

J. S. GODFREY  
Tube-Cleaner.

No. 200,278..

Patented Feb. 12, 1878.

Fig 1

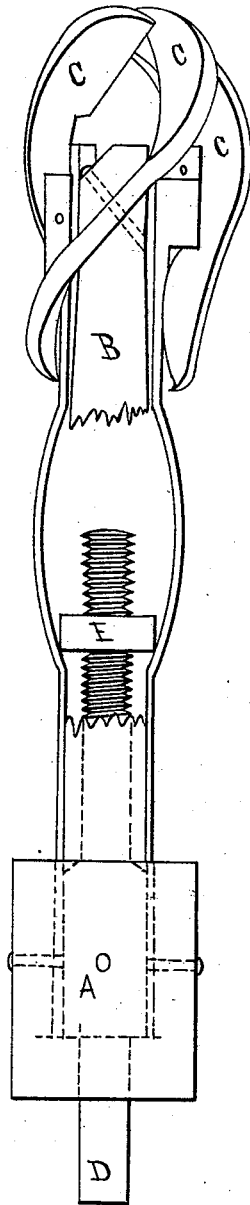
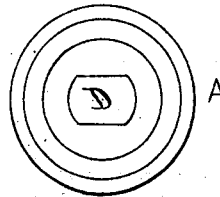


Fig 2.



Witnesses.  
*James Hammill.*  
*W. S. Gilbert.*

Inventor.  
*Joseph S. Godfrey*

# UNITED STATES PATENT OFFICE.

JOSEPH S. GODFREY, OF LESLIE, MICHIGAN.

## IMPROVEMENT IN TUBE-CLEANERS.

Specification forming part of Letters Patent No. **200,278**, dated February 12, 1878; application filed May 8, 1877.

*To all whom it may concern:*

Be it known that I, JOSEPH S. GODFREY, of Leslie, in the county of Ingham and State of Michigan, have invented a new and Improved Boiler-Flue and Water-Pipe Cleaner; and I do hereby declare that the following is a full and exact description of the same.

The nature of my invention consists in providing a flue or pipe cleaner, with the blades so set and self-adjustable as to freely pass by any imperfections that exists in the flue or pipe, either by expansion or contraction, or any imperfection that may be in the flue or pipe.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a longitudinal elevation; Fig. 2, plan of the head-piece.

The springs B have formed upon them projections, on which are placed pivoted cutting-blades C, set at an angle to the axis of the cleaner. By this arrangement a free movement of the blades is obtained, and a greater cutting-edge presented to the tube to be cleaned; at the same time an easy passage of the blades over any obstruction is accomplished, and any cavity in the tube reached and cleaned. The springs B are arched a portion of their length, near the middle and opposite the nut E, so that by moving the nut E it will expand the cleaner, or allow it to contract to fit the tube to be cleaned.

The center screw-threaded rod D is constructed with a shoulder to rest against the

end of springs B, and hold them in place, and extends up in center of cleaner to carry the nut E, and extends below the head-piece A, and is flattened to receive a wrench for turning it to move the nut E up or down.

The cutting-blades C are pivoted at or near the middle, so as to give as near the same pressure as possible each side of the joint or hinge.

The head-piece A is constructed with holes to receive the ends of springs B, and to which can be attached a handle.

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

1. In a tube-cleaner, a cutting-blade, pivoted at or near the middle, as and for the purpose set forth.

2. In a tube-cleaner, the spiral cutting-blades, pivoted at or near the middle, and attached to adjustable springs, as and for the purpose set forth.

3. In a tube-cleaner, the springs B, having a portion of their length arched near the middle, in combination with a nut and screw-threaded rod for expanding the same, as and for the purpose set forth.

4. In a tube-cleaner, the combination of the spiral cutting-blades C, pivoted at or near the middle to the springs B, the springs B arched a portion of their length near the middle, nut E, screw-threaded rod D, and head-piece A, as and for the purpose set forth.

Jackson, September 25, 1877.

JOSEPH S. GODFREY.

Witnesses:

CHAS. A. DAVIES,  
I. H. WILLIAMS.