Dec. 24, 1940. C. P. BOWER 2,225,900

AMALGAM CARRIER

Filed Oct. 9, 1939

FIG. 1

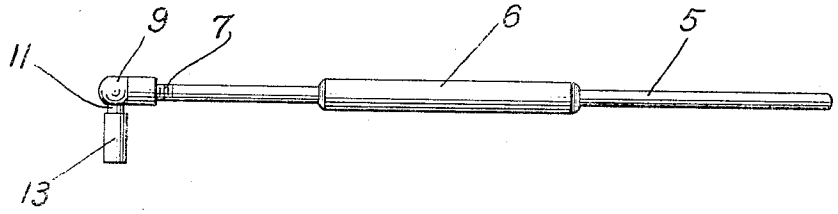


FIG. 4

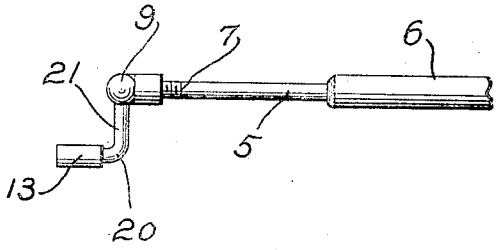


FIG. 2

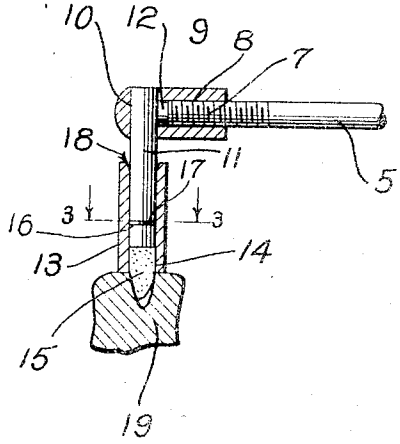
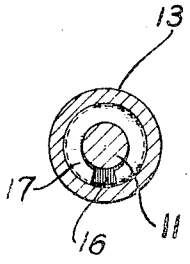


FIG. 3



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AMALGAM CARRIER

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3 Claims. (Cl. 32—60)

This invention relates to dental tools and more particularly to a tool especially designed for carrying and depositing amalgam in dental cavities.

The object of the invention is to provide a dental tool of simple and inexpensive construction, by means of which a predetermined quantity of amalgam or other filling material may be conveniently carried from a source of supply and firmly packed within the cavity of a tooth to be filled without waste of the amalgam or danger of smearing the filled tooth or adjacent teeth with said amalgam.

A further object of the invention is to provide an amalgam carrier, the construction of which is such as to permit the filling of cavities that are usually inaccessible with other dental tools and which can be used with equally good results for filling cavities in the teeth of either the upper or lower jaw.

A further object is to provide a dental tool including an operating handle having a cylindrical plunger detachably secured thereto and provided with a sleeve slidably mounted thereon and adjustable longitudinally thereof to form a pocket of any desired size for the reception of amalgam, means being mounted on the plunger and having yieldable contact with the inner wall of the sleeve for frictionally holding said sleeve in a selected position of adjustment.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency as well as to reduce the cost of manufacture.

In the accompanying drawing forming a part of this specification and in which similar numerals of reference indicate corresponding parts in all the figures of the drawing:

Figure 1 is a side elevation of an amalgam carrier embodying the present invention,

Figure 2 is an enlarged vertical sectional view of the operating end of the tool showing the manner of using the same for filling a cavity,

Figure 3 is an enlarged transverse sectional view taken on the line 3—3 of Figure 2, and

Figure 4 is a side elevation showing the operating handle supporting a right angle carrier head for use in certain types of dental fillings.

The improved amalgam carrier forming the subject-matter of the present invention comprises an operating handle 5 preferably in the form of a metal rod having its intermediate portion provided with a cylindrical finger grip 6 formed of hard rubber or other suitable material. The inner end of the operating handle 5 is threaded at 7 for engagement with the correspondingly threaded walls of a horizontal socket 8 formed in a head piece 9. The head piece 9 is provided with a vertical socket 10 opening through the top thereof and adapted to detachably receive a cylindrical plunger 11. The threaded end of the handle is provided with a reduced extension 12 which bears against the adjacent wall of the plunger 11 and serves to detachably clamp the plunger in position on the head.

