No. 709,410. Patented Sept. 16, 1902.

J. L. KELLY.

DENTAL BRIDGEWORK.

(Application filed Nov. 21, 1901.)

(No Model.)

Fig. 1.

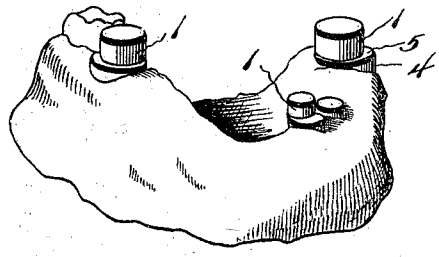


Fig. 2.

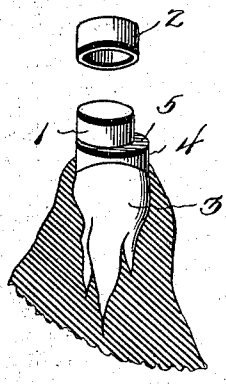


Fig. 3.

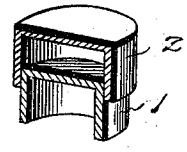


Fig. 5.

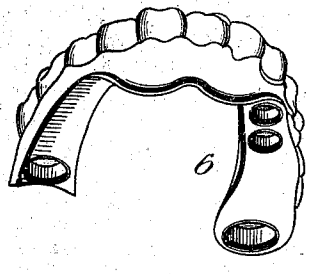
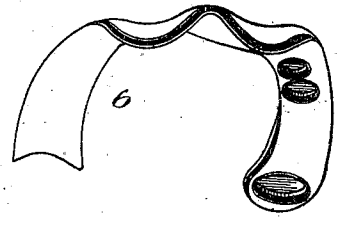


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN LAWRENCE KELLY, OF ST. PAUL, MINNESOTA.

DENTAL BRIDGEWORK.

SPECIFICATION forming part of Letters Patent No. 709,410, dated September 16, 1902.

Application filed November 21, 1901. Serial No. 83,211. (No model.)

To all whom it may concern:

Be it known that I, JOHN LAWRENCE KELLY, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Dental Bridgework, of which the following is a specification.

This invention relates to dentistry, and has special reference to an improvement in bridgework.

To this end the invention primarily contemplates a simple and practical improvement providing for a removable bridging, which is entirely in the control of the user, besides being easily and readily removed for cleaning, and also capable of being replaced with facility back in position by the user without the employment of springs, screws, or other auxiliary retaining devices, as now commonly employed in other systems of bridging.

Heretofore in some forms of bridgework spring-fastenings similar to an ordinary glove-spring have been employed; but constructions of this character permit matter to form within and around the spring, which is not only disagreeable, but quickly impairs the efficiency of the spring. Also some constructions of bridgework involve the use of screws; but these have been found very objectionable on account of the stripping of the threads and also the difficulty of removing and replacing the bridge in the user's mouth.

The present invention contemplates a construction which entirely obviates the difficulties of the old method referred to, besides simplifying bridgework to such an extent as to enable a dentist of ordinary skill to secure perfect and thoroughly satisfactory results.

With these and other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In carrying out the invention advantage is taken of the mechanical adaptation of the telescopic fit of one tubular member within the other, and while this is capable of being used in different ways the preferred embodiment of the invention is shown in the accompanying drawings, in which—

Figure 1 is a perspective view representing a cast of an upper jaw, disclosing the manner of arranging the holding-posts upon the crowned roots. Fig. 2 is an enlarged detail view showing a crowned root fitted with a hollow holding-post, such as contemplated by the present invention, and also showing the hollow bridge-cap associated with and fitting said post. Fig. 3 is a detail sectional view showing the telescopic fit upon the hollow post with which it is associated. Fig. 4 is a detail in perspective of a bridge-saddle carrying the bridge-caps fitting the holding-posts. Fig. 5 is a detail in perspective of the complete removable bridge constructed in connection with the improvement contemplated by the present invention.

Like numerals designate corresponding parts in the several figures of the drawings.

In carrying out the invention the same necessarily involves as essential elements thereof a holding-post 1, and a hollow bridge-cap 2, having a snug telescopic fit over the holding-post, the latter being rigidly and permanently applied to the crowned root and the former—namely, the cap—being involved in and carried by the bridge, which may, as usual, be made of gold, porcelain, or vulcanized rubber.

It is preferable that the holding-post 1 be of a tubular or hollow form, so, in effect, the same and the cap are practically two hollow cups fitting one within the other, as plainly shown in detail Fig. 3 of the drawings. The holding-post 1 and the bridge-cap 2 being of cup-like formation are usually made in steel dies of an accurate gage and of any shape or size, but ordinarily are made cylindrical, as plainly shown in the drawings, and the manner of utilizing the holding-post and bridge-cap to permit of the making of a complete removable bridge without auxiliary fastening means will now be particularly referred to.

Referring to Fig. 2 of the drawings, the numeral 3 designates an ordinary root, which is prepared in the usual way, with a crown-cap 4 fitted thereon; but this crown-cap in carrying out the present invention is made so as not to extend above the gum and is provided with a supporting-surface 5, as flat as possible and extending slightly mesally and distally, so as to provide for sustaining as

large a holding-post as possible. Upon said supporting-surface 5 of the root-crown is securely soldered the holding-post 1, and said post is positioned upon the root crown or crown-cap 4 as far lingually as possible. In soldering the holding-post to the crown-cap these elements are held firmly in parallel position by any suitable means. When the crown-roots have been fitted with the said holding-posts in the manner described, a saddle 6 is wedged to fit the tissues between the abutments and is fitted to the bridge-caps 2. After the saddle and the caps are placed in position in the mouth a bite is taken with the wax to determine the relation of the occulting teeth, and then a plaster impression is made which will carry the bridge-caps and the saddle from the mouth in correct relation. The next step is to make a plaster model of the impression and set it up on the articulator with the bite. The caps and the saddle being removed from the model are soldered together in the relation shown in Fig. 4 and are again placed on the model. After this the making of the bridge may be proceeded with in the ordinary way, and it will of course be understood by a dentist that when rubber is used the saddle is unnecessary.

From the foregoing it is thought that the construction and many advantages of the herein-described improvement in bridgework will be apparent without further description, and it will be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An improvement in removable dental bridgework, the same consisting of a holding-post rigid with and projecting beyond the surface of the root-crown, and a bridge-cap carried by the bridge and telescopically registering with said post.

2. An improvement in removable dental bridgework, the combination with a root crown-cap having no projection above the gum and provided with a top flat supporting-surface, a cup-like holding-post soldered upon and projecting beyond the said flat supporting-surface, and a cup-like bridge-cap carried by the bridge and telescopically registering with the said post.

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

JOHN LAWRENCE KELLY.

Witnesses:
HENRY GALLICK,
CHAS. A. PHEENEY.