(No Model.)

2 Sheets—Sheet 1.

J. P. KOLZEM.

WINDOW VENTILATOR.

No. 418,193. Patented Dec. 31, 1889.

Fig. 1

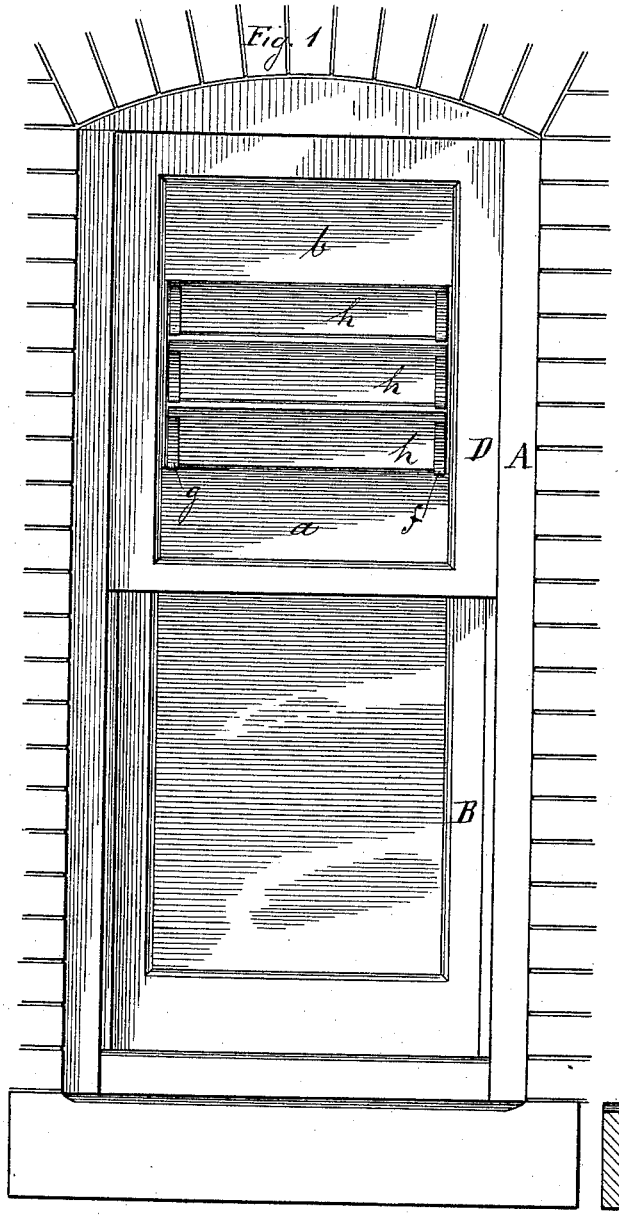
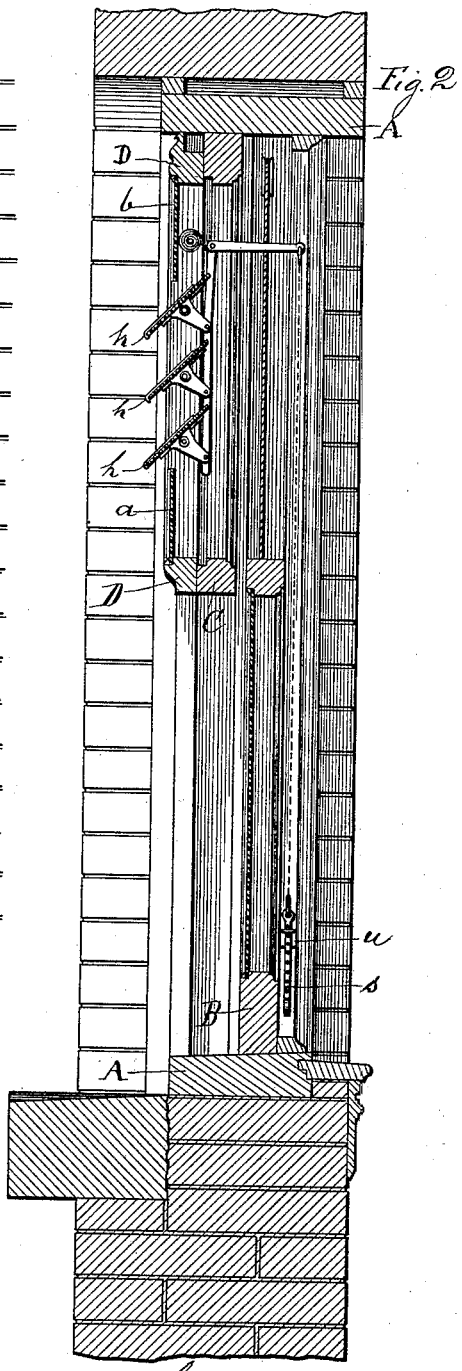


Fig. 2



Witnesses:
Otto Luebkert
H. Weathernot.

