Sept. 23, 1930. B. D. BATTOCLETTI 1,776,277

COMBINED CHIMNEY SWEEPER AND WINDOW CLEANER

Filed Jan. 26, 1929 2 Sheets-Sheet 1

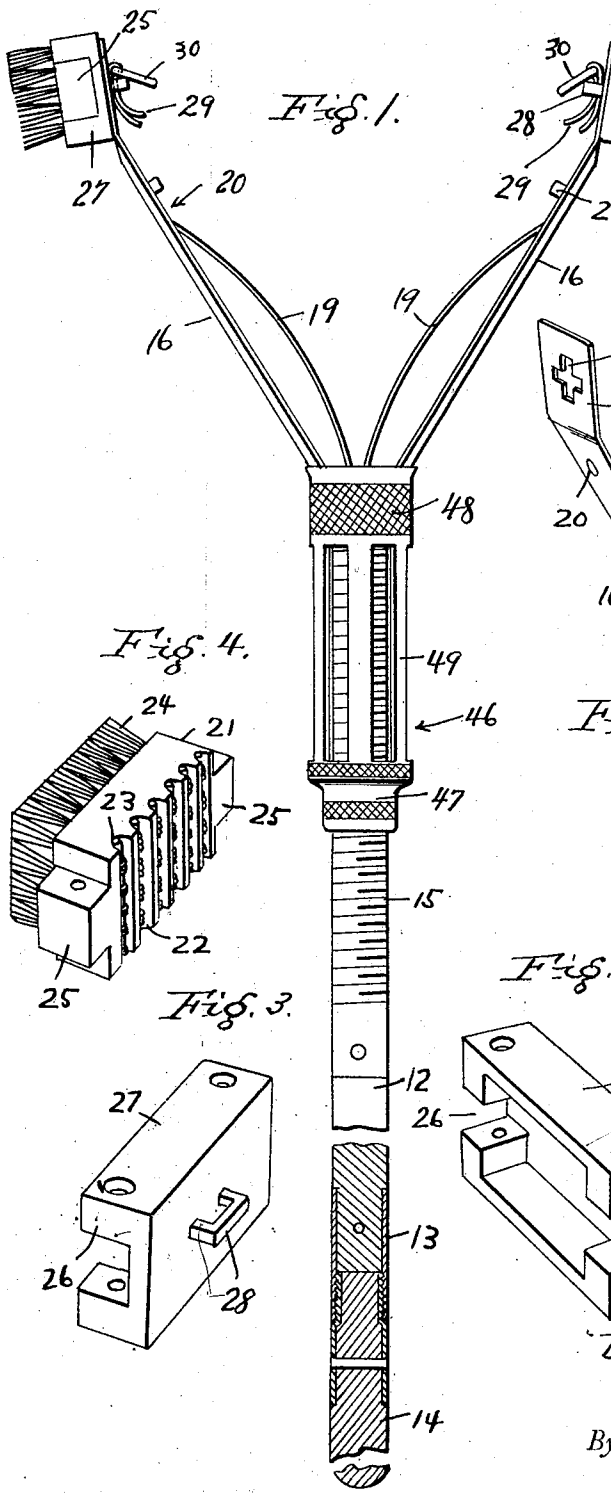


Fig. 1.

Fig. 4.

Fig. 3.

