(No Model.) 2 Sheets—Sheet 1.

J. C. KAHLE.

WINDOW.

No. 574,093. Patented Dec. 29, 1896.

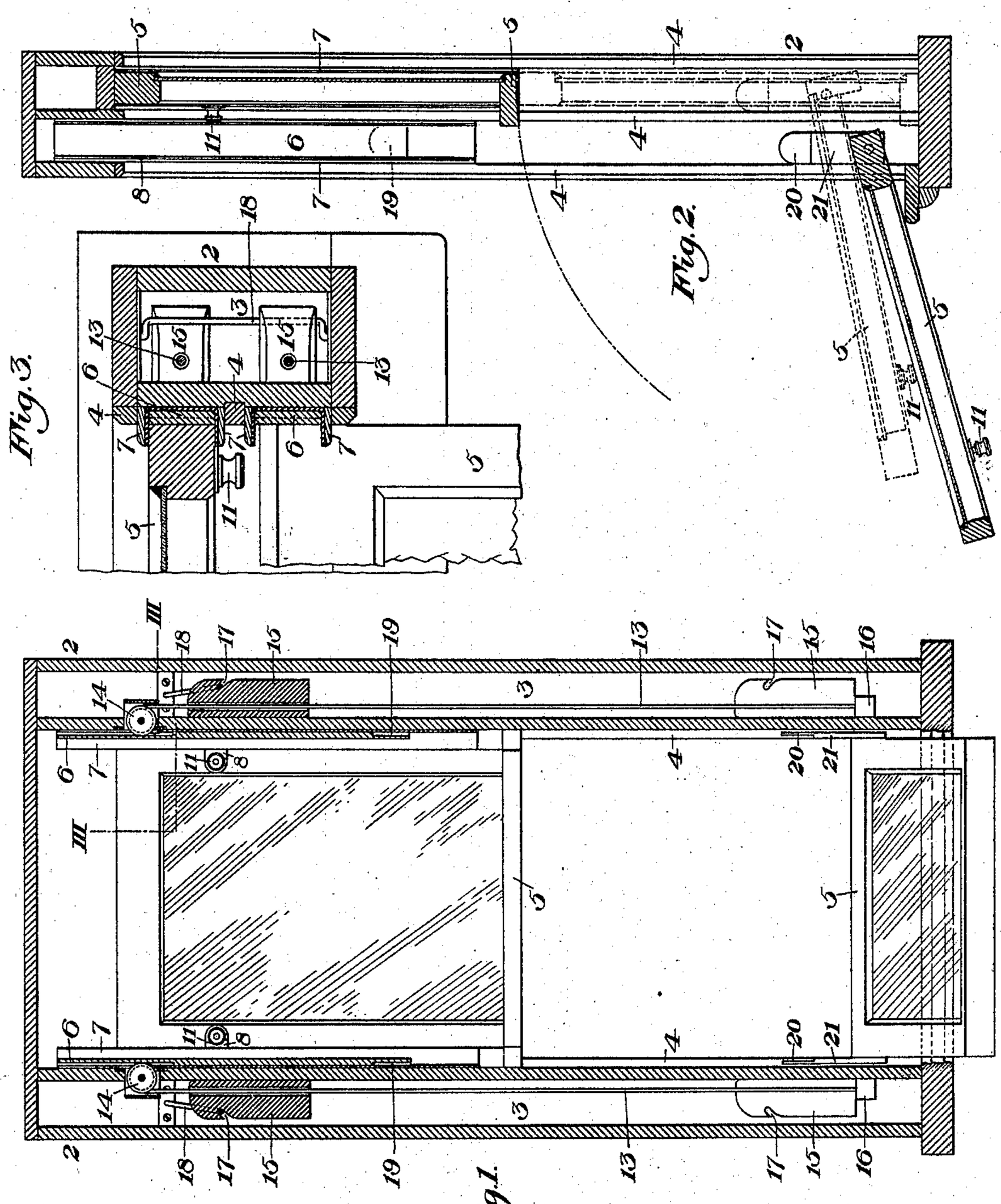

Fig. 2.

Fig. 3.

Fig. 1.

WITNESSES

Warren W. Swarey

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(No Model.) 2 Sheets—Sheet 2

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WINDOW.

