J. E. HAWLEY.

APPARATUS FOR RECOVERING GOLD DUST.

APPLICATION FILED SEPT. 30, 1912.

1,093,049. Patented Apr. 14, 1914.

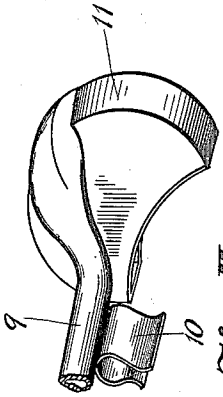


Fig. II.

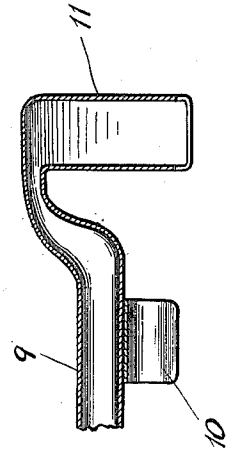


Fig. III.

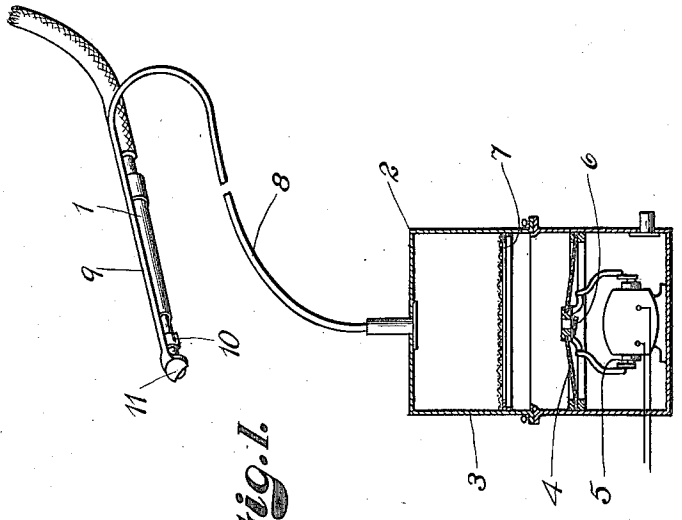


Fig. I.

WITNESSES:

Arthur W. Capps.

Lewis L. Miller.

INVENTOR

Joel E. Hawley

BY

Arthur C. Brown

ATTORNEY

UNITED STATES PATENT OFFICE.

JOEL E. HAWLEY, OF KANSAS CITY, MISSOURI, ASSIGNOR OF ONE-HALF TO G. H. BROWN, OF KANSAS CITY, MISSOURI.

APPARATUS FOR RECOVERING GOLD-DUST.

1,093,049. Specification of Letters Patent. Patented Apr. 14, 1914.

Application filed September 30, 1912. Serial No. 723,166.

To all whom it may concern:

Be it known that I, JOEL E. HAWLEY, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Apparatus for Recovering Gold-Dust; 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 relates to an apparatus for recovering gold dust, and more particularly to an apparatus for dental use wherein suction is utilized to gather dust ground from an object to which the tool is applied.

More particularly the invention consists in the application to a dental hand piece of a hood and vacuum conduit whereby the hood may be applied to the hand piece when a stone is to be used, so that dust ground from a tooth in a patient's mouth will be taken in through the hood and delivered to a suitable receptacle, thereby obviating the loss of the gold dust.

In accomplishing my object, I have provided the improved details of structure hereinafter described and illustrated in the accompanying drawings, wherein:—

Figure I is a perspective view of a vacuum apparatus and hand tool showing the application of the vacuum hood to the tool. Fig. II is a detail perspective of the vacuum hood. Fig. III is a longitudinal section of same.

Referring more in detail to the parts:—1 designates a dental hand tool and 2 a vacuum pump, both of which may be of ordinary construction, but the latter preferably comprising a casing 3, having a flexible diaphragm 4 and crank mechanism 5 for vibrating the diaphragm to draw air into the upper portion of the casing, the diaphragm having an automatic valve 6 whereby the upper casing chamber is relieved of air on the upward stroke of the diaphragm. Above the diaphragm is a tray 7, preferably of fabric, so that air may pass therethrough while fine particles of dust will be caught thereon. Extending from the upper portion of the casing is a tube 8 having a rigid nozzle 9 at its outer end provided with a clip 10 which is adapted for projection over the hand tool 1 to hold the nozzle thereto while the tool is being used, the outer end of the nozzle comprising a hood 11 which is adapted to lie over a stone carried by the hand tool, so that the latter may revolve freely therein while space is afforded around the stone for the circulation of air. The nozzle conduit is preferably offset at its outer end and connects with the hood chamber at the base of the hood so that air is drawn entirely through the hood when the apparatus is in use.

When the hand tool is to be used with a drill, or other tool not adapted for treating gold, the vacuum apparatus need not be connected therewith, but when the hand tool is to be used for grinding or polishing a gold filling or crown the vacuum nozzle is applied to the hand tool by projecting the clip over the body of the tool so that the stone or burnisher is inclosed by the hood 11.

With the hand tool in use, a stone or burnisher works on the crown, or the like, and any gold dislodged therefrom is drawn into the vacuum hood and carried through the conduit to the tray 7 in the casing of the vacuum apparatus, in this way saving the dust which would otherwise be lost.

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

1. The combination with a tool, of a hood partially inclosing the tool, a receptacle, a conduit connecting the hood and receptacle, and a vacuum apparatus adapted for drawing dust through the hood and conduit and delivering same to the receptacle.

2. The combination with a revoluble tool, of a vacuum apparatus, a conduit leading from the apparatus and provided with a nozzle comprising a hood adapted for inclosing part of the revoluble tool, and a clamp on said nozzle for removably attaching same to a part of the tool.

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

JOEL E. HAWLEY.

Witnesses:
LEWIS L. MILLER,
LETA E. COATS.