(No Model.)

H. KOEPP.

WINDOW.

No. 491,653. Patented Feb. 14, 1893.

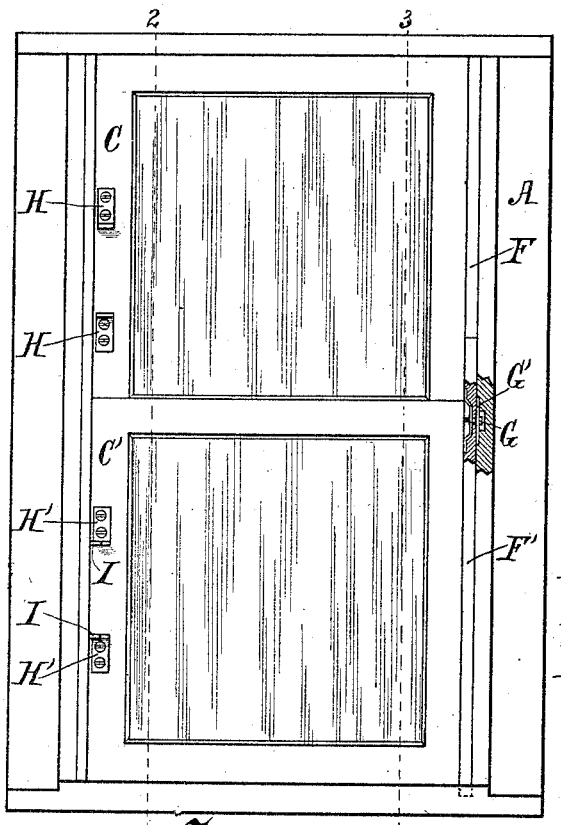

Fig. 1.

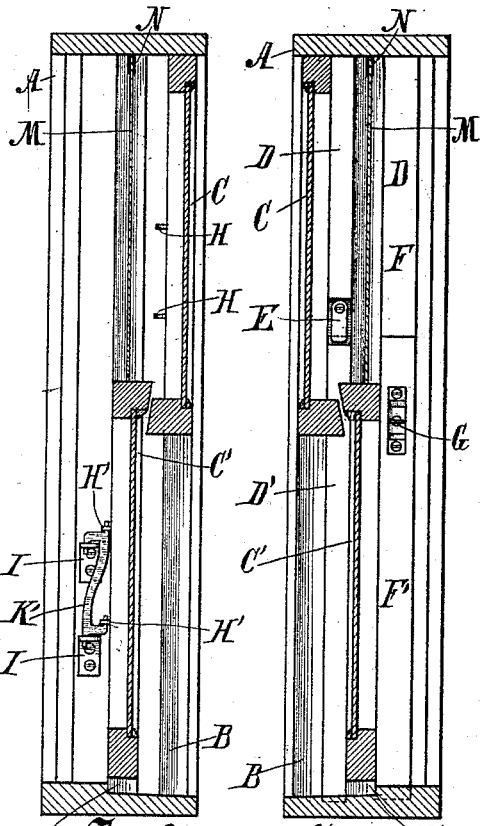

Fig. 2.

Fig. 3.

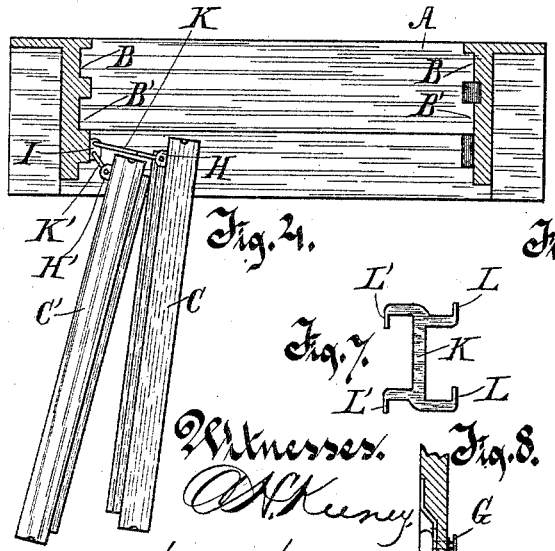

Fig. 4.

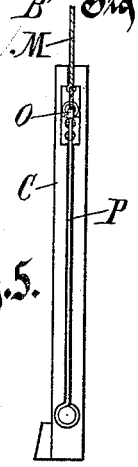

Fig. 5.

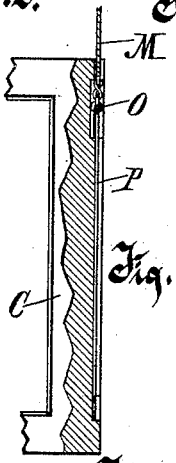

Fig. 6.

Fig. 7.

Fig. 8.

Fig. 9.

Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY KOEPP, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO FREDERICK Z. NEDDEN, OF SAME PLACE.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 491,653, dated February 14, 1893.

Application filed August 31, 1892. Serial No. 444,669. (No model.)

To all whom it may concern:

Be it known that I, HENRY KOEPP, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Windows, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

Buildings as now constructed are commonly provided with two glazed window sashes at each window, arranged to slide vertically past each other in the window frame. The outsides of these windows frequently require cleaning and it is a difficult and dangerous task to clean them when in place in the frame, particularly the windows in the second and higher stories of the building.

The object of my invention is to provide means for conveniently supporting the glazed sashes of the window temporarily and in such manner that the sashes may be swung horizontally into the building, so that the outside of the window may be readily cleaned.

A principal part of my improved device is removable from, and interchangeable on duplicate parts of the device fixed in the sash and frame, thus obviating the duplicating of this part, and avoiding expense, and eliminating an otherwise unsightly feature from view in the building, except only when in temporary use while cleaning the windows.

