are recessed to accommodate the guides 17.

I claim:

1. In a Venetian blind, a support, slats having recessed ends, foldable suspension devices depending from the support, loose connections between the suspension devices and one of the longitudinal edges of the slats, loose foldable connections between the slats at their other longitudinal edges, hauling devices connected to the top slat at the last-mentioned edge thereof, hauling devices connected to the bottom slat and passing upward through the recesses in the ends of the slats, and slat guides over which the recessed ends of the slats extend.

2. In a Venetian blind, a support, slats having recessed ends, foldable suspension devices depending from the support, loose connections between the suspension devices and one of the longitudinal edges of the slats, loose foldable connections between the slats at their other longitudinal edges, hauling devices connected to the top slat at the last-mentioned edge thereof, hauling devices connected to the bottom slat and passing upward through the recesses in the ends of the slats, slat guides depending from the support and passing through the recesses in the ends of the slats, and tightening devices to which the lower ends of the guides are connected.

3. In a Venetian blind, a slat having end recesses, a bar extending across each of the recesses, said bar having one of its ends driven into the bottom of the slat and bent over one edge thereof and thence extended across the recess and beneath the slat, and over the other edge thereof and having its other end driven into the top of the slat.

4. In a Venetian blind, slats having wires bent around the same and twisted intermediate their ends into eyes which are located adjacent to one of the longitudinal edges of the slat, the ends of the wires being brought together and formed into registering eyes adjacent to the other longitudinal edge of the slat, foldable suspension means for the slats on opposite sides thereof, and loose connections between the eyes and the suspension means.

In testimony whereof I affix my signature in presence of two witnesses.

OSKAR GOTHERT.

Witnesses:
WM. ISSENHUTH,
ROY T. BULL.