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C. WEIGANT

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CHIMNEY CLEANER

Filed Sept. 20, 1929

Fig. 1.

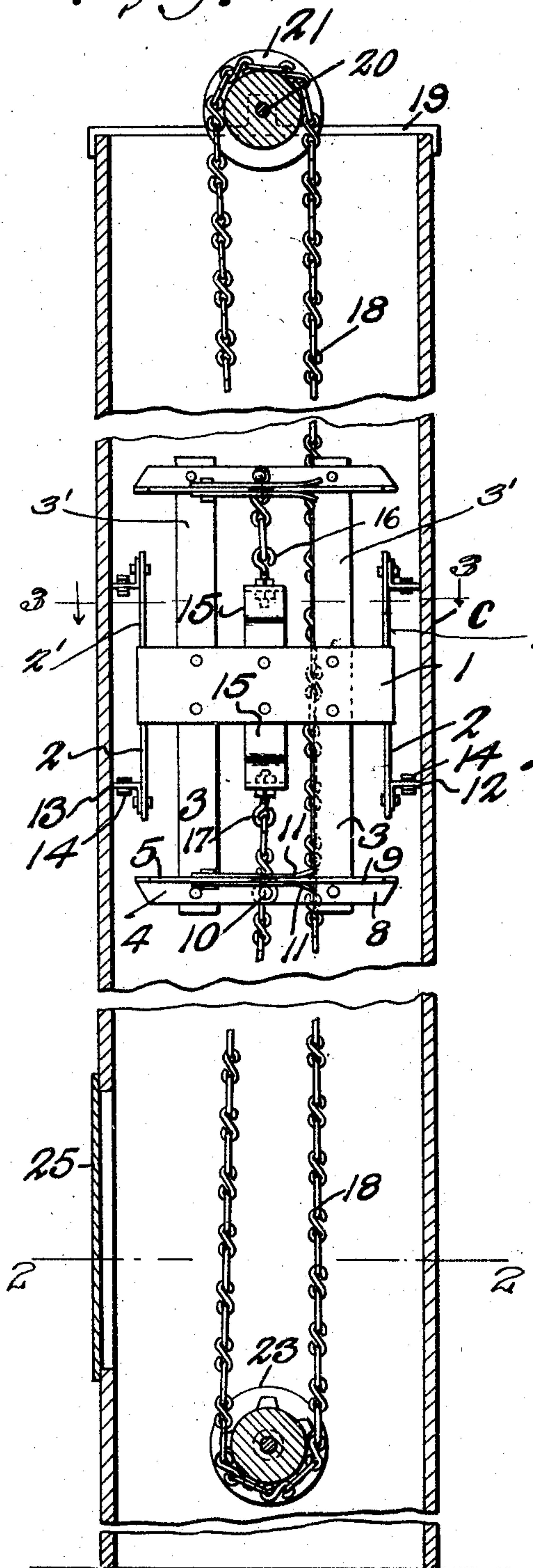


Fig. 2.

