

(No Model.)

H. L. HALL.
ATTACHMENT FOR WINDOW SHADES.

No. 483,490.

Patented Sept. 27, 1892.

Fig. 1.

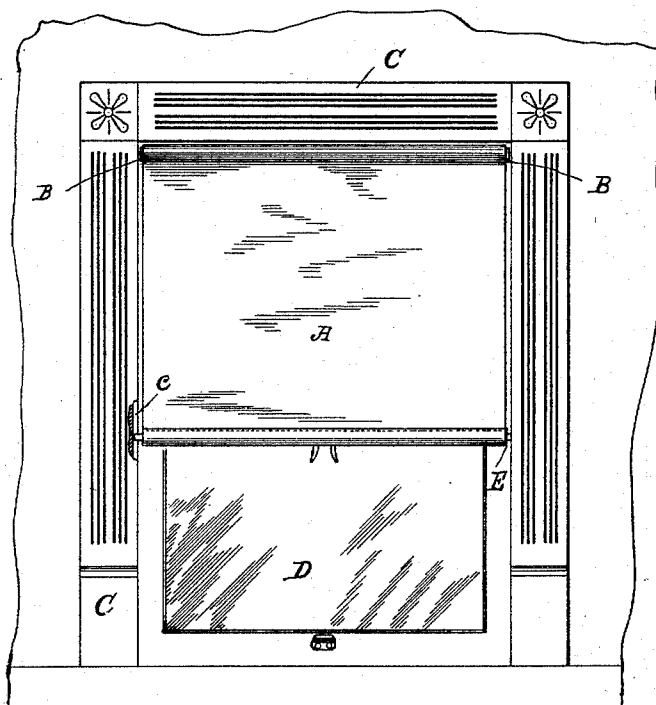
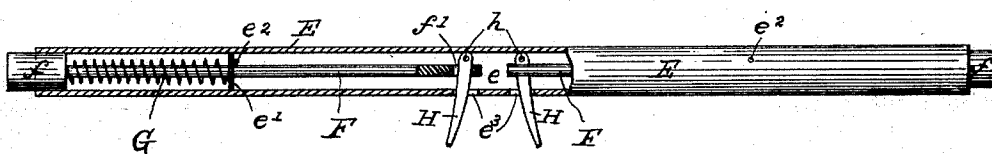


Fig. 2.



Witnesses

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By his Attorney J. B. Thurston

UNITED STATES PATENT OFFICE.

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ATTACHMENT FOR WINDOW-SHADES.

SPECIFICATION forming part of Letters Patent No. 483,490, dated September 27, 1892.

Application filed July 8, 1890. Renewed October 31, 1891. Serial No. 410,428. (No model.)

To all whom it may concern:

Be it known that I, HORACE L. HALL, a citizen of the United States, residing at Manchester, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Attachments for Window-Shades, of which the following is a specification.

The object of this invention is to provide a window-curtain with means whereby it shall remain at any desired elevation.

The invention consists in a certain novel mechanism for releasing rods contained within the curtain-stick (which are normally expanded) from contact with either side of the window-frame.

The invention will be fully set forth in the following specification and claims and clearly shown in the accompanying drawings, forming a part thereof.

Figure 1 represents a car-window with the surrounding frame and a window-shade mounted upon an ordinary spring-roller and provided at its bottom with my improvements, Fig. 2 being an enlarged detached sectional elevation of a shade-stick, showing the interior expansive rods for holding the shade at any elevation by friction with the window-frame and my improved releasing device for drawing in the rods and releasing the friction.

A is the shade, B the spring-roller, C the window-frame, and D the window.

The shade-stick E may be made of wood or metal, and this is provided with a central longitudinal perforation *e* for the reception of expansion-rods F. These rods are forced normally outward, so as to bear against either side of the window-frame C or within a groove *c*, as in Fig. 1, by means of a spring G, contracted between a collar *f*, mounted upon either rod F, and a washer *e'*, placed in the shade-stick and backed by a couple of pins *e''*, passing through the shade-stick. In the adjacent ends of the rods F are formed elongated openings *f''*, each for the reception of one of the curved bars or levers H, which are pivoted at their upper ends upon pin *h* to the upper side of the shade-stick E and rest within a slot *e''*, formed in the bottom of said stick E. By this device the springs G may be very stiff, as the leverage of the bars H between their

retaining-pin *h* and the elongated openings *f''* of the rods F make the contraction of the latter very easy, and by locating each of the washers *e'* intermediate the collar at the outer end of the rod F and the lever H it acts as a guide for the rod and keeps its inner end substantially in the center of the tube or hollow stick, thus dispensing with the need of a pin or other means of connecting the rod to the lever except the slot in the end through which the lever projects. This permits of the stick being made from a light metal tube and also prevents the inner end of the rod falling down toward the opening *e''*, which would decrease the power of the lever, or of its slipping up toward the pivotal point by the inclination of the lever when the rods were being released, which would render the device inoperative by reason of the decrease of the movement of the rod by the lever.

As above described, it is evident that the device is very readily put together or taken apart, thus making it very easy to manufacture and to repair in case any of the parts become broken. After the pins *e''* are secured in their respective ends of the tube and the collars *f* have been secured to the ends of the rods F a spring and a washer are placed upon each rod and the slotted end of the rod is inserted into the end of the tube until the slot *f''* registers with the opening *e''*. The lever H is then inserted through the opening and the slot and secured by the pin *h*, which makes the stick complete and ready for use. By removing the pin *h* the whole device may be separated and any of the parts repaired and put back together again. When it is considered how very small the stick must be to avoid being unsightly and cumbersome on a window-shade and yet be strong enough to hold springs for retaining the curtain in any desired position against a strong spring at the top for rolling it up and levers for releasing it, so that the curtain may be moved up or down, the ability to utilize a small metal tube for the stick becomes a very important consideration.

Having described my improvement, what I claim is—

1. The combination, with a hollow shade-stick provided with two slots substantially

midway from its ends, of two levers secured within the stick independently of each other, each lever being pivotally secured at its upper end and having its lower end projecting
5 through one of the slots, whereby it may be grasped and forced inward, the portion of the stick between the slot forming an abutment for limiting the movement of the levers toward each other, and a spring-actuated rod in each
10 end of the stick, the outer end of each of which is provided with retaining devices and the inner end is loosely secured upon one of the levers below the pivotal point, and means for preventing the inner end of the rod from
15 moving toward the pivotal point of the lever, substantially as set forth.

2. The combination, with a hollow tubular shade-stick the walls of which are substantially of the same thickness throughout its
20 length, said stick being provided with two slots about midway of its length, of two levers secured within the stick independently of each other, each lever being pivotally secured at its upper end within the stick and having
25 its lower end projecting through one of the

slots in the stick, the portion of the stick between the slots being adapted to limit the movement of the levers toward each other, a flat perforated guide secured within the stick between each lever and the adjacent end of
30 the stick, a pin through the stick between each guide and the lever and adjacent to the inner side of the guide, whereby the guide is prevented from moving toward the lever, a rod in each end of the stick, the outer end of
35 which is shouldered and fits within the outer end of the stick and the inner end passes through the guide and is provided with a slot which fits loosely upon the lever adjacent to that end and below its pivotal point, and a
40 spring upon each rod, one end of which bears against the shoulder of the rod and the opposite end bears against the guide, substantially as set forth.

In testimony whereof I affix my signature in 4 presence of two witnesses.

HORACE L. HALL.

Witnesses:

J. B. THURSTON,
ISAAC L. HEATH.