(Model.)

M. D. OSGOOD.

DEVICE FOR CLEANING FLUES.

No. 423,268. Patented Mar. 11, 1890.

Fig. 1.

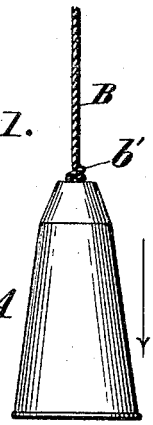


Fig. 2.

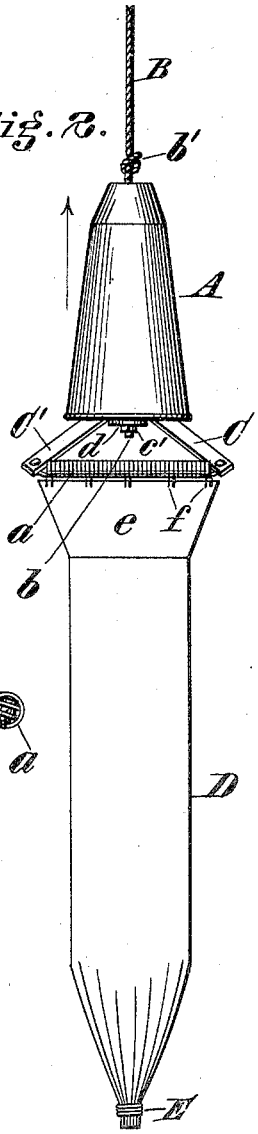


Fig. 3.

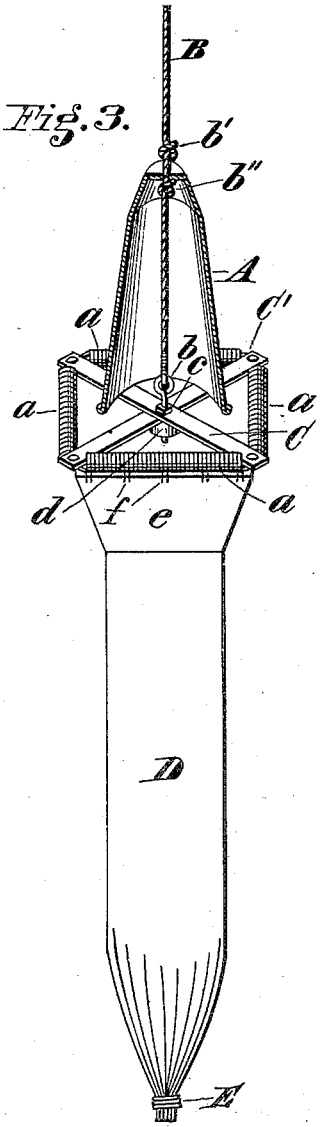


Fig. 4.

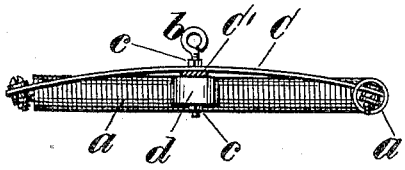
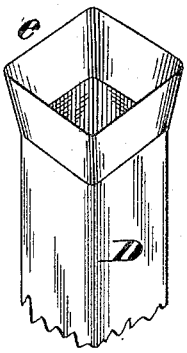


Fig. 5.



Attest

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UNITED STATES PATENT OFFICE.

MILES D. OSGOOD, OF CINCINNATI, OHIO.

DEVICE FOR CLEANING FLUES.

SPECIFICATION forming part of Letters Patent No. 423,268, dated March 11, 1890.

Application filed March 25, 1889. Serial No. 304,712. (Model.)

To all whom it may concern:

Be it known that I, MILES D. OSGOOD, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Device for Cleaning Flues or Chimneys, of which the following is a specification.

My invention relates to a chimney-cleaning device; and it consists in the provision of a conical shell or case, a flexible soot-receiving bag or receptacle, a pair of resilient intersecting bars, forming four resilient suspension-arms and four elastic soot wipers or removers, said soot wipers or removers connecting the outer ends of said resilient arms and together forming a suspension-frame for said soot-receptacle, and also a device for removing the soot from the inner walls of the chimney and guiding it into said receptacle, and the whole being suspended from a rope or chain, all as hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation of my improvement as it appears to view when the soot remover and receptacle are within the conical shell or case and ready to be lowered into a flue; Fig. 2, an elevation of my device complete, showing it as it appears when the soot remover and receptacle are suspended from within the shell or case and in operation; Fig. 3, a perspective view of my device as it appears in operation, the conical shell or inclosing-holder being shown in section; Fig. 4, an elevation of one of the cross-bars which support the elastic soot-wipers and soot-receptacle, the other cross-bar being shown in cross-section; and Fig. 5, a broken perspective view of the soot-receptacle, showing it in its preferred form with a hopper-shaped mouth.