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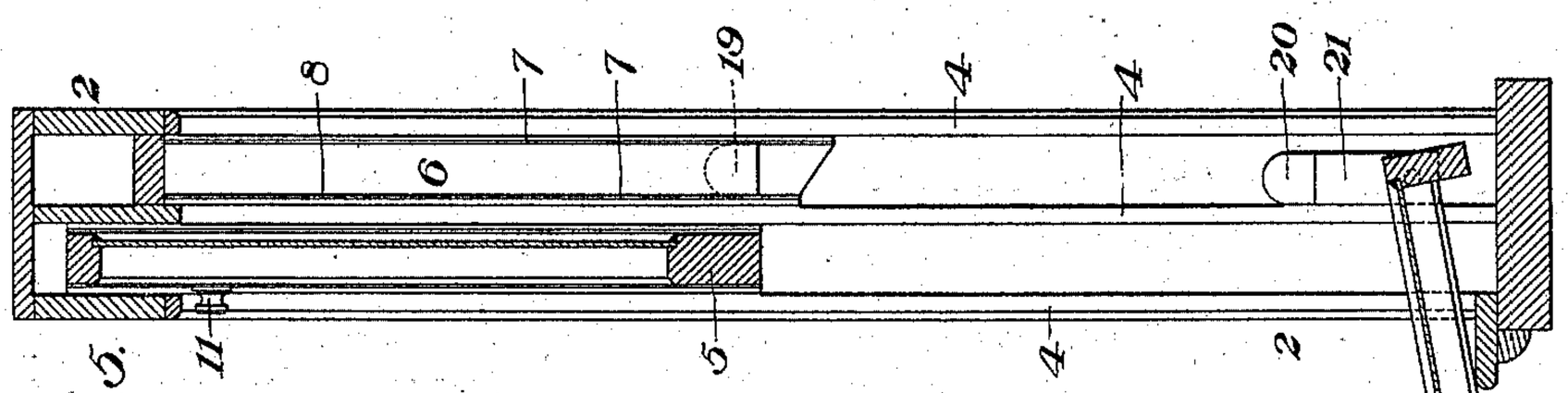

Fig. 5.

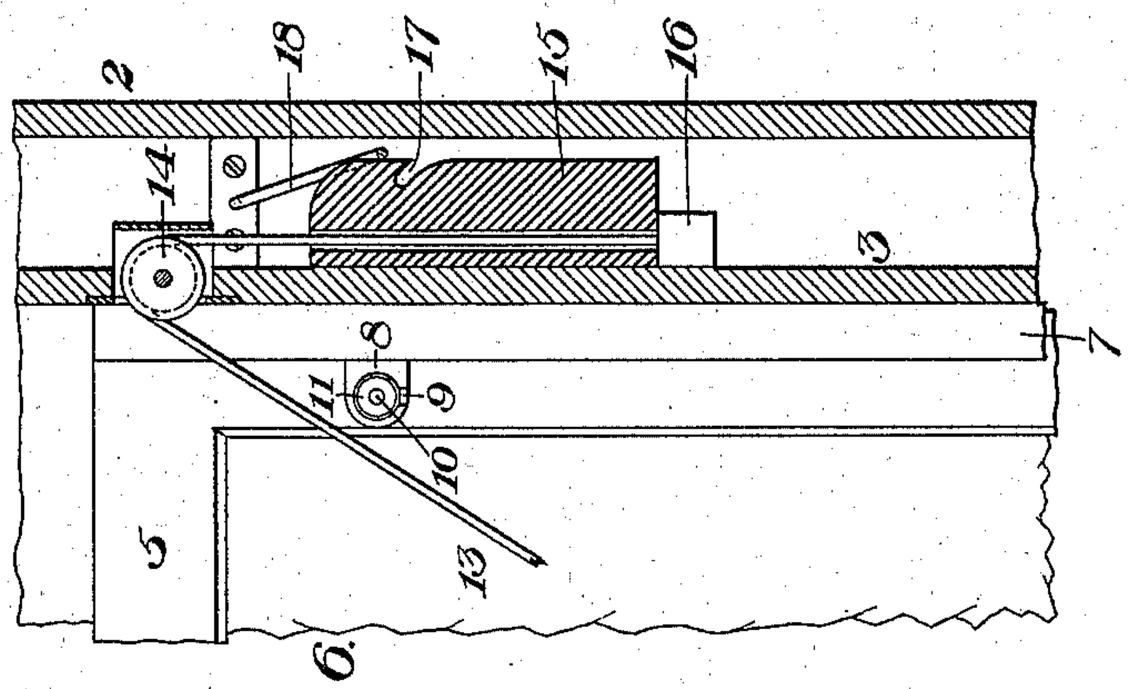

Fig. 6.

