

(No Model.)

R. E. ROLAND.
TWEEZERS FOR MICROSCOPES.

No. 467,630.

Patented Jan. 26, 1892.

Fig. 1.

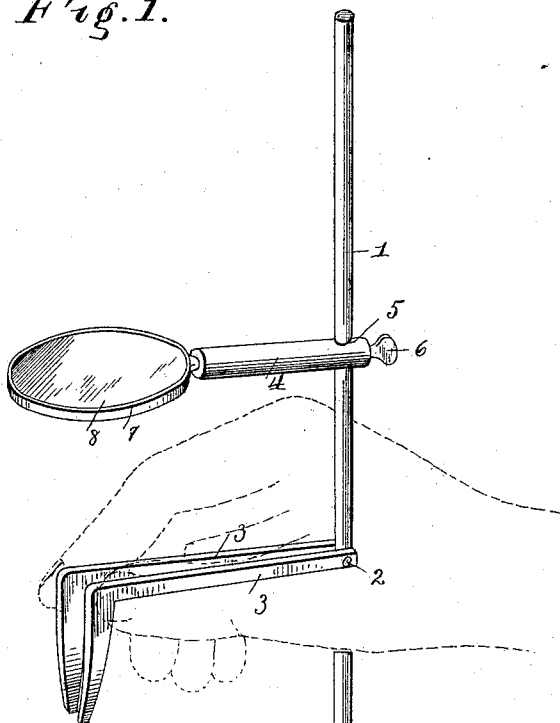
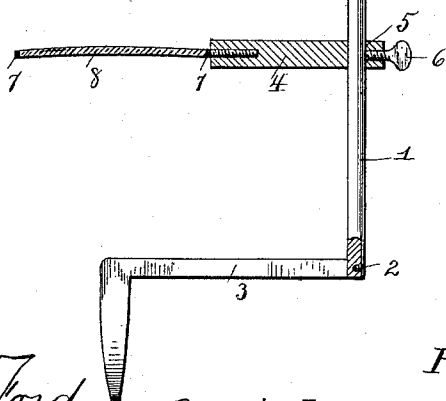


Fig. 2.



Witnesses:

Chas A. Ford.

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UNITED STATES PATENT OFFICE.

RICHARD ELSWORTH ROLAND, OF DECATUR, ILLINOIS.

TWEEZERS FOR MICROSCOPES.

SPECIFICATION forming part of Letters Patent No. 467,630, dated January 26, 1892.

Application filed September 14, 1891. Serial No. 405,691. (No model.)

To all whom it may concern:

Be it known that I, RICHARD ELSWORTH ROLAND, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented a new and useful Tweezers, of which the following is a specification.

This invention relates to improvements in tweezers adapted for general use, and more especially for physicians, barbers, and microscopists.

The objects of the invention are to provide a pair of tweezers adapted to be grasped between the thumb and forefinger of the hand of the operator and to permit sighting the same between the jaws, and to provide means for facilitating the sighting of a small or minute object located in the path of the jaws and to be grasped thereby.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a pair of tweezers constructed in accordance with my invention, a hand manipulating the same being shown by dotted lines in proper position. Fig. 2 is a vertical longitudinal section of the tweezers.

Like numerals of reference indicate like parts in both the figures of the drawings.

In constructing the tweezers I employ a cylindrical rod 1, which rod is squared and reduced at its lower end, and has secured at opposite sides, by means of a rivet 2, a pair of L-shaped spring tweezer-jaws 3, the lower extremities of which are slightly inwardly curved and reduced, as is usual. By reason of the tweezer-jaws 3 being located at opposite sides of the reduced square portion of the rod, it will be seen that said rod acts to separate the jaws and permits of a sight of any object that may be located between the jaws until the jaws have closed upon the same. The L shape of the jaws facilitates and permits of such sight, and thus it will be obvious that very minute objects may be handled with facility.

4 designates a hollow arm, which is pro-

vided near its rear end with a transverse perforation 5, which loosely receives the rod 1, said arm being designed to extend from the rod at a right angle thereto, and terminates short of the elbows of the tweezer-jaws. The rear end of the arm is threaded interiorly and a set-screw 6, mounted therein and adapted to impinge upon the rod, serves as a medium for securing the arm at any desired point along the rod. At the outer end of the rod a clasp or ring 7 is secured, the same extending directly over and above the elbows or angles of the tweezer-jaws, and in the ring there is located a magnifying-lens 8.

In operation the jaws are grasped by the thumb and forefinger of the hand of the operator, the rod 1 extending up between the thumb and forefinger at the rear portions thereof and serving as a guide or steadying device during the manipulation of the jaws, and the lens having been adjusted to proper position with relation to the jaws minute objects may be readily seen and caught between the jaws.

Tweezers thus constructed will be found especially useful for watch-makers, jewelers, physicians, barbers, microscopists, and others whose calling requires them to manipulate in any manner minute objects.

Having described my invention, what I claim is—

1. The herein-described tweezers, consisting of the rod serving as a handle and the opposite L-shaped tweezer-jaws secured at opposite sides and at the lower end of the rod, substantially as specified.

2. The combination, with the rod and the pair of L-shaped tweezer-jaws located at the lower end of the rod, of a magnifying-lens adjustably supported upon the rod above the angles of the jaws, substantially as specified.

3. The combination, with the rod terminating in a lower reduced square end and the opposite L-shaped tweezer-jaws riveted to the opposite sides of said end, of the perforated longitudinally-bored arm mounted upon the rod and extending therefrom, a set-screw threaded in the rear end of the arm and adapted to bear upon the rod, a ring at

the front end of the arm, and a magnifying-lens mounted in the ring, substantially as specified.

4. The combination, with the rod and the
5 tweezer-jaws located on the rod, of a magnifying-lens adjustably supported upon the rod above the jaws, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

RICHARD ELSWORTH ROLAND.

Witnesses:

A. R. MANNING,

D. S. HUGHES.