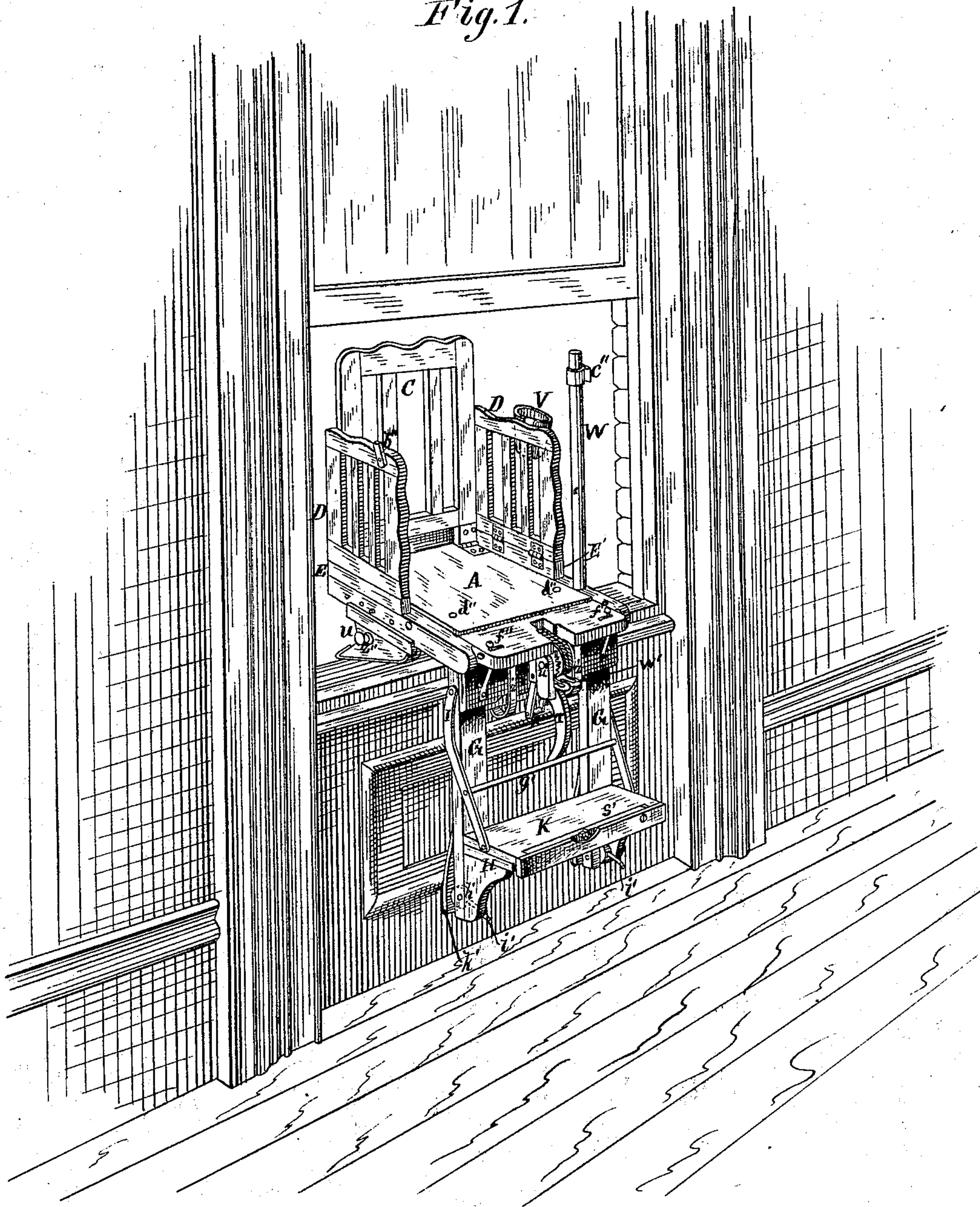


A. DORMITZER.
Window-Cleaning Chair.

No. 219,234.

Patented Sept. 2, 1879.

Fig. 1.



