Oct. 12, 1926.

1,603,153

R. R. SCHAEFER

CHIMNEY CLEANER

Filed Nov. 3, 1924

2 Sheets-Sheet 1

Fig. 1.

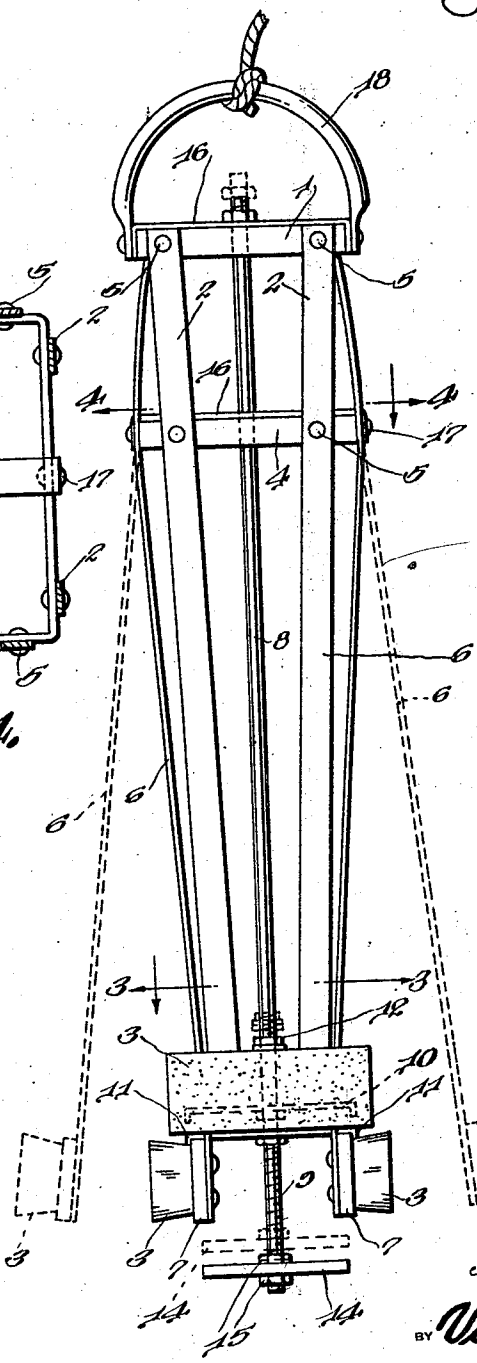
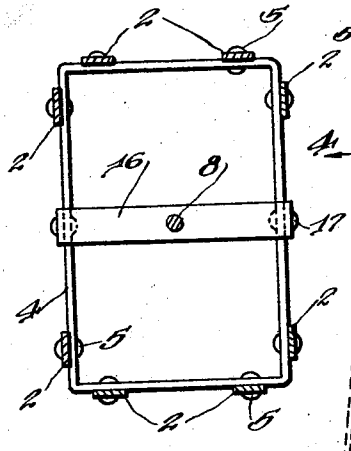


Fig. 4.



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Fig. 2.

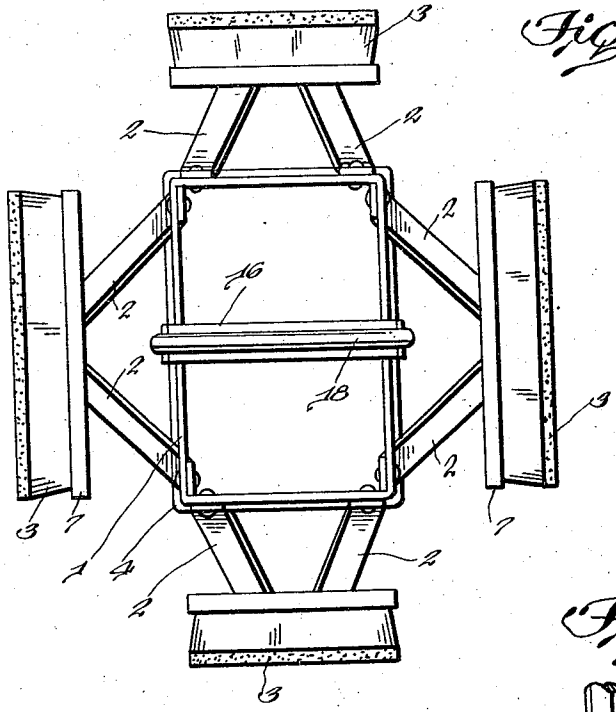


Fig. 3.

