H. S. MILLER.

DENTAL CLAMP.

APPLICATION FILED AUG. 22, 1908.

926,583. Patented June 29, 1909.

Fig. 1.

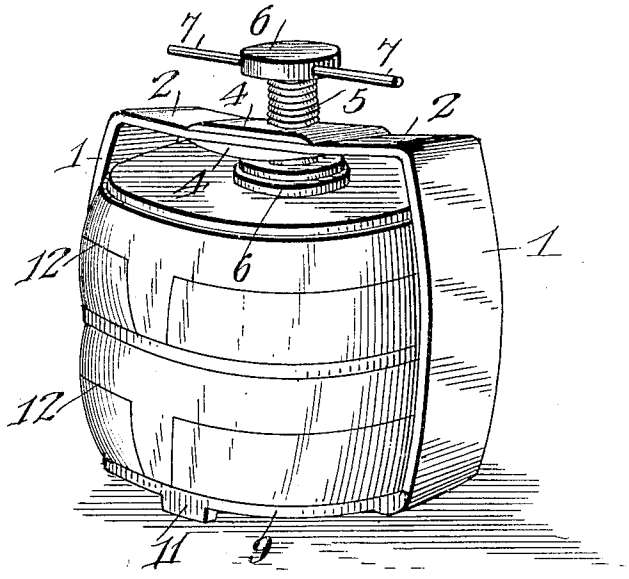


Fig. 2.

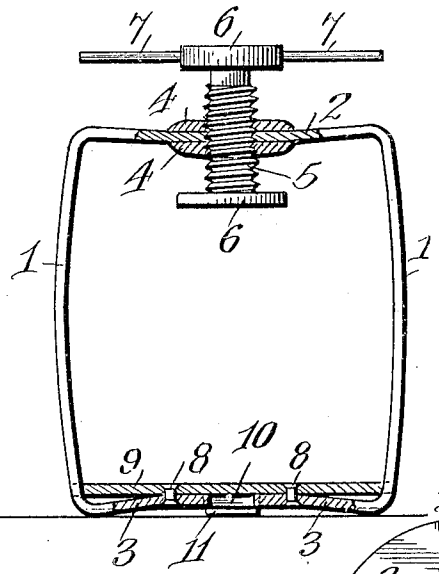


Fig. 3.

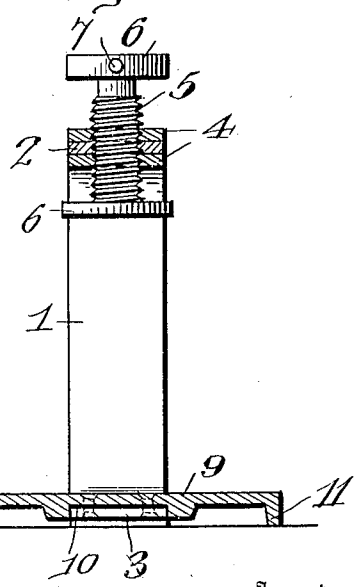
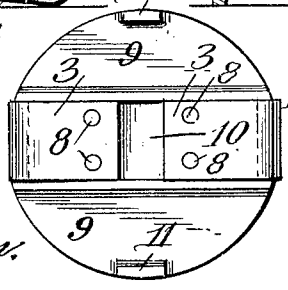


Fig. 4.



Witnesses

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DENTAL CLAMP.

No. 926,583. Specification of Letters Patent. Patented June 29, 1909.

Application filed August 22, 1908. Serial No. 449,765.

To all whom it may concern:

Be it known that I, HENRY S. MILLER, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Dental Clamps, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in dental vulcanizing flasks, and more particularly to clamps for connecting the sections of such flasks together; and has for its general object to provide such a clamp or a peculiar and advantageous construction, and one adapted to exert an equable and yielding pressure upon the sections.

It is a well known fact that with the use of iron or steel flasks or presses in the vulcanizing process the sulfur in the rubber has a marked affinity for the iron or steel in the flasks or presses and in a short while the usefulness of the clamp, as well as its appurtenances, is entirely destroyed.

I contemplate especially the provision of a non-corrodible clamp, one constructed, preferably of brass, although it is obvious that any other metal which is not acted upon chemically by the sulfur in the rubber in making the teeth, will answer the purpose.

