C. G. FRANKE.

APPARATUS FOR SWAGING DENTAL PLATES.

APPLICATION FILED JAN. 22, 1908.

967,873. Patented Aug. 16, 1910.

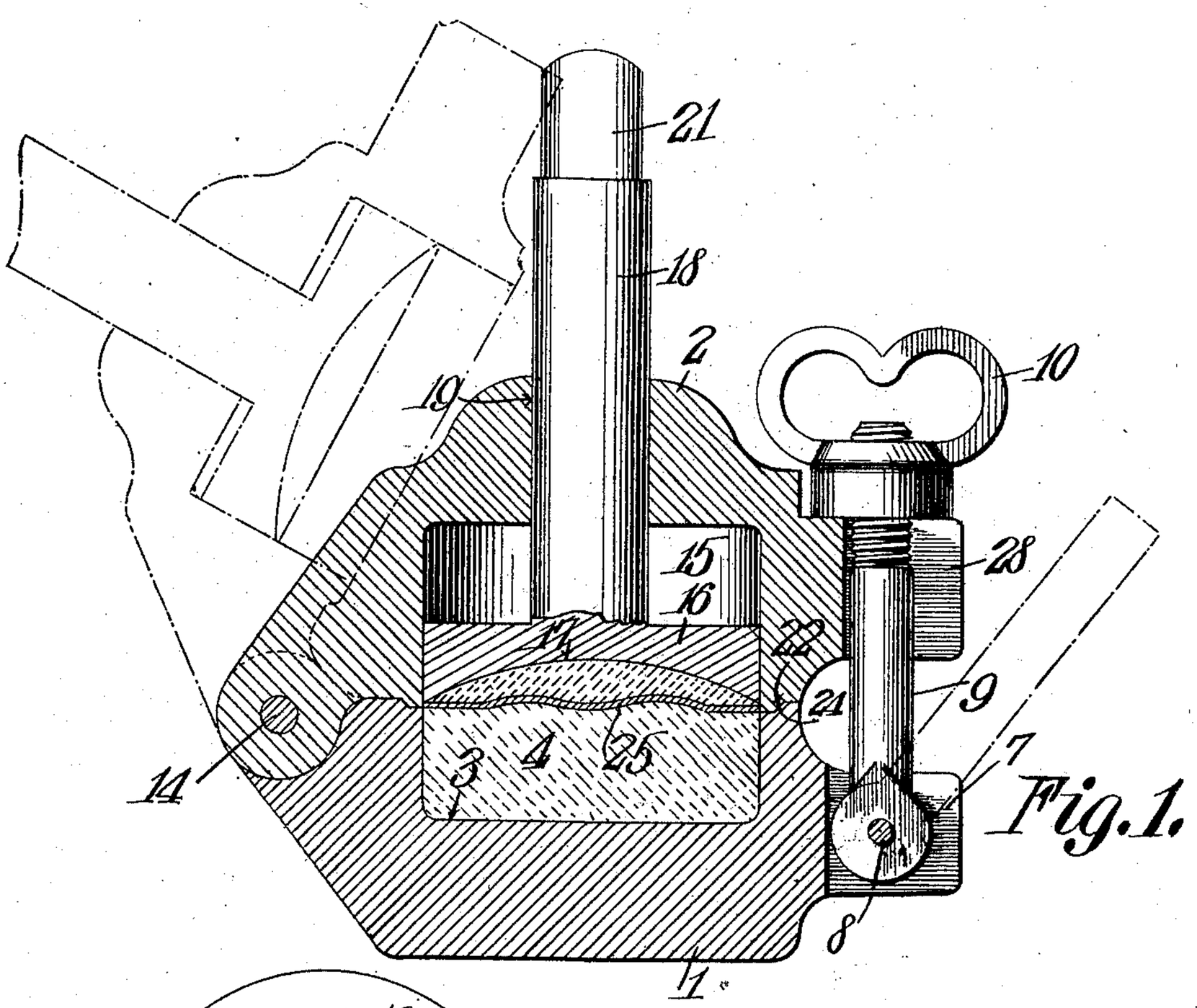


Fig. 1.

