

F. C. THOMPSON.
 MECHANISM FOR OPERATING VENETIAN BLINDS.
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926,911.

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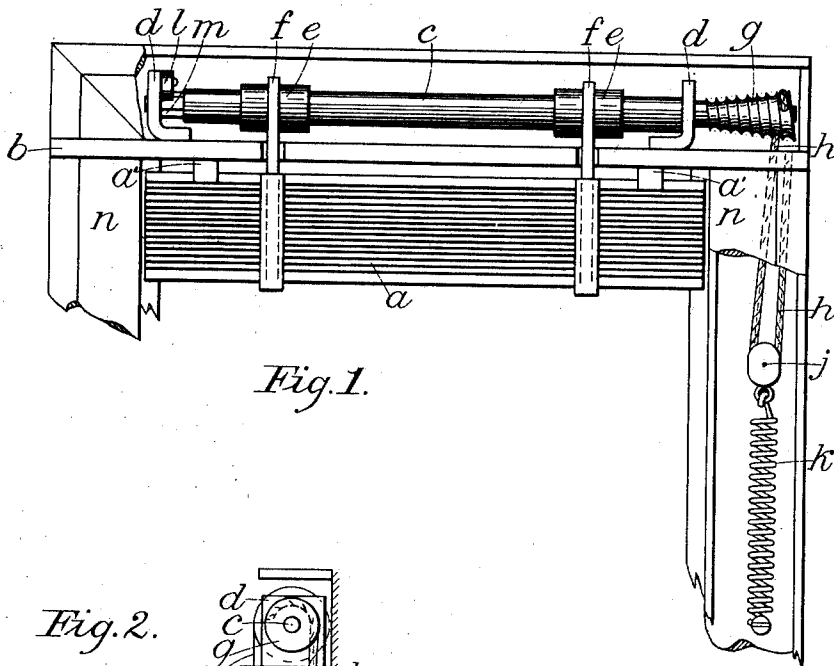


Fig. 1.

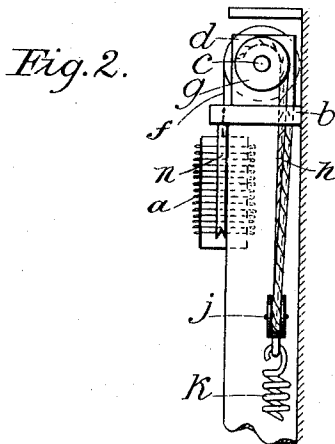


Fig. 2.

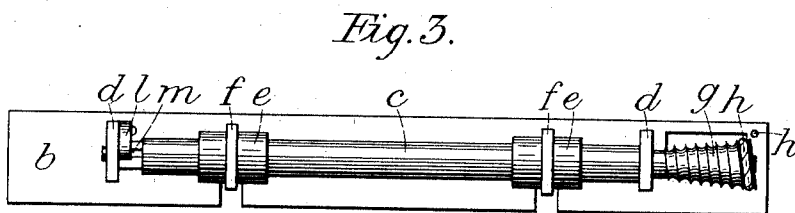


Fig. 3.

Witnesses

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MECHANISM FOR OPERATING VENETIAN BLINDS.

No. 926,911.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FREDERICK CHARLES THOMPSON, a British subject, residing in Christchurch, in the Dominion of New Zealand, have invented certain new and useful Improvements in Mechanism for Operating Venetian Blinds, of which the following is a specification.

My invention relates to apparatus for raising and lowering Venetian blinds, and seeks to render these operations more convenient by the use of mechanical means whereby the blind is raised by the action of a spring and retained in the desired position by a check device, the operation being similar to that employed in raising and lowering the ordinary spring roller blind.

With this object in view, the invention consists of the novel arrangement and combination of the various parts which are united to form the present device.

Reference will now be made to the accompanying drawings wherein:—

Figure 1 is a front elevation of a blind in the drawn-up condition, the woodwork being broken away in various places in order to show the attached mechanism. Fig. 2 is an end elevation. Fig. 3 is a plan of the same, the upper part of the casing being removed.