Slidably mounted on the plunger 11 is a tubular member or sleeve 13 which, when projected beyond the adjacent end of the plunger, forms a pocket or compartment 14 adapted to receive a predetermined quantity of amalgam or other filling material, indicated at 15. The lower end of the plunger 11 is provided with a circumferential groove 16 in which is seated an expansible ring 17 adapted to yieldably engage the inner wall of the sleeve 13 and frictionally hold the sleeve in a selected position of adjustment with respect to the plunger thereby to vary the size of the amalgam receiving pocket 14. The inner walls of the sleeve 13 at the upper end thereof are preferably slightly inclined or beveled, as indicated at 18, to facilitate positioning the sleeve over the lower or free end of the plunger.

In operation, the sleeve 13 is adjusted longitudinally of the plunger 11 to form a pocket of a size sufficient to receive the approximate amount of amalgam necessary to fill a selected cavity in a tooth, after which the amalgam is introduced within the pocket and the sleeve 13 positioned over the cavity in the tooth 19 with the lower edge of the sleeve resting on the tooth around the cavity therein, as best shown in Figure 2 of the drawing. By then exerting a slight downward pressure on the operating handle, the plunger 11 will force the amalgam in the pocket 14 within the cavity of the tooth and firmly pack the amalgam therein without the necessity of using a tamping instrument and without smearing the surface of the tooth being filled or coming in contact with adjacent teeth. For filling certain types of cavities, I provide a right angular head of the type shown in Figure 4 of the drawing. In this form of the device, the plunger 20 is provided with an angular extension 21 which detachably engages the vertical socket in the head 9. The angular head is interchangeable with the vertical head and the plunger of said angular head will, of course, be provided with an expansible ring for frictional engagement with the inner wall of the tubular member or sleeve in the same manner as the tool shown in Figure 1 of the drawing.

By means of a tool constructed in accordance

with the present invention, amalgam may be conveniently carried from a workbench, laboratory or other source of supply and accurately deposited in cavities of teeth which are generally inaccessible with the usual type of dental tool.

It will, of course, be understood that the amalgam carriers may be made in different sizes and shapes and constructed of any suitable material without departing from the spirit of the invention.

Having thus described the invention, what is claimed as new is:

1. An amalgam carrier comprising an operating handle having a threaded portion, a head engaging the threads on the handle and provided with a socket opening through the top thereof, a plunger of uniform cross sectional diameter adjustable vertically within said socket, a sleeve slidably mounted on the plunger and adjustable longitudinally thereof independent of the vertical adjustment of the plunger to form a pocket for the reception of filling material, the threaded end of the handle by engagement with the plunger serving to hold said plunger in adjusted position, and yieldable means carried by the lower end of the plunger and adapted to frictionally engage the inner wall of the sleeve for holding said sleeve in a selected position of adjustment.

2. An amalgam carrier comprising an operating handle having a threaded portion terminating in a reduced extension, a head having a horizontally threaded socket engaging the threads on the handle and provided with a vertical socket opening through the top of the head, a plunger mounted for vertical movement within the vertical socket and held in adjusted position by engagement with the extension of the handle, the lower end of said plunger being provided with an annular seating groove, a sleeve slidably mounted on the plunger and adjustable longitudinally thereof independent of the vertical adjustment of said plunger to form a pocket between the lower end of the plunger and said sleeve for the reception of amalgam, and an expansible ring fitted in the seating groove and frictionally engaging the inner wall of the sleeve for holding said sleeve in a selected position of adjustment, the inner wall of the sleeve at the upper end thereof being beveled in the direction of said plunger.

3. An amalgam carrier comprising a head having angularly disposed sockets formed therein, one of which is threaded and the other smooth and opening through the top of said head, a plunger having an angular extension adjustable vertically within the smooth socket, the outer end of the plunger being provided with an annular seating groove, an operating handle engaging the walls of the threaded socket in the head and bearing against the angular extension of the plunger for holding said extension in adjusted position on the head, a sleeve slidably mounted on the plunger and adjustable longitudinally thereof independent of the vertical adjustment of said extension to form a pocket for the reception of filling material, and an expansible ring fitted in the seating groove and yieldably engaging the inner wall of the sleeve for frictionally holding said sleeve in adjusted position on said plunger.

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