After the flasks containing the teeth, which are invested in plaster of paris to retain them in position, are packed with rubber, the latter, prior to its being placed in the vulcanizer, is quite dense, and with the old process required considerable force to press it into the desired form, and it frequently transpired that the teeth were thus forced out of their set position in the plaster investment. But, by virtue of my form of clamp, this inherent imperfection is eliminated, and a gradual and uniform, but slight, pressure is exerted upon the flasks to produce a perfect articulation of the teeth.

To the accomplishment of the recited object and others coördinate therewith, the preferred embodiment of my invention resides in that construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and embraced within the scope of the appended claims.

In said drawings:—Figure I is a perspective view of the flasks showing the application of my clamp. Fig. II is a side elevation of the clamp, portions thereof being illustrated in section. Fig. III is a transverse vertical section of the clamp, and Fig. IV is a bottom plan view thereof.

Similar numerals of reference indicate corresponding parts throughout the several views.

The clamp comprises a substantially rectangular shaped piece of spring metal having outcurved or convex sides (1), and incurved or concave top (2), and terminals (3), the outcurved portions (1) and the incurved portions (2) and (3) being opposed to each other. The upper concave portion (2) of the clamp is provided medially thereof on opposite sides with fixedly secured plates (4), the said plates and the portion (2) having a female screw threaded aperture, the threads of which are adapted for engagement with the complementary threads of the screw (5), the upper distal ends thereof being designed to present a head (6) and laterally extending arms (7), this head and arms together constituting a handle for the manipulation of the screw, the lower end of the screw having swiveled thereon a member (6^a). The distal ends (3) of the clamp are fastened by the rivets (8) to the circular bottom plate (9), these terminal portions being seated in the diametrically arranged slot (10) of said plate, which is furnished at intermediate opposite points with downwardly projecting lugs (11), the latter, taken in conjunction with the lower angle portion of the clamp, serving as a support for the complete device.

When it is desired to apply the clamp to the flasks (12) indicated in Fig. I of the accompanying drawings, the said flasks are arranged between and concentrically with respect to the base (9) and the swiveled member (6^a), whereupon the screw (5) is manipulated through the medium of the handle, thus gradually and uniformly exerting the necessary pressure on the sections of the flasks. This is due, as will appear evident, to the opposed concavity of the end portions (2) and (3) and the convexity of the side portions (1). It will also be observed that my invention deals rather with the quality of the force rather than with the quantity, in other words I overcome the disadvantage of having the rubber, which is in a semi-plastic condition after it has been subjected to high temperature, ooze out or exude from the flasks, by a uniform application of pressure. The teeth when properly embedded within the flasks and the sections of the

flasks secured together, in a manner well understood by those skilled in the art, are firmly held in the exact position which they occupied before investment, and bear the proper relation to the cast, whether the flask is closed in the proper position or not, and insure a perfect articulation.

It should be understood that in its broader aspect my invention comprehends the employment not only of the various means described, but of equivalent means for performing the recited functions. While the arrangement shown is thought, at the present time, to be preferable, it is desired to reserve the right to effect such modifications and variations thereof as may come fairly within the scope of the appended claims.

What is claimed as new is:—

1. A clamp comprising a base, a screw member, and an integral piece of non-corrodible spring metal with opposed outturned side portions and opposed inturned top and terminal portions.

2. A clamp comprising a base, a screw member, and an integral piece of non-corrodible spring metal with opposed outturned side portions and opposed inturned top and terminal portions, the said screw being arranged medially of said top portion, and said terminals being connected to the base.

3. A clamp comprising a base having a slot, a screw member, and an integral piece of non-corrodible spring metal with opposed outturned side portions and opposed inturned top and terminal portions, the said terminals being secured in the slot of said base portion.

4. A clamp comprising a base having a diametrically arranged slot, a screw member, a piece of non-corrodible spring metal of substantially rectangular contour with opposed outturned side portions and opposed inturned top and terminal portions, the said screw being arranged medially of said top portion, and the terminals being secured in the slot of said base.

5. A clamp comprising a base, a screw member, a piece of non-corrodible spring metal with opposed outturned side portions, and opposed inturned top and terminal portions, the said terminals being secured to the base, and the screw extending through the top portion thereof and plates on each side of the top portion for preventing lateral movement of the screw.

6. A clamp comprising a base, a screw member, and an integral piece of non-corrodible spring metal with opposed outturned side portions, a top portion and opposed upwardly-turned lower terminal-portions.

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

HENRY S. MILLER.

Witnesses:

ROBERT AVERILL,

CHARLOTTE A. HOUSTON.