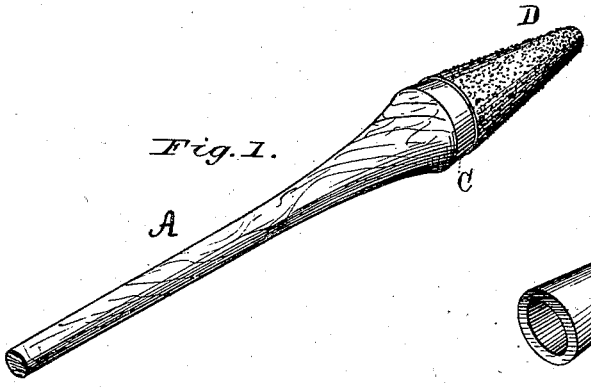
L. F. LOCKE.

DENTAL POLISHING-TOOL.

No. 170,178. Patented Nov. 23, 1875.

Fig. 1.



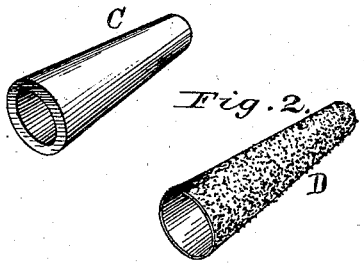


Fig. 2.

Fig. 3.

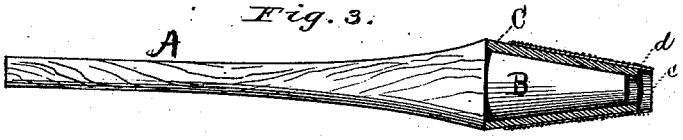
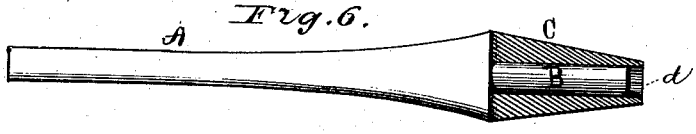


Fig. 4.

Fig. 5.

Fig. 6.



Attest:
R. F. Smith
L. C. Marshall

Inventor.
Luther F. Locke

UNITED STATES PATENT OFFICE.

LUTHER F. LOCKE, OF NASHUA, NEW HAMPSHIRE.

IMPROVEMENT IN DENTAL POLISHING-TOOLS.

Specification forming part of Letters Patent No. **170,178**, dated November 23, 1875; application filed June 22, 1875.

To all whom it may concern:

Be it known that I, L. F. LOCKE, of Nashua, New Hampshire, have invented certain new and useful improvements in implements for cutting, trimming, shaping, and polishing plates for artificial teeth, of which the following is a full, clear, and exact description, reference being had to the drawing making part of this application.

My invention consists of an implement or tool which may be mounted in the dental lathe. It is composed of several parts, viz: a spindle to fit the lathe-head, an elastic conical cushion, and a collar fitting tightly over the latter, and projecting somewhat beyond the end of the supporting-cushion, said collar being composed of sand-paper, emery, or other similar substance. The construction of these parts and their relation to each other are novel and peculiar and will be best understood from the drawing.

Figure 1 shows the device complete. Fig. 2 shows the conical elastic cushion and sand-paper collar detached. Fig. 3 is a longitudinal section of the device, as shown in Fig. 1. Fig. 4 shows the spindle. Figs. 5 and 6 show various forms of the spindle, with the elastic cushion attached.

A is the shank of the spindle, the size and shape being adapted to fit the common lathe-head. B is the head, which may be made conical, and corrugated, as shown in Fig. 4, or straight and smooth, as seen in Fig. 6. C is the elastic cushion, which is, preferably, made of rubber, conical in form, and bored completely through, as shown in Fig. 6. D is the sand-paper collar, which is made to fit the cushion tightly, the several parts thus named being all constructed so that they may easily be detached from each other, and new ones supplied, as wear or injury may require.

All dentists are familiar with the difficulty experienced in shaping and polishing the plates used to support artificial teeth. Not only is the material of which they are composed hard to cut, but the peculiar shape of the plates, and the numerous angles, the minute cavities, and the delicately-formed sinuses, each requiring to be shaped and polished, renders the task one of great labor, and requiring long practice and patience.

The object of my invention is to provide a tool which will shape and polish every part of the plate, and thus avoid the difficulties named.

To this end I allow the elastic cushion to project slightly beyond the end of the spindle-head, as shown in Fig. 6. Now, if the sand-paper collar terminates exactly at the extremity of the cushion it will be seen that an extremely sharp and delicate cutting-edge is obtained, which will readily enter the sinus between two of the teeth upon the plate. Nor is this all; for, by pressing the plate against the end of the cone, at an angle to the axis of the spindle, the unsupported end of the cushion will bend in against the end of the spindle, and, by the rapid rotation of the latter, a sharply-convex polishing-surface is formed, which will enter minute depressions and cavities with ease. When the pressure is removed the rubber cushion will again resume its usual position.

This result may be better attained by arranging the parts, as shown in Fig. 3, allowing the polishing-collar to project beyond the rubber cone about as far as the latter projects beyond the end of the spindle. I much prefer this construction, although either may be used.

The form of the elastic cushion will readily commend itself to any operator, although I claim no novelty therein. The conical surface will cut the material composing the artificial plate with great rapidity.

After the plate is cut down and trimmed to the necessary dimensions and shape the collar may be removed, and upon the surface of the elastic cushion some fine polishing material may be lightly sprinkled. The plate being then applied will be polished most brilliantly in a few moments.

What I claim, and desire to secure by Letters Patent, is—

1. In the dental polishing-tool described, the conical elastic cushion C, adapted to fit the spindle-head B, and having the annulus *d*

projecting beyond the extremity of the spindle B, as and for the purpose described.

2. In a dental polishing-tool, such as described, an elastic, conical cushion, C, having its extremity *d* projecting beyond the end of the spindle, and covered by a sand-paper collar, which has a portion, *c*, extending beyond the end of the cushion, substantially as and for the purpose set forth.

LUTHER F. LOCKE.

Witnesses:
R. T. SMITH,
JOHN TAYLOR.