

No. 675,907.

Patented June 11, 1901.

F. W. RICHTER.

FLOOR, SIDEWALK, OR WINDOW CLEANER.

(No Model.)

(Application filed May 29, 1900.)

2 Sheets—Sheet 2.

Fig. 4.

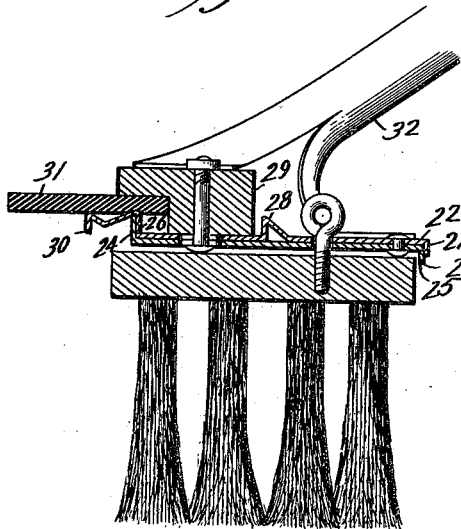


Fig. 7.

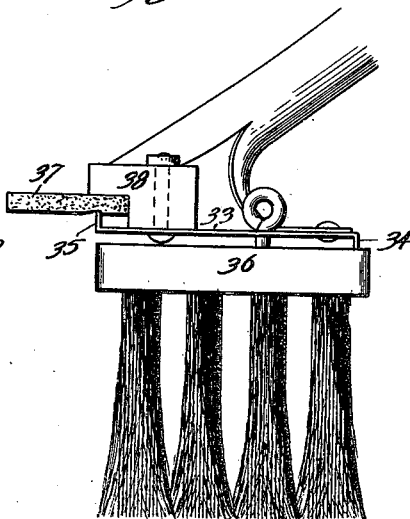


Fig. 9.

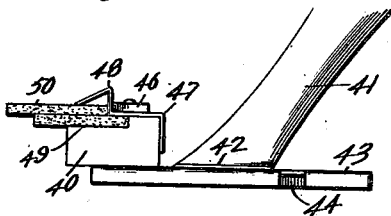
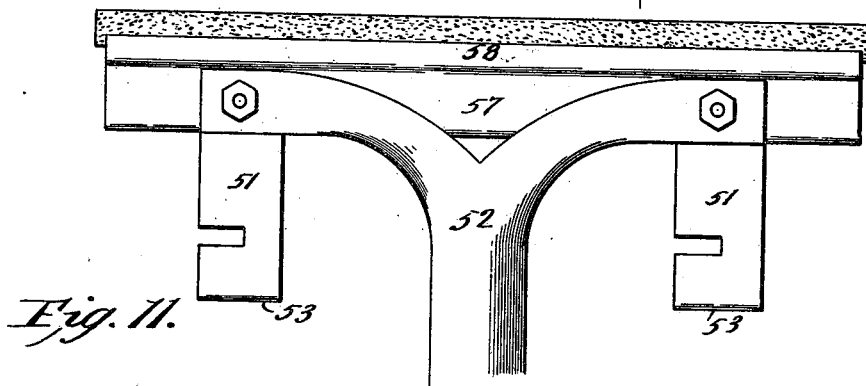
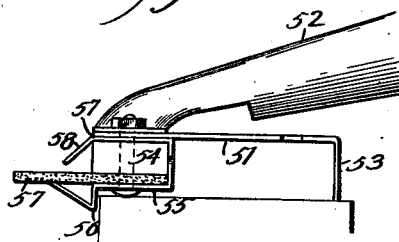


Fig. 10.



Witnesses

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UNITED STATES PATENT OFFICE.

FREDERICK W. RICHTER, OF CHICAGO, ILLINOIS.

FLOOR, SIDEWALK, OR WINDOW CLEANER.

SPECIFICATION forming part of Letters Patent No. 675,907, dated June 11, 1901.

Application filed May 29, 1900. Serial No. 18,429. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. RICHTER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Floor, Sidewalk, or Window Cleaner, of which the following is a specification.

