Sept. 2, 1952 A. ANDREWS 2,608,890

RESILIENT CASING WITH SLIDABLE TOOL

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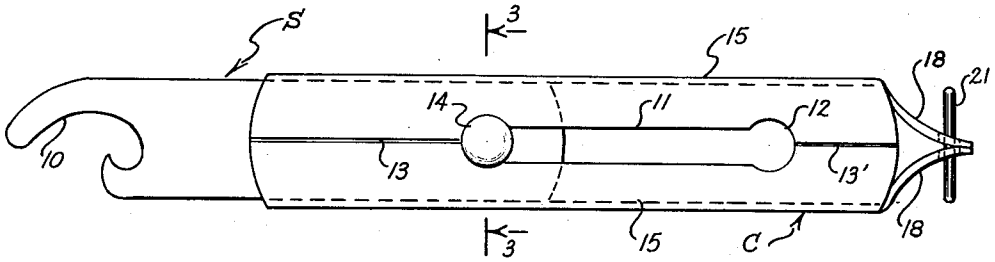


FIG.— 1

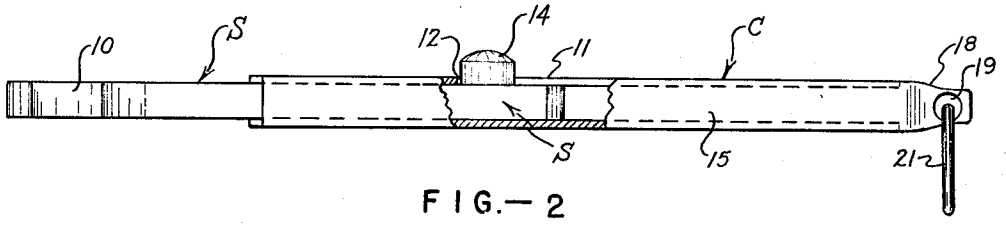


FIG.— 2

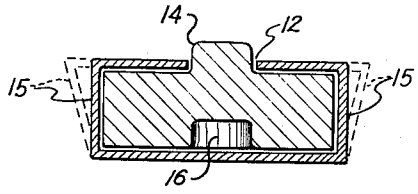


FIG.— 3

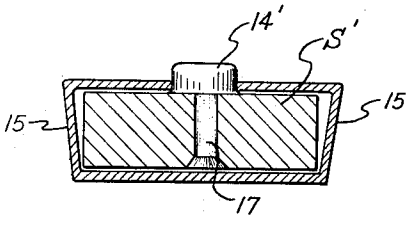


FIG.— 5

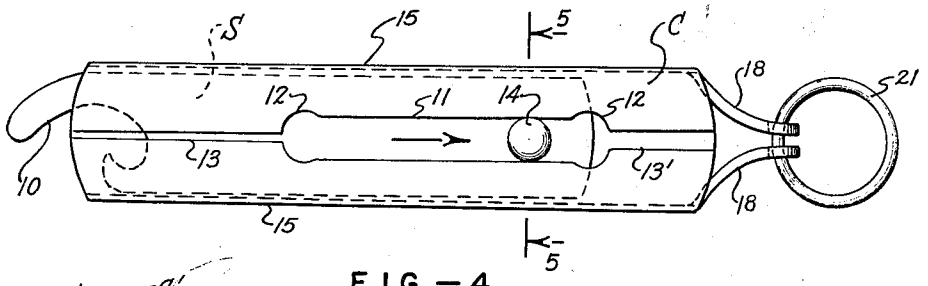


FIG.— 4

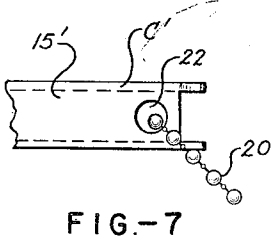


FIG.— 7

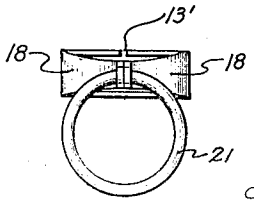


FIG.— 6

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RESILIENT CASING WITH SLIDABLE TOOL

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3 Claims. (Cl. 81—3.46)

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This invention relates to pocket tools, and more particularly to a pocket tool adapted to provide a bottle or cap opener, knife, nail file, or other tool which is movable to and retained in a safe and protected position when not in use.

Among the objects of this invention are to provide such a tool which has as few parts as possible; to provide such a tool which includes a slide or the like, on one end of which is a tool head such as a bottle or cap opener, nail file or the like; to provide such a tool which includes a slide which may be moved readily from an extended or operative position to a retracted or inoperative position; to provide such a tool in which the slide is held against accidental movement from either the extended or retracted position, by sufficient resistance for purposes of normal use; to provide such a tool which may also incorporate other elements, such as a key chain or ring; to provide such a tool which may be made in more than one form; and to provide such a tool which is inexpensive to manufacture and effective in operation.

Other objects and the novel features of this invention will become apparent from the description which follows, taken in connection with the accompanying drawing, in which:

Fig. 1 is a top plan view of a tool constructed in accordance with this invention, in extended position;

Fig. 2 is a side elevation of the tool of Fig. 1, partly broken away to show the interior construction;

Fig. 3 is a transverse cross section taken along line 3—3 of Fig. 1;

Fig. 4 is a top plan view of a tool having a modified slide, and also showing the slide during movement to retracted position;

Fig. 5 is a transverse cross section taken along line 5—5 of Fig. 4;

Fig. 6 is an end view of the tool of Fig. 1; and

Fig. 7 is a fragmentary side elevation, at the rear end, of a tool having a modified casing.

