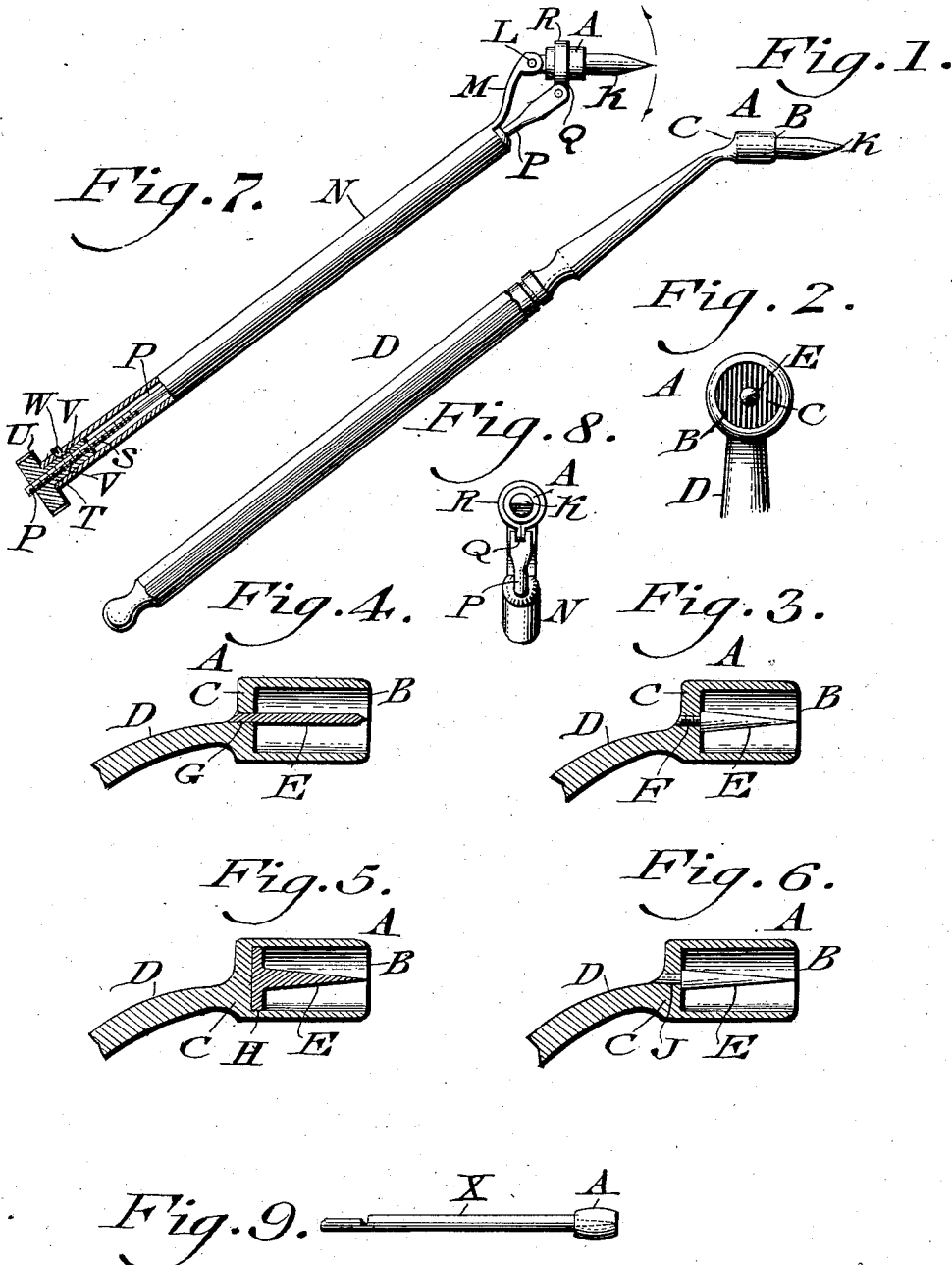


J. W. IVORY.
DENTAL HAND PORTE POLISHER.
APPLICATION FILED MAR. 6, 1911.

1,021,527.

Patented Mar. 26, 1912.



WITNESSES

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JAMES W. IVORY, OF PHILADELPHIA, PENNSYLVANIA.

DENTAL HAND PORTE-POLISHER.

1,021,527.

Specification of Letters Patent.

Patented Mar. 26, 1912.

Application filed March 6, 1911. Serial No. 612,456.

To all whom it may concern:

Be it known that I, JAMES W. IVORY, a subject of the King of Great Britain, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Dental Hand Porte-Polisher, of which the following is a specification.

My invention consists of a dental hand porte polisher having a socket adapted to receive a polishing member, and a device in said socket adapted to expand said member, and thereby hold it firmly in position in the socket.

It consists further in adapting the angle of the polishing member to be changed.

The invention is satisfactorily illustrated in the accompanying drawing, but the important instrumentalities thereof may be varied, and so it is to be understood that the invention is not limited to the specific arrangement and organization shown and described.

