No. 852,159. PATENTED APR. 30, 1907.

J. BODE.

DENTAL TOOL HANDLE.

APPLICATION FILED JAN. 18, 1907.

Fig. 5.

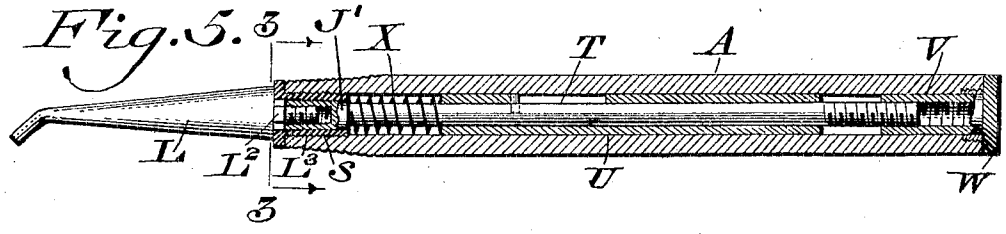


Fig. 1.

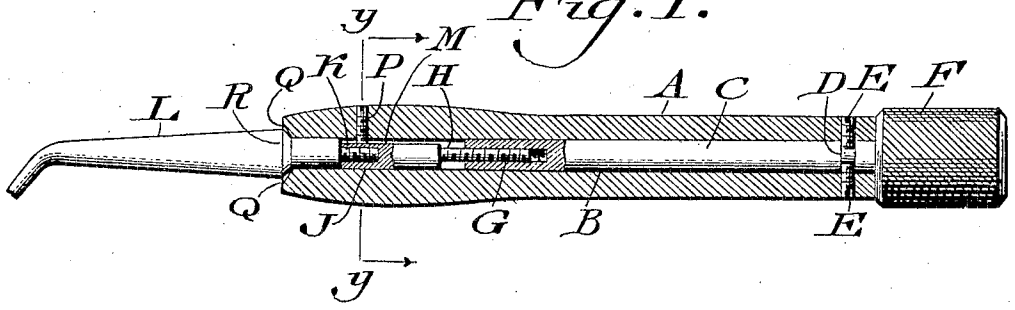


Fig. 2.

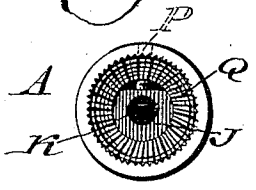
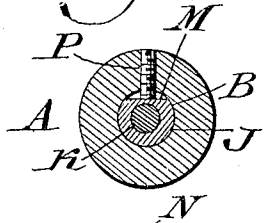


Fig. 3.



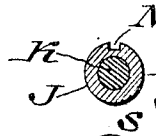


Fig. 4.

Fig. 6.

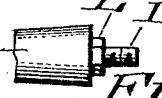


Fig. 7.

Witnesses

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DENTAL-TOOL HANDLE.

No. 852,159. Specification of Letters Patent. Patented April 30, 1907.

Application filed January 18, 1907. Serial No. 352,866.

To all whom it may concern:

Be it known that I, JOSEPH BODE, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Dental-Tool Handle, of which the following is a specification.

My invention consists of a dental or other tool handle embodying a socket and means for operating the same in opposite directions, whereby the tool applied to said socket may be interlocked with the casing and afterward released therefrom, when it may be easily disconnected from said socket.

Figure 1 represents a longitudinal section of a tool handle embodying my invention. Fig. 2 is an end view of the casing with the tool removed. Fig. 3 is a transverse section on the line *y*—*y* of Fig. 1. Fig. 4 represents a transverse section of a modification. Fig. 5 represents a longitudinal section of a modified form of the handle. Fig. 6 represents a section on line *z*—*z* Fig. 5. Fig. 7 represents a side elevation of a detached portion of a member shown in Fig. 5.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings: A designates a casing in the bore of which is rotatably mounted the stem C which by means of the annular groove D therein and screws E passed through said casing into said groove, is held from longitudinal movement while permitted to rotate in said bore.

