

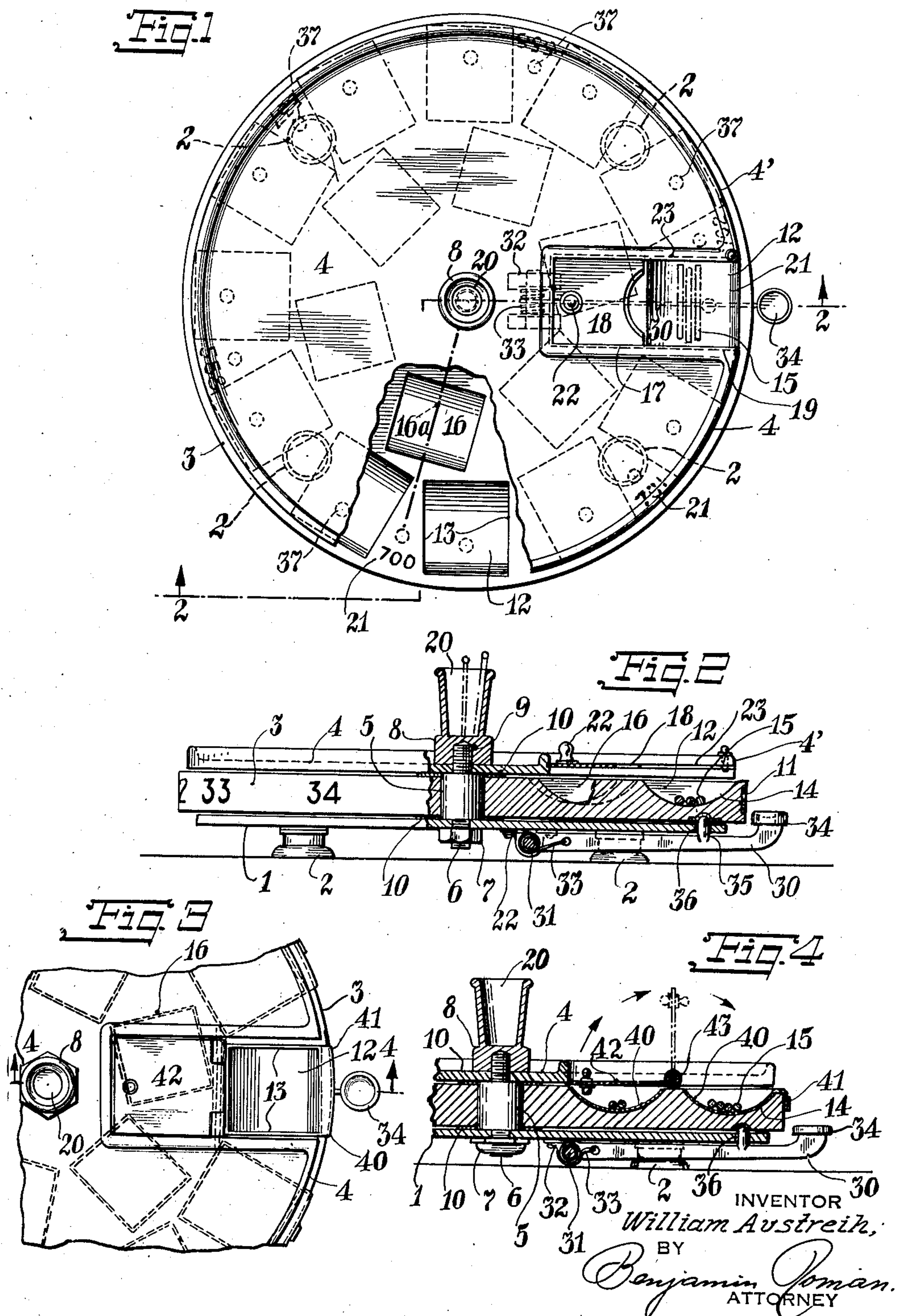
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BURR HOLDING DEVICE

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BURR HOLDING DEVICE

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5 Claims. (Cl. 206—17)

This invention relates to a device for selectively filing, maintenance, and selective obtention of dental burrs or similar articles.

