

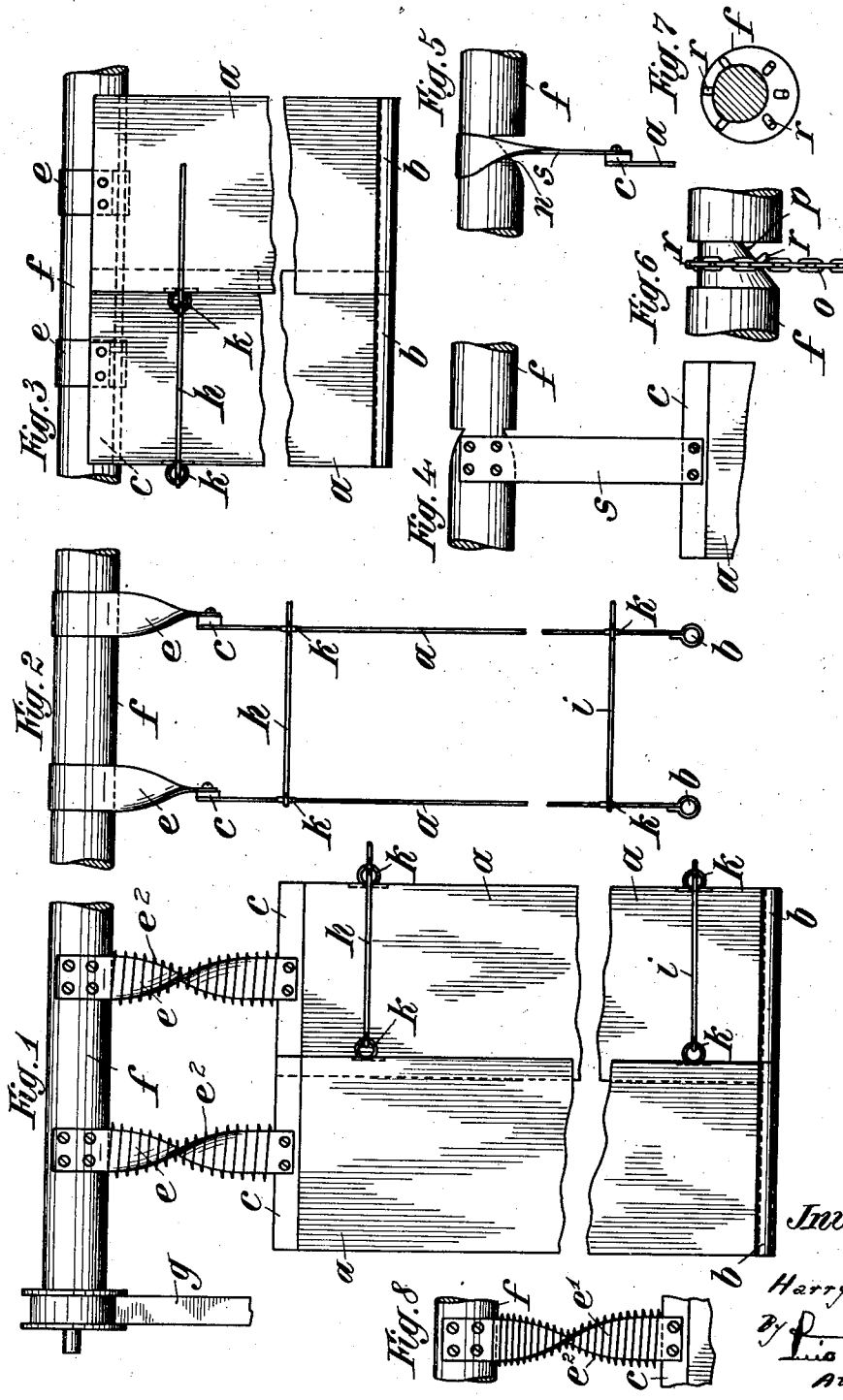
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H. BOECK

SUN BLIND

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Inventor:

Harry Boeck

By *Paul J. G. [Signature]*
Attorney

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HARRY BOECK, OF BERLIN, GERMANY.

SUN BLIND.

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Sun-blinds or curtains are known consisting of blankets or sheets hanging down from the tringle or winding shaft and turning around their vertical axis before lifting by means of a guiding groove, provided in the window frame and a rod fastened to the lower margin of the blankets and guided by the said groove for positively turning the single blankets. This arrangement comprises many complicated members and is therefore expensive in manufacture.

According to the present invention the single blankets of the sun-blind are suspended on the tringle by means of strips capable of being partially turned or distorted during winding upon and from the tringle, so that the blankets are likewise turned at the same time and thereby assume intermediate positions in which the blankets form an angle with the plane passing through their vertical axis.

In the drawing an example of execution is represented in which;

Fig. 1 is a front view of a sun-blind or curtain consisting of single blankets or sheets, each fastened by means of a connecting strip to the tringle in the lowered position of the curtain.