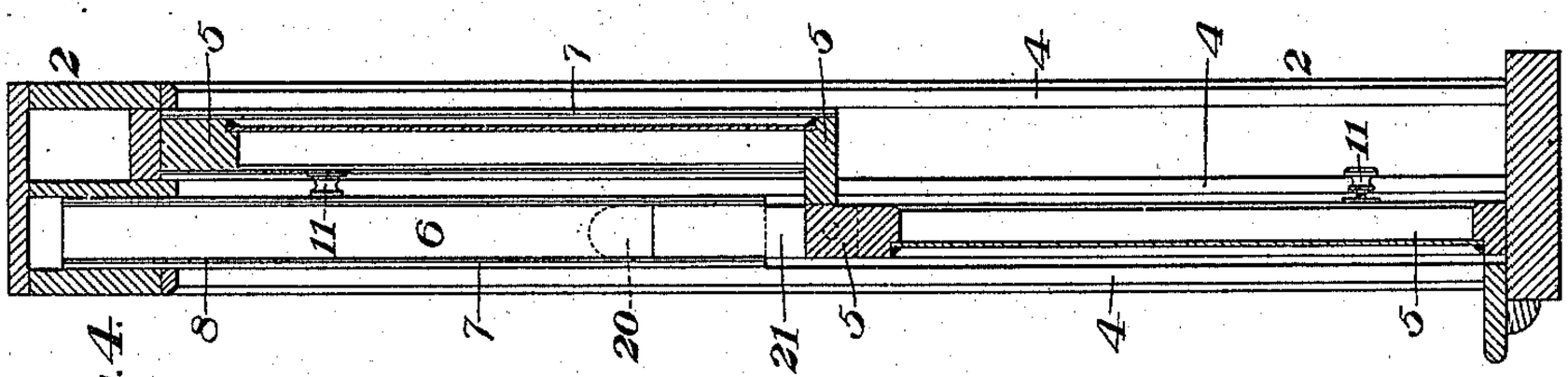

Fig. 4.

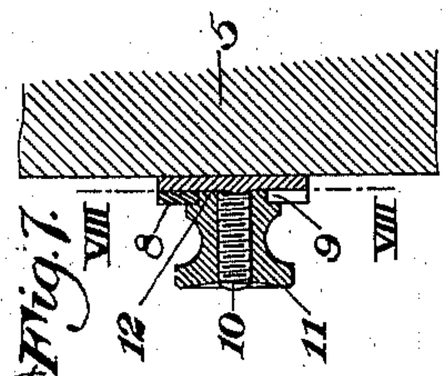

Fig. 7.

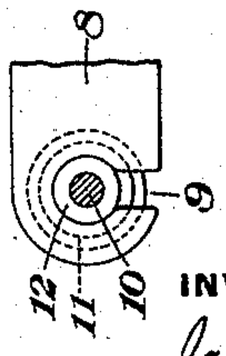

Fig. 8.

WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES C. KAHLE, OF OIL CITY, PENNSYLVANIA.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 574,093, dated December 29, 1896.

Application filed May 21, 1896. Serial No. 592,399. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. KAHLE, of Oil City, in the county of Venango and State of Pennsylvania, have invented a new and useful Improvement in Windows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section of a window constructed in accordance with my invention, the lower sash being swung inwardly. Fig. 2 is a similar section taken at right angles to that of Fig. 1. Fig. 3 is a detailed section on the line III III of Fig. 1. Figs. 4 and 5 are sections similar to Fig. 2, Fig. 4 showing the lower sash reversed and Fig. 5 the outer swung inwardly. Fig. 6 is a detailed view of the sash cord and weights, and Figs. 7 and 8 are detailed views of the slide-securing mechanism.

My invention relates to the construction of windows and window-sash attachments, and is designed to provide a window in which the sash may be easily and quickly swung inwardly for cleaning or repairs without the removal of any stops or bead-strips.

In the drawings, 2 represents the window-frame, having the usual pulley-stiles 3 3 at each side, these stiles being provided with stationary vertical stops or beads 4, forming the grooves for guiding the sashes in their vertical movement. The sashes 5 5 are narrower than the transverse distance between the edges of the stops, and secured to the opposite edges of these sashes are slides 6 6, which fit neatly between the stops and are provided with right-angled flanges 7 7, inclosing the side edges of the sash. Each of these slides is provided with a projecting lug 8, having a circular recess into which leads a lower vertical slot 9, this lug being arranged to take over a stationary screw 10, secured to the side member of the sash, this screw being provided with a thumb-nut 11, having at its inner end a reduced ring-shaped portion 12, arranged to enter the circular recess in the slide-lug and secure the slide firmly to the sash.

To prevent the lug from defacing the sash as it moves thereover, I fix the same slightly forward of the front face of the sash, so that it will not contact therewith in its movements. The sash-cords 13 are secured within suitable recesses in the outer faces of the slides, and passing over the usual pulleys 14 extend longitudinally through holes in the square weights 15 and are secured to lower smaller weights 16 of any suitable form, upon which the larger square weights rest. Each of these upper larger weights 15 is provided in its outer face with an angular slot 17, which, when the weight is raised by hand to a point near the pulley and then slowly lowered, will engage with a loosely-swinging loop 18, pivoted within the sash-cord channel, this loop extending transversely across the channel, so as to be engaged by either of the weights, as desired.