WITNESSES:

Henry N. Miller
C. Sedgwick

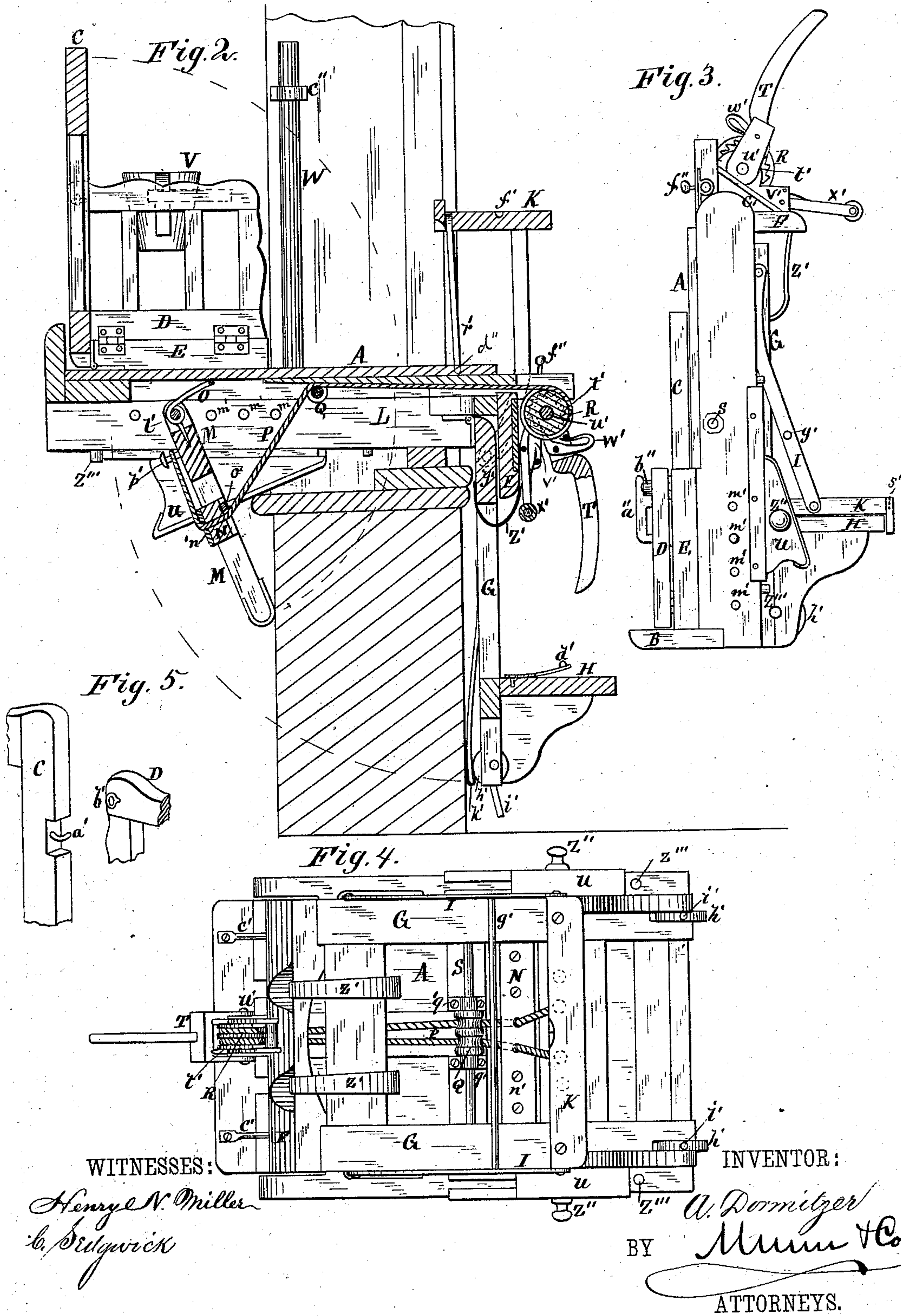
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UNITED STATES PATENT OFFICE.

ANNA DORMITZER, OF NEW YORK, N. Y.

IMPROVEMENT IN WINDOW-CLEANING CHAIRS.

Specification forming part of Letters Patent No. **219,234**, dated September 2, 1879; application filed June 2, 1879.