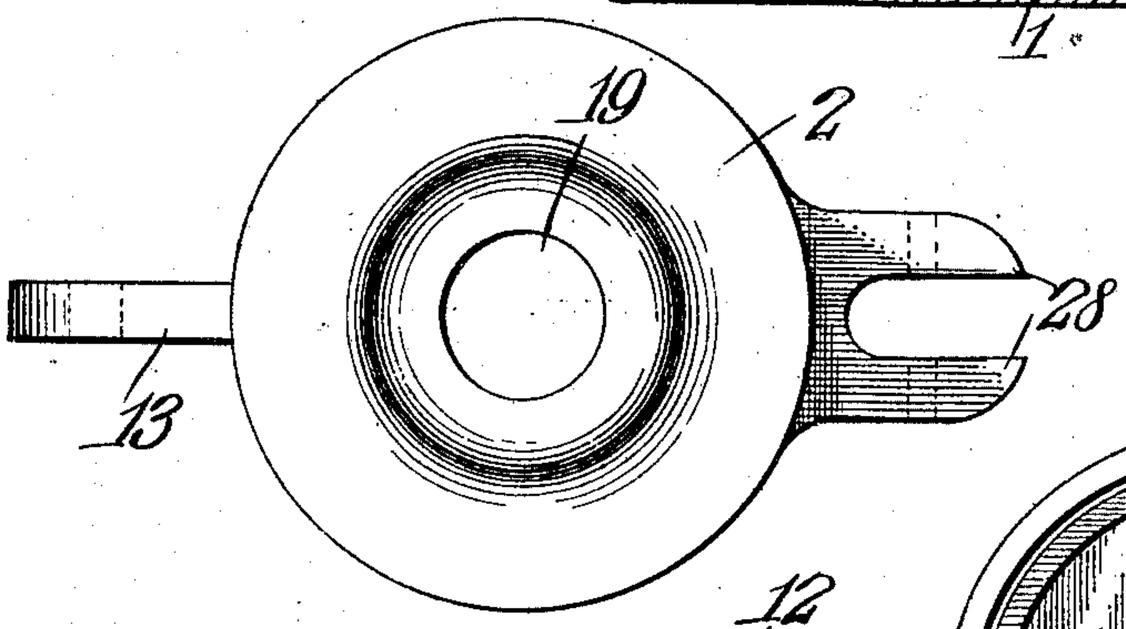
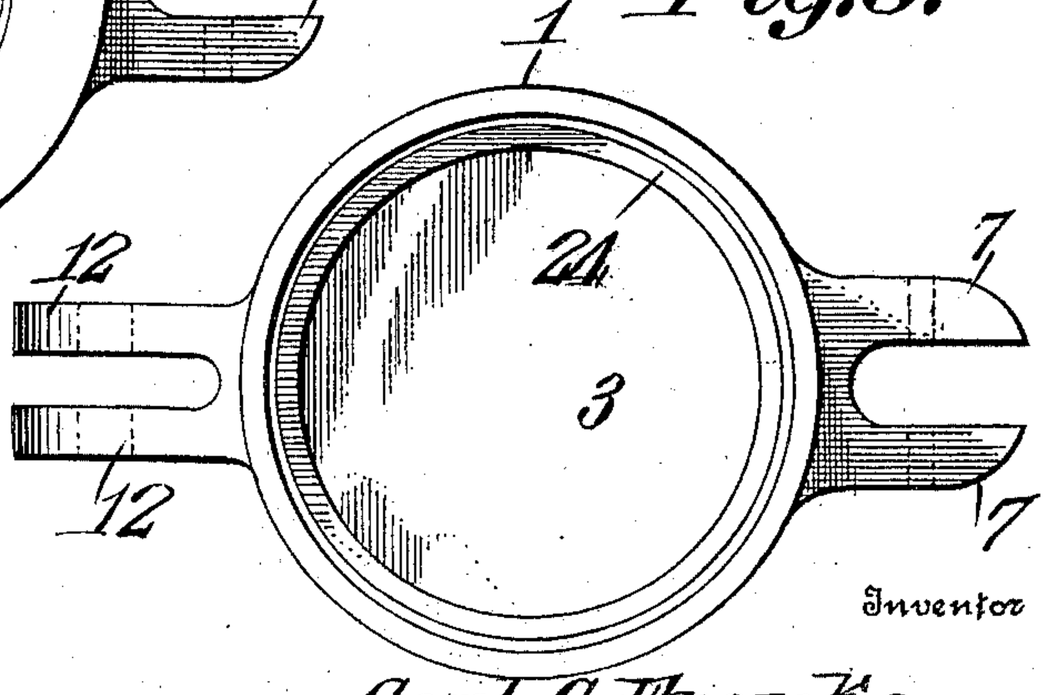


Fig. 2.

Fig. 3.



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CARL GUSTAVE FRANKE, OF MONROE, MICHIGAN.

APPARATUS FOR SWAGING DENTAL PLATES.