The invention relates to improvements in floor, sidewalk, and window cleaners.

The object of the present invention is to improve the construction of floor, sidewalk, and window cleaners and to provide a simple, inexpensive, and efficient one which will be light, strong, and durable, and which may be readily handled, and which will enable dirt to be readily removed from floors and windows and snow and ice from sidewalks.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a cleaning device constructed in accordance with this invention and arranged for removing snow, ice, or other accumulation from sidewalks. Fig. 2 is a sectional view of the same, taken longitudinally of the handle. Fig. 3 is a similar view, a brush being secured to the supporting-plate. Fig. 4 is a sectional view illustrating a modification of the invention. Fig. 5 is a detail perspective view of the supporting-plate of the same. Fig. 6 is a similar view of one of the reinforcing-plates thereof. Fig. 7 is an end elevation showing another form of the invention. Fig. 8 is a perspective view of a window-cleaner, illustrating a modification of the invention. Fig. 9 is an elevation of a portion thereof. Fig. 10 is a similar view showing another form of window-cleaner. Fig. 11 is a plan view of the same.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a supporting-plate substantially L-shaped in cross-section and provided at one edge with a longitudinal flange 2, which is adapted to engage a rubber squeegee 3, having its inner portion interposed between the said flange 2 and a wooden bar 4. The

wooden bar 4, which is secured by bolts 5 or other suitable fastening devices to the upper face of the supporting-plate, is provided at its inner face with a longitudinal recess 6 for the reception of the inner portion of the squeegee. The projecting or depending portion 7 of the L-shaped supporting-plate has its edge 8 bent at an angle and it is adapted to serve as a scraper. The squeegee, which may be made of any thickness of rubber or other suitable material, is adapted to be reversed when its outer portion becomes worn. A brush 10 is adapted to be secured to the supporting-plate, as illustrated in Fig. 3 of the accompanying drawings, by means of suitable screws 14 passing through slots 15 of the body portion of the supporting-plate and provided with suitable heads for engaging the same. The depending portion 7 is adapted to assist in supporting the brush, and the back of the latter fits against the said scraper portion 7.

The cleaner is provided with a handle 16, arranged in a suitable metal socket 17 and preferably secured to the same by a set-screw 18. The socket is provided with a pair of arms 19, and it has an arm 20. The arms 19 diverge from each other and are secured to the outer face of the wooden bar by the adjacent bolts 5 thereof, and the other arm, 20, which extends in an opposite direction from the arms 19, is curved and is secured by bolts 21 to the outer face of the body portion of the supporting-plate. By this construction the handle, or rather the arms thereof, is adapted to support the cleaner, and the said arms form braces for connecting the bar and the supporting-plate.

In Figs. 4 and 5 the supporting-plate 22 is constructed of much lighter material than the supporting-plates of the other forms of the invention, and it is provided with reinforcing-plates 23, arranged at intervals and having oppositely-bent ends forming flanges 24 and 25, which are arranged contiguous to flanges 26 and 27 of the plate 22. The supporting-plate is further strengthened by a longitudinal groove forming an exterior projecting rib 28, located contiguous to the bar 29, and the squeegee-engaging portion of the supporting-plate is bent to form the said flange 26 and

to provide a projecting supporting portion 30 to stiffen the squeegee 31, which may be either light or heavy.

The cleaner shown in Fig. 4 is provided with a handle 32, constructed the same as that heretofore described.

In Fig. 7 of the accompanying drawings the supporting-plate 33, which is constructed of stout metal, is provided at its front and rear edges with longitudinal flanges 34 and 35. The flange 34, which is arranged at the back of the plate 33, extends downward and engages the back of a brush 36, and the other flange, 35, which is arranged at the front of the plate 33, extends upward and engages a squeegee 37, which is interposed between the supporting-plate and a wooden bar 38, constructed similar to the bar 4, heretofore described.