Heretofore, dental burrs were generally kept in a perforated block, and as the work progressed the operator pulled out the desired burr and reinserted it back upon completion of the work. As the required burrs comprise a large number and variety, and each kind of burr is generally sold in a set of six, the block soon becomes a confused aggregation of heterogeneous burrs, some of which may be too dull for effective use while others of the same set may have ample sharpness, as a consequence of which considerable time and labor is consumed in selecting the desired burr during work. This condition is furthermore productive of eye strain, due to required picking out of desired burrs from the confused situation, and often causes pain to the patient through inadvertent choice of a dull or improper burr.

The principal object of the invention, therefore, is to provide improved means for remedying the above mentioned disadvantages, and to provide an efficient and improved device which will maintain the sets of burrs in definite location, whereby the desired burr may be readily, rapidly, and conveniently selected by dialing with one hand, which will as similarly and readily permit the refiling of the used burrs, and which device will be furthermore simplified, conveniently and economically manufacturable, strong, durable, efficient, reliable, and salable at low cost.

Other objects and advantages will hereinafter appear.

In the accompanying drawings,—

Fig. 1 is a plan view of the burr handling device.

Fig. 2 shows a general elevation, partly in full and partly in cross-section, of the burr handling device.

Figs. 3, 4 are a fragmentary plan view and transverse-sectional elevation showing a modification of the invention.

Upon a base-plate 1, provided with several legs 2, is located a turntable 3, over which is disposed a cover 4. Said parts are held together and assembled with each other, by means of a stud 5 passing through the table 3 and located between the cover 4 and plate 1, a lower bolt 6 passing through the base 1 and carrying a nut 7 for therewith securing said stud to the base, and an upper bolt 9 passing through the cover 4 and a nut 8 threading thereover to secure the cover to said stud. Washers 10 are interposed between

the table 3, cover 4, and base 1, whereby the stud 4 constituting an axle permits perfectly free rotation of the turntable 3 relatively to the stationarily disposed cover 4 and base 1. In proximity to its peripheral edge 11 the disk-like table 3 is provided with a concentric series of receptacles 12, each of which is rectangular, the sides 13 of which are vertical and parallel to a centre line thereof radial to the turntable, and the balance area 14 of which consists of a continuous curve as illustrated in Fig. 2, extending toward the edge 11 as well as toward the centre of the table 3. The burrs 15 are placeable in the receptacle 12 in the manner shown, transversely of its radial centre line upon the straight alignment of its curved floor 14, and by virtue of this particular configuration and disposition of the receptacle as well as its proximity to the edge 11 the operator is enabled to remove a single one of the burrs 15 by the expedient of inserting his forefinger in the receptacle, placing his thumb against the edge 11, and thereby simultaneously using both of these fingers to pick a burr and roll it over the curved floor 14 directly into his hand. The table 3 is provided with an additional concentric series of receptacles 16, each of which is similar to the receptacle 12, but the radial centre line 16a of which extends between an adjoining pair of the receptacles 12. In the cover 4 is formed an opening 17 which conforms and registers with any one of the receptacles 12 or 16 as the table 3 is turned to bring any one of them directly under said opening. When one of the receptacles 12 is in registry with the opening 17 the nearby receptacle 16 shows only partially and is out of alignment with the opening, and the same occurs with the receptacle 12 when the receptacle 16 is in alignment with said opening, whereby an erroneous choice of any burr is prevented. A shutter 18 slidable in channelled guiding-ways 19 of the cover 4 is thereby shiftable to cover up the non-registering receptacle and to expose the selected receptacle which may be in registry with the opening 17, in the manner illustrated, to fully conceal the unrequired receptacle. The cover 4 is provided with a retaining rim 4, for convenience in placing thereon one or more of the burrs during work, and for the same purpose the nut 8 is provided with a receptacle 20 for placing therein such burrs vertically. The peripheral wall 11 carries a designation, as "32", "33", "34", opposite each receptacle 12 corresponding to the type of burrs to be contained within such receptacle, and similar designations, as "558", "700", are marked upon 21 to indi-

cate the contents of the receptacles 16. The shutter 18 is provided with a finger-piece 22 for its sliding manipulation, and with a cut-out 23 to expose an area 21 corresponding to a receptacle 16 which may be in registry with the opening 17.

