R. A. BREITENFELD.

SHADE AND CURTAIN ADJUSTER.

APPLICATION FILED JULY 22, 1912.

1,052,406. Patented Feb. 4, 1913.

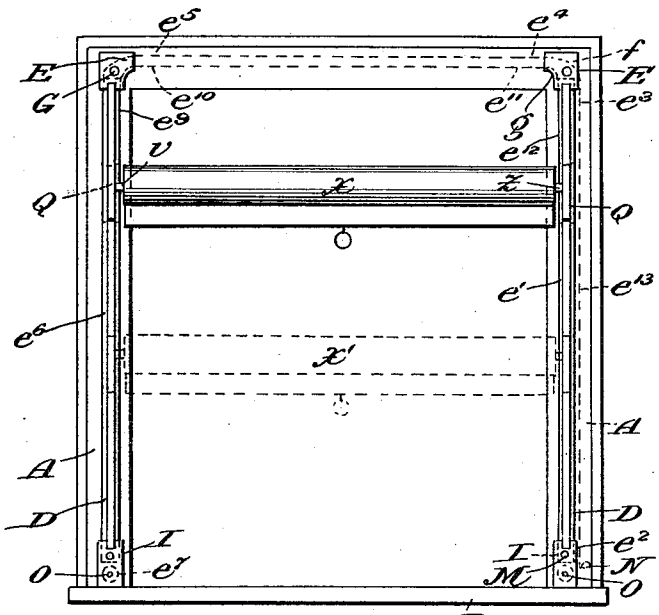

Fig. 1

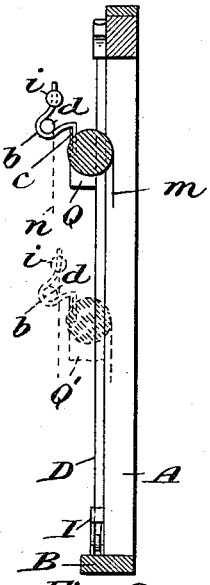

Fig. 2.

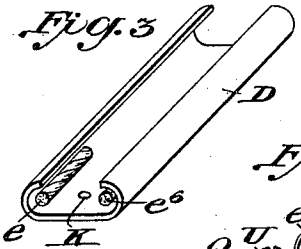

Fig. 3

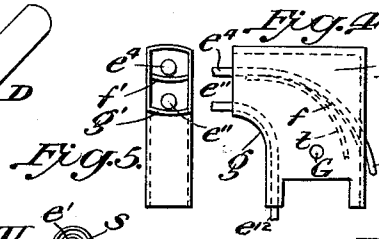

Fig. 4

Fig. 5.

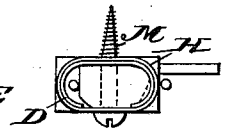

Fig. 9

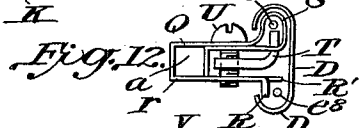

Fig. 12.

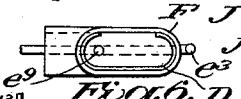

Fig. 6.

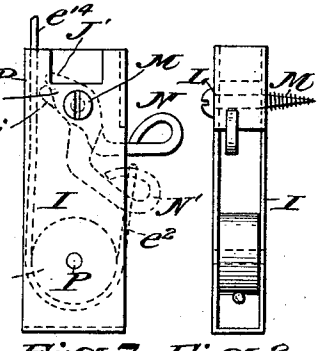

Fig. 7.

Fig. 8.

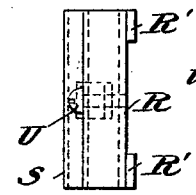

Fig. 11.

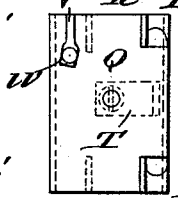

Fig. 10

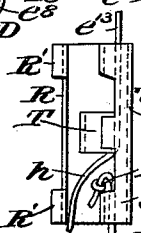

Fig. 13.

Fig. 14

Fig. 15

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UNITED STATES PATENT OFFICE.

RUDOLPH A. BREITENFELD, OF MADISON, WISCONSIN.

SHADE AND CURTAIN ADJUSTER.

1,052,406. Specification of Letters Patent. Patented Feb. 4, 1913.

Application filed July 22, 1912. Serial No. 710,928.

To all whom it may concern:

Be it known that I, RUDOLPH A. BREITENFELD, a citizen of the United States, residing at Madison, in the county of Dane and State of Wisconsin, have invented a new and useful Shade and Curtain Adjuster, of which the following is a specification.