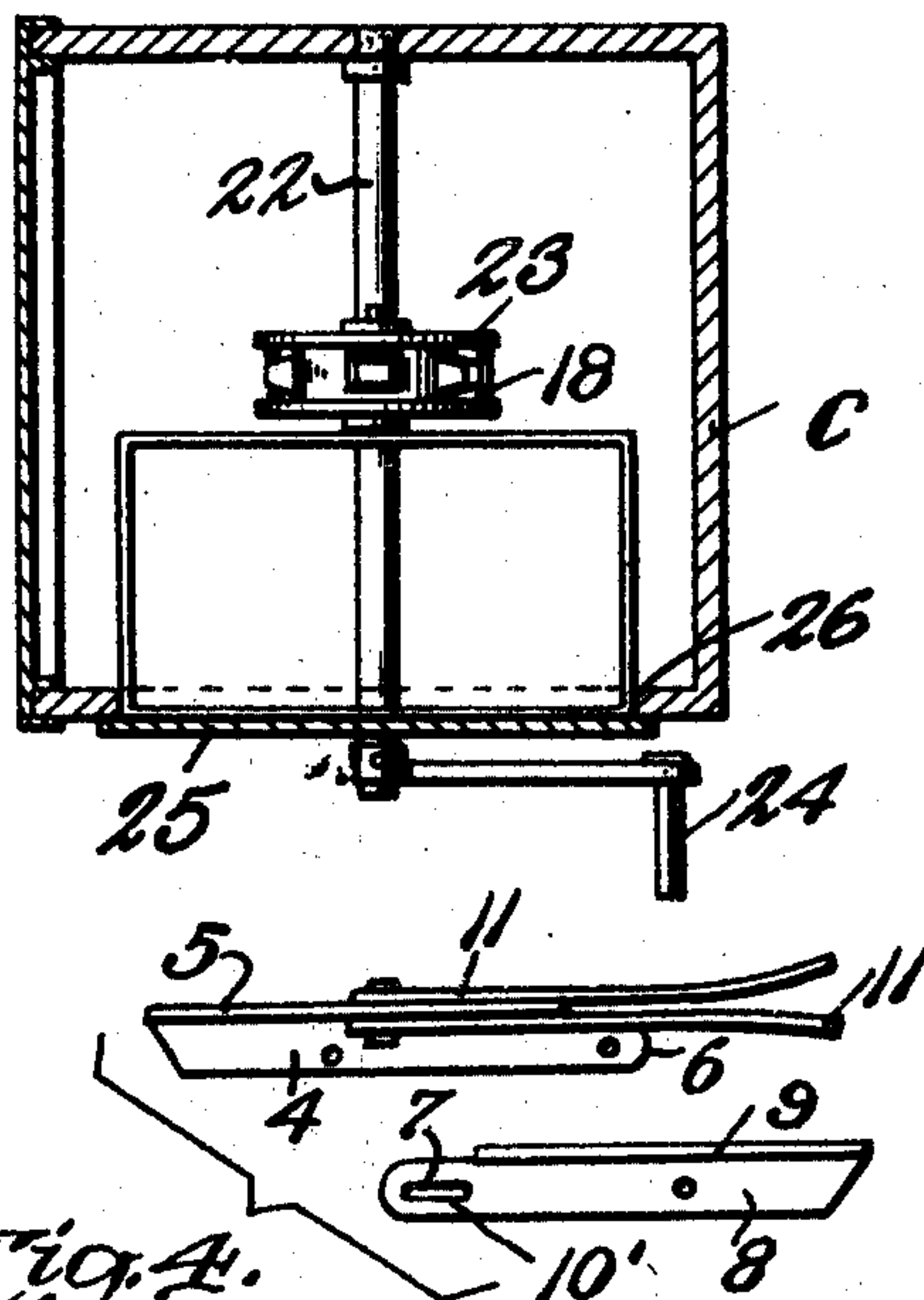


Fig. 3.