5 Underneath the base-plate 1 is located a lever 30, which is fulcrumed by an axle 31 thereof journaled in bearing-straps 32 secured to the plate, and a spring 33 wound around said axle normally forces the lever toward the plate 1. Said lever is provided with a terminal finger-piece 34 located at the table-wall 11 opposite its opening 17, and with a locking pin latch 35 passing through a hole 36 formed in the plate 1. The underside of the table 3 is provided with an indentation 37 for each of the burr receptacles 12, 16, thereby forming an annular series of indentations, as indicated in Fig. 1, each of which registers with the pin 35 and permits it to enter thereinto when the table 3 is turned to bring any one of said receptacles into operative registry with the opening 17 of cover 4, in which manner the turntable becomes locked to stationarily dispose a selected receptacle in said registry.

25 When utilizing the device, the operator depresses the key 34 to unlock the table 3 and release it for free rotation by pressing laterally upon its periphery 11 with the thumb of the same hand, to thereby bring any one of the selected receptacles 12, 16 into operative registry with the gate 17, whereupon he releases the key 34 to automatically lock the turntable with the selected receptacle in such registry, this particular mode of manipulation of the device with only one hand being vital in dental work, as the operator's other hand is frequently otherwise occupied. In this manner the burr handling device may be operated and utilized for readily, rapidly, and conveniently classifying, maintaining, and selectively removing of required burrs.

40 According to the modification shown in Figs. 3, 4, the burrs 15 lie directly in a tray 40, which thus lines the receptacle 12 or 16, is removable therefrom, and conforms precisely to its configuration. The trays 40 may be made of any suitable material, and those contained within the receptacles 12 have aprons 41 that lap over and line the arcuate rim 11 of the turntable 3, which aprons carry the designations of the particular burrs to be held in the trays. When utilizing such trays 40, therefore, they may be removed from the table 3 during assortment and refiling of the burrs, and may be then returned indiscriminately to the various receptacles 12. The cover 4 of this device is provided with a shutter 42 which is hinged at 43 and may be therefore swung in either direction and disposed to expose either a receptacle 12 or 16, which ever may be in required registry.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:

1. A burr handling device having the combination of a base, a pivoted circular turntable on said base, a stationary cover for said table, said table having thereon a concentrically arranged series of burr receptacles, each of said receptacles having upright side walls that are parallel to a line radial to the pivot of said turntable and having a concave bottom curving toward and away from the centre and periphery of said turntable, and said cover having an opening registering with any one of said receptacles.

2. A burr handling device having the combination of a base, a pivoted circular turntable on said base, a stationary cover for said table, said table having thereon a concentrically arranged series of burr receptacles, each of said receptacles having upright side walls that are parallel to a line radial to the pivot of said turntable and having a concave bottom curving toward and away from the centre and periphery of said turntable, said cover having an opening registering with any one of said receptacles, and means to arrest the rotation of said table.

3. A burr handling device having the combination of a base, a pivoted turntable on said base, a stationary cover for said table, said table having thereon a concentrically arranged series of burr receptacles, each of said receptacles having upright side walls that are parallel to a line radial to the pivot of said turntable and having a concave bottom curving toward and away from the centre and periphery of said turntable, said cover having an opening registering with any one of said receptacles, and means to positively lock said table relatively to said base upon the registry of any one of said receptacles with said opening.

4. A burr handling device having the combination of a base, a turntable on said base, a stationary cover for said table, said table having thereon a concentrically arranged series of burr receptacles, said cover having an opening registering with any one of said receptacles, and means to positively lock said table relatively to said base upon the registry of any one of said receptacles with said opening.

5. A burr handling device having the combination of a base, a turntable on said base, a stationary cover for said table, said table having thereon a concentrically arranged series of burr receptacles, said cover having an opening registering with any one of said receptacles, and each of said receptacles being lined with a removable tray conforming to its configuration.

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