S. M. SHERMAN.

BLIND-SLAT OPERATORS.

No. 194,270. Patented Aug. 14, 1877.

Fig. 1

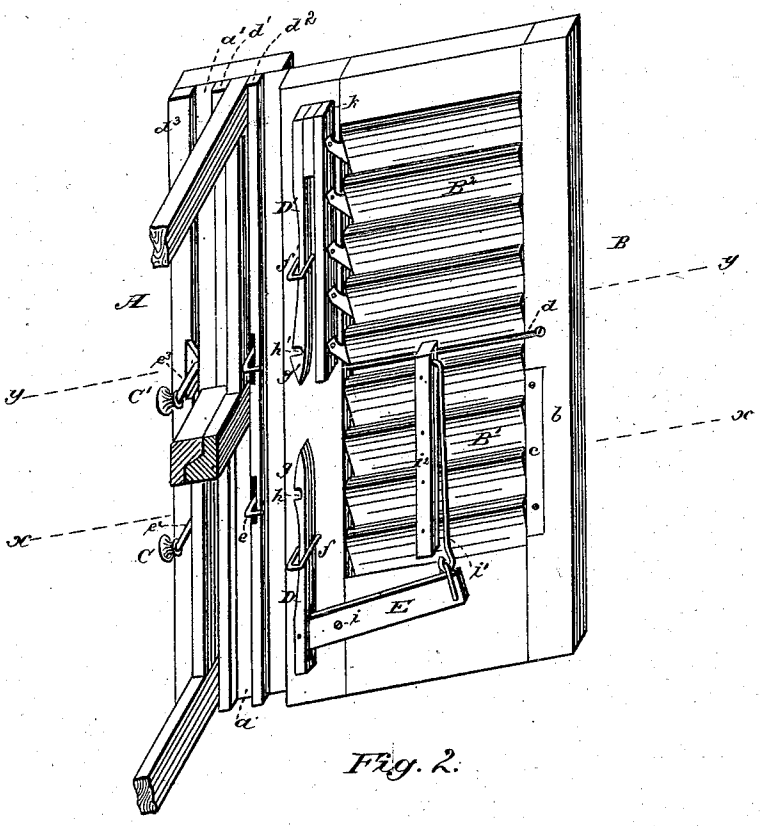


Fig. 2.

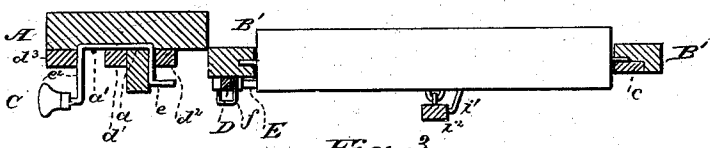
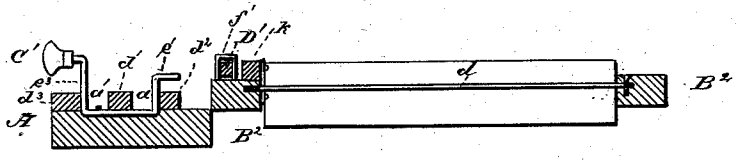


Fig. 3.



Attest:
R. F. Dyer
L. M. Dilly

Inventor:
Seeley M. Sherman
by Geo. W. Dyer & Co
atty.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SEELEY M. SHERMAN, OF FORT DODGE, IOWA.

IMPROVEMENT IN BLIND-SLAT OPERATORS.

Specification forming part of Letters Patent No **194,270**, dated August 14, 1877; application filed June 29, 1877.

To all whom it may concern:

Be it known that I, SEELEY M. SHERMAN, of Fort Dodge, in the county of Webster and State of Iowa, have invented a new and useful Improvement in Blind-Slat Operators; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object I have in view is to operate the upper and lower sections of pivoted window-blind slats independently of each other without interfering in any manner with the window-sash, and at the same time to produce means for effecting this purpose which will be simple and cheap in construction and reliable in operation.

My invention therein consists in the novel combination and arrangement of means for operating the two sections of pivoted slats independently of each other, as more fully hereinafter described and claimed.

To enable others skilled in the art to manufacture my device, I proceed to describe the same, having reference to the drawings, in which—

Figure 1 is a perspective view of one side of a window-frame with a blind hinged thereto and my improvement in position to operate the pivoted slat; Fig. 2, a horizontal section on the line *x x*, looking downward; and Fig. 3, a similar section on the line *y y*, looking upward.

Like letters denote corresponding parts in each figure.

A represents the window-frame, and *a a'* the grooves in which the upper and lower sashes run.

B is a blind, hinged to the frame in the usual manner, and having two sections, B^1 B^2, of pivoted slats.

