

W. H. DEWAR.
PLUMBERS' GRAPPLE.

No. 179,533.

Patented July 4, 1876.

Fig: 1.

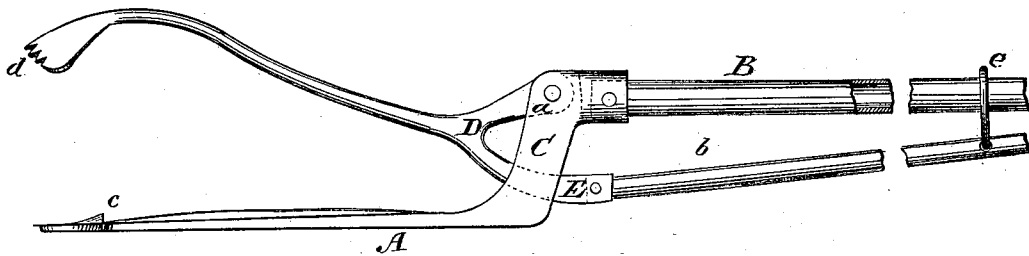


Fig: 2.

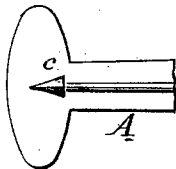


Fig: 3.

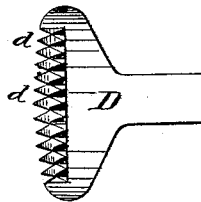
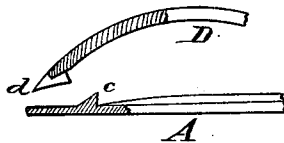


Fig: 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM H. DEWAR, OF NEW YORK, N. Y.

IMPROVEMENT IN PLUMBERS' GRAPPLES.

Specification forming part of Letters Patent No. **179,533**, dated July 4, 1876; application filed June 6, 1876.

To all whom it may concern:

Be it known that I, WILLIAM H. DEWAR, of the city, county, and State of New York, have invented a new and Improved Plumber's Grapple, of which the following is a specification:

Figure 1 is a side elevation. Figs. 2, 3, and 4 are detail views.

Similar letters of reference indicate corresponding parts.

My invention consists in the combination of suitable jaws with rods or tubes in such a way that the jaws may be operated in pipes or other narrow places for removing obstructions, and for other purposes.

A is the fixed part of the jaw, which is attached to a pipe or rod, B. It is offset at C, and made double to receive a movable jaw, D, which is pivoted or jointed to the fixed part at *a*. The jaw is curved in the direction of its length; the outer end is also curved transversely, with the convex side outward. A

short arm, E, is attached to the movable jaw D, to which a rod, *b*, is pivoted. The rod *b* and pipe B are held together at intervals by rings C, which admit of moving the rods in the direction of their length, but prevent their springing apart. The jaw D is provided with teeth *d*, and the jaw A is provided with a single spur, *e*.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of jaw A, attached to rod B, having offset at C, and provided with spur *e*, movable jaw D, having teeth *d*, pivoted at *a*, and having a short arm, E, and the pivoted rod *b*, the rod and pipe being held by rings *c*, all as shown and described.

WILLIAM HENRY DEWAR.

Witnesses:

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WILLIAM STUART.