Fig. 2 is a front view showing the strips of the sun-blind partially lifted.

Fig. 3 is a front view showing the strips fully lifted.

Figures 4 and 5 are front views showing in two different positions another mode of connecting the strips together with an arrangement on the tringle for the purpose of turning the strips during the lifting.

Figures 6 and 7 are front and cross-sectional views respectively showing another modification.

Fig. 8 is a front view showing a further modification of a connecting strip in detail.

According to Figures 1, 2 and 3, the single blankets or sheets *a* of the sun-blind or curtain are provided at their upper edges with a ledge *c* and at their lower edges with a heavy rod *b*. Each blanket is fastened to the tringle or winding shaft *f* of the curtain by means of a flat spring *e*, twisted around their axis about 180°. When the sun-blind is pulled up or lifted from its position in Fig. 1 into the position in Fig. 2 by means of the pulling rope *g*, the springs *e* will smoothly wind themselves up on the

tringle *f*, whereby the single blankets hanging thereon are turned about 90°. In this position the blankets are arrested by fixing the pulling rope, so that the blankets will serve for shutting off the sun rays depending upon the position of the sun and for only transmitting diffused light. During the transit from the position according to Fig. 2 into the position shown in Fig. 3, the springs are fully wound up on the tringle *f*, whereby the blankets *a* are also turned about 90°. Continued rotation of the shaft will pull up the blankets and roll them upon the tringle.

In drawing the curtain the springs will assume their original shape and position according to their release, whereby the blankets too are brought back into their original position.

For accurate adjustment the blankets are provided with separating pieces or members consisting for instance of rods or wires *h*, and *i*, passing through eyes *k*, fastened near the upper and lower margin of each blanket.

Instead of using flat springs *e* (see Figures 1 and 2) also flat strips or ribbons, (see Fig. 8) may be employed, consisting of an inelastic substance, for instance of straps *e'* of linen, hemp, canvas or the like which are rendered elastic by inserting them into flatly wound springs *e''*, capable of being twisted about 180°.

In like manner straps of non-elastic material may be employed which may be turned by guiding them in a curved groove on the tringle; the bottom *n* of such curve being gradually inclined (see Figures 4 and 5). The length of the groove measured on the periphery of the tringle is nearly one half of the length of the strap *s*. According to this arrangement the strap is first turned about 90° and assumes again its original position, that is to say, the strap is flattened again, when the tringle is turned back.

According to Figures 6 and 7 the ribbon is substituted by a chain *o* guided by the pins *r* of a chain wheel.

I claim:

1. A sun-blind comprising a winding shaft; a plurality of sheets associated with said shaft, the longitudinal axes of the sheets being at right angles to the axis of the shaft; and means cooperating with the shaft for supporting the sheets from the shaft at intervals and for causing rotation of the

sheets around their longitudinal axes when the shaft is rotated to adjust the distance between the sheets.

2. A sun-blind comprising a winding shaft; a plurality of sheets associated with said shaft, the longitudinal axes of the sheets being at right angles to the axis of the shaft; and a plurality of twisted strips arranged at intervals for supporting the sheets from the shaft and for causing rotation of the sheets around their longitudinal axes when the shaft is rotated due to the twisting or untwisting of the strips as they are wound on or are unwound from the shaft.

3. A sun-blind comprising a winding shaft; a plurality of sheets associated with said shaft, the longitudinal axes of the sheets being at right angles to the axis of the shaft; and a plurality of distorted elastic strips arranged at intervals for supporting the sheets from the shaft and for causing rotation of the sheets around their longitudinal axes when the shaft is rotated due to the distorting of the strips as they are wound on or are unwound from the shaft.

4. A sun-blind comprising a winding shaft; a plurality of sheets associated with said shaft, the longitudinal axes of the sheets being at right angles to the axis of the shaft; and a plurality of distorted elastic strips arranged at intervals and each consisting of a

ribbon surrounded by a flatly wound spring for supporting the sheets from the shaft and for causing rotation of the sheets around their longitudinal axes when the shaft is rotated due to the distorting of the strips as they are wound on or are unwound from the shaft.

5. A sun-blind comprising a winding shaft; a plurality of sheets associated with said shaft, the longitudinal axes of the sheets being at right angles to the axis of the shaft; and a plurality of strips arranged at intervals and each surrounded by a flatly wound spring for supporting the sheets from the shaft and for causing rotation of the sheets around their longitudinal axes when the shaft is rotated due to the distorting of the strips as they are wound on or are unwound from the shaft.

6. A sun-blind comprising a winding shaft; a sheet associated with said shaft, the longitudinal axis of the sheet being at right angles to the axis of the shaft; and means cooperating with the shaft for supporting the sheet from the shaft and for causing rotation of the sheet around its longitudinal axis when the shaft is rotated.

In testimony whereof I have affixed my signature.

HARRY BOECK.