For convenience of illustration, I have shown in the one blind two styles of pivoted slats—one, B^1, the common kind, having the ends of the slats let into the blind-frame, and the other, B^2, with metal clips secured to the ends of the slats and pivoted by them to the frame—with the devices which I have designed to employ for operating them.

It is sometimes required to remove the slats, as commonly constructed, for repairs or otherwise, which has ordinarily necessitated the taking apart of the entire blind-frame.

To obviate this defect, I prefer to rabbet the outer stile *b* on its inner edge down to the holes formed for the ends of the slats, and place therein a strip, *c*, which is secured by wood-screws.

By removing this strip at any time the slats can be taken out or new ones set in position to supply the place of slats broken or otherwise injured.

These means are not required when the slats B^2 are employed, since they can be removed by simply taking out the pins by which the metal clips are pivoted to the frame.

Another change I prefer to make in the frame of the blind is to substitute for the center rail a metal rod, *d*, which is set between the stiles in the same position as the center rail. This rod has one end screw-threaded, as shown, and the other provided with an eye, through which a wood-screw is turned to hold the rod in position. This rod allows the light to better pass through the blind when the slats are open; and, by removing the wood-screw and turning such rod, the blind-frame may be expanded to prevent the ends of the slats from binding against the stiles, as they often do in the ordinary blind, or by turning the rod in the opposite direction the frame may be correspondingly contracted.

C C′ are two metal cranks, which are made in the form shown in Figs. 2 and 3. These cranks are set in the window-frame into grooves below the surface of the sash-grooves *a a'*, and extending under the parting strip d^1. The ends *e* e^1 of the cranks project outwardly from the frame in slots cut in the outer sash-guiding strip d^2, and are extended laterally over such strip to its outer end. The other ends e^2 e^3 of the cranks play in slots cut in the inner guiding-strip d^3, and have small knobs on their ends by which they are moved. In practice, the other side of the window-frame would also be provided with two cranks, similar in construction to those described, for operating the slats of the blind on that side.

As will be seen upon inspection, these

cranks do not interfere in the least with the window-sash, which can be raised or lowered without regard to the position of such cranks.

D D′ are two spring-rods, which slide in loops *f f′*, secured to the inner stile, and have their heads projecting toward the center of the blind. The heads *g g′* of these rods are wedge-shaped, and have on their inner sides deep slots *h h′*, which engage, when the blind is closed, with the ends *e e*[1] of the cranks C C′, the sides of the rods being sloped or beveled away from such slots.

The sliding spring-rods D D′ are operated by the cranks C C′ when the blind is closed, but when the blind is opened these rods are moved away from the cranks, and the connection broken.

Upon shutting the blind, if the slots in the spring-rods do not come in line with the ends of the cranks, the cranks upon being moved strike against the beveled faces of the rods, springing such rods away from them until the slots are reached, when the rods spring back into position, and the ends of the cranks enter the slots.

For operating the ordinary blind-slats B[1], the foot of the spring-rod D is pivoted to a lever, E, which is in turn pivoted to the frame of the blind, as shown at *i*. The end of the lever E opposite to the one connected with the spring-rod has joined to it a metal or other rod, *i*[1], which is connected at its other end to the slat-rod *i*[2]. By moving the crank C and spring-rod D the slats can be opened or closed at will through the medium of the lever E and rod *i*[1]. This rod *i*[1], when constructed of metal, also acts as a spring to hold the slats open or shut, since it is bowed out to some extent by the opening of the slats.

For operating the style of slats represented by B[2], the heel of the spring-rod D′ is connected, loosely or otherwise, to the slat-rod *k*. This slat-rod is pivoted to the metal clips on the inner ends of the slats, which are extended for that purpose. By moving the crank C′ and rod D′ the slats B[2] will be opened or closed.

It is to be understood that when a blind is constructed entirely of the ordinary slats B[1], or entirely of the slats B[2], that two sets of connections similar to those described for operating the styles of slats used will be employed, while the cranks remain the same, and also that four of the cranks, spring-rods, and connections will be used for each window, two for each blind.

By these means the upper and lower sections of the slats of a blind can be operated independently of each other, and without interfering with the window-sash. The means employed by me are also simple and cheap in construction, can be applied to blinds already in use, and are durable in wear and reliable in operation.

Having thus fully described my invention and explained some of its advantages, what I claim as new therein, and desire to secure by by Letters Patent, is—

1. In a blind-slat operator, the combination of the cranks C C′ with the sliding spring-rods D D′, substantially as described and shown.

2. In a blind-slat operator, the combination, with a blind carrying sliding spring-rods and means for connecting such rods, with the pivoted slats of the cranks C C′, pivoted in the window-frame, and adapted to engage with the rods when the blind is closed, substantially as described and shown.

This specification signed and witnessed this 18th day of April, 1877.

SEELEY M. SHERMAN.

Witnesses:

FRANK F. DAWLEY,

M. H. BLISS.