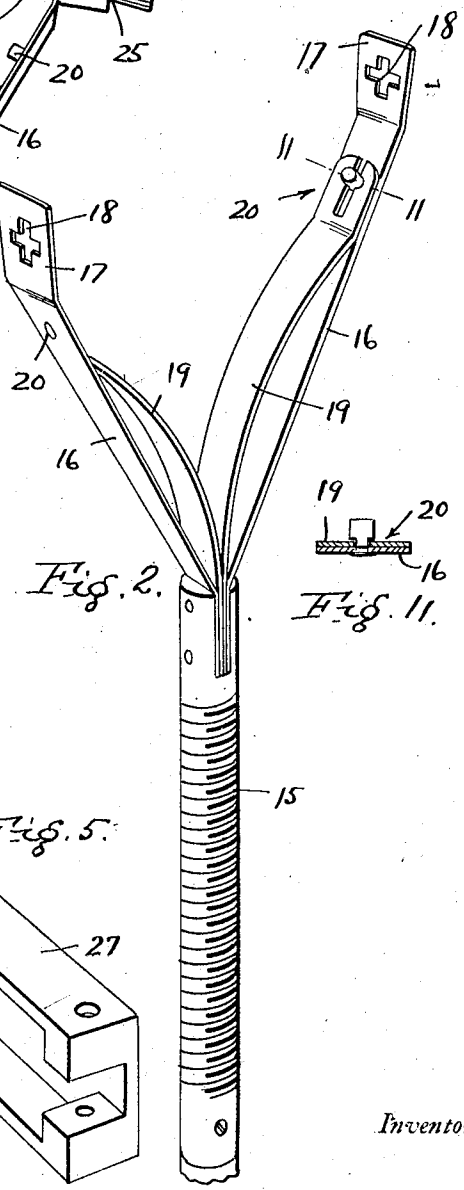


Fig. 2.

Fig. 11.

Fig. 5.

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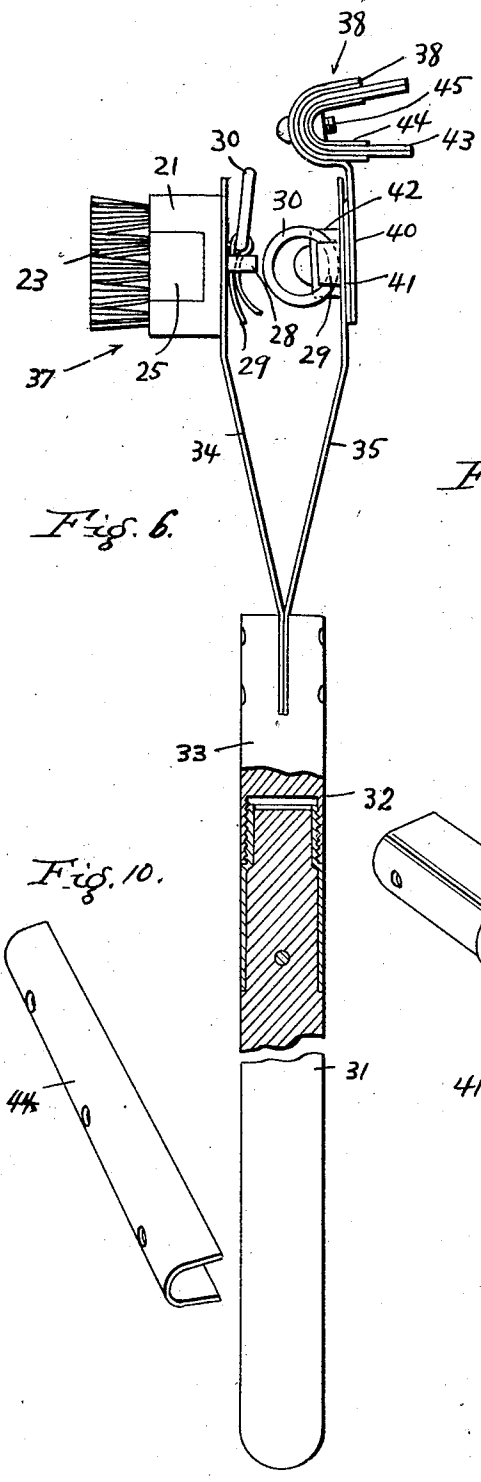


Fig. 6.

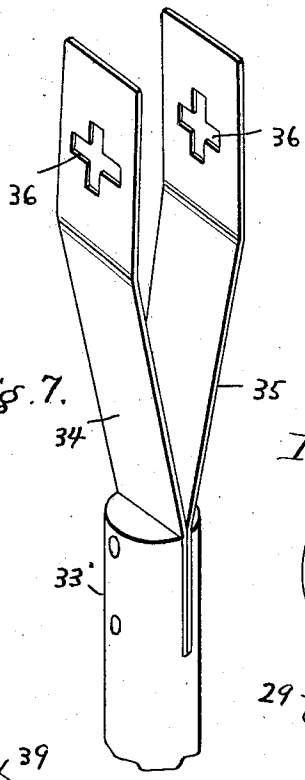


Fig. 7.

