

*L. B. Brown,
Flue Cleaner.*

No. 92,790.

Patented July 20, 1869.

Fig. 1.

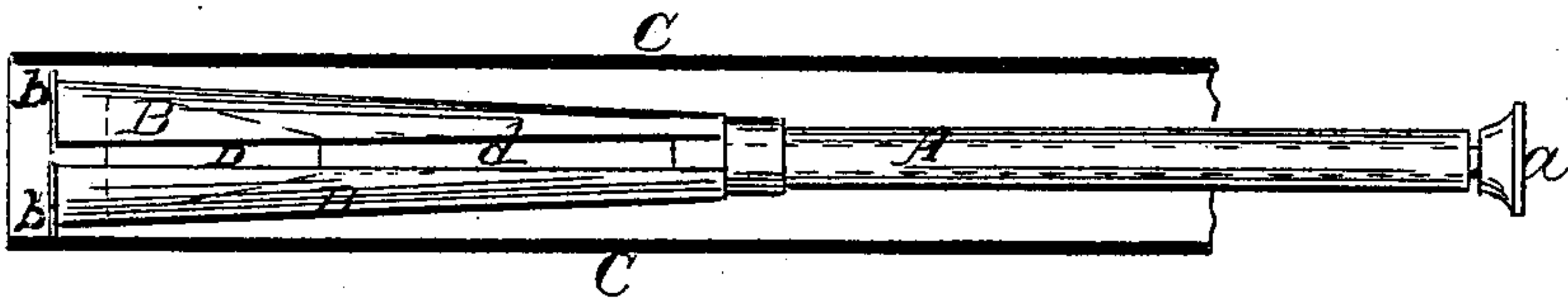


Fig. 3.

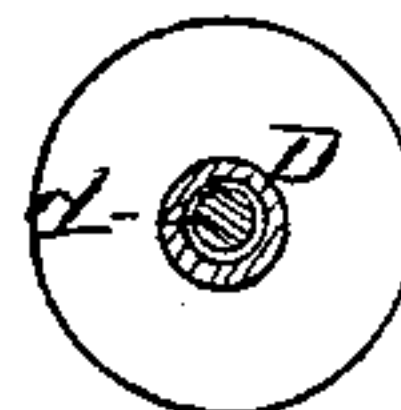
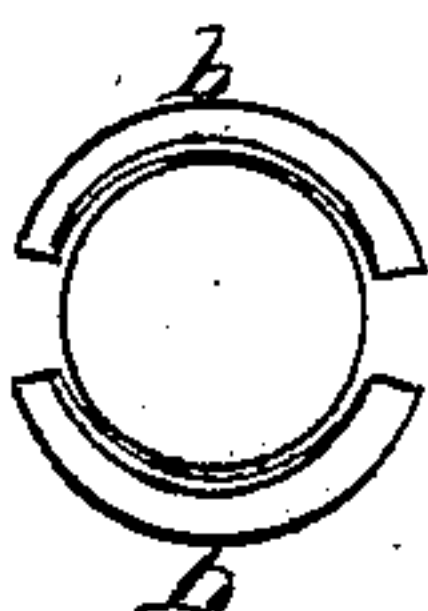
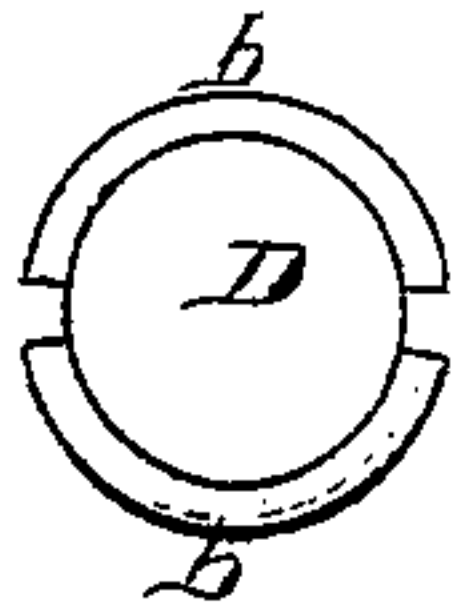
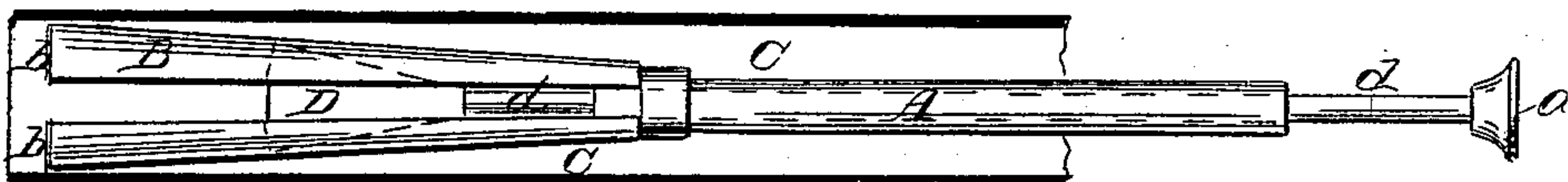


