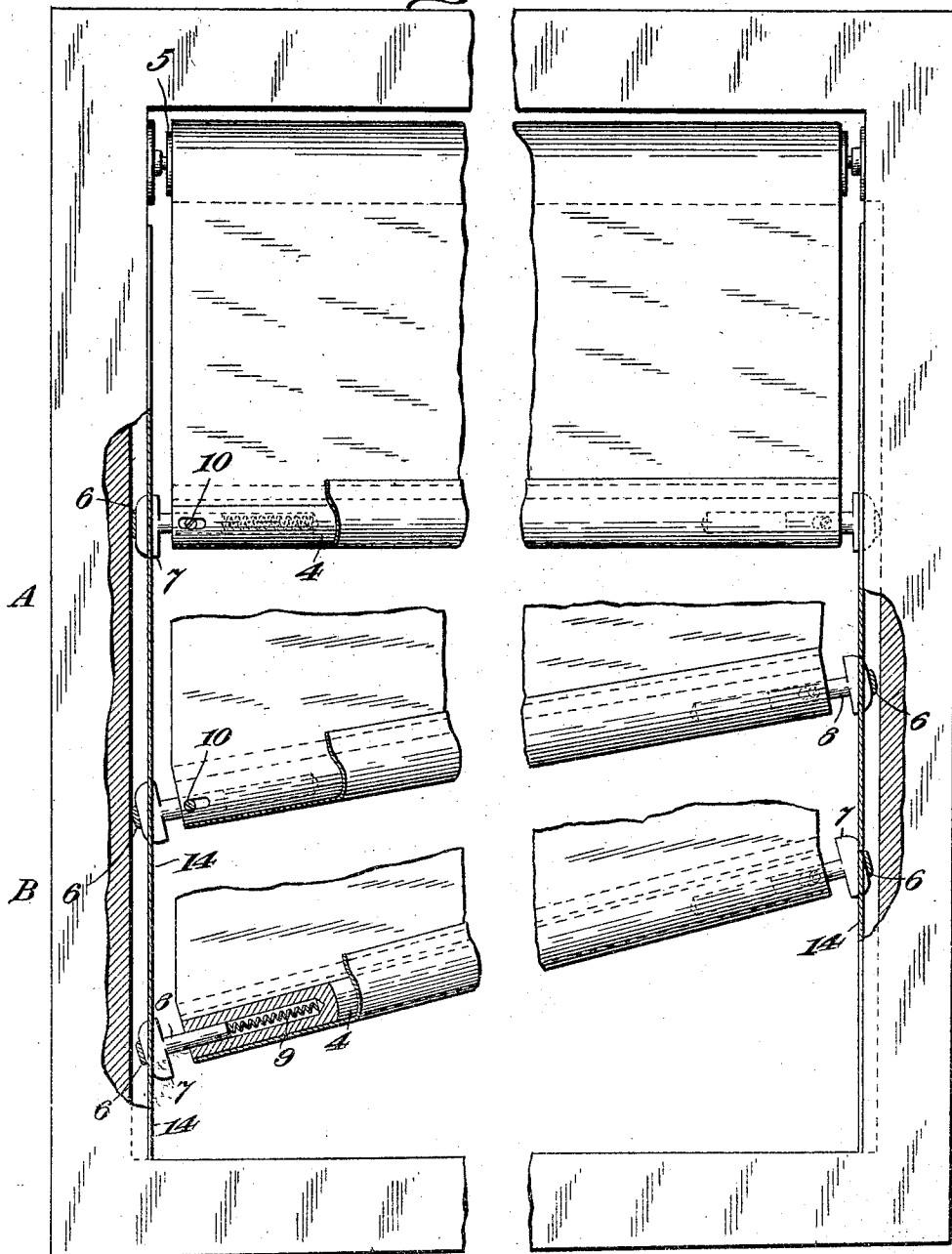


928,865.

Patented July 20, 1909.
2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:

