

UNITED STATES PATENT OFFICE.

STASNISLAS DUFF, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN SHUTTER-WORKERS.

Specification forming part of Letters Patent No. 129,656, dated July 23, 1872.

Specification describing certain Improvements in Blind Operators and Fasteners, invented by STASNISLAS DUFF, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts.

My invention relates to a combination of certain operating parts, by means of which the outside blinds or shutters of windows can be opened, closed, or fastened securely at any required place without the necessity of opening the windows.

The accompanying drawing represents my invention.

Figure 1 is a front view of a window-frame and blinds, showing the outside attachment of the operating parts to the same. Fig. 2 is an inverted plan of the same. Fig. 3 is a view of the inside mechanism which operates the same.

The same letters, wherever they appear, refer to corresponding parts.

A is the window-frame. B B are the blinds. C is a crank-lever, to which is applied the power necessary to move the blinds. D is a triple rack, by means of which the pinions E F F operate the blinds. E is a pinion-gear working into the central portion of the rack D. F F are two pinion-gears working into the end portions of the rack D. G G are cranks connected with and turning with the pinions F F, and working in the slides K K, by means

of which the blinds are opened or closed at will. H is a semicircle of metal, having a number of ratchet projections for the purpose of holding C at any desired place. I I are two brackets, affixed to the frame A, in which the gears F F and the rack D operate. J is a bracket, (also affixed to the frame A about midway between the brackets I I,) in which the rack D and the gear E operate, said gear E being attached to the crank C and operating the other parts. K K are two metal ways affixed to the blinds B, in which ways the cranks G G operate. L is a spring which keeps the crank-lever C against the semicircular rack H.

The advantages of this invention are that it can be almost entirely covered from the weather, is very simple in its construction, and does not easily get out of order, and that it can be operated from the inside of the room without opening the window.

I claim as my invention—

The combination of the lever C, gear E, rack D, gears F F, and crank G, working in the ways K, with the blinds B B, and with the other operating parts, as and for the purpose specified.

STASNISLAS DUFF.

Witnesses:

ALBERT M. MOORE,
ABEL T. ATHERTON.