

S. HOBBS & W. M. JOHNSTON.

FLUE-CLEANER.

No. 178,007.

Patented May 30, 1876.

Fig. 1.

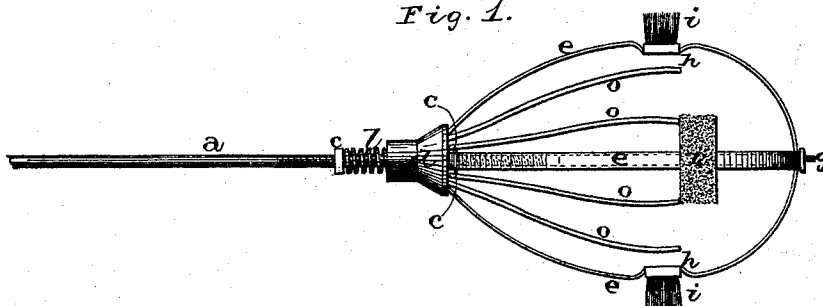


Fig. 2.

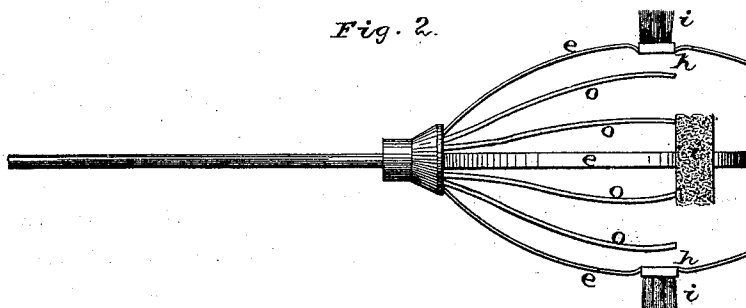
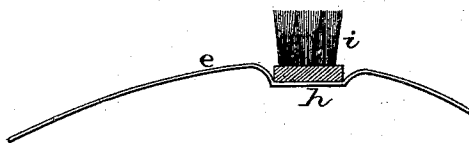


Fig. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

SAMUEL HOBBS AND WILLIAM M. JOHNSTON, OF WILMOT, OHIO.

IMPROVEMENT IN FLUE-CLEANERS.

Specification forming part of Letters Patent No. **178,007**, dated May 30, 1876; application filed April 21, 1876.

To all whom it may concern:

Be it known that we, SAMUEL HOBBS and W. M. JOHNSTON, of Wilmot, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Flue-Cleaners; and we do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improvement in flue-cleaners; and it consists in the arrangement and combination of devices that will be more fully described hereinafter, whereby the brushes can be adjusted to fit flues of all sizes.

The accompanying drawings represent our invention. *a* represents a long handle, and which, for convenience of transportation, may be made in sections that can be quickly taken apart and put together again, or that are jointed together and made rigid by a sliding sleeve. The end to which the cleaner is attached is screw-threaded for a considerable distance, as shown, to receive the two adjusting-nuts, *c*. Between these two nuts, over the rod, is placed the sliding block *d*, to which the ends of the springs *e* are secured. Each of these springs has a small hole through its center so as to fit over the small end *g* of the rod, whereby they are held in position and made to retain their shape. Made in the outer side of each spring is a recess, *h*, to receive the brush *i*, each recess being made just deep enough so that the top of the wood of the brush shall come on a level with the side of the spring, and each recess being made in such relation to each other that the brushes can overlap each other when crowded into small flues, without in any manner interfering with each other. Between the outer adjusting-

nut and the block *d* is placed a coiled spring, *l*, which allows a certain regulated amount of play to the springs *e*, and thus prevent them from being so rigidly held as to run the risk of being broken by being pushed into small flues. Secured to the under-side of the block, and projecting forward any suitable distance, are a number of spring-wires, *o*, which serve as supports for the cleaner as it is being moved back and forth in the flues, and thus prevent any unnecessary wear upon the brushes.

Instead of these wires, a support having a roller upon its lower end may be used. In some instances the outer ends of the springs *e* will be left loose, as shown, in which case there will be no necessity, of course, for the adjusting-nuts and spring *l*, as they will readily adjust themselves.

Having thus described our invention, we claim—

1. In a flue-cleaner, the combination of the springs *e* and brushes *i*, the said springs having the recesses *h* to receive the brushes, whereby the wooden parts of the brushes are prevented from being caught on the ends of the flues, substantially as specified.

2. In a flue-cleaner, the combination of the wires *o*, block *d*, and springs *e*, the said wires being made to project forward between the springs and support the weight of the cleaner, substantially as specified.

3. In a flue-cleaner, the combination of the handle *a*, nuts *c*, block *d*, springs *e*, brushes *i*, and spring *l*, as specified.

In testimony that we claim the foregoing, we have hereunto set our hands this 11th day of April, 1876.

SAMUEL HOBBS.
WM. M. JOHNSTON.

Witnesses:

ROBERT ROWLAND,
WILLIAM PARKS.