Figure 1 represents a side elevation of a dental hand porte polisher embodying my invention. Fig. 2 represents an elevation of a portion at a right angle to Fig. 1 and on an enlarged scale. Fig. 3 represents a longitudinal section on line $x-x$ Fig. 1. Figs. 4, 5, and 6 represent longitudinal sections of other forms of polishers embodying my invention. Fig. 7 represents a side elevation of a dental hand porte polisher embodying another feature of my invention. Fig. 8 represents a side elevation of a portion thereof at a right angle to Fig. 7. Fig. 9 represents a side elevation of another embodiment of the invention.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings:—A designates a socket which is composed of a sleeve open at its front end B, and closed at its rear end C, connected with which latter is the handle D for conveniently manipulating the implement. The handle D extends obliquely from the rear closed end of the socket or at an angle thereto so as to conveniently insert the instrument in the mouth and properly manipulate it therein.

Within the socket is the prong E which extends in the longitudinal direction of the bore of the socket, it being of considerably less diameter than said bore, it being tapering throughout its length as in Figs. 3, 5

and 6, or pointed on its outer end, as in Fig. 4.

Various forms are shown for securing the prong in position. In Fig. 3, it is provided with a threaded nipple F, which is adapted to be screwed into the rear wall C of the socket. In Fig. 4, the inner terminal portion G of the prong is driven into said rear wall. In Fig. 5, the prong has secured to its inner end, the base piece or head H which is firmly held in the socket against the rear wall thereof. In Fig. 6, the prong has a nipple J which tightly occupies an opening in the rear wall C of the socket, but in all cases the prong is firmly sustained centrally with the socket and presents its point to the front. K designates a pin, plug or piece of wood or other suitable material, the same being exteriorly of cylindrical form so as to accord with the bore of the socket A, said piece being adapted for polishing purposes usual in such cases, it being seen that in locating the piece its rear portion is inserted into the socket and forced against the point of the prong, when the latter penetrates said portion and expands the same against the wall of the bore of the socket so that said portion is wedged in the socket, its inner end abutting against the rear wall of the socket, thus limiting the piece in its entrance into the socket, it being seen that the piece is firmly and steadily held in the socket and its outer portion is adapted to render efficient service for dental polishing purposes as is evident. In either of said forms, as most plainly shown in the enlarged sectional views, Figs. 3, 4, 5 and 6, the prong is adapted to impale the polishing member K, ordinarily a small stick when the latter is inserted in the socket and driven against the prong as a fixture of the latter, it being seen that the prong is made separate from its socket so that a small article of the kind may be constructed and finished before being fixed within the socket, and it is made necessarily of superior metal, it being provided with means for securing it firmly in position within the socket, it then being attached to the end wall of the latter.

In Figs. 7 and 8, I show the device or implement adapted to have the angle of the piece B changed according to requirements or desire. To this end the socket A is pivotally mounted as at L on the arm M, the

latter being connected with the tubular handle N, through which is passed the slidable stem P, one end of which is pivoted with the ear Q on the exterior of the socket A, said ear in the present case being the terminals of a band such as R which firmly encircles said socket. The opposite end of the stem P is screw threaded as at S and engages an interiorly threaded plug T to which is attached the milled head U whereby said plug may be rotated, it being noticed that said plug enters the adjacent end of the tubular handle N and has in its exterior the circumferential groove V into which freely projects the point of the screw W which latter is passed through the side of the handle P at a right angle to the plug T, whereby its point enters said groove V, thus forming a swivel for the stem P, it being noticed that the head U is on the exterior of the end of the handle N and the adjacent portion of the stem P passes through the same, so that when said head is rotated, longitudinal motions in opposite direction may be imparted to the stem P, whereby the socket is caused to turn on the pivot or axis L on the arm M and thus the angle of the socket and consequently of the piece K changes relatively to the extent of motion of said stem, while the socket remains fixed or immovable at the angle to which it is adjusted.

In Fig. 9 I show a socket A which is carried by the shank X attachable to an engine for rotatively operating the piece K when so required.

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

1. In a dental porte polisher, a socket, a handle connected therewith and extending

angularly from the exterior thereof, and a prong within said socket, said prong being separate from said socket and provided with means for detachably securing it to the end wall thereof.

2. In a dental hand porte polisher, a socket adapted to contain a polishing piece, and a mounting for said socket whereby its angle and that of said piece may be varied.

3. In a dental hand porte polisher, a socket adapted to contain a polishing member, a bearing on which said socket is pivotally mounted, a handle with which said bearing is connected, a movable device in said handle adapted to engage said socket, and means for operating said device in opposite directions whereby the angle of said polishing member may be varied.

4. In a dental hand porte polisher, a socket adapted to contain a polishing member, a bearing on which said socket is pivotally mounted, a tubular handle with which said bearing is connected, a stem in said handle adapted to engage said socket, means on said handle for operating said stem in opposite directions.

5. In a dental hand porte polisher, a socket adapted to contain a polishing member, a bearing on which said socket is pivotally mounted, a tubular handle with which said bearing is connected, a threaded stem in said handle, one end of which is pivotally connected with said socket, and a swivel device on said handle, the same being adapted to engage said stem to impart motions thereto in opposite directions and thereby vary the angle of said polishing member.

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Witnesses:

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