

(No Model.)

N. KUNS.
RUBBER DAM CLAMP.

No. 484,800.

Patented Oct. 25, 1892.

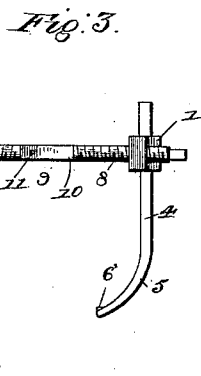
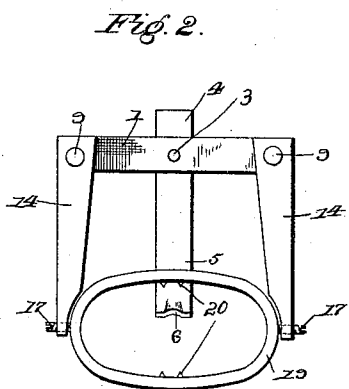
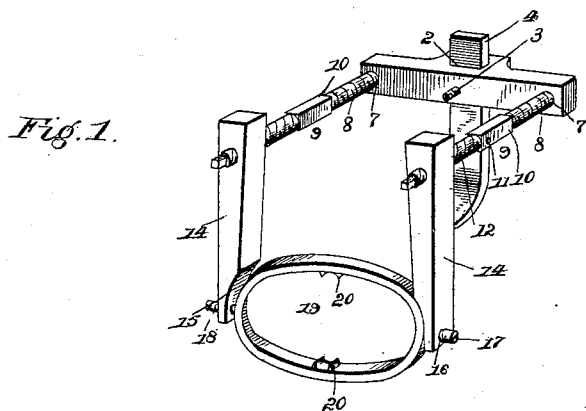


Fig. 4.

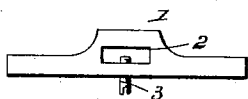
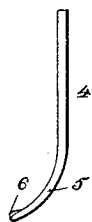


Fig. 5.



Witnesses

J. Johnson
Chas. S. Ayer

Inventor

Nathaniel Kuns

By *his* Attorneys,

C. Snow & Co.

UNITED STATES PATENT OFFICE.

NATHANIEL KUNS, OF FAIRBURY, NEBRASKA.

RUBBER-DAM CLAMP.

SPECIFICATION forming part of Letters Patent No. 484,800, dated October 25, 1892.

Application filed April 11, 1892. Serial No. 428,740. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL KUNS, a citizen of the United States, residing in the city of Fairbury, Jefferson county, and State of Nebraska, have invented certain new and useful Improvements in Rubber-Dam Clamps, of which the following is a specification.

This invention relates to certain new and useful improvements in rubber-dam clamps; and it consists of the construction and arrangement of the parts thereof, as will be hereinafter more fully described and claimed.

The object of this invention is to provide an instrument of the character set forth to aid in the operation of filling teeth in that difficult and troublesome class of cases where the cavity to be filled extends high up on the labial or buccal surface of the root of the tooth, so that the gum overlaps or covers the cavity and obstructs operation, the parts of the device being simple and effective, strong and durable, easily and readily applied, and comparatively inexpensive in manufacture and sale.

In the drawings, Figure 1 is a perspective view of the improved device. Fig. 2 is a top plan view of the same. Fig. 3 is a side elevation thereof. Figs. 4 and 5 are detail views of parts of the mechanism.

Similar numerals of reference are employed to indicate corresponding parts in the several figures.

Referring to the drawings, the numeral 1 designates the main frame-bar, having a slot 2 extending therethrough and a clamping-screw 3 extending centrally inward from one edge thereof and the inner end of the same projecting into said slot, and in the slot 2 is adjustably mounted a clamping-bar 4, which is held in position by a screw 3 and has the lower end thereof bent inward, as at 5, and the center struck up, as at 6, to form an indentation adapted to bear against the tooth to be treated and force the gum away from the same. The ends of the frame-bar 1 are formed with screw-openings 7, in which are fitted the screw-threaded ends 8 of adjusting or clamping bars 9, arranged as a pair and having a central square surface 10, with an eye 11 therein adapted to receive the point of a suitable tool for turning the same. The opposite ends of the said adjusting or clamp-

ing bars 9 are also screw-threaded, as at 12, and in a reverse direction from the screw-threading of the end 8 of the same, and engage screw-openings 13, formed in supporting-bars 14. By this means the frame-bar 1 and the supporting-bars 14 may be adjusted to and from each other and carry the parts mounted in connection therewith in similar directions. The opposite screw-threaded ends of the adjusting or clamping bars 9 are arranged in a right and left manner to engage correspondingly-formed screw-openings in the frame-bar and the supporting-bars. The lower ends of the supporting-bars 14 at their inner opposing sides are concaved, as at 15, and have screw-openings 16 formed therein, which are engaged by the right and left screw-stems 17 and 18, arranged in the central longitudinal axis of an elliptical loop or ring 19. The said loop or ring is adapted to be adjusted while held by the supporting-bars 14 by operating the adjusting or clamping bars 9 to and from the clamping-bar 4. The ring or loop 19 is easily fastened in position and adapted to be so arranged that both the edges thereof may have an equal bearing on the tooth against which it is pushed. In the upper and lower edges of the ring or loop indented lips 20 are formed, projecting from the inner edges thereof adjacent to the end 5 of the clamping-bar 4 and corresponding with the struck-up or indented portion 6 of said bar, and by this means the tooth to be operated upon is held both by the indented clamping-bar 4 and the upper and lower indented lips 20, thereby providing three distinct bearings against the tooth, all of which have smooth indented surfaces, and reducing the inconvenience of the use of such form of device to a minimum. The slight rotation of the loop or ring 19 is exceptionally valuable in instruments of this class, as by this means it can be made to fit teeth of any size or shape and secure in every case an even bearing of every point of contact between the instrument and the tooth to which it is applied.

The device entire is simple and advantageous in its use, and many advantages will appear from time to time to those using the same.

Having thus described the invention, what is claimed as new is—

In a device of the character set forth, the

combination of a main frame-bar, adjusting-bars adjustably connected at right angles to said frame-bar and having right and left screw-threads on opposite ends thereof, a clamping-
5 bar vertically adjustable in said frame-bar and having the lower end thereof bent inward and struck up, supporting-bars connected to the outer ends of said adjusting-bars, and a ring or loop held between the lower ends of said supporting-bars and formed with indented lips at the upper and lower portions of the same, substantially as described.

NATHANIEL KUNS.

Witnesses:

W. W. WATSON,
BENJ. L. PURDY.