No. 859,095. PATENTED JULY 2, 1907.

P. A. MERCER.

SWAGING FORCEPS.

APPLICATION FILED DEC. 4, 1906.

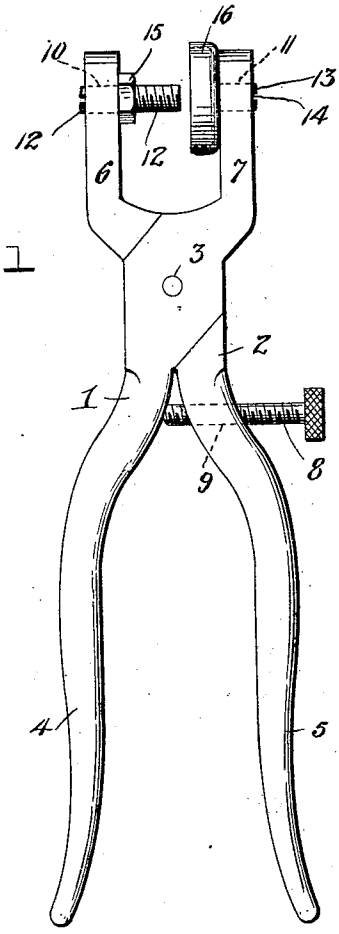

FIG. 1

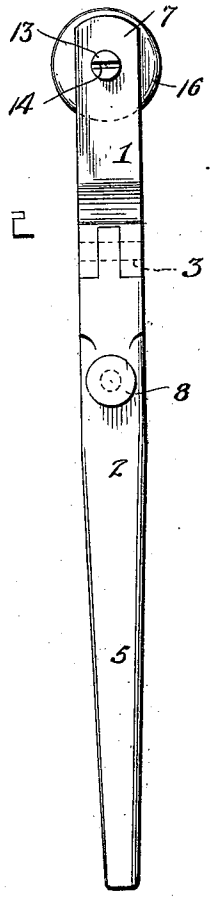

FIG. 2

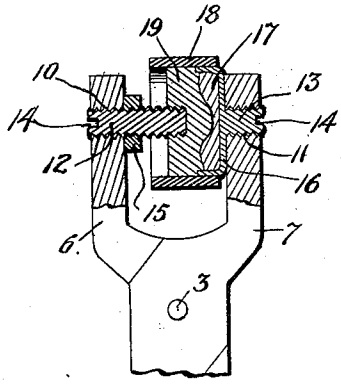

FIG. 3

Witnesses

J. Gruebauer Jr.

A. L. Wedner

Inventor

P. A. Mercer

By Watson E. Coleman

Attorney

UNITED STATES PATENT OFFICE.

PLINY A. MERCER, OF MONTPELIER, OHIO.

SWAGING-FORCEPS.

No. 859,095. Specification of Letters Patent. Patented July 2, 1907.

Application filed December 4, 1906. Serial No. 346,237.

To all whom it may concern:

Be it known that I, PLINY A. MERCER, a citizen of the United States, residing at Montpelier, in the county of Williams and State of Ohio, have invented certain new and useful Improvements in Swaging-Forceps, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in swaging forceps for the use of dentists, and consists in the novel construction, combination and arrangement of parts hereinafter described and claimed.

The object of the invention is to provide a simple and practical tool of this character for swaging one-piece, gold crowns, gold dummies, making gold cusps, backing teeth, making matrices for inlays, making small saddles and reproducing anything from which an impression can be obtained.

Further objects and advantages of the invention, as well as the structural features by means of which these objects are attained, will be made clear by an examination of the following specification, taken in connection with the accompanying drawings, in which

Figure 1 is a side elevation of my improved swaging forceps; Fig. 2 is an edge view of the same; and Fig. 3 is a detail sectional view through the jaws of the device, showing one way in which the device may be used.

My improved tool comprises two crossed levers 1, 2, suitably pivoted intermediate their ends, as at 3, and formed at their long ends with hand grips 4, 5, and at their short or outer ends with laterally offset jaws 6, 7. The closing movement of these jaws is adapted to be limited by an adjustable stop in the form of a set screw 8 arranged in a threaded opening 9 in the handle 5 and adapted to engage the inner face of the handle 4. In the jaws 6, 7 are formed at equal distances from the pivot 3 transverse apertures or openings 10, 11 which are internally screw-threaded to receive threaded stems 12, 13. Each of these stems has a niche or recess 14 in its outer end for the reception of a screw driver or the like by means of which the stem may be adjusted in its jaw. Upon the inner end of the stem 13 is formed or secured a metal cup or tray 16 adapted to receive moldine or any other suitable plastic material in which an impression may be made. Upon the other stem 12 is an adjustable stop preferably in the form of a nut 15. The latter permits the stem 12 to be adjusted in the jaw 6 and locks it in its adjusted position when screwed against the inner face of the jaw 6, as shown in Fig. 1.

When the tool is used, as shown in Fig. 3, a small piece of moldine or the like 17 is placed in the cup or tray 16 and an impression is made in it by pressing the article to be reproduced against it. A ring 18 of rubber or the like is then placed over the cup so as to form a container or receptacle for fusible metal 19 which is poured into the ring when the latter is held in a horizontal position and then allowed to cool. Before cooling, however, the jaws of the tool are closed, so that the inner end of the stem 12 enters and becomes embedded in the metal. When the metal is cool vaseline or the like is rubbed upon the die and the ring and moldine are removed from the cup. Fusible metal is then poured into the cup and the jaws are again closed, so that a counter-die will be produced. If desired, a warm piece of dental lac may be placed in the cup and used instead of the fusible metal. In addition to the above described use, it will be understood that the tool may be adapted to a variety of uses that will readily suggest themselves to one familiar with dental work. It will be observed that this swager will require but a very small amount of fusible metal and hence the die and counter can be saved for future use. In using the tool the work can be closely watched and hence carefully done, and in backing teeth, the handles can be brought together gradually, thereby lessening the danger of breaking the teeth. The cup 16 and its stem 13 can be removed from the jaw 7 and used as an impression tray to secure a cusp from a natural tooth in a patient's mouth. It will be further observed that the tool is of simple, strong and durable construction and may be manufactured at a comparatively small cost. By having the stem 12 threaded, the die formed by the metal 19 may be removed from said stem for future use, if such is desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:—

1. A dental tool of the character described comprising a pair of pivoted hand levers having the jaws at their outer ends formed with opposing transversely extending screw threaded apertures, screw threaded stems adjustable in said apertures, a cup upon the inner end of one of said stems and an adjustably mounted stop arranged upon the inner end of the other of said stems.

2. A dental tool of the character described comprising a pair of pivoted hand levers having the jaws at their outer ends formed with opposing transversely extending screw threaded apertures, screw threaded stems adjustable in said apertures, a cup upon the inner end of one of said stems and a nut screwed upon the inner end of the other of said stems to provide an adjustable stop, substantially as shown and described.

3. A dental tool of the character described comprising a pair of pivoted hand levers having the jaws at their outer ends formed with opposing transversely extending screw threaded apertures, screw threaded stems adjustable in said apertures, a cup upon the inner end of one of said stems, a nut screwed upon the inner end of the other of said stems to provide an adjustable stop, and a set screw arranged in a transverse threaded opening in the inner or handle end of one of said levers and adapted to engage the corresponding part of the other of said levers to limit the closing movement of the jaws of the levers, substantially as shown and described.

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

PLINY A. MERCER.

Witnesses:
W. A. LOUDEN,
J. A. WEAVER.