A represents a shell or case, preferably of sheet metal and conical in form, with its lower end or base open, as clearly shown in Fig. 3.

B is a suspension rope or chain.

C C′ are two resilient spring-bars, centrally crossing each other and connected at their outer ends by four spiral springs *a*, which latter form elastic devices for removing the soot and dirt from the interior of the flue, be it either rectangular or circular, as said elastic devices readily adapt themselves to the inner walls of said flue.

b is an upright eyebolt, whose threaded shank passes downward through the center of both bars C C′, having a nut *c* thereon engaging the upper face of bar C, and a nut *c′* at its lower end to secure a weight *d* in place thereon, which latter rests against the lower face of bar C′, all as distinctly shown in Figs. 3 and 4.

Near the lower end of rope B two knots *b′ b″* are tied at a suitable distance apart to form stops, which operate as hereinafter explained. The extreme lower end of said rope is fastened in any suitable manner to the eye of bolt *b*.

D represents a flexible tube, made of muslin, rubber cloth, or any other like flexible material and provided at its lower end with a draw or gathering string E, by which to close it and form a tight receptacle for gathering the soot. The upper end of the flexible tube or receptacle D is formed into a wide hopper-shaped mouth *e*, whereby it is suspended from the resilient frame, composed of the bars C C′ and springs *a* and the soot properly guided into it.

f f are suitable twines or rings connecting the upper end of the soot-receptacle with the coils of springs *a*, as shown in Figs. 2 and 3.

The operation of my invention is as follows: The device, as it appears in Fig. 1 inclosed in its holder or case, is lowered into the flue to the desired depth, the upper knot or stop *b′* in the rope being in contact with the upper face of the shell top, as shown in said figure. To eject the soot-cleaning mechism from within the shell for operation the rope is given a sudden jerk or pull, thereby bringing knot or stops *b″* into engagement with the lower face of the shell top, and then the entire apparatus, as shown in Fig. 2, is drawn slowly upward, the springs or elastic scrapers *a* coming into contact with the soot on the four inner walls of the flue, simultaneously removing it therefrom and guiding it into the receptacle D, which immediately follows beneath. The weight *d* is supplied as an auxiliary to assist in the ejectment of the operating mechanism from within the case after it has been lowered into the chim-

ney by giving the sudden jerk or pull on the rope or chain from above. It is obvious that in the upward passage or ascent of the flue-cleaner the outer ends of the elastic bars C C′ will adapt themselves to the several corners of the flue, which corners thus form suitable guides therefor, and the elastic soot-wipers *a* will properly yield to or ride over any obstructions in said flue.

To place the operating mechanism within its shell or holder, the empty bag or receptacle is first carefully folded into as small a compass as possible, then the resilient spring-bars C C′ are bent downward, bringing their ends toward each other with the spiral springs *a* and said folded receptacle intervening, and then the entire mass is stuffed into said shell through its open base or bottom, the outward pressure of said spring-bars properly holding it there.

The placing of the operating mechanism within the shell makes it possible to lower the said mechanism into the flue with but little danger of disturbing any of the soot until the desired time.

To empty the receptacle D of the soot collected in its ascent, the draw-string E is released or loosened, thereby permitting the lower end of the bag to open by the downward pressure of said soot.

I claim—

1. In a chimney or flue cleaning device, the combination of the horizontal intersecting resilient bars C C′, elastic wipers or scrapers *a*, connecting the outer ends of said bars and supported thereby, and a suitable soot-receiver and a suspension device for operating the same, substantially as herein set forth.

2. The combination of the horizontal resilient bars C C′, elastic wipers or scrapers *a*, collector or receptacle D, and the suspension device B, having suitable stops *b′ b″*, and a shell or case A, substantially as and for the purpose specified.

3. The combination of an inclosing shell or case A, resilient intersecting bars C C′, elastic wipers or scrapers *a*, soot-receptacle D, and the auxiliary weight *d* at the intersection of the bars at the mouth of the soot-receptacle, said bars, wipers, receptacle, and weight being adapted to be folded together within said shell for lowering the device within a flue for operation, and said weight facilitating the release of said soot removing and receiving devices from within said shell for said operation, substantially as herein set forth.

4. In a chimney or flue cleaner, the combination, with a retaining-receptacle open at its lower end, of an expansible cleaner suspended at the lower end of the receptacle and adapted to be compressed within the end thereof, a soot-receptacle secured to and suspended from the cleaner when in its operative position, and a device for suspending and operating the shell and cleaner, substantially as specified.

In testimony of which invention I have hereunto set my hand.

MILES D. OSGOOD.

Witnesses:

JOHN E. JONES,

B. DONALDSON.