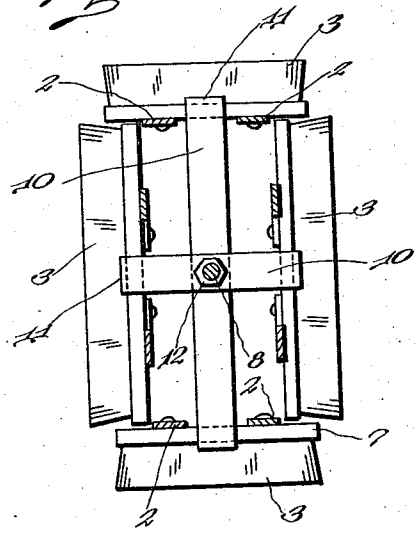
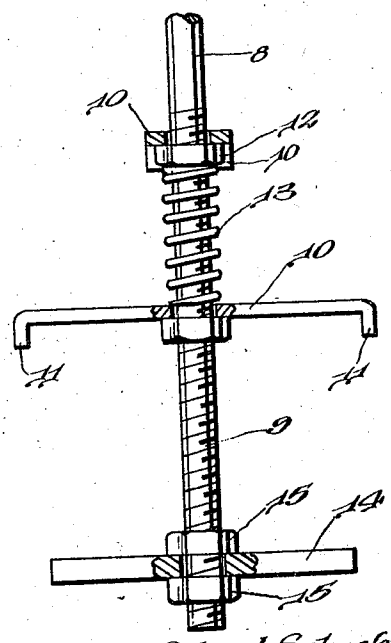


Fig. 5.



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UNITED STATES PATENT OFFICE.

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CHIMNEY CLEANER.

Application filed November 3, 1924. Serial No. 747,607.

This invention relates to new and useful improvements in chimney cleaners and the main object of my invention is the provision of a device of this character including means for retaining the cleaning members in a retracted position while being supported in the chimney and means for releasing the brushes to an expanded position for engaging the walls of the chimney when the device has been moved into contact with the bottom of the chimney.

Another object of my invention is the provision of a chimney cleaner including a frame upon which I mount a plurality of cleaning members operatively arranged in a projecting position so that they will engage the interior of chimneys of various sizes together with means for retaining the cleaning members in a contracted or inoperative position while the device is being placed within a chimney as well as means for releasing the cleaning members from an inoperative position.

With the above and other objects in view, the invention consists in the novel features of construction, the combination and arrangement of parts hereinafter more fully set forth, pointed out in the claims and shown in the accompanying drawings, in which:

Fig. 1 is a side elevation of a chimney cleaner constructed in accordance with my invention,

Fig. 2 is a top plan view,

Fig. 3 is a transverse section on the line 3—3 of Fig. 1,

Fig. 4 is a transverse section on the line 4—4 of Fig. 1, and

Fig. 5 is a detail elevation of the trip member, parts thereof being broken away and illustrated in cross section.

In the construction of my improved chimney cleaner, I provide a top frame 1 which is rectangular in form as clearly illustrated in Figure 2 and attached to each side of this frame are the spaced resilient strips 2 which form supporting arms for the cleaning members 3.

Arranged in spaced relation with the frame 1 is a second frame 4 somewhat larger than the frame 1 and the strips 2 are riveted or otherwise secured to this frame 4 as at 5 thus producing a spreading of the supporting arms for the cleaning members whereby to cause the lower ends thereof to be disposed in a longitudinal plane somewhat beyond the outer sides of the frames 1 and 4.

