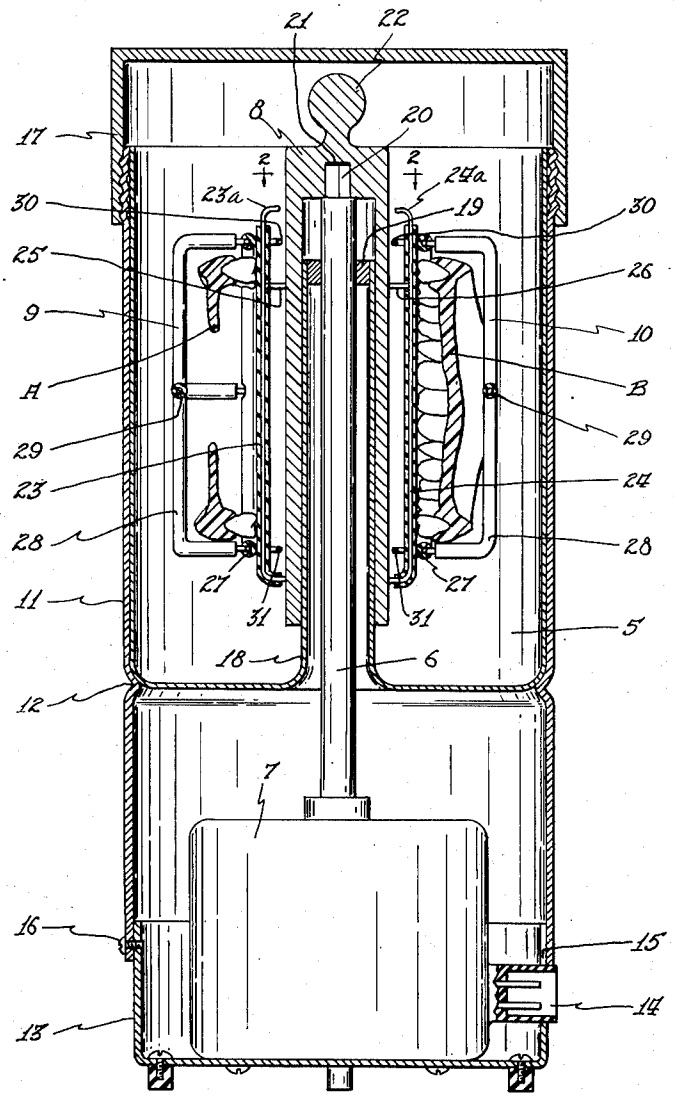
Sept. 9, 1952 M. WARD 2,609,828

WASHING DEVICE FOR ARTIFICIAL DENTURES

Filed Sept. 19, 1949 2 SHEETS—SHEET 1

FIG. 1



INVENTOR.
Mark Ward
BY
Glenn Wells

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Fig. 2.

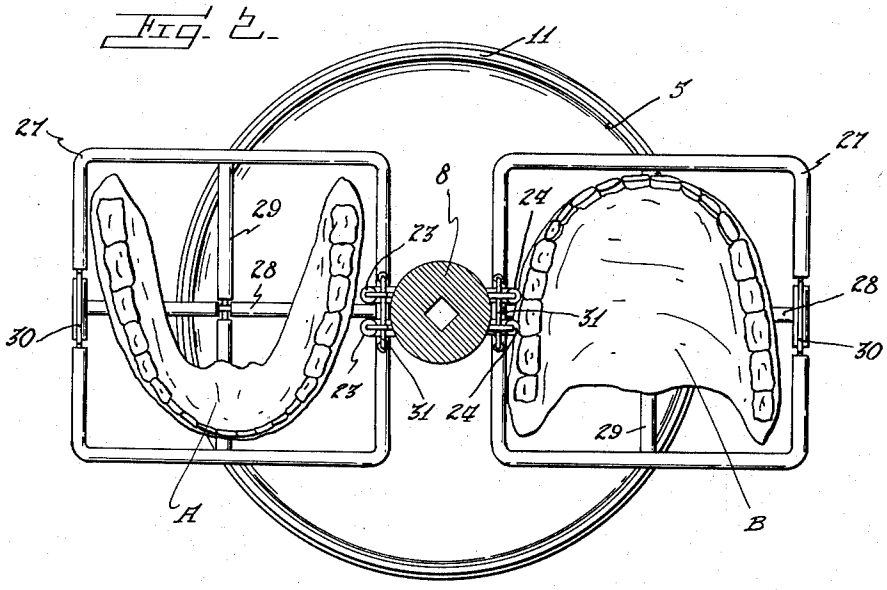


Fig. 3.

