

No. 649,234.

Patented May 8, 1900.

A. CHIAVARO.  
DENTAL TOOL HOLDER.  
(Application filed Aug. 26, 1897.)

(No Model.)

Fig. 1.

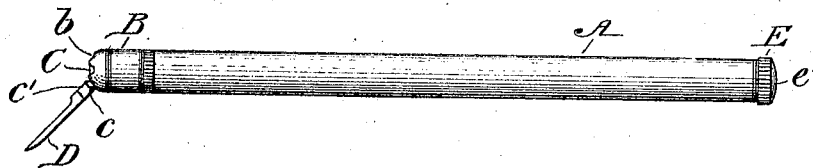


Fig. 2.

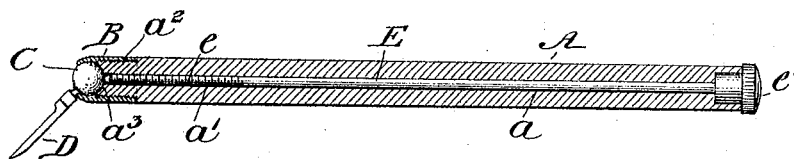


Fig. 3.

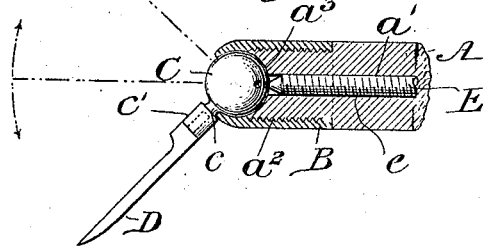


Fig. 4.

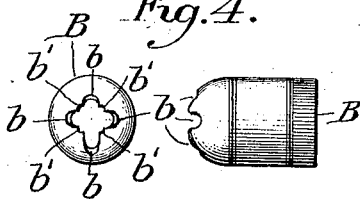
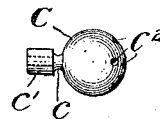


Fig. 5.



Witnesses.

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# UNITED STATES PATENT OFFICE.

ANGELO CHIAVARO, OF CATANIA, SICILY.

## DENTAL TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 649,234, dated May 8, 1900.

Application filed August 26, 1897. Serial No. 649,551. (No model.)

*To all whom it may concern:*

Be it known that I, ANGELO CHIAVARO, a subject of the King of Italy, and a resident of Catania, Sicily, (residing temporarily in the city and county of Philadelphia, in the State of Pennsylvania,) have invented certain new and useful Improvements in Devices for Holding Dental and other Tools, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to a device of simple and efficient construction for holding dental and other tools whereby the tool may be adjusted to different working angles or positions in respect to the handle to meet various requirements of service, thereby attaining by a single implement the several functions heretofore performed necessarily by a large number of separate and independent instruments.

To this end the invention, as generally stated, comprises a handle provided with a socketed end portion having in and around its wall a series of recesses of varying depths, a tool-bearing ball provided with a neck and fitted in said socket so as to have a universal movement therein, whereby said ball may be adjusted to dispose the neck in any one of said recesses, and means for clamping said ball in different positions of adjustment.

The invention also comprises various novel features of construction, which will be herein-  
after pointed out.

In the annexed drawings, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a longitudinal vertical section thereof. Fig. 3 is a similar section, enlarged, of the forward or working end of the device. Fig. 4 is an end and side view, respectively, of the socket-piece. Fig. 5 is a side elevation of the tool-holding ball.

A represents a handle of any appropriate form and size for its intended purpose. This handle is formed with a central perforation  $a$ , which extends from end to end thereof and which is screw-threaded at or near one of its ends, as at  $a'$ . The adjacent end of the handle is exteriorly threaded, as at  $a''$ , and slightly concaved, as at  $a'''$ . Screwed onto the part  $a''$  is a socket-piece B, the outer end of which is

contracted to form, in connection with the end of the handle, a socket for the reception of a ball C. The end of the socket-piece is formed with a series of lateral recesses  $b$ , of different depths, while the ball is provided with an outwardly-extending neck  $c$ , which may be turned to and seated in any of the recesses, as desired, and thereby supported on its under and lateral portions at different working angles in respect to the handle. This neck has an internally-threaded extension  $c'$ , into which may be screwed the correspondingly-threaded shank of an appropriate tool, as D. Extending through the central perforation of the handle is a rod E, one end of which is screw-threaded, as at  $e$ , to engage the threaded portion of the perforation, while the opposite extremity is provided with a knob or cap  $e'$ , which closes the end of the handle. Thus if the ball be turned to seat the neck thereof in one of the recesses of the socket-piece and the rod be then screwed up the inner end of the latter will bear forcibly against the ball and clamp it in place, thereby maintaining the tool fixedly in the angle or position determined by the depth of the recess. The opposing wall of the recess acts as a back and lateral support for the neck of the ball to counteract the thrust of the tool while it is in position.

I preferably recess the edge of the socket-piece at points intermediate the recesses  $b$ , as at  $b'$ , so that the neck may be supported therein, if desired. I also preferably provide the ball with suitably-located sockets  $c^2$  and point the inner end of the rod E, so that the point may register with one of the sockets  $c^2$  when the ball is adjusted, and thereby aid still more effectually in clamping the tool in position.

I may add that I do not limit myself to the particular construction above described, as obviously the device may be variously modified without departing from the fair spirit of the invention.

I claim—

1. The combination, with a handle or holder provided with a socket having in and around its wall a series of recesses of varying depths, of a tool-bearing ball provided with a neck and fitted in said socket, so as to have a universal movement therein, whereby said ball

may be adjusted to dispose the neck in any one of said recesses, and means for clamping said ball in positions of adjustment, substantially as described.

- 5 2. The combination, with a longitudinally-perforated handle or holder, of a screw-threaded socket-piece on one end thereof having in its outer end a series of recesses of varying depths, a tool-bearing ball fitted between said  
10 socket-piece and the end of the handle so as to have a universal movement therein and provided with a neck adapted by the adjustment of the ball to register with the recess or recesses in the end of the socket-piece, and  
15 a screw-rod fitted in said handle and adapted to clamp the ball, substantially as described.
3. The combination, with a longitudinally-

perforated handle or holder, of a socket-piece on one end thereof, a tool-bearing ball fitted in said socket-piece so as to have a universal 20 movement therein and provided with a series of indentations or sockets, and a screw-rod fitted in said handle or holder and pointed at its inner end for engagement with said indentations or sockets in the ball, substantially 25 as described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

ANGELO CHIAVARO.

Witnesses:

JOHN W. MOFFITT,  
JOHN R. NOLAN.