The cleaning members 3 may be secured to the outer ends 6 of the arms 2 in any suitable manner but the cleaning members 3 are preferably provided with a back portion 7 as is clearly illustrated in the drawings. The cleaning members 3 are retained in a closed or inoperative position by means of a trip member which includes a centrally disposed rod 8 having its lower end threaded as at 9 and positioned upon this rod 8 are the arms 10 which extend at right-angles to each other and are provided with down-turned ends 11 which engage over the upper edges of the back portions 7 of the cleaning members for retaining them in an inoperative position as shown in Fig. 1. A stop nut 12 is mounted upon the rod 8 and fixed between the nut 12 and the body portions of the arms 10 is a coil spring 13 which normally retains the down-turned ends of the arms 10 in engagement with the backs of the cleaning members as is clearly illustrated in Fig. 1.

Attached to the lower end of the rod 8 is a cross-piece 14 having jam nuts 15 arranged upon opposite sides thereof for retaining the cross-piece in a fixed position, the lower end of the rod projecting below the lowermost jam nut as shown in Fig. 5 and from this it will be apparent that when the cleaner is lowered into a chimney, either the lower end of the rod 8 will engage the bottom of the chimney or the ends of the cross-piece 14 will engage a support in the chimney for moving the rod 8 upwardly to disengage the down-turned ends 11 of the arms 10 from the backs 7 of the cleaning members releasing the cleaning members whereby they will spring outwardly to an operative position as shown by dotted lines in Fig. 1. The cleaning members may then be moved within the chimney for cleaning the same of soot or débris.

In order to securely brace the two frames 1 and 4, cross-bars 16 are provided the ends of which are turned over the outer faces of the frames and riveted or otherwise secured thereto as shown at 17, the rivets which attach the cross-bar 16 to the upper frame 1 being also used for attaching the ends of a handle member 18 to the frame. Any suitable means may be used for attachment to the handle 18 whereby to raise and lower the cleaner within the chimney. It will be

noted that the upper end of the rod 8 extends thru suitable openings in the crossbar 16 for guiding the rod 8 in its movement.

It will be apparent from the foregoing that I have provided a comparatively simple device for cleaning chimneys and by forming the lowermost frame 4 somewhat larger than the frame 1, it will cause the outer ends 6 of arms 2 which support the cleaning members 3 to diverge as shown by dotted lines in Fig. 1 to thus bring the cleaning members into yieldable contact with the inner surfaces of the chimney to assure a proper cleansing of the walls of the chimney. It will, also, be noted in order to facilitate the insertion of the tool within a chimney, the arms and cleaning members may be moved to a converging position as shown in full lines in Fig. 1 and readily released when the device reaches the bottom of the chimney.

While I have shown and described the preferred embodiment of my invention, it will be understood that various changes and alterations may be made without departing from the spirit of the invention or the scope of the appended claims.

Having thus described my invention, what I claim is:

1. A device of the character described including spaced frame members, resilient arms secured at one end to said frame members and their free ends arranged in diverging relation, cleaning members carried by the free ends of the arms, means detachably engaged with the cleaning members for retaining the arms in a converging relation and means whereby to release said retaining means.

2. A device of the character described including spaced frame members, resilient arms attached at one end to said frame members, the free ends of said arms being normally disposed in divergent relation, cleaning members carried by the free ends of the arms, a movable rod supported by the frame members, retaining members carried by the rod, for engaging the cleaning members to retain the arms in converging relation and means whereby to disengage the retaining means from the cleaning members to permit the arms to assume their normal position.

3. A device of the character described including spaced frame members, one larger than the other, resilient arms having their outer ends attached to the smaller frame, means securing the arms to the larger frame at a point adjacent their outer ends whereby to cause the free ends of the arms to normally assume a position in divergent relation with each other, cleaning members carried by the free ends of the arms, means engaging the cleaning members for retaining the arms in converging relation and means for releasing said retaining means.

In testimony whereof I affix my signature.

ROLAND R. SCHAEFER.