V.E. Hardenburgh, Jr.
R.B. Cavanagh

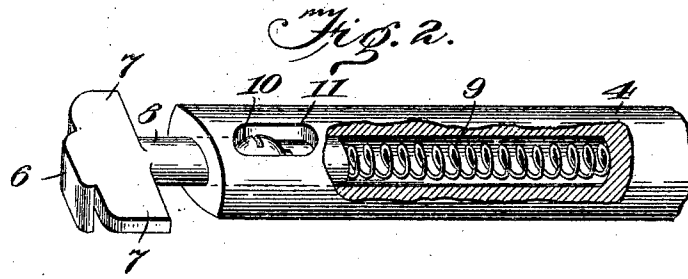
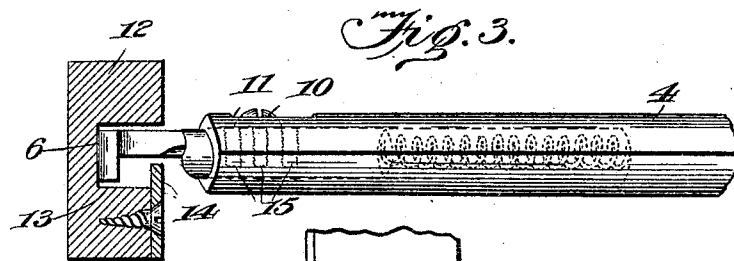
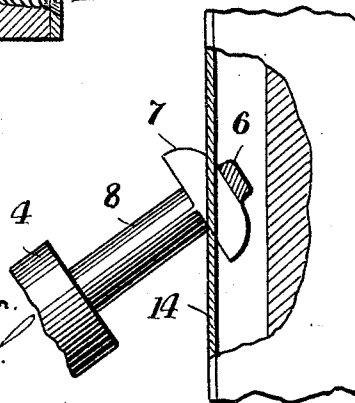
Inventor

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928,865.

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

DANIEL HOYT, OF NEWARK, NEW JERSEY, ASSIGNOR OF ONE-HALF TO THE NATIONAL LOCK WASHER COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

WINDOW-SHADE FIXTURE.

No. 928,865.

Specification of Letters Patent.

Patented July 20, 1909.

Application filed July 26, 1907. Serial No. 385,638.

To all whom it may concern:

Be it known that I, DANIEL HOYT, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Window-Shade Fixtures, of which the following is a specification, reference being had therein to the accompanying drawings.

My present invention relates to improvements in curtain fixtures, and it consists of certain novel parts and combinations of parts particularly pointed out in the claims concluding the specification.

In the accompanying drawings I have shown my invention embodied in the form which is at present preferred by me, but it will be understood that various modifications and changes in the structure may be made without departing from the spirit of my invention and without exceeding the scope of my claims.

In the accompanying drawings, Figure 1 shows partly in elevation and partly in section, a shade provided with a fixture involving my present invention; and also shows the shade bar in different positions of angularity with respect to the window casing. Fig. 2 is an enlarged view showing the fixture head and means for operating the same in perspective; Fig. 3 is a plan top view of Fig. 2, showing the head in engagement with the groove of the window casing. Fig. 4 is a view showing a modified form of fixture, whereby the simultaneous contact of the head with both the housing and the bottom of the guideway will be avoided without employing means for limiting the tilting capacity of the bar.

The following is a description of the construction illustrated in said drawings:

Referring to Figs. 2 and 3, 4 is a shade bar, being, in the example shown, of a considerable weight so as to counterbalance to a greater or less extent the constant pull of the spring roller, which spring roller is always employed with this type of curtain fixtures, and is indicated at 5, Fig. 1, being preferably of substantially uniform tension throughout its working limits. 6 is the surface of the fixture head engaging with the groove or guide way of the window frame and maintaining the shade bar by friction in the desired position. 8 is a shank on which the head 6 is carried, and 9 is a spring con-

stantly tending to force the head outward. 10 is a stop attached to the shank 8 which, co-acting with the slot 11 in the shade bar, limits the latitude of movement of the said head. This stop may be inserted into one or the other of the tapped recesses 15 in the shank and the length of the shade stick may thus be varied. 12 is the window casing provided with a groove or guide way 13 in which the head travels, said groove being provided with a housing plate 14, partially closing the opening to the groove and leaving an entrance space less in width than the width of the head 6. Any other suitable means for mounting and controlling the action of the spring-pressed head 6 may be adopted in place of that shown as these specific means are not essential to my present invention.

The mode of operation of my improved fixture will be readily understood by reference to Fig. 1. In the position indicated by the letter A, the shade-bar is in the horizontal and normal position, the heads being yieldingly pressed outward by their springs, since at this time the stops 10 have not reached the limit of their outward movement. If the shade-bar be tilted to the position indicated at B, the stops will then have reached their outermost positions, and the heads will have lost their frictional grip upon the grooves. Hence the heads will exert no force opposed either to the pull of the shade-spring on one end, or to the action of gravity on the other end of the rod and these forces will combine to effect, or one or the other of them will effect, the automatic self-righting of the shade bar. In the position indicated at C the shade-bar has been still further tilted and has, in fact, been tilted to the maximum extent, because the inner edges of the heads 6 in this position at both ends are in contact with the housing strips 14, which prevent any further tilting. But it will be observed that when the bar is thus tilted to its maximum extent the heads 6 are on neither side in contact with the bottom of the grooves, so that a binding action (which would result from a simultaneous contact of one of the heads with the bottom of the groove and the housing strip) is effectually prevented. Hence, when the force which has thus tilted the curtain bar is removed the bar will automatically, as above described, return to the normal and horizontal position. This construction, when thus organized and

the several parts so adjusted with reference to each other, provides a device which is automatically self-righting under all conditions of use or misuse and which cannot be disengaged from the window frame. Furthermore, it does not require pinch-handles to operate it, although, of course, they might be used.