The same parts bear the same letter throughout.

a is the blind suspended from the headboard *b* by means of the flexible connections *a'* in the usual manner, and *c* is a horizontal shaft revolvably mounted in bearings formed in the brackets *d* which are secured to the upper side of the headboard *b*. Upon the shaft *c*, being rigidly secured thereto, are the pulleys *e*, to the peripheries of which the ends of the lifting cords *f* are attached, so that, when the shaft *c* is revolved, the lifting cords *f* will wind upon the pulleys. The lifting cords *f* are made flat as shown to allow of winding upon the pulleys. Secured rigidly to the end of the shaft *c* is the fusee *g*. To the largest diameter of the fusee *g* is attached one end of the cord *h*, the other end of which passes downward through a slot provided in the headboard *b*, is then reeved through the pulley-block *j*, and is then carried upward and secured to the headboard or some other convenient point above. To the pulley-block *j* is attached one end of the helical spring *k*, the other end of which is secured by a screw or other convenient means to a fixed point on the window-frame below. The

helical spring *k* will therefore assume a vertical or nearly vertical position.

The check device is similar to that employed in the ordinary spring roller, consisting of a pawl *l*, having formed on its lower end a tooth. The pawl *l* is pivoted to the bracket *d* which forms one bearing for the shaft *c*. One end of the shaft *c* is formed with longitudinal recesses *m* at intervals around its periphery, into which the tooth of the pawl comes when the raising or lowering operation of the blind is checked.

The mechanism is here shown concealed behind the casing-boards *n* which may form an architrave around the window.

The operation of my invention is as follows:—Assuming that the blind is in the drawn-up condition as shown in Fig. 1, the lifting cords *f* being wound upon the pulleys *e*, the blind is grasped by the lowest slat and drawn down. The lifting cords will unwind, causing the pulleys *e* to revolve. The pulleys *e* being rigidly secured to the shaft *c*, the latter will also revolve, thereby causing the fusee *g* to revolve likewise. By so revolving the fusee *g* will wind the attached cord *h* upon the periphery of the fusee *g*, in a direction opposite to that in which the lifting cords were wound upon the pulleys. The winding of the cord *h* upon the fusee *g* will, by raising the pulley-block *j*, elongate, and so draw into greater tension the helical spring *k*. The energy stored up in the spring *k* by virtue of this increased tension will normally tend, by acting on the cord *h*, to rotate in the opposite direction the fusee *g*, and with it the shaft *c*, and thus cause the lifting cords to wind upon the pulleys and so raise the blind again.

When the blind has been brought to rest in the desired position, the tooth of the pawl *l* will engage in one of the recesses *m*, and so prevent the shaft from revolving.

In order to raise the blind again, it is drawn down slightly and released. In this way the tooth of the pawl will be disengaged and will continue to jump the recesses while the shaft is revolving, in exactly the same manner as the ordinary spring roller blind.

The operation of the mechanism during the process of raising the blind is simply a reversal of the lowering process, that is, the spring causing the cord *h* on the fusee to unwind, revolves the shaft, thereby winding the lifting cords upon the pulleys.

The cord *h* being wound upon a fusee will

allow for the varying weight to be overcome by the spring as the blind is raised.

I claim:—

1. A mechanism for operating Venetian
5 blinds comprising the combination of a revoluble shaft mounted longitudinally in bearings above the head-board of the blind, one
end of the shaft being formed with longitudinal recesses at intervals around its periphery;
10 a pawl having a tooth adapted to engage in such recesses pivoted upon one of the shaft bearings; lifting cords for the blinds pulleys upon the shaft, upon which the lifting cords
of the blind are wound; a fusee upon the
15 other end of the shaft, a head board having a slot therein a cord having one end secured to and wound upon such fusee in a direction opposite to that in which the lifting cords are
wound, while its other end passes downward
20 through the slot in the head-board and is made fast at a fixed point; a vertically arranged helical spring made fast at its lower
end to a fixed point; and a pulley block secured to the upper end of the spring through
25 which the cord wound upon the fusee is passed before being made fast at a fixed point above it, substantially as and for the purpose set forth.

2. In a mechanism for operating Venetian
blinds the actuating device comprising the
30 combination of lifting cords for the blinds, a head board having a slot therein, a revoluble shaft mounted longitudinally in bearings above the headboard of the blind, pulleys
upon the shaft, upon which the lifting-cords
35 of the blind are wound; a fusee upon the end of the shaft, a cord having one end secured to and wound upon such fusee in a direction opposite to that in which the lifting-cords are
wound, while its other end passes downward
40 through the slot in the head-board and is made fast at a fixed point; a vertically arranged helical spring made fast at its lower
end at a fixed point, and a pulley-block secured to the upper end of the spring through
45 which the cord wound upon the fusee is passed before being made fast at a fixed point above it, substantially as and for the purpose set forth.

In witness whereof I have hereunto set my
50 hand in the presence of two witnesses.

FREDERICK CHARLES THOMPSON.

Witnesses:

JOHN HAZLITT UPHAM,
CYRIL CARLYON COATES.