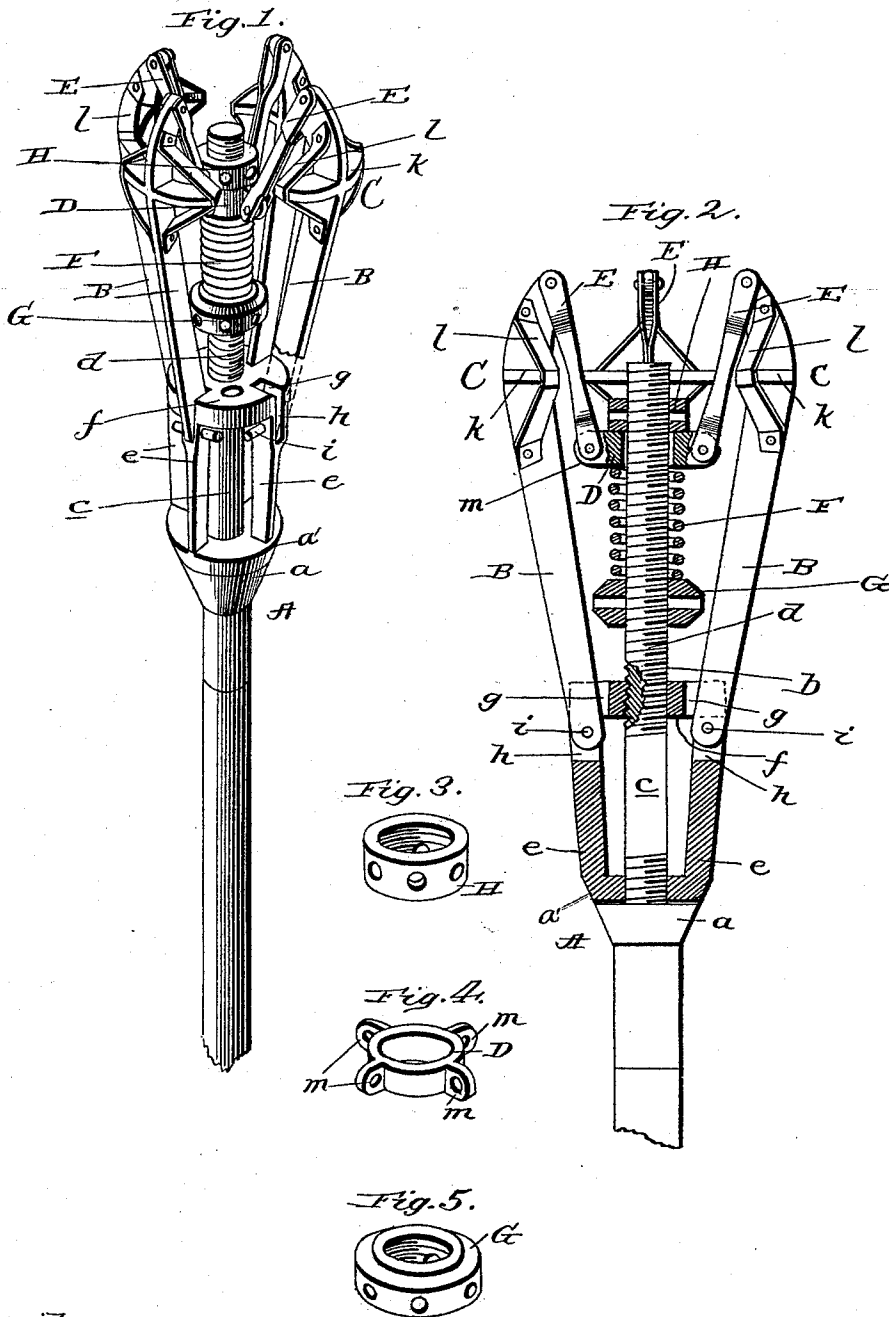


(No Model.)

E. D. WESTON.
FLUE CLEANER.

No. 518,638.

Patented Apr. 24, 1894.



Witnesses:

C. H. Paeder
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UNITED STATES PATENT OFFICE.

EDWARD D. WESTON, OF JACKSON, MICHIGAN, ASSIGNOR OF ONE-HALF TO
ROBERT GAGE AND B. D. LEGG, OF SAME PLACE.

FLUE-CLEANER.

SPECIFICATION forming part of Letters Patent No. 518,638, dated April 24, 1894.

Application filed January 5, 1894. Serial No. 495,845. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. WESTON, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Flue-Cleaners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to improvements in flue scrapers and cleaners, and it has for its prime object to provide a device which will be very effective for the purposes designed, and may be adjusted for flues of various sizes; the parts being combined and arranged so that the scraping blades may be held yieldingly against the walls of a flue.