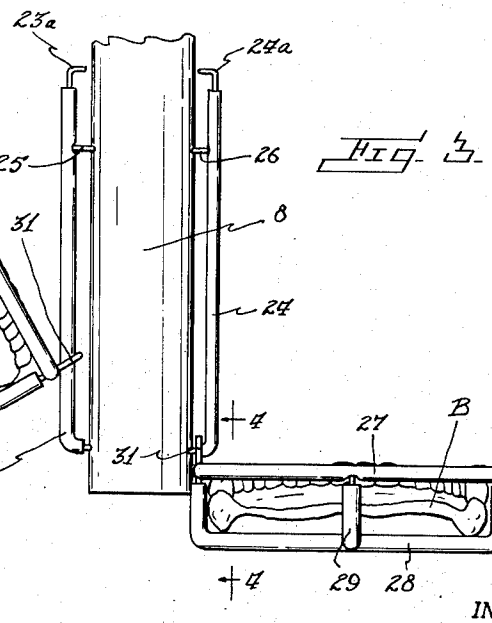
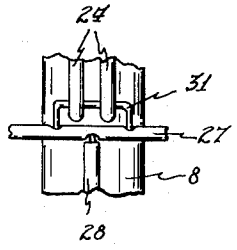


Fig. 4.



INVENTOR.
Mark Ward
BY
Greek Wells

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UNITED STATES PATENT OFFICE

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WASHING DEVICE FOR ARTIFICIAL DENTURES

Mark Ward, Spokane, Wash.

Application September 19, 1949, Serial No. 116,481

3 Claims. (Cl. 134—158)

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The present invention relates to improvements in a washing device for artificial dentures.

People who are required to use artificial dentures must clean the dentures thoroughly at frequent intervals. This is not easy to do with the ordinary hand brush and there is always the danger of dropping or striking the dentures against something hard and causing serious damage thereto. It is particularly difficult for one who travels to find means to take proper care of the artificial dentures. It is the purpose of my invention to provide a washing device which can be utilized wherever water is available, to wash the dentures by giving them a thorough agitation in a container filled with the washing liquid.

My invention is embodied in a washing device which is preferably motor operated, that has means for removably inserting the dentures in holding trays which in turn are secured to a supporting member and held on edge for insertion in the container. The construction is such that the support member can be lifted out of the container and the trays then swung away from the supporting member so that the dentures can be lifted out.

A further and specific object of the invention is to provide a simple denture holding tray and a supporting member with means on the tray and member to hold the tray on edge during the washing and to support it in a horizontal position while the dentures are placed therein and removed therefrom.

The nature and advantages of my invention will appear more fully from the following description together with the accompanying drawings, wherein a preferred embodiment of the invention is shown. It is to be understood however, that the drawings and descriptions are illustrative only and should not be considered as limiting the invention except insofar as it is limited by the claims.

In the drawings:

Figure 1 is a vertical sectional view through a denture washing device embodying my invention;

Figure 2 is a plan view showing denture holding trays and a support therefor in raised position about the denture, the supporting member being shown in section along the line 2—2 of Figure 1;

Figure 3 is a view in side elevation of the denture holding trays and the support in which the trays are attached; and

Figure 4 is a fragmentary sectional view taken substantially on the line 4—4 of Figure 3.

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Referring now in detail to the drawings, the essential features of my invention comprise a container 5, a stem 6 extending upwardly therein and suitably supported for rotation, means 7 such as an electrical motor for rotating the stem 6, a denture tray support 8 telescoping on the stem and connected thereto for rotation by the stem, together with denture holding trays 9 and 10 mounted on the support 8.

The details of mounting the container 5, the motor 7, etc. may of course, be varied. I have illustrated a container 5 as a liner for a cylinder shell or housing 11 which is pressed inward at 12 to provide a seat for the container 5. The housing 11 is closed at its lower end by a cup 13 which mounts the motor 7. A service plug 14 for the motor seats in a slot 15 of the cup 13. The cup 13 and the housing 11 are fastened together by screws 16. A cap 17 is threaded on top of the housing 11 to complete the enclosure. The container 5 has a central tubular portion 18 which extends upwardly around the stem 6 and is provided with a bearing 19 at the top end.