967,873. Specification of Letters Patent. **Patented Aug. 16, 1910.**

Application filed January 22, 1908. Serial No. 412,179.

To all whom it may concern:

Be it known that I, CARL G. FRANKE, a citizen of the United States, residing at Monroe, in the county of Monroe and State of Michigan, have invented a new and useful Apparatus for Swaging Dental Plates, of which the following is a specification.

This invention relates to apparatus for swaging dental plates, and its object is to provide a simple and efficient device of this character which is comparatively inexpensive to manufacture.

In the accompanying drawings:—Figure 1 is a central vertical section through the device, the positions of the movable parts, when the device is open, being indicated by dotted lines. Fig. 2 is a plan view of the upper member of the device. Fig. 3 is a plan view of the lower member.

Referring to the figures by characters of reference 1 designates a cup-like member constituting the base of the apparatus and provided with spaced parallel ears 12 outstanding therefrom and designed to receive between them an ear 13, outstanding from the upper inverted cup member 2. The ears 12 and 13 are connected by means of a pivot 14, so that the upper member 2 is thus capable of swinging into a raised position, as indicated by dotted lines in Fig. 1.

Outstanding from the lower or base member 1, at points substantially diametrically opposite the ear 12, are spaced ears 7, having a pivot pin 8 extending therethrough and on which is mounted an eye formed at one end of a bolt 9. Spaced ears 28 also extend outwardly from the upper member 2 of the apparatus at points substantially diametrically opposite the ear 13, and when the said member 2 is in closed position the bolt 9 is adapted to swing into position between the ears 28, said bolt being provided with a wing-nut 10 designed to be screwed thereon and against the ears 28 so as to draw said ears in the direction of the ears 7, and thus tightly bind the two sections 1 and 2 together.

The cup member 1 is counter-bored at its upper end as indicated at 24 so as to receive a circular flange 22 formed upon the adjoining face of the upper member 2. When the two members 1 and 2 are thus positioned with their adjoining faces in contact and locked by means of the bolt 9 and the nut 10 the compartments 3 and 15 formed within the two members 1 and 2 will register.

A plunger 18 is slidably mounted within an opening 19 formed centrally within the upper member 2, and arranged upon the lower or inner end of this plunger is a circular or cylindrical head 16, the lower or working face of which is concaved as indicated in Fig. 1. The upper or outer end of the plunger is reduced annularly as indicated at 21, so that any upsetting of the plunger caused by constant striking thereof with a hammer or other tool, will not enlarge the said end to such an extent as to prevent the withdrawal of the plunger through the opening 19.

In using the apparatus herein described the upper member 2 is released from the bolt 9 and the nut 10 and swung into the position indicated by dotted lines in Fig. 1. The plunger 18 is then inserted in the opening 19, after which the die is placed within the compartment 3, as indicated at 4, and the plate 25 is positioned thereon. This plate may be covered with rubber or thin fabric, as ordinarily, so as to prevent the swaging material from entering between the die and the plate. A quantity of potters' clay, or other swaging material is then placed within the compartment 15 and upon the concaved face 17 of the head 16, after which the member 2 is swung into closed position and secured by placing the bolt 9 between the ears 28 and tightening the nut 10. The swaging material will thus assume a position upon the plate 25 and, by driving the plunger 18 downwardly, this swaging material will be spread evenly over the plate 25 and will distribute pressure over all portions of the said plate so as to bend the plate downward and cause it to conform with the contour of the die 4, it being understood that sufficient swaging material is used to prevent the head 16 from coming into contact with the plate.

It is often desirable to inspect the plate before the swaging or shaping operation is completed, but this has heretofore been found difficult, for it has been practically impossible to return the parts to the positions initially assumed by them. In the present construction however the flange 22 and the counter-sink indicated at 24 coöperate to obviate this objectionable feature, in-

asmuch as they insure the positive return of the parts to the positions first assumed thereby.

What I claim is:—

A device of the character described comprising oppositely disposed cup-like members hingedly connected, each member having a compartment, which compartments are of uniform transverse dimension, one of said members having a countersink about its compartment, and the other member having an integral circular flange about its compartment and disposed to be seated within the countersink, means for securing said members together with the flange in the countersink, a plunger slidably and removably mounted within the compartment of one of these members, a head carried by the plunger and having a concave work-facing surface, the cross sectional area of the head being equal to the cross sectional area of the compartment in which it is located, the compartment of the other member being adapted to receive a die.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CARL GUSTAVE FRANKE.

Witnesses:
JOHN T. HAMMER,
JOHN C. HAMMER.