Fig. 8.

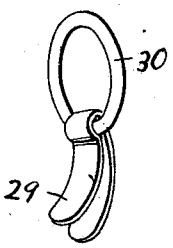


Fig. 10.

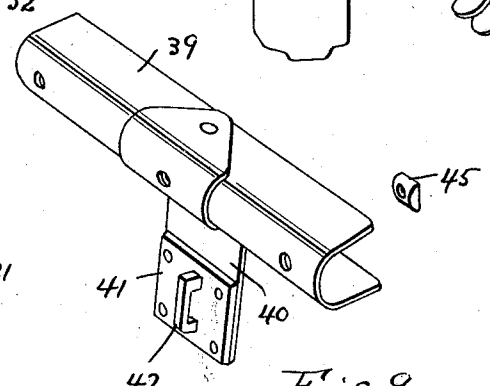


Fig. 9.

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UNITED STATES PATENT OFFICE

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COMBINED CHIMNEY SWEEPER AND WINDOW CLEANER

Application filed January 26, 1929. Serial No. 335,230.

This invention relates to improved devices, one of which is constructed to permit it to be conveniently employed as a chimney sweeper, and the other one of which is especially made for use as a window cleaner.

Generically speaking, the invention has reference to a structure embodying a suitable adjustable handle having a pair of diverging arms at its outer end carrying surface treating elements, these elements being separably mounted in place and the arms being of a resilient nature to provide the desired yieldable pressure.

The chimney sweeper is characterized by a handle including a screw threaded shank carrying outwardly diverging spring pressed arms on which brushes are detachably mounted, and a longitudinally adjustable sleeve mounted on the shank and cooperable with the arms for adjusting the relative angularity existing therebetween.

The window cleaner is characterized by a pair of arms, one of which carries a brush, and the other one of which carries a specially constructed squeegee.

The tool or implement carrying arms in both devices are characterized by certain common features as regards the method of attachment of the tool, and the brushes utilized in these devices are interchangeable.

Other features and advantages will become more readily apparent as the description proceeds.

In the drawings:

Figure 1 is a view in section and elevation of the complete chimney sweeping device.

Figure 2 is a perspective view of the threaded shank and the spring pressed carrier arm.

Figure 3 is a perspective view of a separable brush head.

Figure 4 is a perspective view of the complemental brush.

Figure 5 is a perspective view of the brush head seen in Figure 3 observing the same from a different side.

Figure 6 is a view in section and elevation of the complete window cleaning device.

Figure 7 is a perspective view of the outer end portion thereof with the tool removed.

Figure 8 is a perspective view of one of the details.

Figure 9 is a perspective view of a primary part of the squeegee, the elements of which are shown in separated relation.

Figure 10 is a perspective view of a complemental part of the squeegee.

Figure 11 is a cross sectional view taken approximately upon the plane of the line 11—11 of Figure 2.

Attention is first to be confined to Figures 1 to 5 inclusive. Here the reference character 12 designates an intermediate section of an adjustable handle which is provided at one end with a screw threaded coupling 13 carrying a detachable hand grip 14. Fastened rididly to the outer end of the section 12 is a screw threaded shank 15 which as shown in Figure 2 carries the retaining arm for the tools. I provide a pair of duplicate spring metal arms 16 having laterally directed outer end portions 17, each of which is formed with a cruciform opening 18. These arms are disposed in outwardly diverging relationship and are pressed outwardly under the action of the longitudinally bowed flat springs 19. The inner ends of the springs are rigidly fastened to the shank 15 and the outer ends have pin and slot sliding connection as at 20 to the intermediate portions of the arms.

The tools here employed are in the form of brushes. The brushes are of duplicate construction. Each comprises a suitable backing 21, see Figure 4 having transverse grooves 22 receiving retaining pins 23 for the bristles 24. Extensions 25 are formed on the ends of the backing and are adapted for reception in notches 26 formed in the opposite ends of the channel shaped head 27. This head is fashioned to telescopically receive the back 21 and it is provided with a retaining loop 28 adapted to be placed through the right angularly intersecting portions of the cruciform openings 18. Incidentally this permits the brush to be arranged at right angles to the arms or longitudinally with respect to the arms. In other words the brush may be arranged horizontally or vertically as desired. In either instance the brush is held in place by a peculiarly shaped cotter key 29 which passes

through the loop in the manner shown in Figure 1, this key having a finger ring 30 to facilitate manipulation.

