

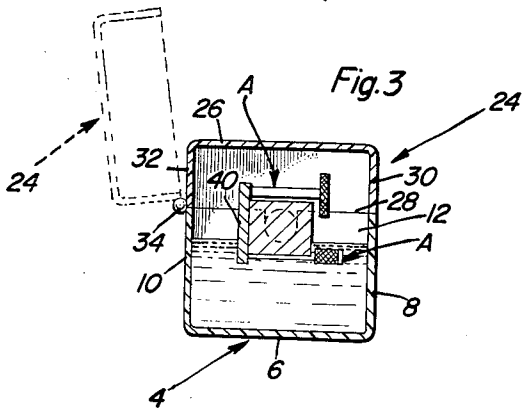
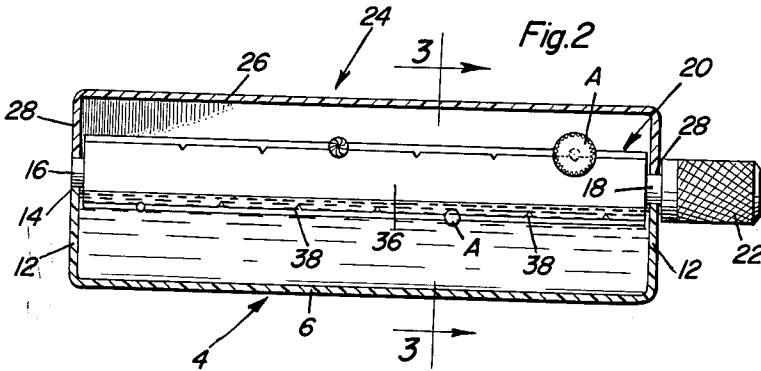
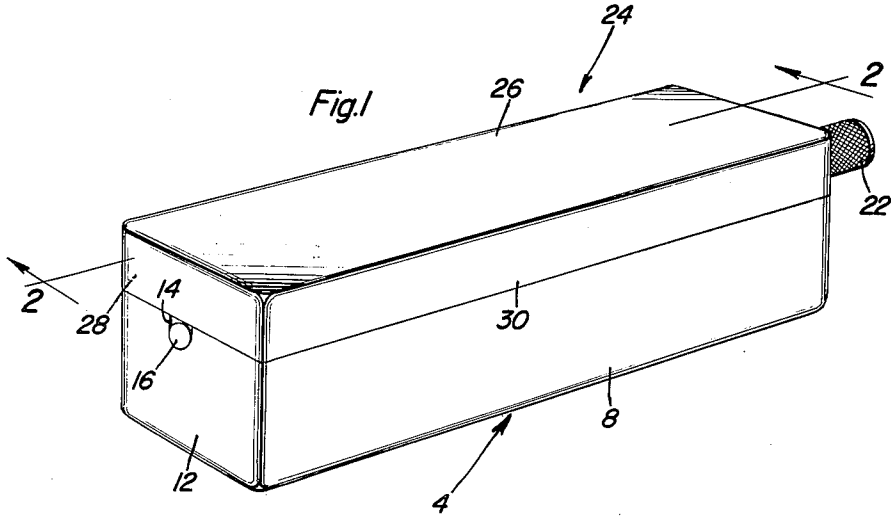
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DENTAL BURR HOLDER AND STERILIZER

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**DENTAL BURR HOLDER AND STERILIZER**

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4 Claims. (Cl. 21—87)

This invention relates to a portable small article housing and storing device which is expressly, but not necessarily, designed and adaptably suitable for expedient use in the office of a dentist.

More particularly, a significant objective and purpose of the device is to provide a busy dentist with a simple, practical and acceptably efficient holder and sterilizer for dental burrs and diamond instruments, for example, contra-angle or miniature sizes.

Briefly, the invention comprises a light weight flat-bottom case which is made of non-magnetic material and is provided with a suitably covered receptacle portion the latter having been charged with sterilizing media, a disinfectant product (usually a commonly marketed brand or type), available for use in the receptacle portion. The receptacle portion is preferably of rectangular box-like form. A permanent magnet is mounted for accessible use in said case, said magnet having surfaces for detachable anchorage of the articles thereon and also having handling means positioned exteriorly of the surfaces of the case.

In carrying out a preferred embodiment of the invention, the case is preferably in the form of a rectangular box, that is a box of non-magnetic material having an open top base which defines the receptacle, and having a hinged lid or cover which is normally fitted over and closes the receptacle portion. The transverse end walls of the receptacle portion are notched to provide bearings for journals provided on the end portions of an insertable and removable manually rotatable shaft.

Then too, novelty is predicated on the shaft with the journals at the ends and suitable finger grip at one end, said shaft being a permanent magnet and having flat faces and said flat faces having V-shaped or equivalent keeper seats therein to distributively seat the selectively usable burrs.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a view in perspective of a dental burr holder and sterilizer constructed in accordance with the instant invention.

FIG. 2 is a section on the plane of the longitudinal line 2—2 of FIGURE 1 looking in the direction of the arrows.

FIG. 3 is a cross section on the transverse or vertical line 3—3 of FIG. 2.

