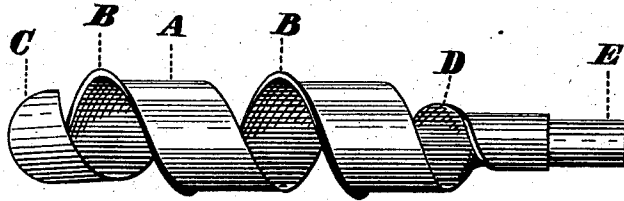


(No Model.)

A. J. SHEPARD.
Flue Cleaner.

No. 238,005.

Patented Feb. 22, 1881.



Witnesses

A. J. Sangster
Hugh Sangster

Inventor

Andrew J. Shepard
By his Attorney
James Sangster.

UNITED STATES PATENT OFFICE.

ANDREW J. SHEPARD, OF BUFFALO, NEW YORK, ASSIGNOR TO HIMSELF
AND CHRISTIAN STURM, OF SAME PLACE.

FLUE-CLEANER.

SPECIFICATION forming part of Letters Patent No. 238,005, dated February 22, 1881.

Application filed April 26, 1880. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. SHEPARD, a citizen of the United States, residing in the city of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Flue-Cleaners, of which the following is a specification.

My invention relates to devices for cleaning out the flues of boilers; and it consists of a spiral spring made of a single strip of flat thin metal provided with a cleaning-flange, and having both ends formed so that it may be moved along the flue either way without catching, as will be more clearly hereinafter shown by reference to the drawing, in which—

A represents the spring; B, a scraping or cleaning flange formed in one piece with it. The end C of the spring A is curved, as shown, so that it will enter the flues without catching, and the opposite end, D, is made smaller than

the body of the spring, so that it may be moved the other way without catching.

The operation will be easily understood from the drawing.

The metal being thin and sufficiently flexible, allows the flange B to accommodate itself to the inequalities of the boiler-tubes in which it is used.

E represents the usual socketed end, to which the rod and handle are connected by a screw or other well-known means.

I claim as my invention—

A flue-cleaner consisting of a thin strip of metal having its sides formed with struck-up flanges and then twisted to spiral form, substantially as set forth.

ANDREW J. SHEPARD.

Witnesses:

HUGH SANGSTER,
A. J. SANGSTER.