My invention relates to improved mechanism for adjusting the vertical position with respect to a window frame of a shade roller or curtain rod, or of both the shade roller and curtain rod, so that the shade roller or curtain rod or both may be lowered, thus allowing ventilation and light to be secured over the top of the shade and curtain instead of from under them only. I attain this object by means of the mechanism illustrated in the accompanying drawings, in which:—

Figure 1 is a front elevation of a window casing, showing the adjusting mechanism and two positions of the shade roller and shade. Fig. 2 is a side elevation of the window casing showing the adjusting mechanism and two positions of the shade roller and shade, with two corresponding positions of the curtain rod brackets curtain rods and curtains. Fig. 3 is a cabinet drawing of one of the guide members which constrain the movement of the shade roller and curtain rod in a vertical direction. Fig. 4 is a front elevation of the element which serves the purpose of cord guide pulleys at the top of the guide member shown by Fig. 3. Fig. 5 is a side view of the element shown in front elevation by Fig. 4. Fig. 6 is a bottom view of the element shown in front elevation by Fig. 4. Fig. 7 is a front elevation of the guide pulley, pulley block and cord brake located at the bottom of the right vertical guide member in Fig. 1, which is similar to the corresponding group located at the bottom of the left guide member with the exception that the latter has no brake attachment. Fig. 8 is a side elevation of the group shown in front elevation by Fig. 7. Fig. 9 is a top view of the group shown in front elevation by Fig. 7. Fig. 10 is a side elevation of the vertically adjustable bracket with cord lock which moves in the slot of the guide member Fig. 3, and provides attachment for the shade roller spindles and curtain rod brackets. Fig. 11 is a front view of the adjustable bracket shown in side elevation by Fig. 10. Fig. 12 is a top view of the adjustable bracket shown in side elevation by Fig. 10. Fig. 13 is a rear view of the adjustable bracket shown in front elevation by Fig. 10, and illustrates the method of securing the ends of cord as described below, in reference to the right adjustable bracket. Fig. 14 is a side elevation of the upper double cord guide for use in place of the form shown by Figs. 4, 5, and 6, when my shade and curtain adjuster is attached to the inner face of the window casing. Fig. 15 is a front elevation of the cord guide shown in side elevation by Fig. 14.

Similar letters refer to similar parts throughout the several views.

To each of the vertical side sections A, A of the window casing are attached by screws or other means, one of the vertical guide members, D, which latter are preferably of metal of the C section shown in Fig. 3. The upper end of guide member D projects a short distance within the similar larger section F of the cord guide piece E, as shown in Figs. 1 and 6, piece E being attached to the window casing A by a screw through hole G or other means, the telescoping fit of D within section F of piece E holding these members in a fixed relation to each other and to the window casing. The lower end of guide member D projects a short distance within a similar larger section H at the top of the pulley block piece I, as shown at H Fig. 9. In adjusting guide member D within pulley block I hole K Fig. 3 is placed in line with hole L in pulley block I and a screw M passed through both I and D and into section A of the window casing, thus securing I, D and the window casing in relatively fixed positions. Screw M also forms a fulcrum for brake N described below. In the pulley block I is a pulley O having rotation about pin P, which latter is secured to the pulley block I.

The adjustable brackets Q shown in detail in Figs. 10, 11, 12, and 13 have projections R, R^1, and S along their bases which fit within the guide members D as shown in Fig. 12, and thus constrain the movement of blocks Q into a vertical sliding motion along guide members D, this motion being limited by cord guides E at the top and pulley blocks I at the bottom of guides D.

Within one of the adjustable brackets Q is a cord clamp T actuated by screw U as described below. A slot V in one of the adjustable brackets Q, and a hole W in the

other, both illustrated for convenience in Fig. 10, form the usual method of attaching a spring shade roller to its brackets, as shown by shade roller X, pins Y, Z and brackets Q Fig. 1.

In order to provide a convenient means for supporting a curtain pole to the adjustable brackets Q, a socket opening *a* is formed in the top of Q as shown in Fig. 12, into which may be placed the shank *c* of curtain bracket *b* Fig. 2, which supports the curtain rod *d*, or the curtain rod *i* depending on the form of rod used. Socket opening *a* and the shank of the curtain pole bracket *d* which fits in opening *a* are formed preferably of square section so that when the mechanism is attached to the inner face of the window casing the curtain rod brackets *d* may be set in a ninety degree position with brackets Q in comparison with the position shown in Fig. 2, thus placing brackets *d* in the same relative position with window casing as shown in Fig. 2.