Connected with what may be termed the outer end of said stem, is the milled head F which is rotatively mounted on the exterior of the casing and adapted to be used by the operator to rotate the stem. The other end of the stem has a threaded opening in which is fitted the screw H, the latter projecting from a slidable socketed tool holder J which occupies the forward portion of the bore B, and having a screw threaded opening in its forward end to receive the nipple K of the tool or implement L.

The tool holder J is cut away forming the flat surface M, Fig. 3, or the groove N, Fig. 4, contacting with which is the screw or stud P which passes through the casing A, and serves to prevent rotation of said tool holder while, however, permitting sliding motions thereof.

The wall of the forward end of the casing A comprises a shoulder formed with an inwardly beveled socket on which are serrations Q, the same being adapted to have contact with the outwardly beveled shoulder R on the tool or implement L, when the latter is inserted in the bore B.

The operation is as follows:—When it is desired to apply a tool, the head F is rotated and with it the stem C, whereby the tool holder J is advanced toward the forward end of the casing, and its opening is conveniently presented to insert the nipple K of the tool thereinto, which being accomplished, the head F is rotated in reverse direction, whereby the stem C draws in the tool holder and with it the adjacent end of the tool, when the shoulder R is forcibly pressed against the serrations Q and so interlocked, with the end of the casing, whereby the tool is firmly held in operative position and prevented from rotation.

It is evident that when the head is rotated in reverse order, the tool holder is moved outwardly, thus removing the shoulder R from the end of the casing and consequently from its locking engagement with the serrations Q, when the tool may be unscrewed from the socket, its removal being thereby effected.

In Figs. 5, 6 and 7, I show the nipple of the tool as partly threaded and partly polygonal, the threaded portion being adapted to enter the socket of the tool holder, and the polygonal portion being adapted to enter a thimble S in the bore of the casing, the wall of said thimble being also polygonal as shown at S′, Figs. 5 and 6. In this case, the tool holder is connected with the sliding but non-rotatable stem T, the latter being guided in the sleeve U in the casing A, and having a threaded end which is engaged by the rotatable stem V, with which latter is connected the operating head W.

In the bore of the casing and interposed between the sleeve U and thimble S, and bearing against said members is the spring X which is compressed when motion is imparted to the stem T for a purpose to be hereinafter explained.

When the head W is rotated in one direction, the socket J′ formed on the forward end of the stem is advanced sufficiently to have the nipple L′ of the tool L screwed thereinto. When the head is rotated in reverse direction, the socket is drawn into the casing, and the polygonal portion L^2 of said nipple is drawn

into the thimble S and tightened against the tool in position and preventing rotation of the same in the casing.

As the collar moves inwardly, the spring X is compressed so as to be in condition for use when the tool is to be removed. The head W is rotated in reverse order when said spring expands and forces the socket J′ sufficiently outward, whereby the polygonal part L^2 of the nipple of the tool clears the thimble S so that the tool may be unscrewed from the socket, and so entirely disconnected from the casing.

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

1. A tool handle comprising, a casing, a tool holder therein, means for operating said tool holder in opposite directions, and a shoulder on said casing, said shoulder being adapted to be engaged by a shoulder on a tool.

2. A tool handle comprising, a casing, a tool holder therein adapted to have a tool connected therewith, means for operating said tool holder in opposite directions, and means on said casing adapted to interlock the tool therewith.

3. A casing for a tool handle, the same having a bore and provided at the end thereof with a shoulder adapted to engage a shoulder on a tool, the shoulder on the casing having serrations.

4. A tool handle comprising, a casing, a tool holder therein adapted to have a tool connected therewith, means for operating said tool holder in opposite directions, and means on said casing adapted to interlock the tool therewith, said tool holder being adapted to be moved in outward direction, whereby the tool may be removed from its locking engagement with the casing and then disconnected from the tool holder.

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Witnesses:
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