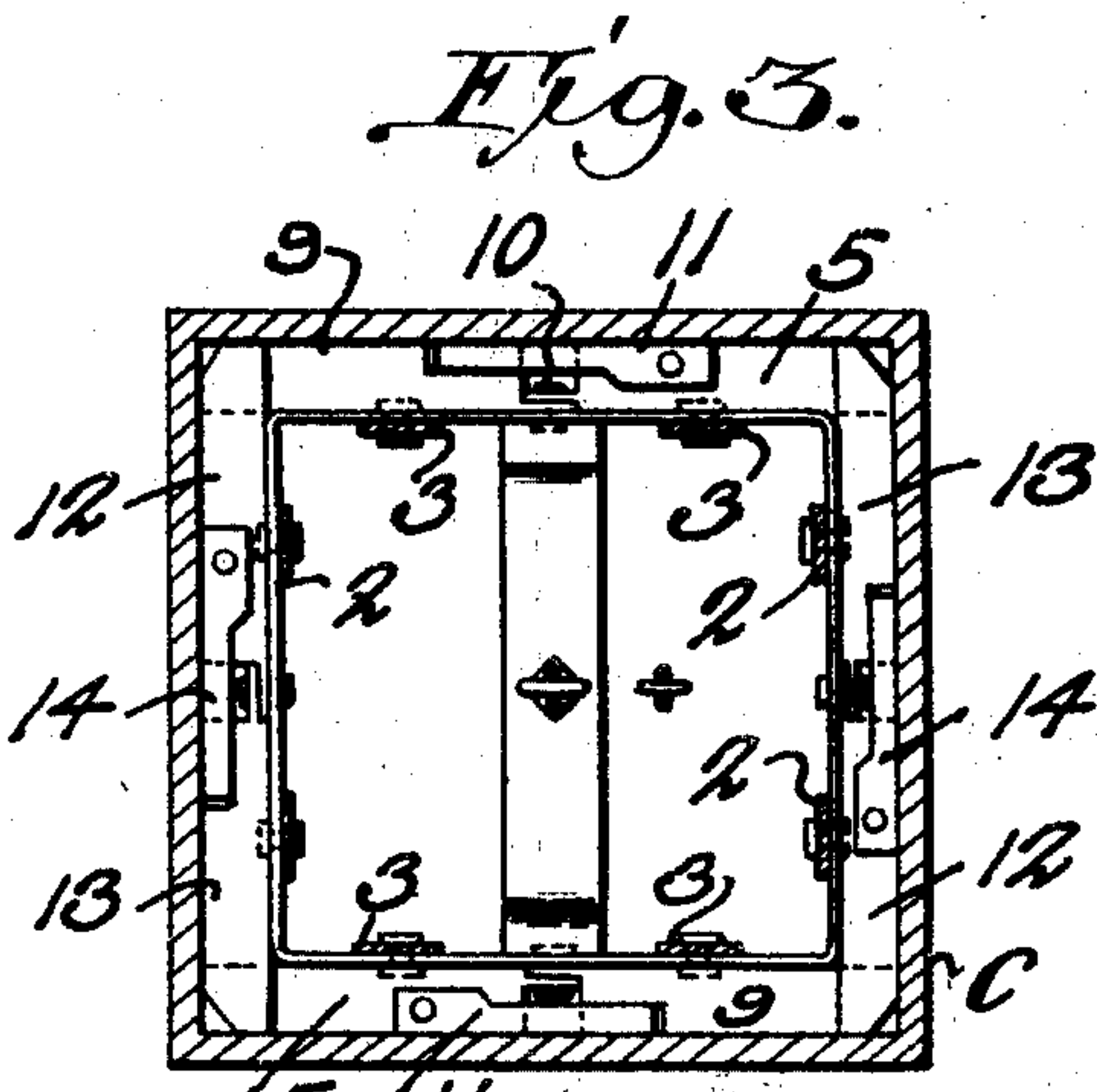
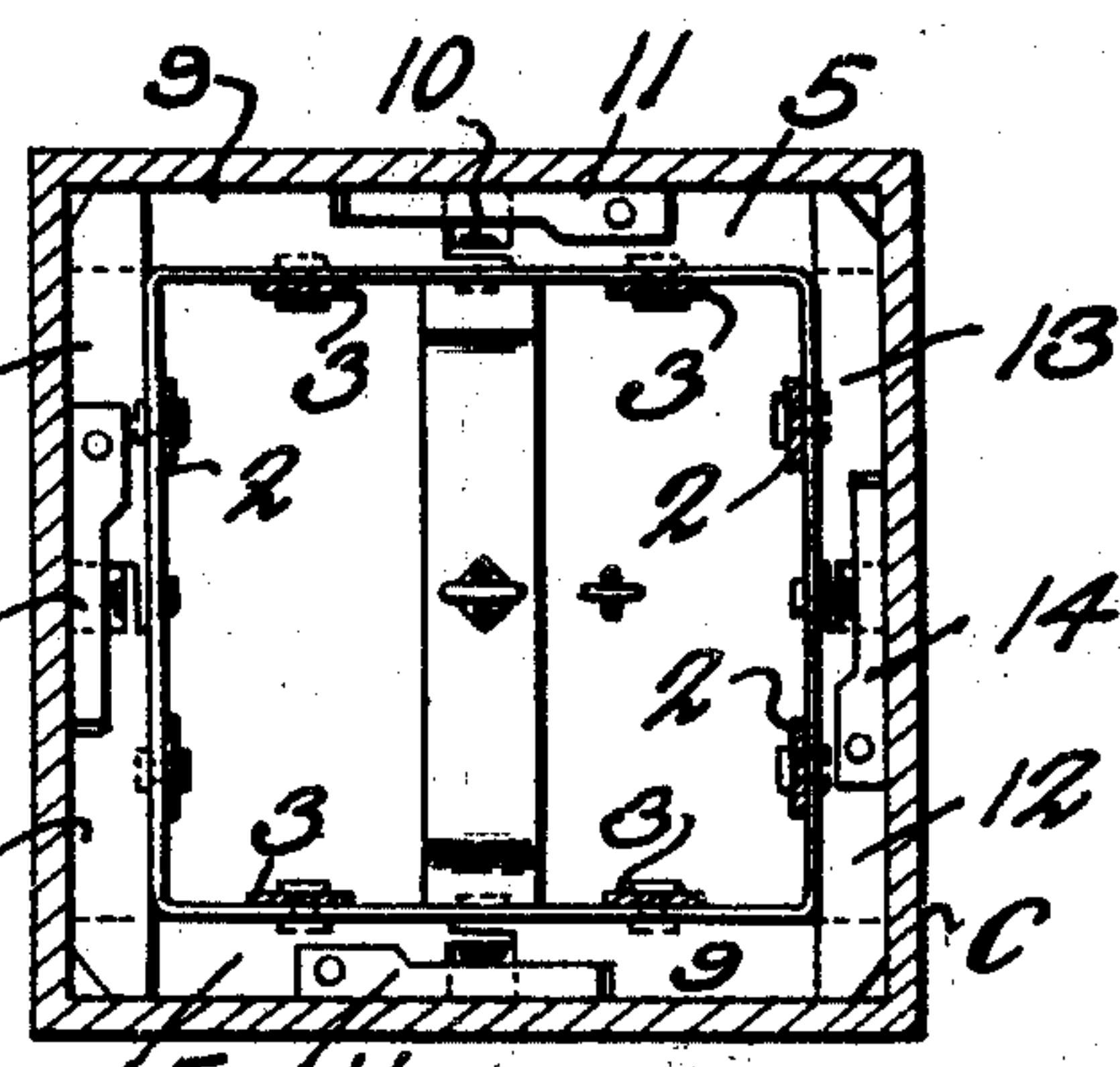