The support 8 and the stem 6 are separately connected for rotation by a reduced squared section 20 on the stem and a socket 21 in the head of the support 8. A knob 22 on the support 8 is used for lifting the support and its associated trays to remove them from the container 5.

The trays 9 and 10 are alike and are suitably mounted on the support 8 so that they may be hung in a vertical position alongside the support 8 during the rotation of the support for washing. It will be appreciated that the motor 7 may be of a reversible type or may have suitable means to rotate the stem 6 first in one direction and then the other if that is desired. Any suitable means may be used to rotate the stem 6.

An important feature of my invention is the construction whereby the trays 9 and 10 securely lock the dentures indicated at A and B against removal when the trays 9 and 10 are secured against the support 8. The support has vertically extending means 23 and 24 mounted diametrically opposite each other on the support. These members comprise spaced rods which are secured at their lower ends to the support 8 and hooked inward at the top as indicated at 23a and 24a. The rods are covered with rubber tubing and are braced by tie rods 25 and 26 near their upper ends. Each tray consists of a main rim 27 and cross bars 28 and 29. The cross bars extend directly away from the plane of the rim for a short distance and then parallel with the plane of the rim, crossing each other at their

mid points. The cross bars **26** and **29** and the rim **27** are covered with rubber tubing so that they will not injure the denture.

At the upper and lower side edge of each tray, the rims **27** have loops **30** and **31**. The loops **31** extend around the two securing members **23** and **24** so as to permanently fix the trays to the support. The loops **30**, however, hook over the inturned portions **23***a* and **24***a* and can be removed by elevating each tray. Figure 3 illustrates how a tray can be swung outwardly when its loop **30** is released from the securing members on the support **8**. When the two trays are released and spread out horizontally, they can be set on a table or other surface so that the dentures A and B can be placed therein or lifted out without difficulty.

The use of the device is believed to be evident from the foregoing description. The container **5** is filled with washing liquid. The support **8** can be lifted out while the trays are being filled with the dentures and secured with their side edges facing up and down and with their rim portions **27** pressed against the members **23** and **24**. With the cap **17** in place, the motor **7** can be started to perform the washing operation. When the washing is finished the cap is removed and the support **8** is lifted out. The dentures are then readily removed by folding the trays outwardly as illustrated in Figures 2 and 3. The device is easily cleaned and dried and can be made of such small size that it can be carried by travelers without difficulty. The sizes of the stem and the denture tray support **8'** shown in the drawings are enlarged for the sake of clarity in the showing. They need only be large enough to carry the light denture trays and dentures.

It is believed that the nature and advantages of my invention will be apparent from the foregoing description. Having thus described my invention, I claim:

1. A washing device for artificial dentures comprising a container, a substantially vertically disposed stem therein, means to rotate the stem, a pair of denture supporting trays, a support extending downwardly over the stem, having means to drivingly connect it to the stem, means securing the trays to the support near its lower end for swinging movement between a horizontal position and substantially vertical position alongside the support, and cooperating means on the trays and near the upper end of the support, releasably securing the trays in substantially vertical position alongside the support.

2. A washing device for artificial dentures comprising a container for washing fluid, a rotatable substantially vertically disposed stem therein, means to rotate the stem, a tubular support removably telescoped over said stem, cooperating parts on the stem and support for drivingly connecting the stem to the support when the support is lowered onto the stem, a denture holding tray, vertically extended securing means on the support and upper and lower members on the opposite side edges of the tray engaged with said means to hold the tray substantially vertically alongside the support, the upper members being separable from the securing means to release the tray at the upper side in order that it may be swung outwardly away from the support for removal of the dentures.

3. A washing device for artificial dentures comprising a container, a substantially vertically disposed stem therein, means to rotate the stem, a pair of denture supporting trays, tray supporting means on said stem comprising oppositely disposed members swingably mounting certain side edges of the trays and additional oppositely disposed members vertically spaced from the first named members releasably mounting the opposite side edges of the trays whereby the trays may be held substantially vertically with the stem therebetween for rotation and swung outward for insertion and removal of the dentures.

MARK WARD.

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