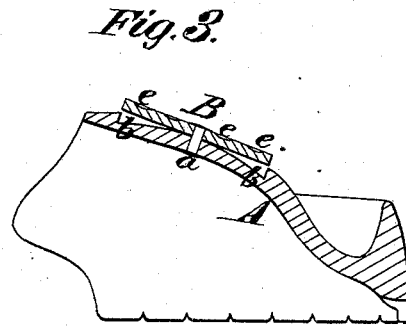
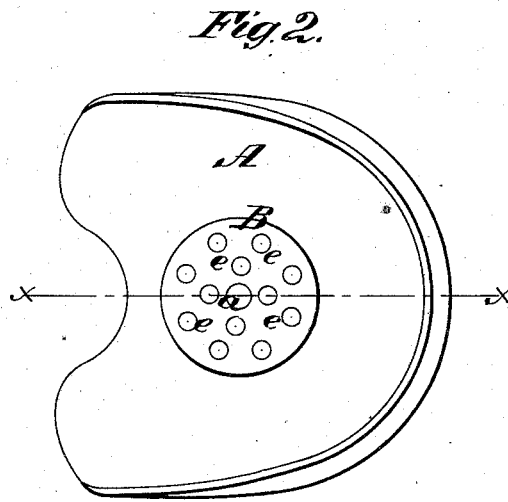
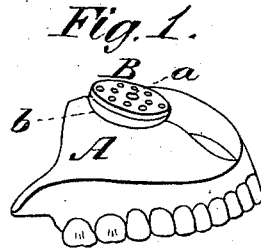


G. VAN N. RELYEA.
Dental-Plates.

No. 160,714.

Patented March 9, 1875.



WITNESSES

Mary S. Wiley.
E. H. Bates

INVENTOR

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UNITED STATES PATENT OFFICE.

GEORGE VAN NEST RELYEA, OF BELLEVILLE, CANADA.

IMPROVEMENT IN DENTAL PLATES.

Specification forming part of Letters Patent No. **160,714**, dated March 9, 1875; application filed January 30, 1875.

To all whom it may concern:

Be it known that I, GEORGE VAN NEST RELYEA, of Belleville, in the county of Hastings and Province of Ontario, Dominion of Canada, have invented a new and valuable Improvement in Dental Plates; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of my plate. Fig. 2 is a plan view of the same; and Fig. 3 is a sectional view.

This invention has relation to atmospheric-pressure attachments for dental plates; and the nature of my invention consists in an india-rubber disk, having numerous cells in its upper surface, in combination with a recess or depression in the upper surface of the roof of the palate-plate, in which recess the said disk is secured, as will be fully understood from the following description.

In the annexed drawings, A designates the palate-plate of a full upper set of teeth, the palatine side of which has the ordinary circular depression or cavity *b* in it, commonly known as the "suction-chamber." In this cavity I secure, by means of a rivet, *a*, a disk, B, of any suitable flexible or elastic material, preferably using for this purpose india-rubber. The disk B is about the same diameter as the cavity *b*, and of any suitable thickness. The upper or palatine side of the disk has a number of depressions, *e*, in it, which, when the

plate is in its proper position in the mouth, will form vacuum-chambers, which will cause the disk to firmly attach itself to the roof of the mouth. The dental plate itself will be retained in contact with the palate in the usual manner by the pressure of the air, the disk lying in the depression formed to receive it. This flexible vacuum-disk B will prevent the teeth from dropping down, even should air find ingress between the plate and the roof of the mouth, and thereby loosen the plate.

The disk may be used on any kind of a plate for artificial teeth, whether vulcanite or metal.

I am aware that a cup-shaped disk has been used with dental plates; also, that flat rubber disks have been used, with radial grooves. The cupped pieces soon become flat and useless; and the grooved disks are objectionable, for the reason that a slight ingress of air at their outer ends destroys the vacuum.

My improved disk has a great number of cells, each one of which affords a vacuum independent of the others.

What I claim as new, and desire to secure by Letters Patent, is—

The flexible disk B, having a number of independent vacuum-cells in its palatal surface, combined with the chamber *b* in the plate A, substantially as described,

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE VAN NEST RELYEA.

Witnesses:

E. E. LEACH,
E. G. PRICE.