Fig. 4.



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UNITED STATES PATENT OFFICE

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CHIMNEY CLEANER

Application filed September 20, 1929. Serial No. 394,059.

This invention relates to apparatus designed for use in cleaning the inner surfaces of chimneys, one of the objects being to provide a novel form of scraper having means for moving it longitudinally within the chimney, said scraper having portions for rubbing along the inner surfaces of the chimney walls so as to dislodge incrustations.

Another object is to so construct the wall-engaging portions as to prevent them from becoming hung on any protuberances that might otherwise interfere with the proper operation of the apparatus.

A further object is to provide an apparatus of this type which can be installed readily.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawing the preferred form of the invention has been shown.

In said drawing,

Figure 1 is a vertical section through a portion of a chimney showing the present improvements mounted therein ready for actuation.

Figure 2 is a section on line 2—2, Figure 1.

Figure 3 is a section on line 3—3, Figure 1.

Figure 4 is a side elevation of two scraping blades, the same being shown detached.

Referring to the figures by characters of reference, 1 designates an angular frame from two opposed sides of which depend parallel hangers 2 while from the other two opposed sides depend longer hangers 3. To the lower end portion of one of the hangers 3 is pivotally connected the downwardly extending flange 4 of a scraping blade 5 that extends longitudinally of the flange. One end of the flange is extended beyond one end of the scraping blade to form an ear 6 and this ear laps another ear 7 extending from one end of a flange 8 that is formed longitudi-

nally of a scraping blade 9. The lapping portions 6 and 7 are connected by a pivot pin 10 one end portion of which is mounted to have a slight play in an enlarged opening or slot 10' in the portion 7. Thus it will be seen that while the two blades are pivotally connected to the respective arms or hangers 3 one cannot swing without also actuating the other. Spring strips 11 are connected to opposed sides of the blades 5 and project beyond the ear 6 so as to receive between them the scraping blade 9. This spring serves to hold the two blades 5 and 9 normally in alinement.