Instead of providing means for limiting the tilting of the shade bar and thus preventing the head coming into engagement simultaneously with both the housing strip and the bottom of the guide way, I may proportion the vertical width of the head to the effective depth of the guide way (by diminishing the former or increasing the latter or both) in such a manner that the vertical width of the head is not substantially greater than the depth of the guide way whereby simultaneous contact of the head with both the housing and the bottom of the guide way will be avoided in practical operation without employing means for limiting the tilting capacity of the bar—such an arrangement being shown in detail in my pending application Serial No. 296,343, filed January 16, 1906, this construction being illustrated also in the modified view designated as Fig. 4 in the drawings.

I will now describe the function of the wings 7, 7 attached to the heads 6, which are in no sense essential to the principles of my invention broadly considered. If these wings were absent the wear of the housing strip 14, which is preferably of metal, would all be imposed upon the shank 8 and would tend rapidly to cut the shank in two. To avoid this the shank or head is provided with the wings 7, 7, which wings expose a very much larger surface to the wear of the housing strip and so diminishing its cutting effect, or, in other words, prolong the life of the fixture. Furthermore, these wings bearing on the housing strip prevent the shade bar, or head, being rotated which might cause binding between the head and the sides of the groove. These wings, however, it should be observed, do not have any function in effecting or interfering with the self-righting function of the fixture, because, as clearly shown in Fig. 1, they are never in contact with the bottom of the guide way; nor do they have any function in preventing the disengagement of the head from its guide way.

Having thus described my invention in the form in which it is at present preferred by me, what I claim and desire to secure by Letters Patent is:

1. The combination with a window casing formed with a guide way, a partial housing for said guide way affording a face opening of less width than the guide way, of a shade having a shade bar at its lower end, holding means carried by the bar having a head of greater width than the face opening of the

guide way, a spring carried by said shade bar for pressing said holding means into contact with the bottom of said guide-way, the parts being so constructed and arranged that the head cannot simultaneously contact with the bottom of the guide way and the housing when the shade bar is in its position of maximum tilting.

2. The combination with a window casing formed with a guide-way, a partial housing for said guide-way affording a face opening of less width than the guide-way, of a shade having a shade bar at its lower end, holding means carried by the bar having a head of greater width than the face opening of the guide-way, a spring carried by said shade bar for pressing said holding means into contact with the bottom of said guide-way, the parts being so constructed and arranged that the tilting of the shade bar is limited and the head cannot simultaneously contact with the bottom of the guide-way and the housing when the shade bar is in its position of maximum tilting.

3. The combination with a window casing formed with a guide way, a partial housing for said guide way affording a face opening of less width than the guide way, of a shade having a shade bar at its lower end, holding means carried by the bar having a head of greater width than the face opening of the guide way, a wearing surface attached to the part carrying said head extending in a line parallel with said housing and against which it bears, a spring carried by said shade bar for pressing said holding means into contact with the bottom of said guide-way, the parts being so constructed and arranged that the head cannot contact both with the bottom of the guide way and the housing when the shade bar is in its position of maximum tilting.

4. The combination with a window casing formed with a guide way, a partial housing for said guide way, affording a face opening of less width than the guide way, of a shade having a shade bar at its lower end, holding means carried by the bar having a head of greater width than the face opening of the guide way, and a wearing surface attached to the part carrying said head extending in a line parallel with said housing and against which it bears, a spring carried by said shade bar for pressing said holding means into contact with the bottom of said guideway, the parts being so constructed and arranged that the tilting of the shade is limited and the head cannot simultaneously contact both with the bottom of the guide way and the housing when the shade bar is in its position of maximum tilting.

5. The combination with a window casing formed with a guide way, of a shade, a shade bar therefor, and holding means carried by the bar comprising a member movable relative to the bar, a widened wearing surface

carried by and arranged at an angle to the movable member, and a head carried by and extending at approximately right angles to the wearing surface and adapted to lie in the
5 guideway.

6. The combination with a window casing formed with a guideway, of a shade, a shade bar therefor, a shank member reciprocating in the bar, a vertically arranged wearing
10 member carried by and above and below the shank member, and a head carried by and extending at an angle to the wearing surface.

7. The combination with a window casing

formed with a guideway, of a shade, a shade bar therefor, a shank member reciprocating 15 in the shade bar, means for limiting the movement of the shank member in the shade bar, a wearing surface integral with the shank and a head integral with the wearing surface.

In testimony whereof I affix my signature
in presence of two witnesses. 20

DANIEL HOYT.

Witnesses:

W. A. PAULING,

RICHARD B. CAVANAGH.