

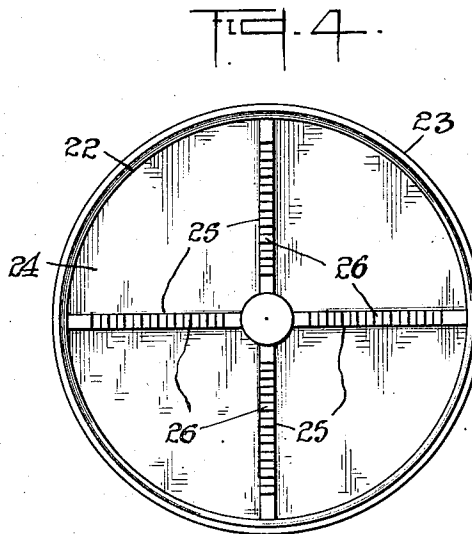
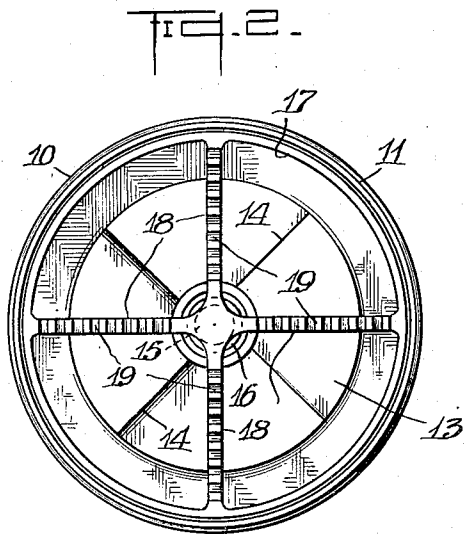
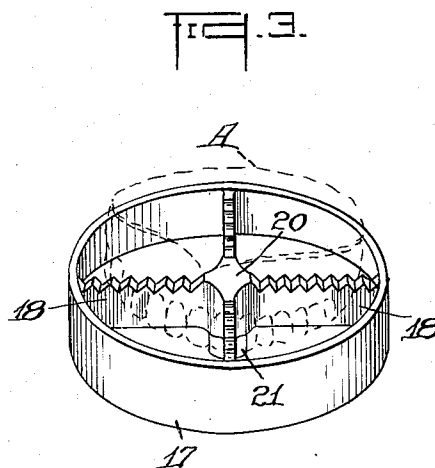
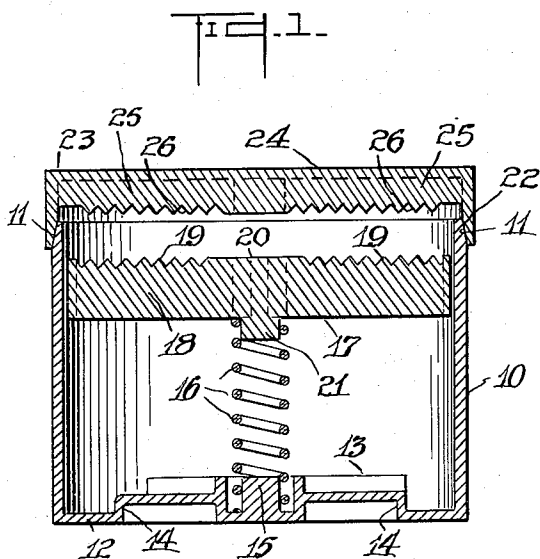
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PORTABLE CLEANSING DEVICE FOR ARTIFICIAL DENTURES

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PORTABLE CLEANSING DEVICE FOR
ARTIFICIAL DENTURES

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7 Claims. (Cl. 134—154)

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My invention pertains to improvements in portable cleansing device for artificial dentures.

The present invention is a modification of the denture cleansing device forming the subject matter of my copending application Serial No. 732,187, filed March 4, 1947, Patent Number 2,565,988, patented August 28, 1951, and has for its object to provide a yieldably mounted denture support for the container, whereby dentures of varying thicknesses may be automatically supported without making any mechanical adjustment in the support.

A further object of my invention is to provide the bottom wall of the container with a propeller-like profile, whereby during the manual shaking movement the solution will be given a swirling action in an upwardly direction against a held denture to more thoroughly cleanse the latter.

I accomplish the objects of my invention by means of certain novel constructions and arrangement of parts hereinafter more fully described, set forth in the claims, and illustratively exemplified in the accompanying drawing, in which:

Figure 1 is a substantially longitudinal sectional view of my improved cleansing device;

Figure 2 is a top plan view of the container with the cover removed to reveal the denture support and propeller-like bottom profile.

Figure 3 is a perspective view of the denture support showing denture in dotted lines; and

Figure 4 is an elevational view of the cover, looking into the under face of the same to show the toothed spider portions.

Referring to the drawings in detail, 10 denotes a cylindrically shaped container having a slightly tapered lip 11 at its upper open end, and a bottom wall 12 provided with a centrally raised section 13 consisting of a plurality of radially disposed steps 14, which form a propeller-like profile to the upper face of the section, and which in the manual operation of the device impart to a cleaning solution within the container an upwardly directed swirling movement. The center or axis of the section 13 is provided with an upstanding hub or post 15, about which the lower end of an upstanding helical spring 16 is coiled for support.

