

S. R. FOSTER.  
Shutter-Workers.

No. 141,267.

Patented July 29, 1873.

Fig. 2

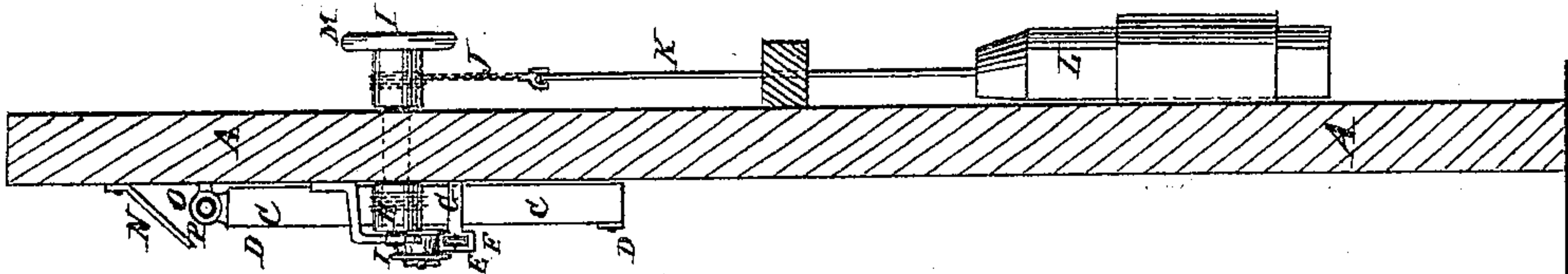
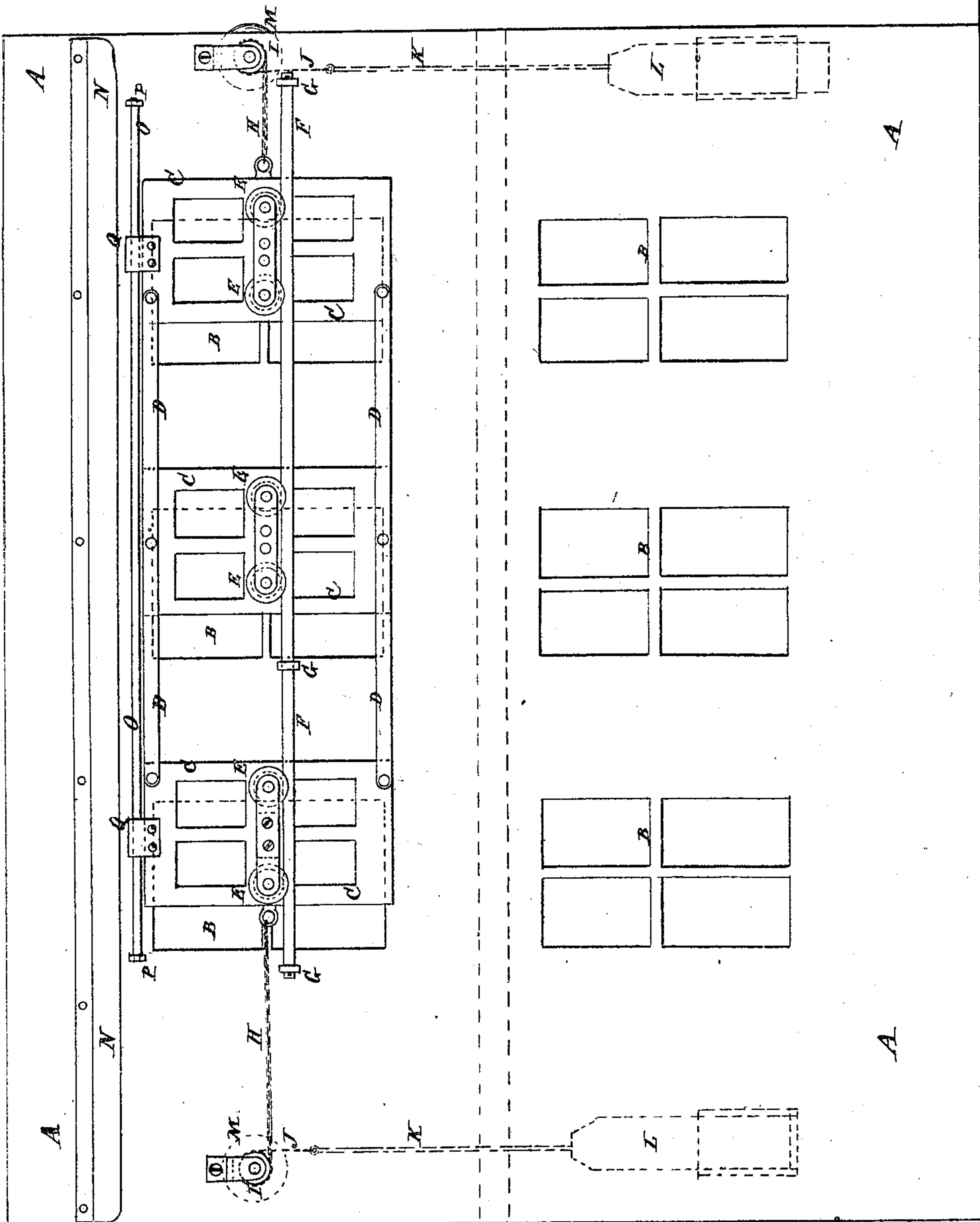


