

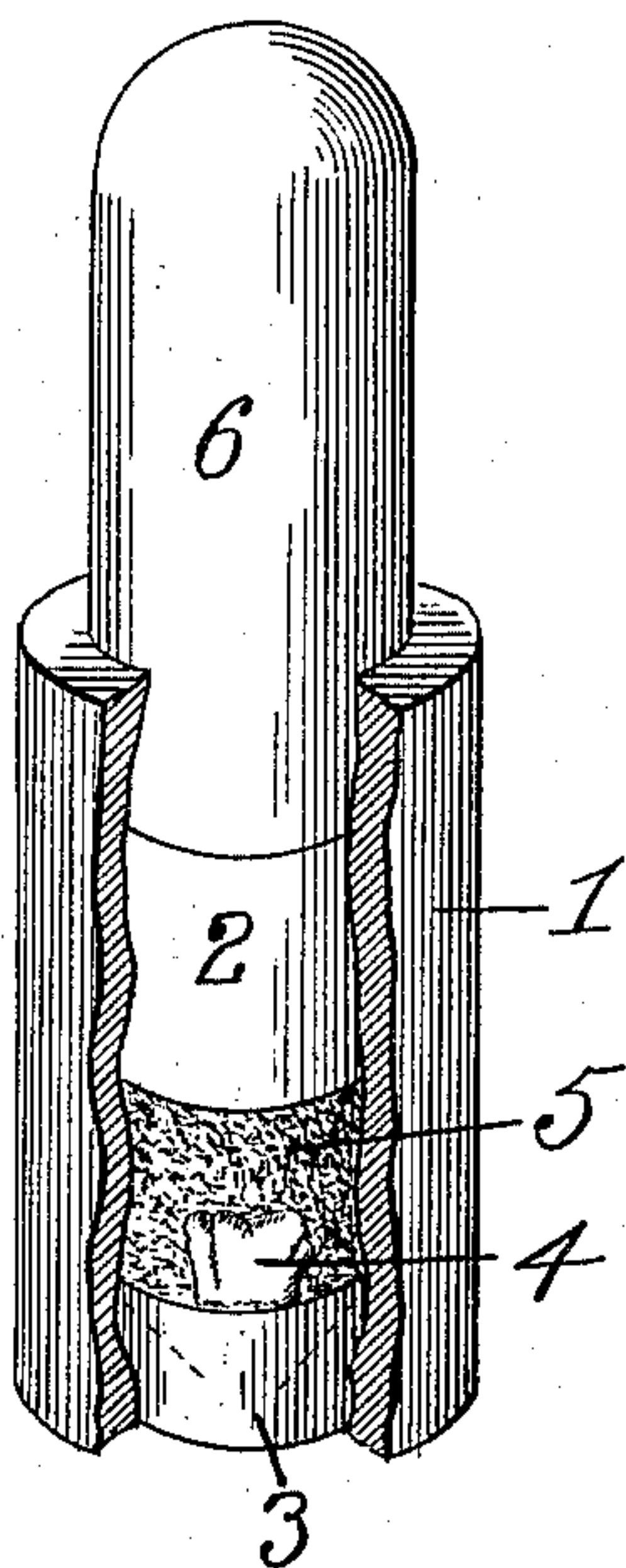
No. 748,565.

PATENTED DEC. 29, 1903.

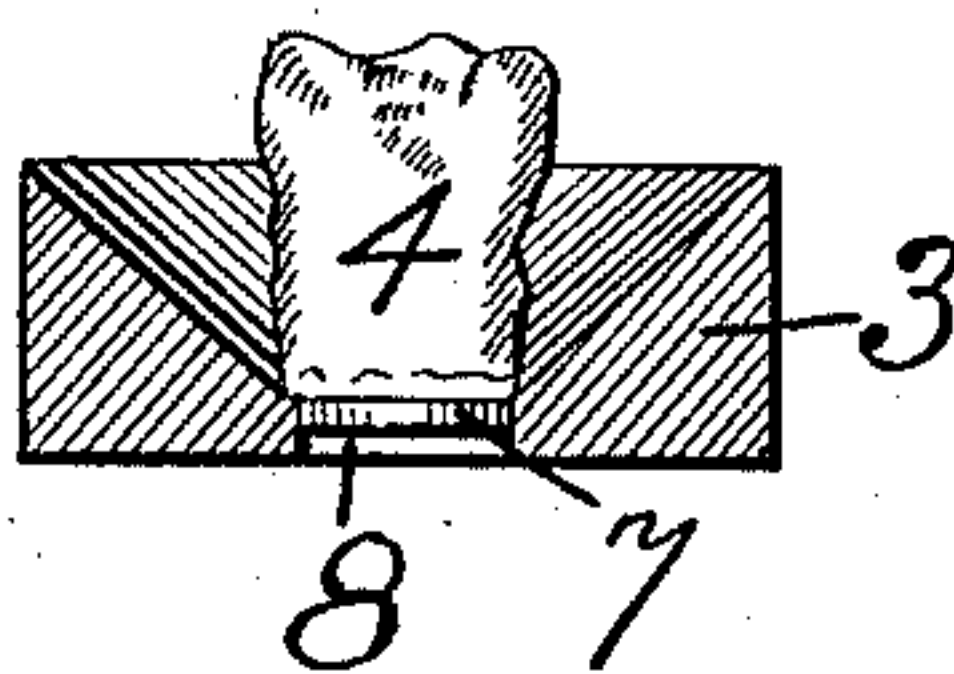
G. B. STONE.  
SWAGER.