In Fig. 8 of the accompanying drawings is illustrated a window-cleaner provided with a brush 39, which is connected with a wooden bar 40 by a handle 41, provided with arms 42 and having plates 43 arranged on the back of the brush and interposed between the same and the bar 40 and secured to each of said parts. The plates, which may be connected with the arm 42 in any desired manner, are preferably flanged, as shown, and are provided with slots 44, receiving the shanks of screws 45, which are embedded in the brush. The bolts 46 or other suitable fastening devices which secure the bar 40 to the plates 43 also hold a clamping-plate 47 on the outer face of the bar 40, and the said clamping-plate 47, which has an L-shaped inner portion, is provided with an approximately V-shaped engaging portion 48, overhanging a recess 49 of the bar 40, as clearly illustrated in Fig. 9 of the accompanying drawings, and adapted to engage a squeegee 50. The squeegee 50 may be composed of two layers of rubber, or a single piece of rubber may be employed, and when two layers or strips of rubber are used one is arranged to project beyond the other, the innermost one being engaged by the body portion of the clamping-plate and the outer one being arranged in contact with the outer edge of the V-shaped engaging portion 48.

As illustrated in Fig. 10 of the accompanying drawings, the plates 51 of the handle 52 may be arranged at the outer face of the wooden bar instead of being interposed between the bar and the back of the brush, the inner or rear ends 53 of the plates 51 being bent downward to form arms. A clamping-plate is arranged at the inner face of the bar 54, and this clamping-plate 55 is provided with an approximately V-shaped outer portion 56, which supports the projecting portion of the squeegee 57. The squeegee is interposed between the inner portion of the clamping-plate and the inner face of the bar 54. The clamping-plate 55 is of the same shape as the clamping-plate 47, and it extends over a portion of the inner edge of the bar 54. The outer face of the bar 54 is preferably covered

by a plate 57, having a projecting portion 58, which is adapted to support the squeegee, especially when the device is used for operating on a polished floor or other surface. The projecting portion of the plate 57 is inclined, and this inclined portion and the inclined portion of the clamping-plate 48 are adapted to prevent water from flowing backward.

It will be seen that the cleaning devices are exceedingly simple and inexpensive in construction, that they are light, strong, and durable, and that they are adapted to be conveniently handled and arranged for operating on floors, windows, sidewalks, and other surfaces. It will also be apparent that squeegees of any thickness may be employed and that they may be readily reversed to increase the life of the same. Furthermore, it will be seen that the slots which receive the fastening devices for securing the brush and the bar to the supporting-plate admit of an adjustment of the latter to properly engage the same with the squeegee.

What is claimed is—

1. A device of the class described comprising a supporting-plate, a brush secured to the lower face of the same, a bar mounted on the upper face of the supporting-plate at the front edge thereof, a squeegee interposed between the bar and the plate and projecting from the front edge of the latter, and a handle secured to the bar and also to the back of the plate, whereby the device is supported at both the front and the back, substantially as described.

2. A device of the class described comprising a supporting-plate provided at its back with a depending flange adapted to be used as a scraper and arranged to support either a brush or a shovel, said plate forming a guard to retain the material on the flange when the latter is used as a scraper, a bar mounted on the plate at the front edge thereof, a squeegee interposed between the plate and the bar and projecting from the front of the device, and a handle secured to the bar and to the back of the plate, whereby the device is supported both at the squeegee and at the scraper, substantially as described.

3. A device of the class described comprising a supporting-plate having its front edge bent upward to form a flange and provided at its back with a depending flange adapted to be used as a scraper, the body of the supporting-plate forming a guard for retaining the material on the flange when the latter is used as a scraper, a brush secured to the lower face of the supporting-plate and supported by the depending flange, a bar secured to the upper face of the supporting-plate, a squeegee interposed between the plate and the bar and engaged by the upwardly-extending flange of the former, and a handle having arms secured to the bar and to the back of the plate, whereby the device is supported at both points, substantially as described.

4. A device of the class described comprising a supporting-plate provided at the back

with a flange extending downward and forward and adapted to serve as a scraper, the body of the supporting-plate being arranged to form a guard to retain the material on the
5 flange when the device is used as a scraper, and a handle extending rearward from the supporting-plate, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRED. W. RICHTER.

Witnesses:

RALPH M. FAY,
C. E. COWMAN.