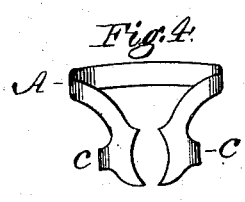
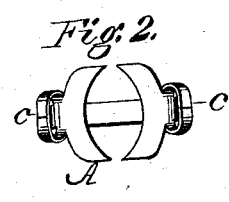
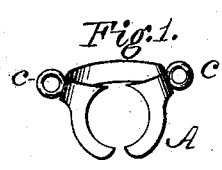


D. PALMER.  
Clamps for Dental Rubber-Dams.

Patented June 22, 1875.

No. 164,870.



WITNESSES:

Will. H. Dodge

INVENTOR:

Delos Palmer,  
by Dodge & Son  
Atty.

# UNITED STATES PATENT OFFICE.

DELOS PALMER, OF NEW YORK, N. Y.

## IMPROVEMENT IN CLAMPS FOR DENTAL RUBBER DAMS.

Specification forming part of Letters Patent No. **164,870**, dated June 22, 1875; application filed August 31, 1874.

*To all whom it may concern :*

Be it known that I, DELOS PALMER, of New York, in the county of New York and State of New York, have invented certain Improvements in Clamps for Dental Dams, of which the following is a specification :

My invention consists in providing the clamps used to hold rubber dams on teeth with ears, rings, or similar projections, to enable them to be more readily taken hold of and handled when being placed in position or removed, and whereby the clamps may be made much smaller, and thus be less in the way of the operator, as hereinafter more fully described.

The several figures in the accompanying drawing illustrate various forms of the clamps with my improvement applied thereto.

In filling teeth and similar dental operations it is desirable to prevent the saliva and other fluids of the mouth from coming in contact with the tooth being operated upon, or with the filling or tools; and for this purpose a so-called dam, consisting of a sheet of rubber, is used, the sheet being punctured and slipped over the tooth, and then secured or held in place by means of metallic clamps.

As heretofore made these clamps are objectionable mainly, because of their size, which causes them to interfere with the proper and convenient use of the tools, they being more or less in the way; and this large size has been necessitated mainly by their having been made either without any special provision for handling them, or with the bar or strip composing their bodies of such width or size as to permit holes to be formed therein in which to insert the forceps used for placing or removing them.

In order to obviate these objections, I construct my clamps of strips or pieces of metal

much narrower or smaller, thus making the clamp smaller and more compact; and then, to enable them to be more readily handled, I provide them with ears *c*, as represented in the several figures of the drawings.

As shown in Figure 1, the ears *c* consist of two small rings, similar to those used for eyes on metal buttons, which I solder, rivet, or otherwise attach to the opposite sides of the clamp *A*, in such a position as to permit the points of the forceps or pliers to be readily inserted, and yet not be in a position to interfere with the operation of the jaws of the clamp. Instead of making these ears *c* of separate pieces of metal and attaching them to the clamp, as above described, they may be made as shown in Figs. 2, 3, and 4. In these cases a small projecting ear is left on one or both edges of the metal strip composing the clamp, these being afterward bent over, as represented in Figs. 2, 3, and 4, thus forming rings to receive the points of the implement used for handling them. By this method of constructing the clamps I am enabled to make them much smaller and lighter than they were formerly made, and, at the same time, to provide means for handling them with facility.

I am aware that clamps have been made with holes formed in the body of the metal composing the clamp; but when so made, in order to have the required strength, the clamp must necessarily be made much larger, and therefore more clumsy, and I do not claim such; but

What I do claim is—

The dental clamps *A*, having the projecting ears *c*, constructed substantially as described.

DELOS PALMER.

Witnesses:

ALGERNON K. JOHNSTON,  
EUGENE PALMER.