To all whom it may concern:

Be it known that I, ANNA DORMITZER, of the city, county, and State of New York, have invented a new and Improved Window Cleaning Step-Chair, of which the following is a specification.

Figure 1 is a perspective view of my improved chair, showing it in position for use. Fig. 2 is a vertical sectional elevation of the same. Fig. 3 is a side elevation of the chair detached from the window and closed. Fig. 4 is a plan of the under side of the chair closed. Fig. 5 is an enlarged view of sections of the guards, showing the device for holding them together.

Similar letters of reference indicate corresponding parts.

My present invention is an improvement on the window-cleaning chair for which Letters Patent Nos. 200,441, 206,935, and 206,936 were granted to me, respectively, February 19 and August 13, 1878.

The object of my present invention is to still further simplify the adjustment of the chair, and to make it more reliable and complete.

The invention consists in the combination of a platform, folding guards, supports, steps, braces, and their auxiliary parts and mechanism, as will be hereinafter more fully described.

In the drawings, A represents a platform of suitable size to sit or stand upon, provided with a raised strip, B, fastened along its rear edge, to serve as a partial support to the back guard, C, that is hinged on the face of the platform between the two side guards, D D, that are hinged on the side strips, E E, which are securely fastened on the edges of the platform. When opened these guards are secured in an upright position by the engagement of the hooks *a'* of the back guard in the screw-eyes or staples *b'* of the side guards.

On the under side of the platform, and at its opposite end, is secured the strip F, which is further strengthened and supported, as is also the projecting front edge of the platform, by the braces *c' c'*. Hinged to the under side of the platform, just in the rear of the strip F, are the two supports G G, that carry the main step H, and to a side of each of these supports is pivoted the flat curved iron supports I, that carry the auxiliary step K, that swivels between them, and is held to the main step, when

desired, as shown in Fig. 1, by the spring *d'*, which is fastened on the main step, and engages in a slight depression or socket, *f'*, in the under side of K. These two iron supports are stiffened by the rod *g'* that connects them. This step is also provided with two pivoted legs, *r' r'*, that are folded in a slot, *s'*, when the step is used, as in Fig. 1, and which are unfolded and adjusted, when desired, as shown in Fig. 2.

The supports G G have their lower ends slotted, and pivoted in the slots are the eccentrics *h' h'*, which are provided with pins or handles *i' i'* to operate them. They are designed to press the springs *k' k'*, that are secured on the rear faces of the supports, against the wainscot of the window when the chair is placed in position, as shown in Figs. 1 and 2, and the tips of these springs are faced with leather or other soft material, so that they shall not deface the paint, and that they may hold more firmly against the wainscot.

Passing through the side strips, L, of the chair and under the platform is a strong iron rod, *l'*, which may be adjusted to suit the thickness of any window-sill in any of the holes *m'* in the strips. Swinging on this rod is the rear or outer support, M, of the chair, to which great strength is imparted by the cross-beam N, that is plated with iron *n'* on one face and strengthened by a truss-rod, *o'*, on the other.

The spring O is wound around the rod *l'*, and its loop rests against the bottom of the platform, while its ends are entered into the upper edge of the support M, and thus it serves to throw open the support as the tension of the cords P is relaxed. These cords are made fast to two of the pins *p'*, and thence passed through the cross-beam N and over the grooved rollers Q through the strip F, to be secured on the drum R at the front of the chair.

The rollers Q revolve on a strong rod, S, that passes through the side strips of the chair, and is firmly held in place by the clamps *q' q'*.

The drum R has fixed on each side of it a ratchet, *t'*, and it is keyed on a shaft or pin, *u'*, between the two lugs *v'*, which pin also serves as a pivot for the fork T, that embraces the lugs, and has pivoted on the inside of each tine a pawl, *w'*, that engages with the ratchets, and on the inside of the downward projections of the lugs are pivoted the pawls *x'*, that also engage with the ratchets. To the back of a

cross-piece, y' , that is secured between the heads of the supports $G G$, are fastened the two springs Z' , that are bent upward around the strips F , and lie in grooves made therein. These springs serve to hold the supports and steps open in the position shown in Figs. 1 and 2, and also to hold them closed when in the position shown in Figs. 3 and 4.