The movable brackets Q are given a simultaneous upward or downward motion by means of a cord disposed as an endless belt as follows: Fig. 12 which may represent the right hand adjustable bracket Q sliding in the guide member D has formed as part thereof the hollow lug S, through the lower section, of which is passed an end e^1 of the cord *e*, which is knotted at K to hold the cord securely in the lower section of lug S as shown in Fig. 13. This cord runs within guide member D as shown at *e* in Fig. 3, thence downward and part of the way around pulley O Fig. 1 passing outside pulley block I as shown at e^2 in Figs. 1 and 7. From e^2 the cord passes upward and outside of guide member D to e^3 where it enters the cord guide E, passing about the outer guide sector *f*, Figs. 1, 4 and 5 and out at e^4. From e^4, Fig. 1, the cord passes horizontally to e^5, whence it passes over the outer sector of a cord guide similar to the one described with the exception that the outer guide sector has the form of the part *t* Fig. 4, thence down the left hand guide member D as shown at *e* Fig. 3, and e^6 Fig. 1, through hollow lugs in the left hand bracket Q, as described above for the right hand bracket Q and around a half circumference of pulley O in the left hand pulley block I to the position e^7 Fig. 1. From this point the cord is carried up the inner right side of the left guide member D as shown at e^8 Fig. 3 freely past left bracket Q, as shown at e^8 Fig. 12, to e^9 Fig. 1 from whence it passes through the left cord guide E and over inner sector shown in reversed position in Fig. 4 to e^{10}. From e^{10} the cord passes horizontally to e^{11}, thence through right corner guide E over inner guide sector *g*, Figs. 1 and 4 to the left inner portion of the right guide member D as shown at e^{12} Fig. 1 and *e* Fig. 3. From e^{12} the cord passes through the upper and middle sections of hollow lug S of right movable bracket Q as shown at e^{13}, Fig. 13, thus completing the circuit of the cord, one end of which e^1, is secured by knot K above hollow lug S, and the other end e^{13} by means of the pressure exerted by clamp T when drawn down by screw U, the free end of the cord being shown at *h*. A clamp and screw of the same form secures the left movable bracket Q to the single portion e^6 of the cord which passes through the hollow lug S of this bracket. When the section of the cord between e^2 and e^3, which is without the right guide member D and thus easily grasped is pulled downward, the section e^4—e^5 moves to the right and the section e^6 is pulled upward carrying the left hand movable bracket Q with it. Tracing the resulting motions of the remainder of the cord the section e^7—e^9 moves downward, the section e^{10}—e^{11} to the left and e^{12}—e^1 upward, thus carrying the right movable bracket Q upward, approximately the same distance that the left movable bracket is moved upward, as all parts of the cord *e* move the same distance neglecting a slight stretching of the cord. It is evident that if the section e^2—e^3 of the cord *e* be given an upward motion, the movable brackets Q will be lowered approximately equal amounts and the shade roller X and curtain rod *d* will at all times be approximately horizontal as shown by the positions X and X^1 of the shade roller. This vertical movement may be obtained by applying force to other moving parts than the cord, and is limited by the movable brackets Q coming in contact with the top cord guides E or the pulley blocks I. This vertical movement does not interfere with the ordinary operation of the shade *m* or curtain *n* shown in Fig. 2.

The brackets Q will usually be prevented from dropping by the friction of the mechanism, but as an additional means of security, the brake N J, Figs. 1, 7, 8 and 9 is provided. Brake N J is fulcrumed about screw M, as described above and is so formed that when the projecting handle N^1 of the brake lever is moved upward to the position N, the point *j* of the brake compresses the section e^{14} of cord *e* against the side section *p* of pulley block I, as shown in Fig. 7 in which the position N J of the brake lever locks cord *e*, and the position N^1 J^1 releases it.

The forms of guide elements D, cord guides E, pulley blocks I and adjustable brackets Q render them specially adaptable to being readily formed of sheet metal, this being the preferred method of construction.

My improvement in shade and curtain adjusters described above and illustrated in the drawings, is shown as applied to the outer faces of the vertical sections of the

window casing, the plane of these faces being parallel to the wall in which the window is located. With slight variations in the mechanism, which make no changes in the principles of the invention, it may be applied to the inner vertical faces of the window casing, the plane of these faces being perpendicular to the wall of the room in which the window is located. These variations consist in the substitution of the upper double cord guide Figs. 14 and 15 for the form shown by Figs. 4, 5, and 6. The lower portion of the double cord guide Figs. 14 and 15 is formed to fit telescopically over the upper end of guide D the cord occupying the positions e^{15} and e^{16} Fig. 14. In passing across the upper section of the window casing the cords are crossed when form Figs. 14 and 15 is used.

In the application of my improved shade and curtain adjusted to the inner face of the window casing the shade roller pin openings V and W Fig. 10 are formed in the face r Fig. 12. With these slight modifications my improved shade and curtain adjuster may be applied to the inner face as readily as to the outer face of the window casing.

I claim—

1. A shade adjuster comprising a pair of parallel guides of C section each fitted at one end telescopically within a double cord guide and at the other end telescopically within a pulley block, a movable shade roller bracket constrained in motion by each parallel guide, a pulley journaled in each pulley block, a cord clamp in each movable bracket, a cord secured to each movable bracket by the cord clamp, the cord being disposed as endless in such a manner as will impart like motion to the pair of movable brackets.

2. A shade and curtain adjuster comprising a pair of parallel guides of C section each fitted at one end telescopically to a double cord guide and at the other end telescopically to a pulley block, a pulley journaled in each pulley block, a shade roller bracket constrained in motion by each parallel guide, a cord clamp attached to each movable bracket, sockets in each movable bracket, a curtain rod support fitting each of said sockets, a cord brake journaled in one pulley block, and an operating cord attached to each movable bracket by the cord clamp and disposed as endless about the pulleys and over guide sectors in the double cord guides.

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