At their lower ends the slides 6 are cut away in thickness and are provided with a vertical recess 19, adapted to receive the upwardly-projecting rounded lug 20 of a short strip 21, which rests loosely within the groove, and which, when the slide is secured to the sash, fits in the recessed portion of the slide and makes it of substantially the same thickness throughout. The lower end of each sash is pivoted between these short strips, so that when the slides are detached from the window-sash the sash may be swung inwardly for cleaning or other work thereon.

If it is desired to prevent a wind blowing through the room during the cleaning of the window, the short strips may be slid upwardly to their upper limit and the sash thus completely reversed.

The short strips 21 for the outer sash are preferably somewhat longer than those for the inner sash, so that the outer sash may be swung inwardly over the inner one. The outer sash for this same reason is pivoted at a higher point upon its sides.

To allow the outer sash to swing inwardly freely when the slides are loosened therefrom, the lower ends of these slides for the outer sash are preferably cut away or beveled, as shown, to allow the upper end of the sash to swing inwardly clear of the slides.

The operation of my invention will be apparent to those skilled in the art, the slides being firmly secured to the sashes and moving therewith in the ordinary movements of the window. When it is desired to clean one of the sashes, the nuts 11 being loosened the lugs upon the slides are freed from the screws 10, thus allowing the slides to move upwardly

beyond the sash when in its lower position. If the full force of the weights acted upon these slides to raise them, they would be moved upwardly with great force and probably injure parts of the window. To obviate this, I employ the double-weight system, above described, and prior to loosening the slides the cord, being seized by the hand, is drawn downwardly until the square weight is at its upper limit, after which, it being lowered slowly, the swinging loop will enter its angular slot, and thus support this square weight. When the slide is loosened, the lower smaller weight will therefore act alone upon the slide, this smaller weight preferably being of such a size that it will just counterbalance the slide, which will therefore stop in any position to which it is moved, and can be so moved easily and freely. After the slides are thus moved upwardly the sash is swung inwardly, it pivoting upon the lower short strips and being in convenient position for cleaning or other operations. It then being swung back to place it may be moved into its upper position, and the other sash being lowered is operated upon in a similar manner, or, if desired, both sashes may be swung inwardly at the same time, the outer sash swinging over the inner one, as above described.

The advantages of my invention will be apparent to those skilled in the art, since the sashes may be quickly and easily swung inwardly without the removal of any stops or strips, while their ordinary operation is not hindered. The flanges of the slides projecting inwardly over the sash give a very neat and ornamental appearance to the sash, and the whole construction is simple and durable.

It will be understood that the separable slides may be employed upon sashes without the system of double weights I disclose, and many other changes may be made in the form and arrangement of the parts without departing from my invention, since

What I claim is—

1. The combination with a window-sash, of a vertical slide fitted to its side edge, a projecting screw upon the sash provided with a thumb-nut, and a lug upon the slide arranged to take over the screw and having a recess arranged to be engaged by the thumb-nut, substantially as described.

2. The combination with a window-frame and a sash movable therein, of a slide detachably secured to the edge of the sash, a sash-cord secured to said slide and passing through a weight which slides freely thereon, an adjustable catch for said weight and another weight secured to the outer end of said cord, substantially as described.

3. The combination with a window-sash having a slide detachably secured thereto, of a sash-cord secured to said slide, a weight having a slot arranged to be engaged by a loop within the weight-channel, a longitudinal hole in said weight through which the sash-cord passes, and a second weight secured to the end of the cord, substantially as described.

4. The combination with a window-sash, of a slide detachably secured to its side edge, a sash-cord secured to said slide, a weight having a flat side to hold it in the same relative position in the weight-channel and provided with an angular slot adapted to be engaged by a loosely-swinging loop in the channel, said weight having a longitudinal hole through which the sash-cord passes, and a weight secured to the end of said cord, substantially as described.

5. The combination with a window-sash, of detachable slides secured to its side edges, these slides being made in two parts, the sash being hinged to the lower separable parts of the slides, substantially as described.

6. The combination with a window-sash, of slides detachably secured to its side edges, each slide having a lower inner detachable strip to which the lower end of the sash is pivoted, these strips having lugs arranged to enter recesses in the slides proper, substantially as described.

In testimony whereof I have hereunto set my hand.

JAMES C. KAHLE.

Witnesses:
G. I. HOLDSHIP,
C. BYRNES.