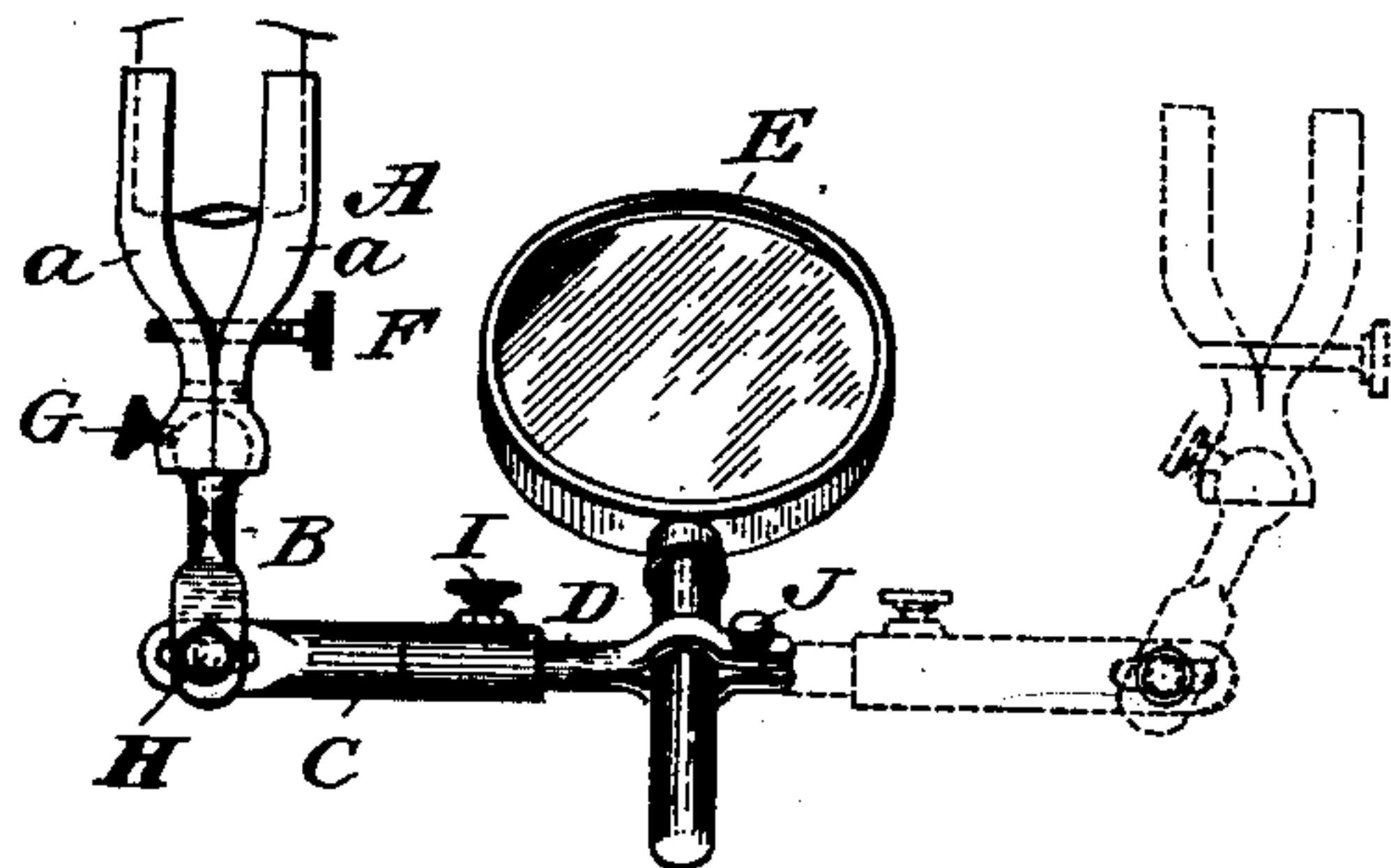


(No. Model.)

Z. HAND.
DENTAL APPLIANCE.

No. 520,357.

Patented May 22, 1894.



