(No Model.)

J. J. STEDMAN.

ARTIFICIAL DENTURE.

No. 474,104. Patented May 3, 1892.

Fig. 1.

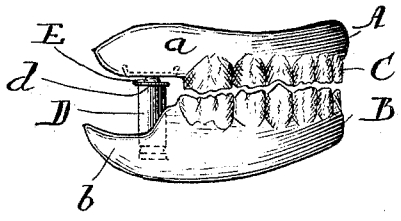


Fig. 2.

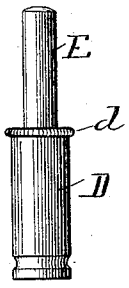


Fig. 3.

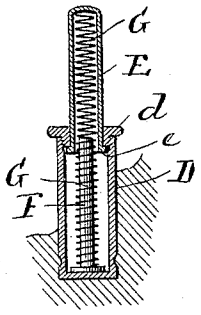


Fig. 4.

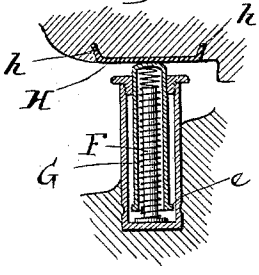


Fig. 5.

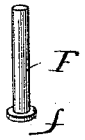


Fig. 6.

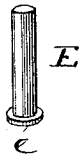
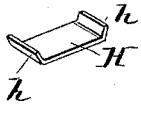


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN J. STEDMAN, OF LA PORTE, INDIANA.

ARTIFICIAL DENTURE.

SPECIFICATION forming part of Letters Patent No. 474,104, dated May 3, 1892.

Application filed December 21, 1891. Serial No. 415,777. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. STEDMAN, of La Porte, in the county of La Porte, State of Indiana, have invented certain new and useful Improvements in Artificial Dentures, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My present invention has for its object to provide improved means whereby the denture shall be firmly held in place within the mouth, and more particularly does my invention relate to the improvement upon the spring mechanism for artificial dentures set forth in Letters Patent No. 452,653, granted to me May 19, 1891.

Figure 1 is a view in side elevation of upper and lower dentures having my invention applied thereto. Fig. 2 is an enlarged detail view, in side elevation, of the casing and plunger for inclosing the spring mechanism. Fig. 3 is a view in vertical section through Fig. 2, the casing being shown embedded in the ridge of the lower denture. Fig. 4 is a view in vertical section through portion of the upper and lower dentures, showing the spring mechanism in position for use. Fig. 5 is a detail perspective view of the spring-holding rod. Fig. 6 is a detail perspective view of the plunger. Fig. 7 is a detail perspective view of the bearing-plate for the plunger.

A and B denote, respectively, the upper and lower dentures, *a* indicating the alveolar ridge of the upper denture, and *b*, denoting the corresponding ridge of the lower denture, these ridges being provided with teeth C. In the position usually occupied by the last molars is placed the improved spring mechanism, next to be described. This spring mechanism comprises a casing D, the top of which is interiorly threaded to receive a correspondingly-threaded screw-cap *d*. This cap *d* is perforated to permit the hollow plunger E to work freely therein. The hollow plunger E is furnished at its lower end with an exterior flange or stop *e*, which prevents the withdrawal of the plunger from the screw-cap *d* of the casing. Within the hollow plunger E is held a spring-rod F, this rod being encircled by the spiral spring G, which bears against the outer end of the plunger and serves to force the same normally outward. The spring-rod F serves to hold the coiled spring G in such manner as to guard against danger of the spring cramping, and thereby insures its uniform action. This rod F is preferably formed with the base *f*, which firmly seats against the bottom of the casing D. Within the alveolar ridge *a* of the upper denture is embedded the edges *h* of the bearing-plate H, this bearing-plate having a flat face to form a straight seat, against which the outer end of the plunger E will bear.

In practice the casing D will be embedded within the alveolar ridge of the lower denture B in the position of the last molar of such denture, and when the dentures are in the mouth the coiled spring F will be compressed and the plunger E will be forced inward; but the force of the spring tending to thrust outward the plunger E will cause the dentures to be securely seated in position within the mouth of the wearer. By providing the casing D with a detachable cap *d* the plunger, the spring, and the spring-rod can be removed whenever desired for the purpose of cleansing, although it will be found that inasmuch as the plunger works snugly within the perforated cap *d* of the casing there is much less danger of the food secreting within the casing than would occur if any open joints existed between the plunger and the casing. The cap *d* of the casing D (which cap is preferably quite deep) affords an accurate guide for the plunger, so that a straight movement thereof is insured, and the spring-rod within the plunger guards against all danger of the spring becoming cramped or distorted. Consequently while an easy action of the plunger is secured, insuring the firm seating of the dentures within the mouth of the wearer, there is no danger of binding or cramping of the parts in use. I have found that by providing a straight-faced bearing-plate H for the plunger a much easier action of the dentures is secured than where a concave plate for such purpose is used, since the straight face allows a slight lateral movement of the plunger with respect to the plate H, thereby permitting a greater freedom of movement of the jaws.

It will be understood that the same spring

mechanism will be used upon each side of the denture, this mechanism being located, as in my former patent, in the place of the last molars.

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

1. An artificial denture having spring mechanism located between its upper and lower plates, said spring mechanism comprising a casing D, provided at its upper end with a perforated detachable cap, a plunger working within said cap, and an incased spring within said plunger, substantially as described.

2. An artificial denture having spring mechanism located between its upper and lower plates, said spring mechanism comprising a casing D, screw-threaded at its upper end and provided with a perforated screw-threaded cap *d*, a hollow plunger E, passing through said cap and provided with a flange or stop *e*, a coiled spring F within said plunger, and a spring-rod G within said coiled spring, substantially as described.

3. An artificial denture having spring mechanism located between its upper and lower plates, the upper one of said dentures being provided with a straight-faced bearing-plate H and the opposite denture being provided with a casing D, having a perforated detachable cap *d*, a plunger E, passing through said cap and provided with a flange or stop *e*, and a coiled spring within said casing, substantially as described.

JOHN J. STEDMAN.

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