The chair is put in position for use by unfolding it and placing the platform upon the window-sill, with the rear outside, and drawing taut the cords P , so as to bring the rear support, M , into close contact with the outside of the wall. The cords are drawn taut by turning the fork T from the upright to the dependent position, in doing which the pawls w' engage in the teeth of the ratchet t' and revolve the drum R , to which the cords are secured. If turning the fork down once does not suffice, the pawls x' will hold the ratchets and drum in position, while the fork may be turned up again for a fresh purchase of the pawls w' ; or the pawls can be made to push the ratchets round a few teeth at a time. When the cords have been drawn taut the eccentrics $h' h'$ are turned so as to press the springs $k' k'$ against the wainscot, for the purpose of securing the chair more firmly, and the sliding wedges U , that have their edges faced with leather or other soft material, and are provided with handle Z'' , are pushed as tightly as possible in between the window-sill and chair, in order to complete the security and stability of the device. These wedges are held in grooves on the lower edges of the side strips, L , and are prevented from moving too far rearward by the stops Z''' .

When the chair is in position the back and side guards are raised and secured as hereinbefore described, and the pail V is secured by a nib upon it in the loop a'' , that also serves as a catch for the button b'' on the opposite guard when the chair is closed. The standard W is also set in a socket in the edge of the chair, and is provided with a device, c'' , from which may be suspended a bucket or other vessel, for the convenience of the person at work upon the window. Should it be desirable for the operator to reach higher than is possible from the platform itself, the auxiliary step K may be raised to the position shown in Fig. 2, and so secured by the insertion of its legs in the sockets d'' made in the face of the platform, and by the spring-bolts f'' , that project from the sides of the platform.

When not in use, the chair may be folded, as shown in Figs. 3 and 4, so that it will occupy but little space.

I am aware that standards for supporting paint-buckets and tool-receptacles have been applied to ladders, and pawls and ratchets to lifting-jacks and hoisters; but

What I claim is—

1. A window-cleaning chair having the plat-

form A , raised strip B , side strips, E , strip F , supported by braces c' , guards $C D$, supports $G I$, rod g' , springs k' , eccentrics h' , step H , auxiliary step K , rod l' , holes m' , support M , provided with plated and trussed cross-beam N , spring O , rod S , clamps q' , parts $Q S$, drum R , provided with ratchets t' , shaft w' , lugs v' , provided with pawls x' , fork T , provided with pawl w' , and sliding wedges U , provided with handles Z'' and stops Z''' , constructed and arranged substantially as herein shown and described.

2. In combination with the window-cleaning chair herein described, the standard W , provided with device c'' , adapted to support a bucket provided with a nib, substantially as herein shown and described.

3. In the construction of a window-cleaning chair, the combination of the drum R , provided with ratchet t' , shaft w' , lugs v' , provided with pawls x' , fork T , provided with pawls w' , cords P , and support M , substantially as herein shown and described.

4. In the construction of a window-cleaning chair, the combination of the springs Z' , supports $G G$, cross-piece y' , step H , springs d' and $k' k'$, eccentrics $h' h'$, supports I , rod g' , and auxiliary step provided with socket f' , legs $r' r'$, and slot s' , substantially as herein shown and described.

5. The plated and trussed cross-beam N , substantially as herein shown and described.

6. In the construction of a window-cleaning chair, the rear support, M , provided with cross-beam N , that is furnished with an iron plate, n' , and a truss-rod, o' , and spring O , substantially as and for the purpose described.

7. In the construction of a window-cleaning chair, the sliding wedges U , held in grooves of the side strips, faced with leather or other soft material, and provided with handles Z'' , substantially as herein shown and described.

8. The cords P , secured at one end, p' , and thence passing through the cross-beam N , over the grooved rollers Q , and through strip F , the ends being secured to drum R , substantially as shown and described.

9. The combination, with the rod, platform-support, and cords, of the spring O , wound around the rod, with loop resting against the lower face of the platform, and with ends entering the support M , which it serves to throw open as the tension of the cords P is relaxed, substantially as shown and described.

10. The spring-bolts f'' , in combination with the platform A and auxiliary step K , substantially as shown and described.

ANNA DORMITZER.

Witnesses:

C. SEDGWICK,

I. I. STORER.