Fig. 1



Witnesses:

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Inventor:

*S. R. Foster*  
Per *Wm. H. Foster*  
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# UNITED STATES PATENT OFFICE.

SETH R. FOSTER, OF ST. JOHN, CANADA.

## IMPROVEMENT IN SHUTTER-WORKERS.

Specification forming part of Letters Patent No. **141,267**, dated July 29, 1873; application filed June 21, 1873.

*To all whom it may concern:*

Be it known that I, SETH R. FOSTER, of St. John, in the county of St. John, Province of New Brunswick, Dominion of Canada, have invented a new and useful Improvement in Operating Window-Shutters, of which the following is a specification:

Figure 1 represents a row of window-shutters to which my improvement has been applied. Fig. 2 is an edge view of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved device for connecting all the window-shutters upon each row, or upon each side of a store-house or other building, so that they may be all closed or opened at the same time, and from any floor of the building upon which the operator may happen to be.

The invention consists in the combination of the connecting-bars, the wheels, the rails, the chains, the shafts, the rods, and the balance-weights with the shutters of a building, as hereinafter fully described.

A represents the side of a store-house or other building; B are the windows, and C are the shutters. The shutters C of each row of windows B are connected together by bars or rods D, so that they may all move together and may be kept parallel with each other. To each of the shutters C are attached one or more wheels or pulleys, E, which rest upon and roll along a rod or rail, F, which is secured to the building by eye-bolts G or other convenient means. The wheels E and rail F may be placed at the middle part of the shutters, as shown in the drawings, or at the upper part, or at the lower part, as may be desired. The shutters may be placed upon the outside of the buildings, as shown in the drawings, or upon the inside, or the walls may be made hollow or double and the shutters arranged to work in the spaces thus formed, as may be desired. The shutters may be further secured in place by a guide-rod, O, secured to the wall of the building by eye-bolts P, or other means, and along which slide-keepers Q are attached to said shutters. The position of the guide-rods O must depend upon the position of the rails F.

To the outer edge of the outer shutters of each row is attached one end of a small chain, H, the other end of which is attached to and wound upon a drum or shaft, I, which passes in through the wall of the building, and to its inner part is attached, and around it is wound, a short chain, J, the other end of which is attached to a rod, K, which extends up through the various stories of the building. The rods K work up and down in guides, and to their lower ends are attached weights L of sufficient size to keep the various chains taut. The chains J of all the rows of shutters are attached to the rods K, so that they may all move together. The two weights L upon each side of the building should be of the same size, so as to balance each other, and so that, in operating the shutters, no more power will be required than enough to move the said shutters. To the inner end of each of the shafts I may be attached a hand wheel or crank, M, for convenience in operating the shutters, or the shutters may be operated by drawing the rods K upward or downward. The outer ends of the shafts I should be covered with a cap to protect them from the weather, and for the same reason the tops of the shutters should be covered with a hood, N, attached to the wall of the building. With this construction all the shutters upon a side of the building can be closed and opened instantly, and from any floor of the building. One or more of the shutters, C, should be provided with a bolt or other fastenings to secure them when desired.

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

The combination of the connecting-bars D, friction-wheels E, and the supporting-rails F, when used for opening and closing two or more window-shutters, substantially as described.

2. The combination of the bars D, shutters C, and the chains H, when used to open and close window-shutters, as shown.

SETH R. FOSTER.

Witnesses:

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