

(No Model.)

S. P. SHARP.
ANGLE ATTACHMENT FOR DENTAL ENGINES.

No. 491,499.

Patented Feb. 7, 1893.

Fig. 1.

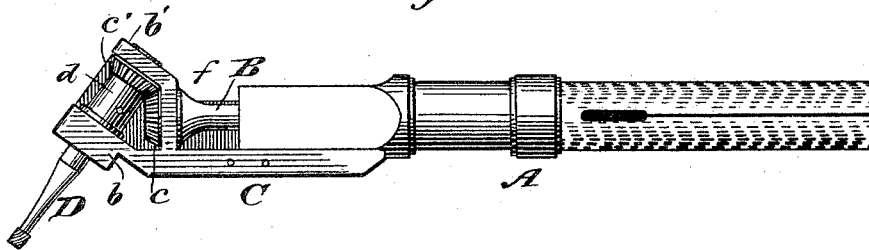


Fig. 2.

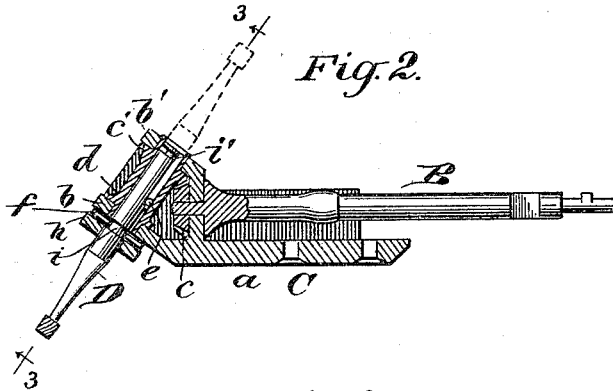


Fig. 3.

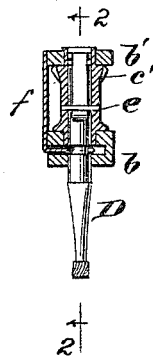


Fig. 5.

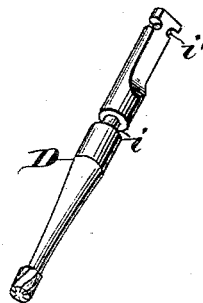
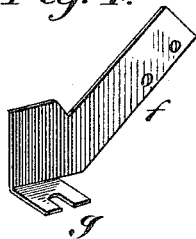


Fig. 4.



WITNESSES:

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SAMUEL P. SHARP, OF KNOXVILLE, TENNESSEE.

ANGLE ATTACHMENT FOR DENTAL ENGINES.

SPECIFICATION forming part of Letters Patent No. 491,499, dated February 7, 1893.

Application filed July 26, 1892. Serial No. 441,278. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL P. SHARP, of Knoxville, in the county of Knox and State of Tennessee, have invented a new and Improved Angle Attachment for Dental Engines, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a side elevation of my improved angle attachment, showing its connection with the engine tool handle; Fig. 2 is a side elevation, partly in section, of the attachment; Fig. 3 is a transverse section taken on line 3—3 in Fig. 2; Fig. 4 is a detail view of the bit-locking spring; and Fig. 5 is an enlarged perspective view of one of the bits or burrs.

Similar letters of reference indicate corresponding parts in all the views.

The invention is an improvement in the class of angled tool-holders for dental engines, and consists in the construction and combination of parts as hereinafter pointed out.

The handle A, is of the kind usually employed in connection with dental engines for carrying the burring, drilling, abrading and polishing tools. It is provided with a shaft of the usual description furnished at its extremity with a socket for receiving rotating tools. To the shaft is fitted the spindle B, which takes the place of the ordinary revolving tool.

A frame C, consisting of the body *a* and the angled arms *b*, *b'*, is attached to the side of the handle A at the end, and the outer end of the spindle B is journaled in the arm *b'*, and carries on the end thereof which projects through the said arm, a beveled gear wheel *c*. In the arms *b*, *b'*, is journaled a sleeve *d*, which is inclined at any angle with the spindle B which may be found most convenient and desirable. In the present case the axis of the sleeve *d* is inclined at an angle of about sixty degrees with the spindle B. The sleeve *d* carries a beveled gear wheel *c'*, which meshes with the wheel *c*, and it is provided with a transverse pin *e* which engages the tool carried by the sleeve, causing it to rotate in the

sleeve. To the side of the body *a* is attached a flat spring *f*, provided with an angled slotted end *g*, which extends into a slot *h* in the arm *b*.

The tool D, which is carried by the sleeve *d*, is flattened upon one side through a portion of its length to allow it to engage the pin *e* extending through the sleeve *d*, and in the shank of the tool are formed circumferential grooves *i*, *i'*, into which the slotted end of the spring *f* enters. The said spring by engagement with the circumferential groove retains the tool D in the sleeve *d*. The tool D is reversible, and may be inserted in either end of the sleeve. When it is in the position shown in full lines in Figs. 1 and 2, the tool forms an obtuse angle with the spindle B, but when it is inserted in the opposite end of the sleeve, as indicated in dotted lines in Fig. 2, the tool D forms an acute angle with the spindle B.

My improved attachment may be applied to any existing form of dental engines, or it may be provided with a handle of its own especially adapted to it.

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

1. In an angle attachment for dental engines, the combination, with the angle frame C having the arm *b* provided with the slot *h*, of the flat spring *f*, having its free end forked, and adapted to enter said slot, whereby it is adapted to hold the tool detachably in place, as shown and described.

2. In an angle attachment, the combination with the angle frame C having the apertured arms *b*, *b'* one of which has a slot *h*, and the cross pin *e*, of the reversible tool D having two circumferential grooves *i* and *i'* and a flattened side portion, and the forked spring *f* which is adapted to enter said slot and thus engage either groove and lock the tool in either position, as shown and described.

SAMUEL P. SHARP.

Witnesses:

H. H. TAYLOR,
C. H. BROWN.