APPLICATION FILED DEC. 15, 1902.

NO MODEL.



*Fig. 1.*



*Fig. 2.*

Witnesses:

*H. S. Barrett*  
*Robert Hatchpole*

Inventor:

*Gustav B. Stone,*  
*By Geo. E. Valdo,*  
*Atty.*

## UNITED STATES PATENT OFFICE.

GUSTIN B. STONE, OF CHICAGO, ILLINOIS.

## SWAGER.

SPECIFICATION forming part of Letters Patent No. 748,565, dated December 29, 1903.

Application filed December 15, 1902. Serial No. 135,193. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTIN B. STONE, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a Swager, of which the following is a specification.

This invention relates to swagers, and relates particularly to swagers of the type comprising a cylinder or barrel, upper and lower swaging-dies fitted thereto, between which the article to be swaged is placed, and granular or plastic material inserted between the swaging-dies around the article to be swaged. Swagers of this type are particularly designed and adapted for use by dentists in fitting or conforming seamless gold crowns and plates to tooth forms or patterns.

The object of my invention is to provide means for supporting the tooth form or pattern in fixed position, whereby the swaging impact will be distributed uniformly on all sides thereof, thus insuring that the lateral sides of the cartridge or plate will be made to conform exactly to the contour of the tooth form or pattern.

To this end a swager of my invention consists of the various features, combinations of features, and details of construction hereinafter described and claimed.

In the accompanying drawings a swager of my invention is fully illustrated.

Figure 1 is a perspective view of a swager of my invention, the cylinder or barrel being broken away to show other parts thereof; and Fig. 2 is a sectional view of a removable lower swaging-die, showing a tooth form or pattern supported therein.

For purposes of illustration I have herein shown and described a swager of my invention as applied for swaging gold crowns to tooth-forms.

Referring now to the drawings, 1 designates the cylinder or barrel of the swager; 2 and 3, the upper and lower swaging-dies, respectively; 4, a tooth form or pattern supported in the lower swaging-die 3, to which is adjusted the gold cartridge from which the crown is to be formed; 5, a quantity of granular material, as cornmeal or the like, inserted

between the swaging-dies around the tooth form or pattern 4, and 6 a plunger adapted to be inserted into the cylinder or barrel 1 and through which the blow is transmitted to the upper swaging-die 2. As regards their usual features, all of the foregoing parts are old and well known and will be readily understood by those familiar with the art without a detailed description thereof.

The swaging face or surface of the lower swaging-die 3 instead of being flat, as heretofore, is concave, declining inwardly from near the edge thereof to the base or neck of the tooth form or pattern. Obviously the component of a blow on the lateral sides of a cartridge adjusted to the tooth form or pattern will increase as the concavity of the top increases. In practice I have found that a concavity of about forty-five degrees is sufficient to create a component on the lateral sides of the cartridge, which will swage or drive it in and cause it to conform exactly to the contour of the tooth form or pattern.

As a further improvement in swagers of this type I provide improved means for supporting the tooth form or pattern in the lower die, consisting of a hole or opening 7, formed in the lower die 3, which is adapted to receive a shank 8 on the tooth form or pattern, whereby said tooth form or pattern will be supported in upright position, all as clearly shown in Fig. 2.

I claim—

A swager comprising a barrel or casing and opposed upper and lower swaging-dies fitted to the bore thereof, the swaging-surface of the lower die being concave and said lower die being provided with a hole or opening at the bottom of said concave swaging-surface designed to receive a shank on the tooth form or pattern, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two subscribing witnesses, this 9th day of December, A. D. 1902.

GUSTIN B. STONE.

Witnesses:

M. S. SOMERVILLE,  
ROBERT J. SATCLIFF.