As illustrated in Figs. 1 and 2, a pocket tool constructed in accordance with this invention may comprise a casing C in which is received a slide S, the slide S being provided at its outer end with a suitable tool head 10, such as a bottle or cap opener, as shown, it being understood that a knife, nail file, screwdriver head, or any other desired tool head may be formed or mounted on the outer end of the slide S. The slide S and casing C are both preferably generally rectangular in cross section, for convenience in use, although other shapes may be utilized, and the

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casing is provided on the top with a central slot extending from end to end but having a central portion 11 and an enlargement 12 at each end of the central portion 11. The end portions 13 and 13' of the slot are normally closed, as when a button 14 of slide S is disposed in either enlargement 12, but may be spread apart, as in Fig. 4, when the slide S is moved between extended and retracted positions, the position of enlargements 12 corresponding to the position of button 14 in extended and retracted position of the slide S. Button 14 is adapted to be utilized in moving the slide from extended to retracted position, the relative proportions of button 14 and enlargements 12 being such that the button fits within each enlargement, as in Fig. 3, and the width of slot portion 11, with respect to the width of button 14, being such that during movement along the slot portion 11, the button 14 causes the slot to be spread, the side walls 15 of casing C being pushed outwardly, as indicated by the slightly exaggerated dotted position of Fig. 3 and full position of Fig. 5.

As will be evident, the resistance to movement of button 14 along slot portion 11 tends to maintain the button in a predetermined position, i. e. in one of the enlargements 12. During normal use, of course, when the slide S is in retracted position and the tool head 10 is withdrawn into casing C, the slide is adequately retained within the casing, because there is no significant force tending to move the slide out of the casing. Thus, when carried in the pocket of a user, the possibility of the tool head causing damage to the material of the pocket, or even causing personal damage to the user, is obviated. When the slide S is in extended position for use, as in Fig. 1, the thumb or a finger of the user is conveniently placed on the button 14, so that the tool head 10 is easily maintained in extended position.

The casing C is formed of resilient material, normally metal such as steel, brass, aluminum or the like, although certain types of plastic may be used, particularly those having considerable resiliency or flexual strength, such as polyvinyl acetate and chloride, methyl methacrylate, laminated plastics of various types, and others. The slide S is, of course, preferably made of metal, such as steel, brass, aluminum, or the like. The button 14 of the slide S of Figs. 1–3, may be formed by material punched out of the slide, as when a punch produces a cavity 16 of Fig. 3, and the material of the button is extruded from the opposite side of the slide. Or, the button may be formed separately and attached to the slide, such as in the case of the button 14' of Fig. 5, which is pro-

vided with a stem 17 extending through a hole drilled or punched in the slide S' and its lower end riveted over, as shown. Or, the button may be spot welded or otherwise attached to the slide.

The rear end of the casing C may carry a key ring or chain, for which purpose the side walls 15 of the casing C may be provided with rearward extensions 18 brought together at the end, a hole 19 being provided in each extension 18 for a key ring 21, as in Figs. 1 and 2, a key chain, or the like. Or, as in Fig. 7, each side wall 15' of a casing C' may be provided with a hole 22 adjacent the rear end thereof, through which a key chain 20, or a key ring or the like, passes.

From the foregoing, it will be evident that the pocket tool of this invention fulfills to a marked degree the requirements and objects hereinbefore set forth. By utilizing the resiliency of the casing itself to maintain the tool slide and head in desired position, i. e., either extended or retracted, the number of parts and the cost of manufacture are reduced to a minimum. Also, the button can be formed inexpensively on the slide, and the cost of manufacture of the slide itself is relatively low. The relatively wide range of materials of which the pocket tool of this invention may be made enables various decorative effects, such as advertising indicia, to be placed on the casing, particularly when the casing is made of a resilient plastic. Also, the utility of the tool is increased by providing the rear end of the casing with a key ring or chain, or the like.

Although variations in the construction of the pocket tool of this invention have been illustrated and described, it will be understood that other variations may exist, that various other materials, in addition to those enumerated may be utilized, and that additional embodiments may also exist, all without departing from the spirit and scope of this invention.

What is claimed is:

1. A pocket tool or the like comprising a slide having a tool at one end; a casing for said slide, said casing being formed of resilient material and having a top and a bottom, and sides connecting said top and bottom, said top having a longitudinal slot extending from end to end thereof; and a button extending from said slide

through said slot and adapted to be moved along said slot, said button having a greater width than the normal width of said slot at the point of contact therewith, so that said slot tends to be spread by movement of said button therealong, the resistance of said slot to movement of said button thus tending to maintain said slide in extended or retracted position.

2. A pocket tool or the like comprising a slide having a tool at one end; a casing for said slide, said casing being formed of resilient material and having a top and a bottom, and sides connecting said top and bottom, said top having a longitudinal slot extending from end to end thereof with an enlargement of said slot at spaced points corresponding to extended and retracted positions of said slide; and a button extending from said slide through said slot and adapted to be moved along said slot and to be received in said enlargements, said button having a width greater than the normal width of said slot between said enlargements at the point of contact therewith, said enlargements having a size corresponding to said button, so that said slot is spread by movement of said button therealong, the resistance of said slot to movement of said button from said enlargements thus tending to maintain said button in one of said enlargements and thereby tending to maintain said slide in a corresponding extended or retracted position.

3. A pocket tool or the like as defined in claim 2, wherein the width of said slot is greater between said enlargements than between each enlargement and the adjacent end of said casing.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
933,878	Borsch	Sept. 14, 1909
1,434,388	Hughes	Nov. 7, 1922
1,561,262	Martin et al.	Nov. 10, 1925
1,906,573	Gits	May 2, 1933
1,953,690	Sanways	Apr. 3, 1934
2,270,655	Keeran	Jan. 20, 1942