

W. M. LANPHERE.  
Blind-Slat Adjuster.

No. 164,464.

Patented June 15, 1875.

Fig. 1.

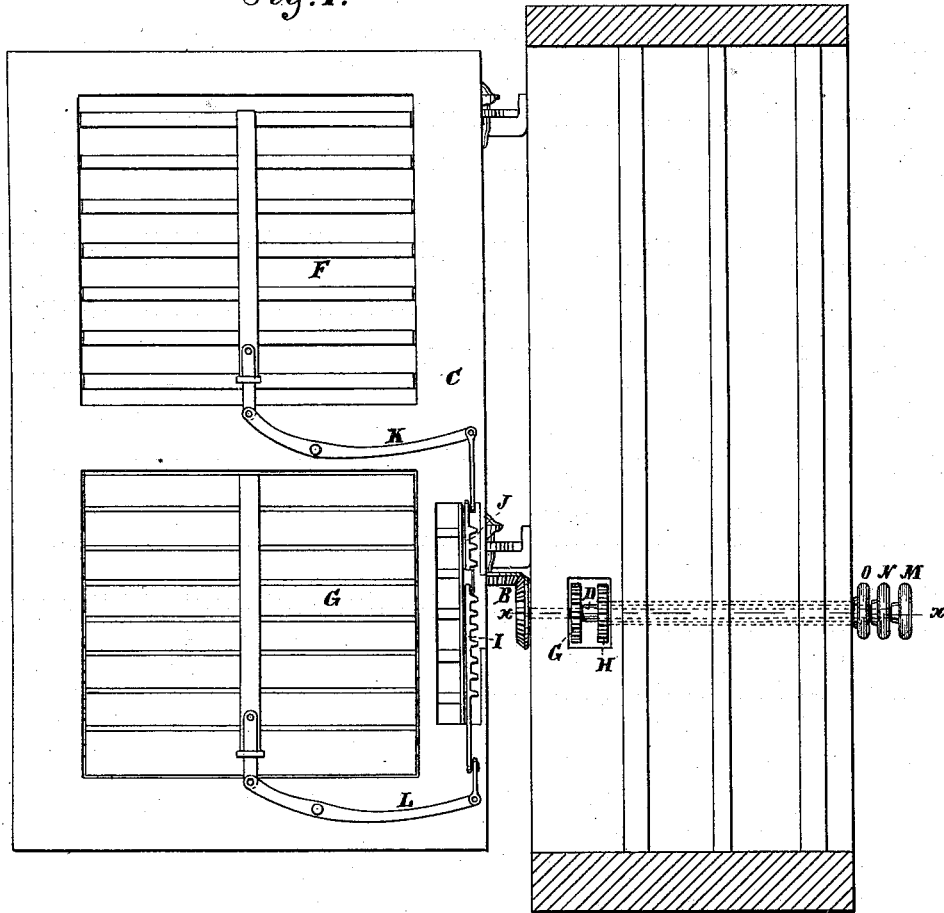
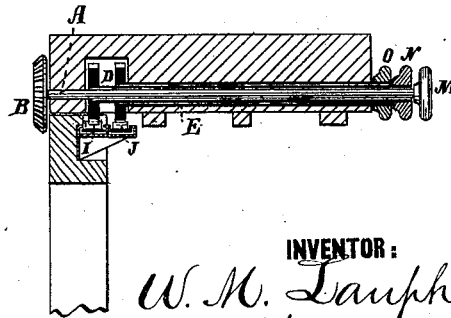


Fig. 2.



WITNESSES:

*A. H. Terry*

INVENTOR:

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BY

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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

WILLIAM M. LANPHERE, OF WATERLOO, IOWA.

## IMPROVEMENT IN BLIND-SLAT ADJUSTERS.

Specification forming part of Letters Patent No. **164,464**, dated June 15, 1875; application filed April 3, 1875.

### CASE C.

*To all whom it may concern:*

Be it known that I, WILLIAM M. LANPHERE, of Waterloo, in the county of Black Hawk and State of Iowa, have invented a new and Improved Blind-Slat Operator, of which the following is a specification:

My invention consists of tubular shafts arranged on the shaft of the blind-opener, to open and close the slats by wheels at the outer end gearing with racks on the blind, which operate the slats by levers and connecting-rods, a set of the devices being employed for each section of slats, to work them independently of each other.

Figure 1 is a sectional elevation of a window-frame, and a side elevation of a blind, with my improved slat-operating apparatus; and Fig. 2 is a horizontal section on the line *x x* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A represents the shaft, and B the wheels,

for opening and closing the blind C, on which I arrange the tubular shafts D and E, to work the slats F and G by the wheels G and H, gearing with the racks I and J, which are connected to them, respectively, by levers K and L, the racks being so arranged that they gear with the wheels when the blind is shut, and the shafts being arranged so that only one set of bearings is required, and so that the knobs M, N, and O are clustered together neatly.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of toothed racks I J on the blind, connected to the upper and lower slats for operating them, with toothed wheels G H on tubular shafts D E in the window-frame for working it, substantially as specified.

WILLIAM M. LANPHERE.

Witnesses:

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