Referring to the drawing the aforementioned case is portable and has the form of an elongated box which may be said to be oblong or rectangular and which is made of suitable plastic or equivalent material which is non-magnetic. The hollow base 4 defines the aforementioned receptacle portion for the disinfecting or sterilizing liquid or solution. This part comprises a flat bottom 6, longitudinal or front and rear walls 8 and 10 and transverse end walls 12 whose upper central edge portions are provided with cut-outs or notches 14 which provide bearings for the central journals 16 and 18 at the right and left end portions of the insertable and removable rotatably mounted burr racking and holding shaft 20. The journal 18 is extended to connect with an appropriate knurled finger grip 22. The upper part of the casing comprises a

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lid or cover 24 having a top wall 26, transverse end walls 28 and longitudinal front and back walls 30 and 32. The back wall 32 is hingedly mounted on the upper edge portion of the rear wall 10 as at 34 (FIG. 3). The lower straight edges of the end walls rest atop the upper edges of the end walls 12 of the receptacle portion as shown in FIG. 3 and again at the left in FIG. 1.

Returning to the burr racking and turning shaft 20 it is to be explained that this element comprises an elongated permanent magnet which is rectangular or otherwise polygonal in cross-section and which provides a plurality of flat faces 36 having grooves or open-ended notches 38 for systematically seating the cooperating portions of the burrs A in the manner shown. If desired, one face of the magnet or shaft may be provided with an attached plate 40 which has its upper and lower edges extending slightly above and below the upper and lower surfaces of the shaft and serving as stop flanges. These flanges limit the position of the ends of the burrs in the manner shown in FIG. 3. Sufficient sterilizing liquid or a disinfectant solution may be placed in the receptacle portion so that when the shaft is turned the burrs or other articles thereon will be immersed in the solution and thus sterilized in what is believed to be a self-evident manner.

By partially filling the plastic box with a suitable cold sterilizer solution (with rust inhibitor) it is possible to keep the burrs continuously sterile, yet readily available. They are spaced in the holder in such a manner that instant selection of size and type is possible without immersing the hand in the sterilizer solution or the use of thumb forceps. Friction grip, latch-type, or taper-shank burrs may be stored in this holder. These burrs and diamond instruments, being magnetizable, are attracted to and held by the magnetized holding shaft or bar 20. The holding bar 20 rotates 360° on axial journals resting removably in bearings 14. The burrs, are immersed in sterilizing solution at 0°. The magnetized holding bar or shaft may then be turned 180° and sterilized burrs are then accessible for use.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. For use in enclosing and systematically storing a plurality of readily accessible magnetizable articles; a portable holder and sterilizer comprising a case made of non-magnetic material and having a receptacle portion adapted to be charged with a prescribed amount of sterilizing media, and a permanent magnet mounted for accessible use in said case, said magnet having surfaces for detachable anchorage of the articles thereon and also having handling means positioned exteriorly of the surfaces of the case, said magnet comprising a shaft mounted for rotation within the confines of said receptacle portion, said shaft being of a cross-section appreciably less than the cross-section of said receptacle portion and being disposed in a plane below the plane of the upper edges of said receptacle portion and a predetermined distance above the plane of the bottom of the receptacle portion and functioning in part as a gauge indicative of the proper level of the sterilizing media and as such to enable the user to permit the lower half-portion of the shaft to contact the sterilizing media and the upper half-portion to assume a plane above the plane of the normal level of the sterilizing media.

2. The structure defined in claim 1, and wherein said shaft is polygonal in cross-section, the cross-section being

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such that it presents readily available and usable planar surfaces, said surfaces being provided at longitudinally spaced points with selectively usable keeper seats for individual reception and retention of magnetizable articles, said shaft being removably mounted on said receptacle portion in a manner that it may be lifted and bodily removed from the case with or without the articles thereon for checking and otherwise keeping an eye on the supply and condition of said articles.

3. The structure defined in claim 2 and wherein said shaft is provided on one side with a longitudinally extending fixedly attached plate, said plate being of a cross-section greater than the cross section of the shaft and having longitudinal flanges constituting stops for cooperating ends of the burrs.

4. For use in enclosing and systematically storing a plurality of magnetizable dental burrs, a burr holder and sterilizer comprising an elongated case made of non-magnetic material and having a flat bottom receptacle portion with end walls, the upper central portions of said end walls being provided with notches, said notches opening through upper edges of said upper central portions and providing bearings, a cover hingedly mounted on one wall of the receptacle portion and normally covering the otherwise open top thereof, an insertable and removable elongated bar of magnetized metal constituting a shaft and of a length corresponding with the length

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of the receptacle portion and arranged in said receptacle portion and having journals at its ends journaled for rotation in said bearings and also provided at one end with a finger grip, said shaft being non-circular in cross-section and having flat faces provided with V-shaped notches and said notches constituting seats for reception of insertable and removable burrs of magnetizable material, said shaft being provided on one lengthwise side with an attached plate commensurate in length with the shaft and having longitudinal edge portions projecting respectively beyond adjacent cooperating surface portions of the shaft and functioning as limit stops for cooperating end portions of the burrs, said edge portions defining flanges, the latter bridging and closing the adjacent cooperating ends of said V-shaped notches.

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