Dec. 5, 1950 D. D. VERTIN 2,532,972

SCREW HOLDER AND STARTER

Filed April 18, 1947

Fig. 1.

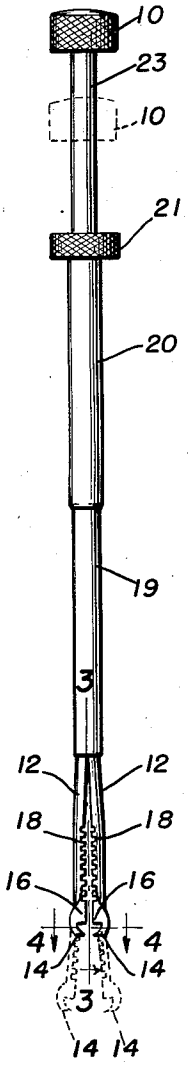


Fig. 2.

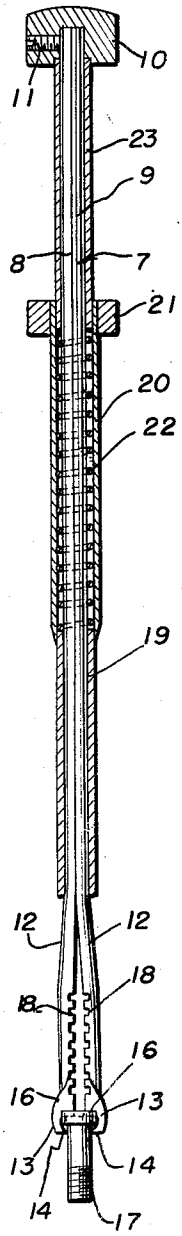


Fig. 3.

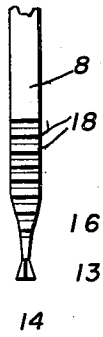


Fig. 4.

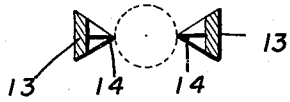
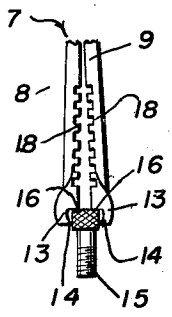


Fig. 5.



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2,532,972

SCREW HOLDER AND STARTER

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Application April 18, 1947, Serial No. 742,429

2 Claims. (Cl. 145—50)

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The present invention relates to hand operated and readily manipulatable tools and implements used as holders and starters for screws and equivalent fasteners.

As the preceding and opening statement of the invention implies, it is well settled that the art to which the invention relates is already reasonably well developed and therefore, appreciably active. In fact, many and varied attempts have been made to satisfactorily meet the demands of the trade and prospective users in this field of endeavor; some acceptably resultful, others not. Keeping in mind the known state of development of the prior art under advisement, and resorting to such knowledge as a steering guide, and mindful of recognized efforts of my predecessors, I have produced a carefully thought out structural adaptation which is destined, it is submitted, to achieve desired commercial and other ends in that it is characterized by requisite features of structural and functional simplicity, economy and efficiency.

Briefly, the preferred embodiment of the invention is characterized by a pair of resilient limbs terminating in screw head grabbing and retaining jaws, said jaws being normally separated to permit same to embrace the screw-head, and being thereafter forced together, this by end thrust action of a coacting longitudinally shiftable tube or sheath.

Novelty is thought to reside in the special jaw formations, the sheath construction, spring and knob arrangements and other coacting details. The fact that the art is recognizably well developed makes it evident that the nature of the contribution herein offered is primarily structural and functional in character.

Other objects and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is an elevational view of a so-called screw holder and starter constructed in accordance with the invention showing the jaws spread apart in both full and dotted line illustrations;

Figure 2 is a central view on an enlarged scale and primarily in elevation and showing the manner in which the sheath is slid to bind the gripping jaws against the screw or other article to be held;

Figure 3 is a fragmentary detail section of an

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end portion of one of the jaw-equipped limbs or members;

Figure 4 is an enlarged horizontal section on the line 4—4 of Figure 1, looking in the direction of the arrows; and

Figure 5 is a fragmentary detail view showing the functioning of the spur-like jaw tips.