Yieldably supported upon the upper coils of the spring 16 is a denture support or cradle 17, which comprises a cylindrical band of an exterior diameter to loosely fit the inside diameter of the container 10, radial arms 18 having toothed upper surfaces 19 and being integral at their outer ends with the band and at their inner ends with a core 20 from which depends a hub or post 21 to be embraced by the upper coils of the spring 16,

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as illustrated in Figure 1. The loose fit of the denture support within the container permits of a tilting or canting of the support when a supported denture is engaged by the denture holding means on the cover as hereinafter described.

The tapered lip 11 of the container 10 forms a seat for the beveled inner surface 22 of the skirt portion of a cover 23. The skirt portion is an annular depending band closed on top by an integral disc or plate 24, which on its inner surface is provided with a plurality of depending radial ribs or arms 25 similar in shape and contour to the arms 18 of the denture support 17, i. e., the under surfaces of the ribs 25, are provided with teeth 26, as illustratively exemplified particularly in Figs. 1 and 4. The teeth 19 and 26 on the ribs 18 and 25, respectively, which are adapted to engage the denture operate to prevent lateral movement of the denture relatively to the container.

To utilize the denture cleansing device a suitable quantity of a cleaning solution is put into the container 10 and the denture A is placed or rested upon the support 17 so as to bring the tips of the teeth 19 into contact with the under surfaces of the denture. The cover 23 is then applied, bringing the tapered surfaces 11 and 22 into a liquid tight joint and the teeth 26 of ribs 25 into engagement with the upper surfaces of the denture A. As the cover 23 is pressed over the container and against the denture, the latter and its support 17 will be forced downwardly accompanied under certain conditions by a tilting or canting action and the spring 16 will collapse sufficiently to accommodate the adjustment of the support, but will still continue to exert upward pressure sufficient to firmly hold the denture immovable against the cover 23. With the denture A safely supported, the cleansing operation may be started by vigorously shaking the container until the swirling fluid has properly and completely cleaned the denture.

Having described my invention and the manner in which the same is made to function, what I claim and desire to secure by Letters Patent is:

1. A cleansing device for artificial dentures, comprising a container, a cover therefore having depending toothed portions, an upright helical spring disposed axially of said container, and a denture support mounted on said spring and freely adjustable in said container, whereby a denture placed upon the support will be held firmly between the toothed cover portions and the support.

2. A cleansing device for artificial dentures comprising a container, a cover therefor having radial depending toothed arms on its inner face,

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an upright helical spring disposed axially of and supported on the bottom of the container, and a denture support yieldably supported on said spring and comprising a peripheral band fitting loosely the interior of the container and having radial arms toothed on their upper surfaces and meeting in a hub at the center to receive the upper coil of said spring.

3. A cleansing device for artificial dentures, as claimed in claim 1, in which the container comprises a cylindrical shell having a closed bottom wall provided with a concentric raised central portion comprising a plurality of radial steps having a propeller-like contour and an upstanding center post to receive and support the lower coil of the supporting spring, substantially as described.

4. A cleansing device for artificial dentures comprising a container including a body portion and a removable cover, a pair of denture gripping members one within the container and the other within the cover, and resilient means urging one of said gripping members toward the other and permitting relative tilting thereof to hold a denture between them, said denture gripping members having rib members for engaging a denture and for providing access, upon agitation, by liquid within the container to substantially all portions of said denture.

5. A cleansing device for artificial dentures comprising a container including a body portion and a removable cover, a pair of denture gripping members, one within the container and the other within the cover, and resilient means urging one of said gripping members toward the other, at least one of said denture gripping members having on its denture engaging surface means for preventing lateral movement of the denture when gripped, said denture gripping members being of open framework character to limit contact with a denture and provide ample space, both above and below a firmly held denture, between the surfaces of the denture and the inner surface of the cover and the base of the container, respectively, and provide access to said spaces for cleansing liquid within the container to freely pass over substantially the entire denture to effectively cleanse the same when the device is vigorously shaken.

6. A cleansing device for artificial dentures comprising a container including a body portion and a removable cover, a pair of denture gripping members, one within the container and the other within the cover, and resilient means urging one

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of said gripping members toward the other, at least one of said denture gripping members being mounted to have limited tilting movement within the container whereby to hold a denture between said denture gripping members in slightly tilted relation, said denture gripping members being of open framework character to limit contact with a denture and provide ample space, both above and below a firmly held denture, between the surfaces of the denture and the inner surface of the cover and the base of the container, respectively, and provide access to said spaces for cleansing liquid within the container to freely pass over substantially the entire denture to effectively cleanse the same when the device is vigorously shaken.

7. A cleansing device for artificial dentures comprising in combination, a container with a closed bottom and an open top, a cover for the open top, a denture support spaced from the closed bottom of the container and movable therein toward and away from said cover, resilient means urging said support toward said cover to resiliently grip a denture between said support and said cover and hold said denture during manual agitation of the device when supplied with cleansing liquid whereby said denture will be cleansed, said resilient means providing for automatic accommodation of different thicknesses of dentures and a plurality of angularly disposed protuberances formed interiorly of the container and shaped to cause a swirling action of the liquid when the device is manually agitated.

ERNEST A. WILCOX.

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