In Figures 6 to 10, inclusive, I have shown the novel window cleaning device. This comprises a handle 31 having screw threaded connection as at 32 with a section 33 with which the arms 34 and 35 are rigidly connected. Here again the arms are disposed in outwardly diverging relation and the offset free end portions are provided with cruciform openings 36.

It will be observed that the arm 34 carries a detachable brush 37. This brush is the same in construction as the brushes already described and the same reference characters are employed to designate like parts. Also, since the cotter key 29 is the same in construction the same reference characters are employed to designate it and the finger ring. The arm 35 carries a separable squeegee generally designated by the reference character 38. This comprises a channel shaped backing member 39 as seen in Figure 9 which is provided with an attaching shank 40. The attaching shank is provided with a reinforcing plate 41 carrying a retaining eye or loop 42. A similar cotter key 29 and operating finger ring 30 cooperates with this loop 42 and the cruciform opening 36 of the arm 35 as shown for holding the squeegee in place. The squeegee also includes a pair of rubber strips 43 held in place by channel shaped retaining plates 44 and a retaining bolt and nut 45. Thus in the window cleaning device I propose to use a brush and squeegee in order that they may be alternately employed in properly cleaning window glass.

It is to be noted that in the window cleaning device, the springs 19 are omitted. Also the screw threaded shank 15 is omitted. In the chimney sweeping device employing this shank 15, it is advisable and desirable to employ an adjusting sleeve generally designated by the reference character 46. This comprises a knurled finger grip 47 and a knurled annulus 48 connected by longitudinally circumferentially spaced bars 49. This sleeve unit is adjustable on the shank and the annulus 48 cooperates with the arms 16 in permitting them to be adjusted toward and from each other to regulate the distance between the brushes.

A careful consideration of the description in conjunction with the drawings will enable the reader to obtain a clear understanding of the invention. Therefore, a more lengthy description is regarded unnecessary.

Minor changes in shape, size, and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice if desired.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a cleaning device of the character described, and in combination, a cleaning element, a handle for said cleaning element, a carrier arm secured to said handle and extending from one end of said handle, said carrier arm having slots forming a cruciform opening adjacent one end of said carrier arm, and said cleaning tool having a loop rigidly formed thereon adapted to be inserted through either slots of said opening, and means for retaining said loop in said opening.

2. In a cleaning device of the character described, and in combination, a cleaning element, a handle for said cleaning element, said handle having a carrier arm extending from one end thereof, said carrier arm having slots forming a cruciform opening formed therein adjacent its outer end, said cleaning element having a rigid loop formed thereon adapted to be inserted through either slots of said cruciform opening, and a cotter key having a portion thereof disposed through said loop and bearing against an adjacent side of said carrier arm for maintaining said loop in said opening.

3. In a cleaning device of the character described, and in combination, a cleaning element, a handle for said cleaning element, said handle having a carrier arm extending from one end thereof, said carrier arm having slots forming a cruciform opening formed therein adjacent its outer end, said cleaning element having a rigid loop formed thereon adapted to be inserted through either slots of said cruciform opening, and a cotter key having a portion thereof disposed through said loop and bearing against an adjacent side of said carrier arm for maintaining said loop in said opening, and a ring carried by said cotter key to facilitate the removal of said cotter key.

4. In a cleaning device of the class described, a handle, a pair of carrier arms extending outwardly from one end of said handle and in diverging relation, a pair of spring members secured at one end thereof to one end of said handle, said spring members having their free ends adapted to bear against adjacent carrier arms, said springs at their free ends having a pin and slot connection with said carrier arms, a sleeve slidably and rotatably mounted on said handle and adapted to engage with said arms for moving said arms inwardly against the action of said springs, and said arms respectively at their outer free ends being provided with means whereby a cleaning element may be secured thereto.

In testimony whereof I affix my signature.

BORTOLAMEJO D. BATTOCLETTI.