Inventor:
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Attorney

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3

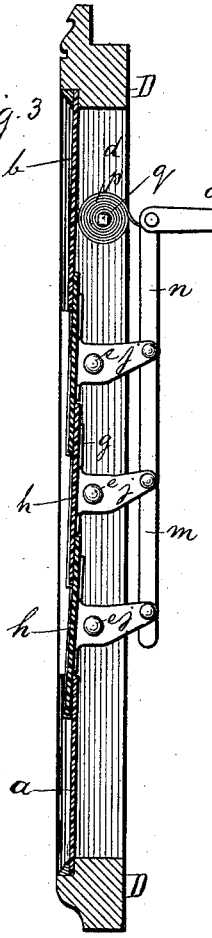


Fig. 4

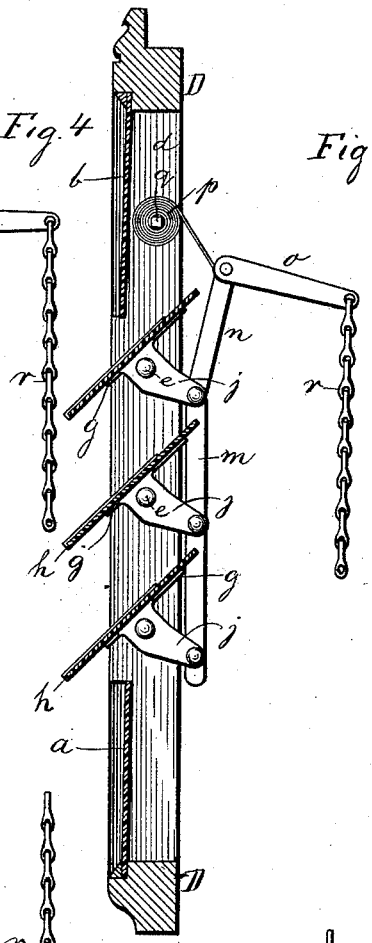


Fig. 5

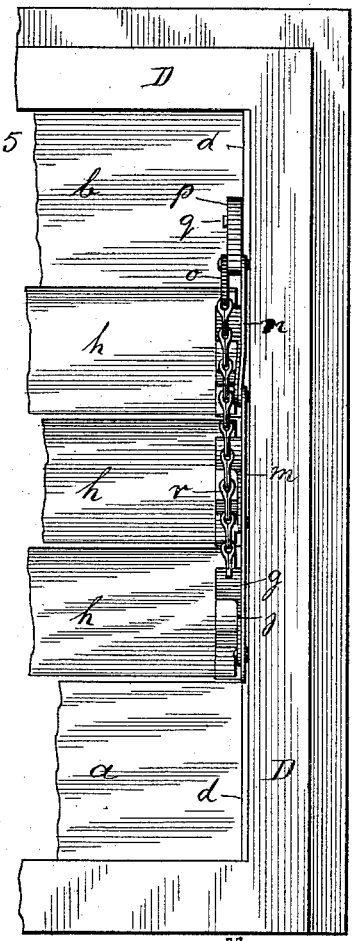
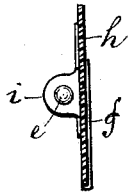
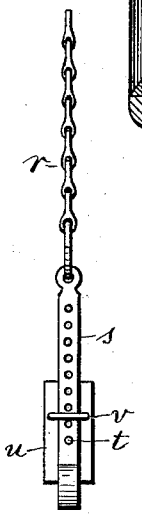
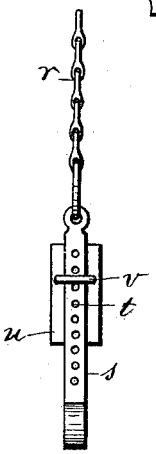
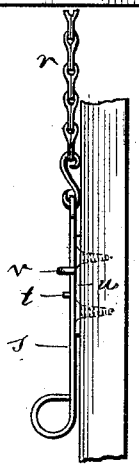


Fig. 6









Witnesses:
Otto Luebkert
H. Weatherwax

Inventor:
John Peter Kolzem
By Wm. C. Lotz
attorney

UNITED STATES PATENT OFFICE.

JOHN PETER KOLZEM, OF CHICAGO, ILLINOIS.

WINDOW-VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 418,193, dated December 31, 1889.

Application filed October 26, 1889. Serial No. 328,344. (No model.)

To all whom it may concern:

Be it known that I, JOHN PETER KOLZEM, a subject of the Emperor of Germany, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Window-Ventilators, of which the following is a specification, reference being had therein to the accompanying drawings.

This my invention relates to window-ventilators, with the object to provide a perfect ventilation without creating a draft and without obstructing or diminishing the light to enter the room; and with that object in view my invention consists of the novel devices and combinations of devices hereinafter described and specifically claimed.

In the accompanying drawings, Figure 1 represents an exterior elevation of a window provided with my improvements, and Fig. 2 a vertical cross-section of the same. Figs. 3 and 4 are vertical cross-sections of the ventilator with the adjusting device in its closed and opened positions. Fig. 5 is a portional inside elevation of the device, and Fig. 6 an edge view of one of the pivotal glass-slat holders detached.