In the drawings, Figure 1, is a front elevation of a window including the glazed sashes and the window frame, parts of which are broken away to show the interior construction. Fig. 2, is a vertical transverse section on line 2—2 of Fig. 1, looking toward the left, to which is added the temporary supporting device for one of the sashes. Fig. 3, is a vertical transverse section on line 3—3 of Fig. 1, looking toward the right. Fig. 4, is a horizontal transverse section of the window frame showing the sashes supported by my improved devices and swung away from their normal positions into the room in the manner practiced for cleaning them. Figs. 5 and and 6, are details showing a device attached to the weight-supporting cord for the purpose of securing the cord and manipulating it when it is released from the sash, and also exhibiting the location and arrangement of the device in the edge of a sash. Fig. 7, is one of the removable cranes, forming a part of my sash-supporting device. Figs. 8 and 9 are details of a device for securing a portion of the sash stop in position in the frame.

The window frame A is of the common form for vertically sliding sashes and has two grooves, B B′ in which the sashes C and C′ respectively travel. The lower portion D′ of the parting strip D is removable, the removable portion being located in a vertical channel therefor in the frame, the top of which is secured in place by the swinging gravity button E, pivoted on the upper fixed part of the strip. The lower portion F′ of the stop F is also removable, being ordinarily secured in place by having its lower end let into a socket therefor in the sill of the frame, its upper end being secured to the frame by a turning elongated button G, which enters a corresponding socket in the frame through an elongated aperture in a plate G′ secured to the frame.

Two lugs H H, one above the other are secured to the face of the sash C, and two other lugs H′ H′, are in a similar manner secu ed to the face of the sash C′. The projecting part of these lugs is each provided with a vertical aperture for receiving therein a pintle of the crane. Another pair of lugs I I one above the other is secured to the frame; the projecting part of each of these lugs I I is provided with a plurality of apertures for receiving therein the pintles of a plurality of cranes. Ordinarily there are but two sliding sashes in each window but there may be three or more and in such case it would be desirable to have a corresponding number of apertures in the lugs I I for receiving the pintles of a number of cranes corresponding with the number of sashes in the window frame.

Double removable cranes K K′, each provided with two sets of pintles L L′, are formed of such size and shape that the pintles of each side of the crane are in axial line with each other and are so arranged that the pintles on one side are adapted to take into the lugs I I on the frame, while the pintles on the other side of the crane are adapted to receive thereon the lugs H′ H′ on the sash. The lugs I I are so located on the frame and the cranes K K′ are of such form that the cranes are adapt-

ed to support the sashes respectively, a little above and free from the sill of the frame, so that when the removable portion F′ of the stop, and the removable portion D′ of the parting strip are removed, the sashes may be swung away from the frame into the building. The crane K is of greater extent laterally than the crane K′, and is thereby adapted, as will be seen by reference to Fig. 4, to support the upper and outer sash C in such position that it can swing away from the frame into the building, alongside of the lower sash C′.

It will be understood that with fixed lugs corresponding to the lugs I I on the frames and H and H′ on the sashes in all the windows of a building, the sashes in any of the windows can at any time, be supported temporarily and swung inwardly for cleaning on a single set of cranes which can be used interchangeably with any of the windows.

For balancing the windows, cords M, provided with weights (not shown) at their outer ends, run over pulleys at N in the upper portion of the frame and at their inner ends are secured to the sashes by means of rings on the ends of the cords, which catch onto hooks O, fixed in the edge of the sashes.

For conveniently releasing the cords from the sashes a rod P, is connected to the inner extremity of each cord conveniently, by means of the ring which engages the hook O, which rod is pendent from the end of the cord and normally lies in a groove in the edge of the sash. As this edge of the sash faces against the bottom of a groove in the frame, the rod P and the cord, which is also in a groove, are not visible, while the sashes are in position in the window.

When a sash is supported on a crane and is swung away from the frame, the rod P may be used as a handle or means of pulling down on the cord and releasing it from the hook O, and the cord being allowed to run over the pulley N, until the rod P reaches the pulley, the rod acts as a pin or stop bearing against the frame and preventing the escape of the cord through the pulley aperture. When the sash is to be replaced in the window frame the cord may be again readily retrieved by means of the rod-handle P.

What I claim as my invention and desire to secure by Letters Patent, is:—

1. The combination with a window frame and a vertically sliding sash therein, of lugs fixed on the sash in vertical alignment, other lugs fixed on the frame one above the other vertically, and a removable crane arranged to engage the lugs on the frame and on the sash and to support the sash pivotally thereon, substantially as described.

2. The combination with a window frame and a vertically sliding sash therein, of a plurality of lugs fixed on the frame in vertical alignment other lugs fixed on the sash in vertical alignment adjacent to that part of the frame to which the lugs aforesaid are attached, and a removable crane having a plurality of pintles arranged in pairs to enter apertures in the lugs whereby the crane is made to support the sash, substantially as described.

3. The combination with a window frame and a plurality of vertically sliding sashes therein, of a pair of lugs fixed on each sash, a pair of lugs fixed on a frame, each lug having a plurality of apertures and a plurality of removable cranes of unequal extent laterally, adapted to engage the lugs on the frame and respectively to engage the lugs on the sashes, and support them so that the sashes can swing horizontally alongside each other, substantially as described.

4. The combination with a window frame, a sash having a groove in its edge, and movable vertically in the frame, the sash being supported by weight-provided cords and means other than the cords for supporting the sash temporarily, of a pendent rod secured to the end of the cord and arranged to rest normally in the groove in the edge of the sash and to serve as a means for securing and drawing down the cord when released from the sash, substantially as described.

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

HENRY KOEPP.

Witnesses:
F. J. NEDDEN,
C. T. BENEDICT.