Pivotally connected to the shorter hangers 2 are scraping blades 12 and 13 connected in the same manner as the blades 5 and 9 and also provided with springs 14 for holding the blades 12 and 13 normally alined, the springs 14 being similar to the springs 11. The outer edges of the blades 12 and 13 and 5 and 9 are positioned where they will engage and scrape along the inner surfaces of the four walls of the chimney C in which the apparatus is to be used. The hangers 3 and 2 are resilient so as to be free to swing inwardly should the blades come against obstructions. Furthermore the blades are free to swing on their pivots against the action of the springs 11 should they come against unyielding projections in the paths thereof.

Secured in the frame 1 is a connecting frame 15 that extends above and below the frame 1. To the upper end of this connecting frame there is attached a hook 16 and another hook 17 is attached to the lower end of the frame 15. One end of a chain 18 or other flexible device is secured to hook 16 while the other end is secured to hook 17. This chain is of sufficient length to extend from the top of the chimney C to a point adjacent the bottom thereof.

A cap 19 is adapted to be placed on the upper end of the chimney and on this cap is journaled a shaft 20 carrying a pulley 21 engaging and supporting the chain 18.

Arranged in the lower portion of the chimney C is a transverse shaft 22 to which is secured a sprocket 23. The chain engages this sprocket and by rotating the shaft said chain

can be actuated so as to draw the scraping blades upwardly or downwardly within the chimney.

The shaft can be provided with a crank arm 24 by means of which it can be rotated.

For the purpose of supporting shaft 22 a plate 25 can be employed for closing an opening 26 in the chimney, the shaft being journaled in this plate. The plate can be removably mounted in the opening so as to permit the apparatus to be withdrawn through the opening after it has been used and after the chain has been disconnected from pulley 21.

As has already been explained, when the chain is actuated the frame 1 will be drawn upwardly or downwardly within the chimney. This will cause the scraping blades to travel along the inner surfaces of the chimney walls and remove therefrom any accumulations of soot or other foreign substances to be taken from the chimney.

If, during the movement of the frame 1 in the chimney, one or more of the blades become caught in an obstruction, said blade or blades will be free to shift relative to the hangers until the obstruction has been passed whereupon the springs 11 will return them to normal positions. The hangers 2 and 3 are also free to yield inwardly under these conditions.

For the purpose of increasing the efficiency of this device the parts 2 to 14 can be duplicated above frame 1 so that there will be upper and lower pairs of scraping blades 5 and 6 and upper and lower pairs of scraping blades 12 and 13, the upper blades being connected to the frame 1 by resilient members 3' and 2' respectively.

What is claimed is:

1. In a chimney cleaning apparatus connected yielding members, a blade pivotally mounted on each member, said blades being disposed in pairs, yielding means for holding the blades of each pair normally in alignment, and means for moving the members and their blades within a chimney.

2. Chimney cleaning apparatus including resilient members disposed in pairs, blades pivotally connected to the respective members and disposed in pairs, yielding means for holding the blades of each pair normally in alignment, and means for moving the blades and their members back and forth within a chimney to scrape the walls thereof.

3. Chimney cleaning apparatus including a frame, a flexible actuating device connected at its ends to the frame and extending in opposite directions therefrom, hangers arranged in pairs and extending from the frame, said hangers being resilient, a scraping blade pivotally connected to each hanger, the blades being disposed in pairs, a pivotal connection between the blades of each pair, yielding means for holding the blades of each pair normally in alignment, the blades of

each pair being adapted to swing upwardly against the action of said yielding means and relative to each other when engaging an obstruction, and means for actuating the flexible connection to slide the frame and blades longitudinally within a chimney.

4. In a chimney cleaning apparatus a frame, upwardly and downwardly extending resilient members carried by the frame and disposed in pairs, blades pivotally connected to the respective members and disposed in pairs, yielding means for holding the blades of each pair normally in alignment, and means for moving the frame, members and blades back and forth within a chimney to scrape the walls thereof.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

CASPER WEIGANT.