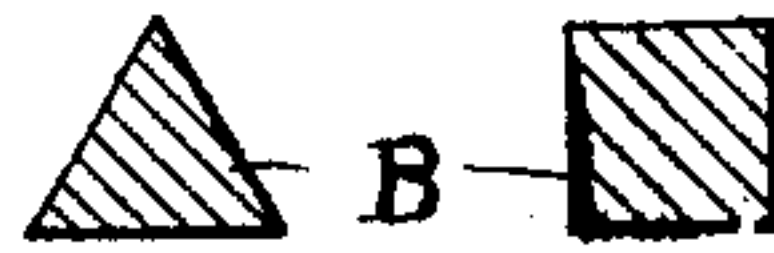
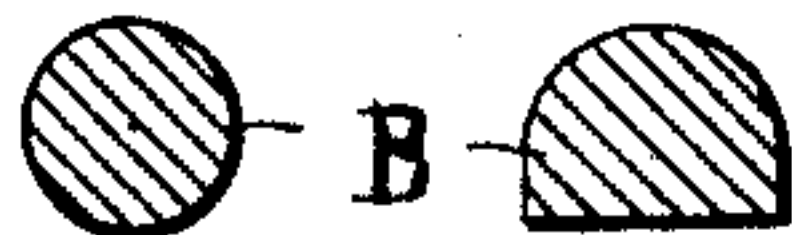


(No Model.)
J. F. McNUTT & H. F. GRIMMESEY.
FLUE CLEANER.

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FLUE CLEANER.

No. 475,733.

Patented May 24, 1892.



R. B. Moser.
H. L. McLane

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Fig 3

Fig 4

John F. McKitt
Hiram F. Grimessey.

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Hiram F. Grimessey.

By H. T. Fisher. Attorney.

UNITED STATES PATENT OFFICE.

JOHN F. McNUTT AND HIRAM F. GRIMMESEY, OF WARREN, OHIO, AS-
SIGNORS OF ONE-THIRD TO O. R. GRIMMESEY, OF SAME PLACE.

FLUE-CLEANER.

SPECIFICATION forming part of Letters Patent No. 475,733, dated May 24, 1892.

Application filed August 31, 1891. Serial No. 404,219. (No model.)

To all whom it may concern:

Be it known that we, JOHN F. McNUTT and HIRAM F. GRIMMESEY, citizens of the United States, residing at Warren, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Flue-Cleaners; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to flue-cleaners of the variety having scrapers of one form or another adapted to bear against the surface of the flue and by being turned or worked back and forth remove the scales or deposits in the flue; and the invention consists in a flue-cleaner having specially-arranged wires or their equivalent mounted on a central rod and constructed, combined, and operating substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plain elevation of a flue-cleaner embodying our invention. Figs. 2 to 5 are cross-sections of several different styles of wire adapted to be used in our improved cleaner to form the scraping and cleaning ribs.

A represents the central rod, upon which all the other parts are supported, and is designed to have such length as the service requires, or a handle, which will answer the same purpose.

B represents the cleaning-wires. These wires are shown in the several figures of the drawings as considerably varied in outline in cross-section, and they may have any of the forms shown or any of the equivalents thereof; but the preferred forms are those which have a flat surface and a sharp corner or edge to engage the surface of the flue and to scrape it clean—such forms, for example, as are shown in Figs. 4 and 5, especially, with the form in Fig. 3 as fairly good. These wires or ribs are arranged spirally, with a comparatively long bend around the central rod A, and are so bent at their respective ends as to throw as much as possible out to the working

radius, which is supposed to be equal to the diameter of the flue to be cleaned, so that each wire will be in working contact with the flue-surface practically throughout its entire length. In this instance three such wires or ribs are shown; but the number may be varied; and the said ribs or wires are set at such distance apart as to divide equally, or nearly so, the space around the rod A, thus giving a uniform bearing of the cleaner at all points and doing the most effectual work. The ends of the wires, rods, or ribs B are clamped in sectional flanged heads C, sleeved on the rod or core-piece A and free to slide thereon within certain fixed limits. Thus on the inner sides the heads C rest normally against fixed collars c, where they are held by the pressure of the springs d, surrounding the rod A. Both of said springs d bear against nuts D D. Said nuts may be capable of turning on the rod A and taking up or letting out the spring or springs d, as may be required.

The ribs B are of course made of elastic metal—such as a suitable quality of steel—and they can be held more or less rigidly at work by tightening up the springs d. If the cleaner should fit rather too snugly in the flue, the sliding heads are adapted to relieve the pressure on the ribs sufficiently to operate the cleaner, and thus relief is accommodated by the tension of the springs d.

Within the ribs B on shaft A are shown a pair of disks F, which serve to carry out the scraping and afford a support for the ribs, and by which the ribs are prevented from compressing beyond a certain limit fixed by the diameter of said disks.

What we claim, and desire to secure by Letters Patent, is—

1. In a flue-cleaner, a central rod having one or more disks thereon, and spiral wires secured at their ends on said rod on opposite sides of said disks, substantially as described.

2. In a flue-cleaner, the central rod, movable heads on said rod having the cleaning-wires fixed thereon, springs bearing against the outside of said head, and a disk or disks on said rod substantially midway between said heads, as and for the purpose set forth.

3. In a flue-cleaner, a central rod having
fixed stops thereon, sliding heads bearing nor-
mally against the outside of said stops, and
the cleaning-wires secured in said heads, in
5 combination with one or more disks mounted
on said rod between said collars and within
the cleaning-wires, substantially as described.

Witness our hands to the foregoing speci-
fication this 17th day of August, 1891.

JOHN F. McNUTT.

HIRAM F. GRIMMESEY.

Witnesses:

FRANK S. CHRYST,

W. C. STILES.