Corresponding letters of reference in the several figures of the drawings designate like parts.

A denotes the window-sash frame, and B the lower and C the upper sash, all of which to be of the usual construction, with the sash to be counterbalanced by weights in the usual manner.

Against the outside of the upper sash C, after removing the plate of glass puttied therein, I secure by wood-screws another sash D, of about the same dimensions as sash C, and rabbeted on its exterior side edges and top to clear the outside beads of frame A. This auxiliary sash D is rabbeted in its outward face for inserting and rigidly securing therein a narrow plate of glass *a* in the bottom and a similar plate of glass *b* in the top of the same, both with putty in the usual manner, leaving a sufficient opening between such plates *a* and *b*.

Against the inward edge of each stile of sash D is secured a metal bar *d*, being full width of the thickness of such stile and notched out at both ends on one edge to clear the plates *a* and *b*, abutting against the same, and against each such bar *d*, intermediate of glass plates *a* and *b*, are pivotally secured by rivets *e* a series of glass-strip holders *f* and *g*. These holders *f* and *g* are made each to provide a groove or channel or V-flanges for inserting and securing therein by clamping or cementing the end of a strip of plate-glass *h* in a manner that each such strip is held between two such holders *f* and *g*, thus combined to be similar to a blind-slat that is transparent, the holders having each an eye-lug *i* for engaging rivet *e*, which for holders *g* are extended at the same time to provide arms *j*, by which to operate and angularly to adjust these strips *h*. These glass strips are set oblique, that the lowest one with its lower edge will exteriorly overlap the upper edge of rigid plate *a*, that the lower edge of each upper strip will exteriorly overlap the upper edge of the next strip below, and that the uppermost strip *h* with its upper edge will interiorly overlap the lower edge of rigid plate *b*. These strips *h* are thus arranged similarly to blind-slats for the purpose of making the movement of all simultaneous, and the ends of the several arms *j* are pivotally connected by a bar *m*. With the uppermost arm *j* is also coupled the end of an arm *n*, which is rigidly connected to another arm *o*, to be rectangular therewith, by a hub having coupled the outer end of a clock-spring *p*, mounted with its inner end upon a square stud *q*, that is rigid with plate *d*. To the end of arm *o* of the thus-formed L-lever is coupled one end of a chain *r*, the opposite end of which being coupled with a bar *s*, having a suitable handle to its bottom end, and being perforated with a series of holes, either one of which will engage a stud *t* of a plate *u*, that is rigidly fixed against the lower window-frame, and is provided with a guide-loop *v* for adjusting-bar *s* to be guided therein. By pulling bar *s* and thereby the lever *o* downward the spring *p* will be contracted and the strips *h* will be partly rotated to the desired extent to be locked by engaging one of the holes in plate *s* with stud *t*, and when thus opened the strips *h* will permit a free admittance of air into the room directed by the oblique position of the strips toward the ceiling, so as to cause no unpleasant draft, and will at the same time provide a free escape of foul

air and gases accumulating, thus bringing about a rapid exchange of air, at the same time serving to shed rain, and again by releasing bar *s* the spring *p* will swing the strips *h* to form close joints, one upon the other, almost entirely excluding the outdoor atmosphere. It will be readily seen a window-ventilator is thus provided by which a desirable ventilation can be had without obstructing the light through the windows, and which can be applied to any sliding-sash window and removed again without damaging the same.

For the purpose that with raising the lower or lowering the upper sash the upper bar of the lower sash may not strike against lever *o*, and thereby cause damage to any part of this ventilator, I can secure stop-blocks against the sides of the window-frame A—one for the upper sash below and one for the lower sash above—that will limit the movement of either sash to a point not to interfere with lever *o*.

What I claim is—

1. The combination, with a window, of the auxiliary sash D, secured exteriorly against the upper sash thereof, of glass plates *a* and *b*, rigidly secured in the top and bottom of sash D, of glass-plate slats *h*, secured between metal holders *f* and *g*, pivoted between the stiles of sash D intermediate of plates *a* and *b*, and the holders *g*, provided with arms *j*, and of rod *m*, connecting the arms *j* of all the slats for simultaneous movement, substantially as set forth.

2. The combination, with a window, of the auxiliary sash D, secured exteriorly against the upper sash thereof, of glass plates *a* and *b*, rigidly secured in the top and bottom of sash D, of glass-plate slats *h*, secured between metal holders *f* and *g*, pivoted between the stiles of sash D intermediate of plates *a* and *b*, and the holders *g*, provided with arms *j*, of rod *m*, connecting the arms *j* of all the slats, of bell-crank *n*, coupled with rod *m*, of spring *p*, holding suspended bell-crank *n* and tending to swing the slats one upon the other, and of chain *r*, coupled with bell-crank *n*, for opening the slats, all substantially as set forth.

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

JOHN PETER KOLZEM.

Witnesses:
WILLIAM H. LOTZ,
OTTO LUEBKERT.