Referring now to the drawings by distinguishing reference characters, the numeral 7 designates a longitudinally elongated part which may be conveniently referred to as a sectional shank. More specifically, the sections are in the form of jaw-equipped spring metal limbs 8 and 9, these being substantially semi-circular in cross sectional form. The flat faces are disposed in abutting relation and the upper end of the shank, that is in relation to Figure 2, is fitted into a socket in the central underside of a suitably knurled finger-grip or knob 10 and the parts are held assembled by an appropriate set-screw 11 extending into the socket. The outer end portions of the limbs are flexed and possessed of inherent resiliency, as indicated at 12, to form expansible and contractible portions for the jaws. The jaws are more in the nature of relatively small screw-head grabbing claws and to such extent they are of curvate form, looking at same from sides thereof as shown for example in Figures 1, 2 and 5. The terminals or tips 14 are pointed and inturned to facilitate usage. In some instances the points thus formed tend to "dig" into the part to be held. See for example Figure 5 where the points are diametrically engaged with the knurled head of a small headed screw 15 of the type shown. The jaws are also substantially V-shaped or wedge-form in cross section in order that same may be forced and frictionally jammed into a screw driver slot or kerf in the screw-head (not shown). Then too, the jaws have shouldered portions at the inner ends, as indicated at 16, to rest upon the head of a headed fastener of the type indicated at 17 in Figure 2. The inherent resiliency of the bowed or sprung portions 12 is such as to normally and naturally spread same apart. The inner surfaces of the sprung portions are serrated and the serrations 18 form teeth which may be used as additional grips for objects and articles to be placed and held between the thus formed jaw-equipped portions.

A tubular jaw contracting sheath is denoted at 19 and this is slidably mounted on the limbs and is forced against the sprung portions 12 for purposes of binding and pressing same together, in an obvious manner. The sheath has an enlarged

handle or socket-forming portion 20 which is integral with part 19 and which spacedly surrounds the shank 7 and is provided with a knurled finger-grip or knob 21. This portion 20 also serves to accommodate a normally expanded coiled spring 22 whose tendency is to exert tension against the sheath and to force same downwardly or outwardly in the direction of the jaws. The spring 22 bears against the inner end portion of a hollow tubular shank 23 as brought out to advantage in Figure 2, said shank being anchored in the knob 10. Thus, the knob 10 carries a short sleeve and the shank is attached to the knob and projects well beyond the sleeve, the sheath 19 being slidably mounted on the shank between the sleeve, and carrying a spring and knob arrangement and the outer end of the sheath 19 serving to engage and press the sprung portions 12 of the shank together.

As before indicated, these types of screw holders and starters are generally well known and also the mode of operation is equally well known. Consequently, a more elaborate description is believed to be unnecessary.

A careful consideration of the foregoing description in conjunction with the invention as illustrated in the drawings will enable the reader to obtain a clear understanding and impression of the alleged features of merit and novelty sufficient to clarify the construction of the invention as hereinafter claimed.

Minor changes in shape, size, materials and rearrangement of parts may be resorted to in actual practice so long as no departure is made from the invention as claimed.

I claim:

1. A screw holder and started of the class described comprising a knob provided in one face with a centered socket, a relatively short tubular shank fixed at one end to said knob and in alignment with said socket, a solid shank having one end fitting removably into said socket, a set screw carried by said knob and securing said one end of said solid shank in said socket, the opposite end portion of said solid shank extending well beyond the corresponding end of said tubular shank and terminating in screw gripping and turning jaws, said jaws being movable toward and from each other but normally spring biased apart, a sheath slidable on the intermediate portion of said solid shank and serving to urge said jaws toward each other, said sheath having an end portion snugly surrounding the portion of said solid shank adjacent said jaws and an enlarged handle portion to form an internal shoulder at the juncture of said portions,

a knob fixed to and flush with the end of said handle portion which is closest to said first named knob, the adjacent end portion of said tubular shank telescoping into said handle portion, and a coiled spring in said handle portion surrounding the solid shank and bearing at one end against the tubular shank and at its opposite end against said shoulder.

2. A screw holder and starter of the class described comprising a sectional shank embodying duplicate limbs, said limbs being substantially semi-circular in cross section and having their flat sides opposed and fitting together, a knob having a socket, corresponding ends of said limbs fitting in and being secured in said socket, opposite end portions of said limbs being resilient and spring biased apart, the free terminal portions having jaws, said jaws including hooked claw portions V-shaped in cross section and said claw portions having shoulder portions constructed to rest against a headed fastener or to fit into the kerf portion of a headed fastener, an elongated sheath slidable on the intermediate portion of said shank, the intermediate portion of said sheath having a shoulder, a finger-knob fixed flush with one end of said sheath and parallel and in close proximity to said first named knob, a relatively short tubular shank fixed at one end to said first knob, surrounding said solid shank and having one end telescoping into the adjacent end of said sheath, and a coiled spring situated in said sheath, surrounding the coacting portion of the solid shank, bearing at one end against said shoulder and bearing at its opposite end against the adjacent end of said tubular shank.

DONALD D. VERTIN.

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