Oct. 15, 1968 R. G. BUTLER 3,405,749

MULTI-CHAMBERED TOOL HOLDER

Filed March 6, 1967

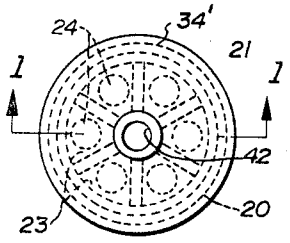


FIG. 1A.

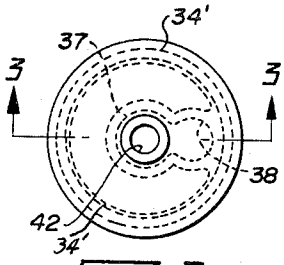


FIG. 2.

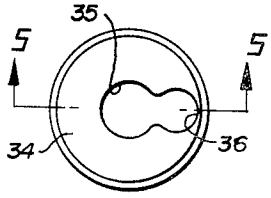


FIG. 4.

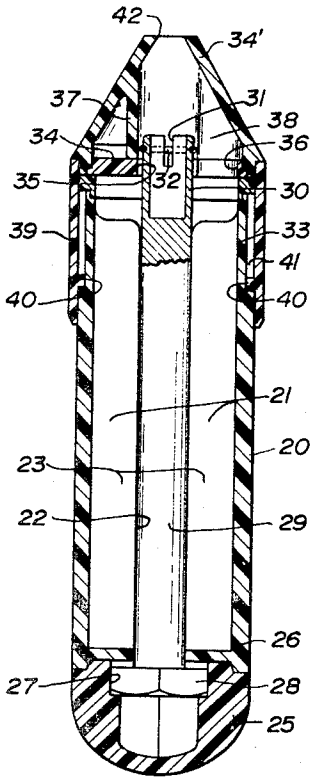


FIG. 1.

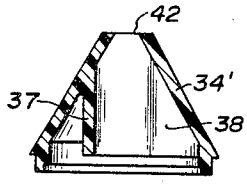


FIG. 3.

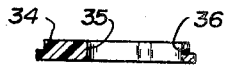


FIG. 5.

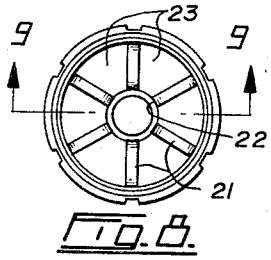


FIG. 8.

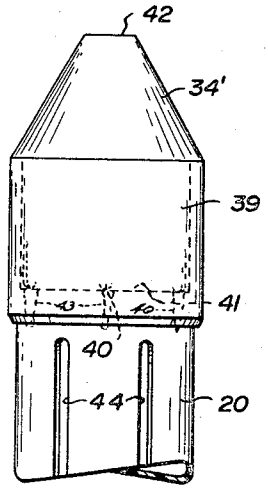


FIG. 10.

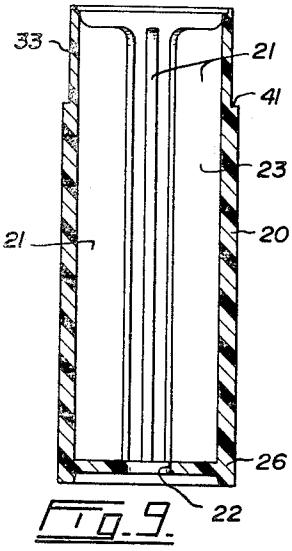


FIG. 9.

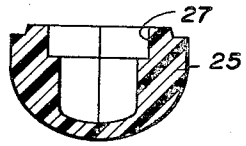


FIG. 7.

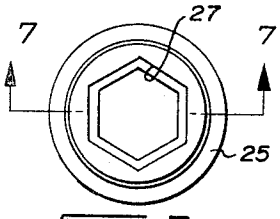


FIG. 6.

INVENTOR
RICHARD G. BUTLER
BY
ATTORNEY

United States Patent Office 3,405,749 Patented Oct. 15, 1968

3,405,749

MULTI-CHAMBERED TOOL HOLDER

Richard G. Butler, Gimli, Manitoba, Canada, assignor to Kendor Distributors Ltd., Winnipeg, Manitoba, Canada

Filed Mar. 6, 1967, Ser. No. 620,707
4 Claims. (Cl. 145—63)

ABSTRACT OF THE DISCLOSURE

A multi-bit screwdriver having various bits stored in a plurality of tool compartments formed in a hollow handle and having an indexing device which enables the selected bit to be fed into the chuck from the inside of the handle and to be returned for storage in the handle after use.

My invention relates to new and useful improvements in multi-chambered tool holders, particularly tool holders specifically designed to hold a plurality of various types of screw driver bits.

Many attempts have been made in the past to provide such tool holders but most of them are relatively involved and make production difficult and high-priced.

The present device overcomes these disadvantages by the extreme simplicity of the construction and operation so that the principal object and essence of my invention is to provide a device of the character herewithin described which enables a plurality of screw driver bits to be retained in a cylindrical handle and to be moved into position for operation as desired.

Another object of the invention is to provide a device of the character herewithin described in which the indexing for the various screw driver bits is relatively simple and positive.

A still further object of the invention is to provide a device of the character herewithin described which includes a position on the indexing portion so that the screw driver bits are not inadvertently ejected from the device.

Yet another object of the invention is to provide a device of the character herewithin described which is simple in construction, economical in manufacture, and otherwise well suited to the purpose for which it is designed.

With the foregoing objects in view, and such other objects and advantages as will become apparent to those skilled in the art to which this invention relates as this specification proceeds, my invention consists esentially in the arrangement and construction of parts all as hereinafter more particularly described, reference being had to the accompanying drawings in which:

FIGURE 1 is a sectional elevation of my device along the line 1—1 of FIGURE 1A.