Fig. 2.



Witnesses

*D. C. Colby
Geo. C. Green*

Inventor.

*Lester B. Brown
by J. B. Woodruff & Son
Attorneys*

United States Patent Office.

LESTER B. BROWN, OF PETROLEUM CENTRE, PENNSYLVANIA.

Letters Patent No. 92,790, dated July 20, 1869.

IMPROVEMENT IN BOILER-FLUE SCRAPERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, LESTER B. BROWN, of Petroleum Centre, in the county of Venango, and State of Pennsylvania, have invented a certain new and useful Improvement in Flue-Cleaners for Tubular Steam-Boilers, and for other purposes; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a broken-off section of a tube or flue, with the scrapers contracted, so as to easily enter the hollow opening through the tube or flue.

Figure 2 shows a view of the same with the rod drawn, the scrapers expanded to fill the diameter of the flue.

Figure 3 shows three sectional end views of the spring-scrappers and cone-slide for operating the scrapers.

The object of my invention is to furnish a cheap, durable, and efficient implement, to scrape the soot and ashes, and more thoroughly clean out the fire-flues of tubular steam-generators or horizontal stove-pipes, &c.

My invention consists in the construction, arrangement, and combination of yielding spring-scrappers with a cone-slide, adjusting-rod, and tube-handle, to be operated in the manner hereinafter more fully described.

I take a piece of small gas-pipe or tubing, A, of the desired length, to which I secure, at one end, two or more metal scrapers, B B, of such a length as to allow them to yield readily, so as to expand or contract according to the size or diameter of the inside of the tube C C, or flues of a tubular steam-boiler, or smoke-pipes of furnaces, which are so liable to become clogged up with soot and ashes.

The scrapers B B are formed of light sheet-metal, in a semicircle or curve, the end being turned out at a right angle, so as to bring the thin, sharp edges *b b* in

contact with the tube or flue C when sufficiently expanded.

This is effected by means of a cone, D, secured to a rod, *d*, which passes through the pipe or tubing A, the rod *d* being provided with a handle-knob, *a*, or ring, by which the cone D is slid in the scrapers B B, their form being such, that by drawing the cone forward the scrapers are forced outward at the end, and the sharp edges *b b* are brought in contact with the two sides of the flue C, and may be made to bear sufficiently hard to remove all of the soot that has adhered to the inner surface by a single thrust or withdrawal of the scrapers. Then, by contracting the scrapers B B, and inserting again, and bringing the edges *b b* to bear on the quarter, the flue will be cleaned in the most thorough manner.

The advantages of my invention are well known and appreciated in the oil-regions, where there are so many tubular steam-boilers in use; and it has been practically demonstrated that there is at least one hundred per cent. saving in the cost, the time it takes to clean the flues, and their durability, over any other flue-cleaner that has ever come to my knowledge.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the yielding spring-scrappers B B with the cone-slide D, adjusting-rod *d*, and tube-handle A, when constructed and arranged to operate substantially in the manner as herein described and set forth.

In testimony whereof, I hereunto subscribe my name, in the presence of—

LESTER B. BROWN.

Witnesses:

J. G. ELLIOTT,
JAS. H. SMITH.