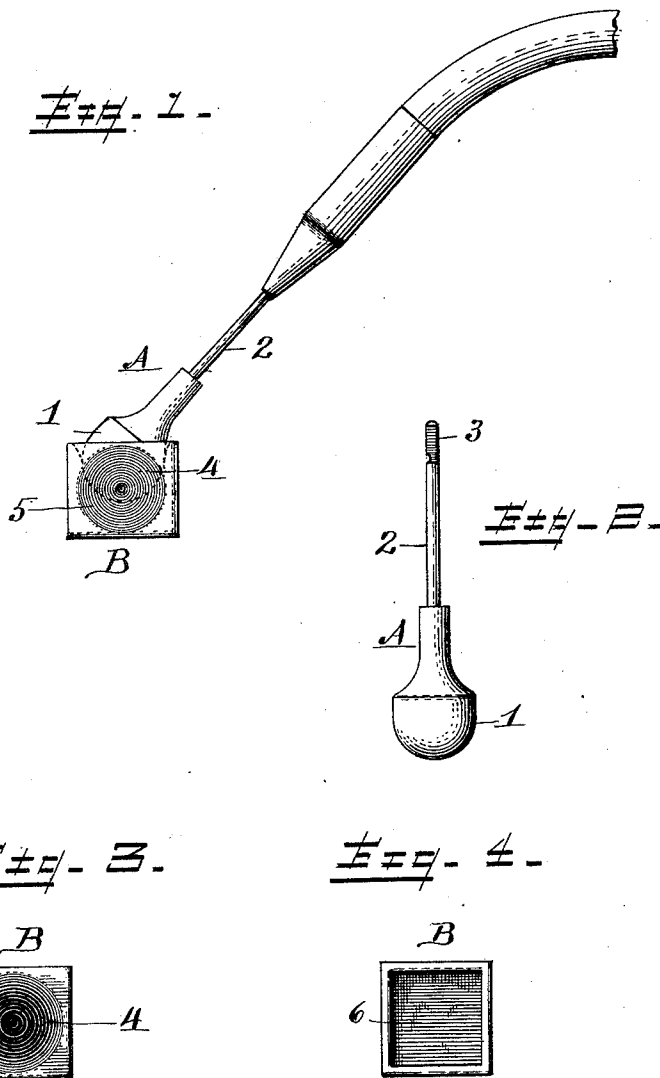


(No Model.)

F. E. HANSÈN.
PESTLE AND MORTAR FOR DENTAL USE.

No. 462,703.

Patented Nov. 10, 1891.



Witnesses

W. B. Blackwood
A. G. Kuylen

Inventor
Florian E. Hansen
By J. M. Yznaga.
Attorney

UNITED STATES PATENT OFFICE.

FLORIAN E. HANSEN, OF MINNEAPOLIS, MINNESOTA.

PESTLE AND MORTAR FOR DENTAL USE.

SPECIFICATION forming part of Letters Patent No. 462,703, dated November 10, 1891.

Application filed June 26, 1891. Serial No. 397,597. (No model.)

To all whom it may concern:

Be it known that I, FLORIAN E. HANSEN, a citizen of the United States of America, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Pestles and Mortars for Dental Use; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention has relation to improvements in pestles and mortars; and the object is to provide an improved mortar for reducing or triturating amalgams or plastic materials, such as are used in the profession or art of dentistry. So far as I am aware, the amalgams and plastics used in the filling of teeth are reduced simply by manipulation in the palm of the hand or by common hand-mortar and pestle. This, while in a measure effectual, is not satisfactory or complete, and I have devised the present invention, consisting of a mortar of particular construction, adapted especially for dentists' use, and have also invented a revolving pestle to be used in the mortar.

My invention therefore consists in the novelty of the parts and their operative combination, as will be hereinafter specified, and particularly pointed out in the claims.

I have fully and clearly illustrated my invention in the accompanying drawings, wherein—

Figure 1 is a view of the pestle in position in the mortar and the stem of the pestle attached to the end of the flexible shaft of a dental engine. Fig. 2 is a perspective of the pestle. Fig. 3 is a perspective view of the mortar, showing the concave or saucer in the side; and Fig. 4 is a view of the mortar, showing a tray formed in the side.

A designates the pestle, the bulb or grinding portion 1 of which may be extended beyond a semisphere to afford more grinding-surface when in the mortar. In the shank of the pestle is fixed a shaft 2, the upper end 3 being formed to couple with the flexible shaft of a dental engine or other rotating means

for revolving the pestle. The bulb of the pestle may be made of wedgewood, glass, or any suitable material, and when made of glass the grinding-surface should be ground in order to obtain the requisite bite in use.

B designates the mortar, the bowl 4 of which is made somewhat flaring, in order that when the pestle is inserted for use the largest possible grinding-surface may be presented or utilized between the mortar and pestle. One side of the mortar is formed concave, constituting a shallow saucer 5 for use in dentistry, instead of separate implements of that kind usually employed, and in the bottom or one of the sides of the mortar is also formed a tray 6, for holding such materials as may be desired or requisite, so that the mortar may not only be used for that particular purpose, but in a single implement the uses of three implements are attained or accomplished.

In use or operation the stem or mandrel of the pestle is connected to the hand-piece of the dental engine, the material placed in the mortar, and then the pestle applied and being rotated through its connection to the dental engine the trituration of the material is thoroughly accomplished. At the same time that the pestle is grinding in the mortar the latter may be turned by the hand in opposite direction and the desired result more quickly attained. I thus not only provide an efficient and simple means for grinding or triturating the material, but save both time and labor in the operation.

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

1. The combination, with a mortar, of a hand-pestle provided with a coupling-stem, and a flexible rotatable shaft connected to the stem, substantially as and for the purpose set forth.

2. The mortar herein described, consisting of a rectangular body having a mortar-bowl formed therein, a saucer formed in one side of the body, and a tray formed in one of the other sides, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FLORIAN E. HANSEN.

Witnesses:

NEWTON T. HUME,
WILLIAM H. DAVIES.