FIGURE 1A is an end elevation of my device.

FIGURE 2 is an end view of the cap.

FIGURE 3 is a sectional view along the line 3—3 of FIGURE 2.

FIGURE 4 is a plan view of the center post guide plate.

FIGURE 5 is a side sectional view along the line 5—5 of FIGURE 4.

FIGURE 6 is a plan view of the bottom retaining cap.

FIGURE 7 is a sectional view along the line 7—7 of FIGURE 6.

FIGURE 8 is an end view of the barrel section.

FIGURE 9 is a sectional view along the line 9—9 of FIGURE 8.

FIGURE 10 is a fragmentary side elevation of the device showing the indexing of the head.

In the drawings like characters of reference indicate corresponding parts in the different figures.

Reference character 20 illustrates the cylindrical barrel of the device preferably manufactured from plastic.

This barrel also includes a plurality of radially disposed vanes 21 extending from a hollow cylindrical centrally located stem 22 thus defining a plurality of tool holding compartments 23 around the cylindrical stem.

These compartments are adapted to receive a plurality of screw driver bits or the like 24, each bit having the conventional extending retaining fins (not illustrated) on one end thereof.

A plastic base 25 is secured to the lower end 26 of the barrel, said base having a hexagonal recess 27 formed therein as shown in FIGURE 6. This recess receives a hexagonal head 28 situated upon the lower end of a bit holding bolt 29 which extends through the hollow cylindrical stem 22. This bolt is preferably made of steel and is adapted to receive the torque of the screwdriver bit held within the chuck end 30 thereof.

This chuck end includes a vertical drilling having slotted sides 31 to receive the aforementioned fins of the screw driver bit. A detachable retaining device 32 is incorporated with this bit end 30 and takes the form of a circular spring clip surrounding the bit end 30 and frictionally holding the screw driver bit end therein.

The bolt 29 which is defined as a center post, is held in position at the upper end 33 of the barrel by means of a center post guide plate 34 secured to a cap 34' which will hereinafter be described. This guide plate is apertured centrally as at 35, said aperture freely registering over the bit end 30 of the post 29. A further aperture 36 is formed through this plate and joins the aperture 35 as shown in FIGURE 4, the purpose of which will hereinafter be described.

The aforementioned cap 34' is conical and hollow and is provided with an internal web 37 defining a bit channel 38, said channel aligning with the aperture 36 within the plate 34.

An indexing sleeve 39 is secured to the cap 34' and mounts same upon the upper end 33 of the barrel 20 for rotation and limited endwise movement thereon.

A pair of projections 40 project inwardly from the sleeve 39 and engage within an annular recess 41 formed upon the upper end 33 of the barrel thus permitting free rotation of the cap and sleeve and limited endwise movement with relation to the barrel.

When the sleeve is rotated so that the aperture 36 registers over any one of the chambers 23, the bit within the chamber is permitted to slide through the aperture and through the bit channel 38 to protrude through a central aperture 42 in the apex of the cap 34'. It may then be manipulated so that the end of the bit engages the bit holder 30 and the screw driver may then be used.

When it is desired to store this bit or change same, it is moved endwise with reference to the bit holder 30 thus disengaging same from the holder whereupon it is moved sideways and allowed to pass down through the aperture 36 into the storing chamber 23.

It is, of course, desirable to be able to index the cap, and sleeve with reference to the chambers 23 and in this connection reference should be made to FIGURE 10. I have provided a plurality of relatively short grooves 43 within the outer wall of the cylindrical casing selectively engageable by the aforementioned projections 40 on the sleeve 39 and these grooves are positioned so that when the projections engage opposite pairs of grooves, one of the chambers 23 is in alignment with the bit channel 38.

Longitudinal striations 44 may be formed upon the outer surface of the cylindrical casing 20 in order to afford a non-slip grip to the casing.

Since various modifications can be made to the invention herein described within the scope of the inventive concept disclosed, it is not intended that protection of the said invention should be interpreted as restricted to the

modification or modifications or known parts of such concept as have been particularly described, defined or exemplified, since this disclosure is intended to explain the construction and operation of such concept, and not for the purpose of limiting protection to any specific embodiment or details thereof.

What is claimed to be the present invention is:

1. A multi-chambered tool holder for selection and engagement of any one of a plurality of tool bits stored within said tool holder; comprising in combination a hollow, longitudinally extending barrel portion, an axial extending hollow stem secured by the base thereof to the base of said barrel, a plurality of radially extending vanes formed on said stem, said vanes, said stem, and said barrel defining a plurality of tool bit holding compartments, bit holding means extending through said stem and being secured by one end thereof, to the base of said barrel against rotation, a bit chuck on the other end of said holding means, a hollow, centrally apertured cap rotatably mounted and endwise movable within limits, on the other end of said barrel and indexing means in said cap selectively registrable with each of said compartments.

2. The device according to claim 1 in which said last mentioned means includes a double apertured plate secured to said cap and freely engageable over said bit chuck, one of said apertures selectively registering over any one of the said compartments.

3. The device according to claim 2 which includes tool bit guide means in said cap.

4. The device according to claim 1 which includes means associated with said cap and said barrel for facilitating the manual alignment of said indexing means with the selected compartment.

References Cited

UNITED STATES PATENTS

1,579,498	4/1926	Anderson	145—62
1,816,812	8/1931	Allison	145—63
3,006,395	10/1961	Dye	145—63
3,194,286	7/1965	Wagner	145—63

ROBERT C. RIORDON, *Primary Examiner.*

R. V. PARKER, *Assistant Examiner.*