Other objects and advantages will appear from the following description and claims when taken in connection with the annexed drawings, in which—

Figure 1, is a perspective view of my improved device, with one of the levers partly broken away. Fig. 2, is a side elevation with parts in longitudinal section. Fig. 3, is a perspective view of the check or stop nut. Fig. 4, is a perspective view of the slidable collar, and Fig. 5, is a similar view of the adjusting nut.

Referring by letter to said drawings:—A, indicates the stock, or shank. This stock is usually provided with external threads to receive the socket of a handle, which latter may be made in any suitable number of sections or in a single piece if desired. Extending from the shoulder *a*, of this stock or shank, is a stem *b*, which is plane, as shown at *c*, and externally threaded from its outer end to a sufficient distance in its length as shown at *d*. Extending from the shoulder *a*, of the stock and parallel or approximately so, to the stem *c*, are arms or branches *e*, there being four shown in the present illustration. These arms may be fixed to or formed on the nut *a'* at their inner ends, or formed integral therewith, and have fixed to or formed on their outer ends a transversely disposed ring *f*.

B, indicates the scraping blades or arms. These arms bear at their inner ends in slots

g, in the periphery of the ring *f*, and also extend into slots *h*, in the arms or branches *e*, and are pivotally connected to the latter by means of pins *i*, so that the arms or blades B, will be pivotally connected with the arms or branches *e*. These scraping blades are provided at a suitable distance from their outer ends with expanded portions C, which comprise a transversely-disposed, curvilinear cross-bar *k*, and a strip *l*, of sheet metal or the like. The strips *l*, are secured at their ends to the opposite sides of the blades or arms B, and straddle the outer ends of the cross bars *k*, so that in the aggregate they form the expanded body C, of approximately rectangular form in outline. The blades or arms B, are arranged opposite each other in pairs, and the scraping heads or expanded portions C, of one set, are set farther out on the arms or blades than those of the opposite set, so as to permit the blades or arms to close more snugly, so that they may occupy but little space, and also permit of entering a very small flue, while on the other hand they will present a larger scraping surface as the device is turned in a flue or chamber.

D, indicates a slidable collar, which is placed upon the threaded stem *b*. This collar is provided externally with a suitable number of perforated ears *m*, and links E are employed to connect the outer ends of the blades or arms B, which are preferably given a slight inward curve to the ears of the slidable collar.

F, indicates a tension spring, which is here shown as a coil-spring. This spring is also arranged upon the threaded stem and against the inner side of the slidable collar.

G, indicates an adjusting nut. This nut which is also arranged upon the threaded stem, bears against the opposite or inner end of the spring and confines the same against the inner side of the slidable collar.

H, indicates a stop or check nut. This stop which is internally threaded is placed upon the threaded stem on the outer side of the slidable collar, and both the check nut and adjusting nut may have holes as shown, to receive a key, or other implement, for turning them.

In operation it will be seen that as the slid-

able collar is stopped by the check nut H, the outward throw of the scrapers will be limited according to the position of the stop upon the threaded stem, and that the tension of the spring, and consequently the pressure to be exerted by the scrapers, will be governed by the position of the adjustable nut G, which regulates the tension of the spring F. In practice the stop nut or check H, should be turned upon the threaded stem, outwardly, as far as it is desired to allow the scrapers to move laterally. The adjusting nut can then be turned upon the stem and against the spring until the required rigidity of said spring is obtained, so as to regulate the scrapers for the amount of pressure it is desired that they should resist in the flue.

By the construction described, it will be seen that the parts are of a very durable construction, and as it is well known that springs in course of time, become weak, they can be readily strengthened by the manipulation of the nut G, and should the spring become so impaired, that it may be no longer fit for use, it can be quickly and easily removed and replaced by another, at a very small expense.

While I have described very specifically and in detail, the parts constructed precisely as shown, yet I do not wish to be understood as confining myself to such precise construction, as I am aware that many of the parts will permit of changes in the form and arrangement without departing from the spirit of my invention.

Having described my invention, what I claim is—

1. The flue scraper described, comprising the stock having the threaded stem, the scraping blades pivotally connected at their inner ends with the stock, the slidable collar arranged on the threaded stem, the links connecting the outer ends of the blades with said collar, the threaded stop on the stem and on the outer side of the collar, the adjusting nut also on the stem and on the opposite side of the collar and the tension spring interposed between the collar and the adjusting nut, all substantially as and for the purpose set forth.

2. The flue scraper described comprising the stock, having the shoulder, and also having the threaded stem, and the rigid arms extending from said shoulder, the scraping blades, pivoted at their inner ends to said arms, the slidable collar arranged on the threaded stem, the links connecting the outer ends of the blades with said collar, the threaded stop on the stem, and on the outer side of the collar, the adjusting nut also on the stem and on the opposite side of the collar, and the tension spring interposed between the collar and the adjusting nut, all adapted to operate, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD D. WESTON.

Witnesses:

W. P. HEATON,
RUD. WORCH.