Witnesses
Frederic D. Lyle
Harry C. Hood

Inventor
Zelophear Hand
by *Martin W. Lane and*
Lendell A. Cummings
his Attorneys

UNITED STATES PATENT OFFICE.

ZELOPHEARD HAND, OF MILLVILLE, NEW JERSEY.

DENTAL APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 520,357, dated May 22, 1894.

Application filed December 11, 1893. Serial No. 493,397. (No model.)

To all whom it may concern:

Be it known that I, ZELOPHEARD HAND, a citizen of the United States, residing at Millville, in the county of Cumberland and State of New Jersey, have invented certain new and useful Improvements in Dental Appliances; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which forms a part of this specification.

The invention relates to an improvement in dental tools and has for its object the construction of an appliance to be used in filling distal, mesial, palatine or other surfaces of the teeth by aid of dental mirror, or otherwise, which mirror reflects the light into the cavity or enables the cavity to be easily seen by the reflection in the glass.

With these ends in view I have designed the present invention, the details of which will be more fully set forth and pointed out in the claims.

In the accompanying drawing the figure represents my device attached to a tooth.

Like letters of reference indicate like parts wherever they occur.

In the drawing A represents a clamp of any suitable material which may be securely held in place on a tooth selected for attachment of appliance by a thumb-screw F. This clamp is composed of any suitable material such as steel and may or may not be padded, so as to prevent injury to the tooth to which it is attached. The jaws *a, a*, do not preferably entirely surround the tooth. The jaws *a, a*, are long enough to get a firm hold on the tooth, and hold the remainder of the mechanism. The mirror E is held by a jointed rod, so jointed as to give a great variety of movements to the mirror, and is composed of the several bars or sections, B, C and D, so attached as to permit any desired movement. The bar B is swiveled or has a ball and socket joint, in clamp A which may be of any suitable shape. The said bar is held by a set screw G in any desired position. The bar C has an elongated slot for the lengthening

or shortening of said bar, and is securely held in the proper place with relation to bar B by a screw H. The bars B and C are preferably flattened at one end and cylindrical at the other, and the bar C is drilled to receive the rod D which construction permits of the rotation of mirror E, at any angle desirable. The bar or rod D is held securely by a screw I. The outer end of rod D is flattened and split so as to form a clamp in which the handle of the dental mirror E is grasped. The dental mirror is firmly held by bar D at any desired point by tightening set-screw J.

By the employment of this device wherein the mouth mirror is securely held by said appliance, the operator can readily adjust the apparatus so no movement of the head of the patient will destroy the focus, and discomfort to the wearer is reduced to a minimum. The operation is obvious. The operator selects the proper tooth best suited to hold the clamp and the jointed arm attached thereto, and then adjusts the several sections thereof, and then locks them in the desired position.

The movements of the device are so varied that any position can be easily secured in filling cavities of the teeth or treating diseases of the throat and mouth.

I am aware that prior to my invention dental appliances have been made with mirror reflection by attachment in and outside of the mouth, and I do not claim the same broadly, but

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

1. In a dental apparatus, a clamp forming part of said apparatus, adapted to grasp any tooth, having at one end a ball and socket joint, a jointed arm, having one end adapted to fit said socket, and a set-screw adapted to lock said arm, a dental mirror at the outer end of said jointed arm, a clamp adapted to receive and hold the handle of said mirror in the desired position, substantially as described.

2. In a dental apparatus, a clamp forming part of said apparatus having gripping jaws adapted to grasp any tooth, a jointed arm composed of extensible sections, united to said clamp by a ball and socket joint in such a manner as to permit of universal move-

ment, set screws for securing the several sections in the desired position in respect to each other, and a mirror or reflector carried by said jointed arm, substantially as described.

5
3. In a dental apparatus, a clamp forming part of said apparatus, adapted to grasp any tooth, having at one end a ball and socket joint, a jointed arm comprising both a tele-
10 scopic and also a second extensible section, set screws adapted to lock said sections in

the desired position in respect to each other, a clamp upon the outer end of said arm, and a mirror or reflector secured by clamp, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ZELOPHEARD HAND.

Witnesses:

CLINTON L. SOUDER,
FRANK REED, Jr.