

(No Model.)

W. E. JUDSON.
Crucible and Cupel Tongs.

No. 232,977.

Patented Oct. 5, 1880.

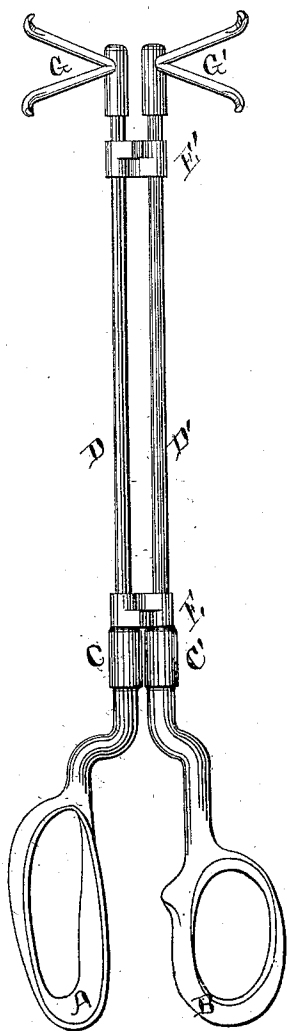


Fig. 1.

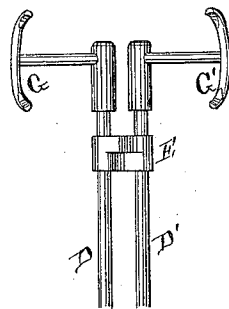


Fig. 2.

Witnesses,
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UNITED STATES PATENT OFFICE.

WILLIAM E. JUDSON, OF CLEVELAND, OHIO.

CRUCIBLE AND CUPEL TONGS.

SPECIFICATION forming part of Letters Patent No. 232,977, dated October 5, 1880.

Application filed March 9, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. JUDSON, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Crucible and Cupel Tongs; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to certain improvements in tongs designed for laboratory use in lifting and holding crucibles, cupels, or any similar devices used in chemical or laboratory work; and the particular improvements are in the peculiar form and arrangement of the parts by means of which the motions of the fingers and hand are transmitted from the handles to the grasping-jaws without any increased pressure beyond that exerted by the grasp of the hand, the parallel rods joining two extremities effecting this result, as will be seen by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved tongs, and Fig. 2 a modified form of the grasping-jaws which I intend to use and form to adapt the tongs to differently-shaped crucibles, cupels, or scorifiers, &c., or to any other uses to which the tongs may be put.

In Fig. 1, A is the handle for the fingers of the right hand, and B that for the thumb. At C C' these handles are socketed into the rods D D', which, in turn, are fastened by the connecting links or hinges E E'.

The jaws G G' are firmly attached to the ends of rods, as shown, or they may be cast all in one piece with the rods, and the jaws may be four-pronged, as shown, or as in Fig. 2. In fact, I do not limit myself to any particular form of the jaws, but design to make them in any shape adapted to the class of work they are intended to perform.

The advantages of the invention are in the

construction of the parallel rods and their hinged connecting-links, by means of which the pressure exerted at the jaws G G' is identical with that at A B, and a nicety of pressure can be attained in lifting delicate cupels and like chemical apparatus which would be impossible with a form of lever-tongs where the pressure is multiplied; and these tongs can be used in more confined spaces than would be possible with those pivoted and opening and closing from the center or a point approximating thereto.

Any suitable material may be used in making these tongs, though I prefer spring-steel for the jaws and rods and brass for the connecting-links and handles.

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

1. In tongs for laboratory or assaying uses, the parallel revolving rods D D', with sockets C C' to receive the handles A B, respectively, substantially as described and shown.

2. A crucible or cupel tongs having the handles A B and jaws G G' connected by parallel revolving rods D D', operated in the manner and for the purposes set forth and described.

3. The combination of the handles A B, hinges or links E E', rods D D', and jaws G G', operating as and for the purposes set forth and described.

4. In tongs for laboratory or assaying uses, the jaws G G', constructed as described, and connected to the parallel revolving rods D D', substantially as described and shown.

This specification signed and witnessed this 11th day of February, 1880.

WILLIAM E. JUDSON.

Witnesses:

S. M. WOLCOTT,
H. McL. HARDING.