Sept. 29, 1953 A. A. REA 2,653,637

AUXILIARY SLIP-ON HANDLE FOR SCREW DRIVERS AND SIMILAR TOOLS

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Fig 1

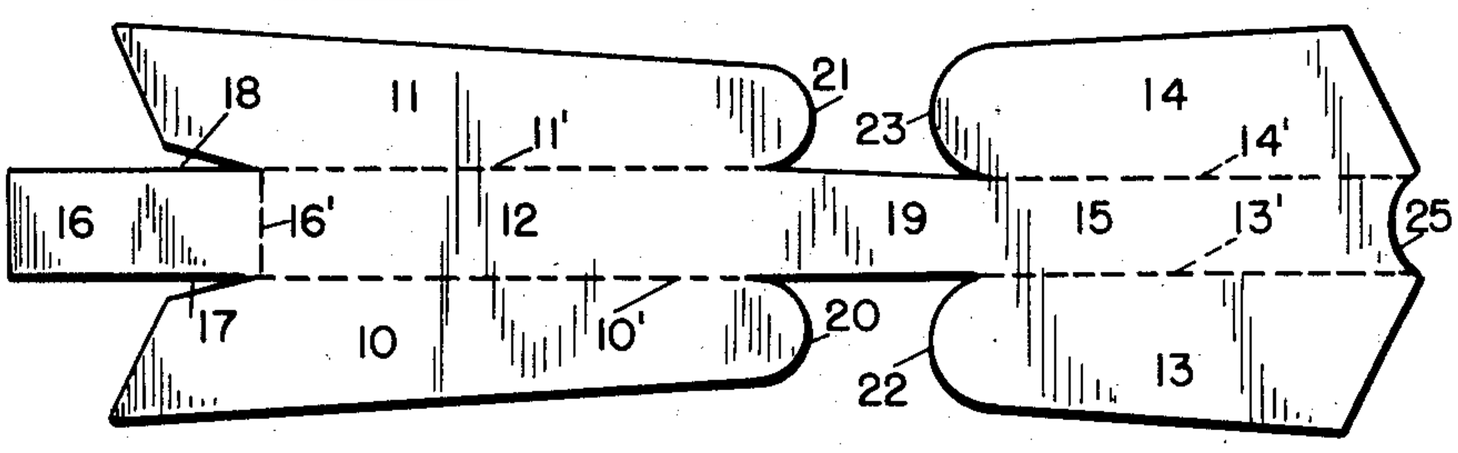
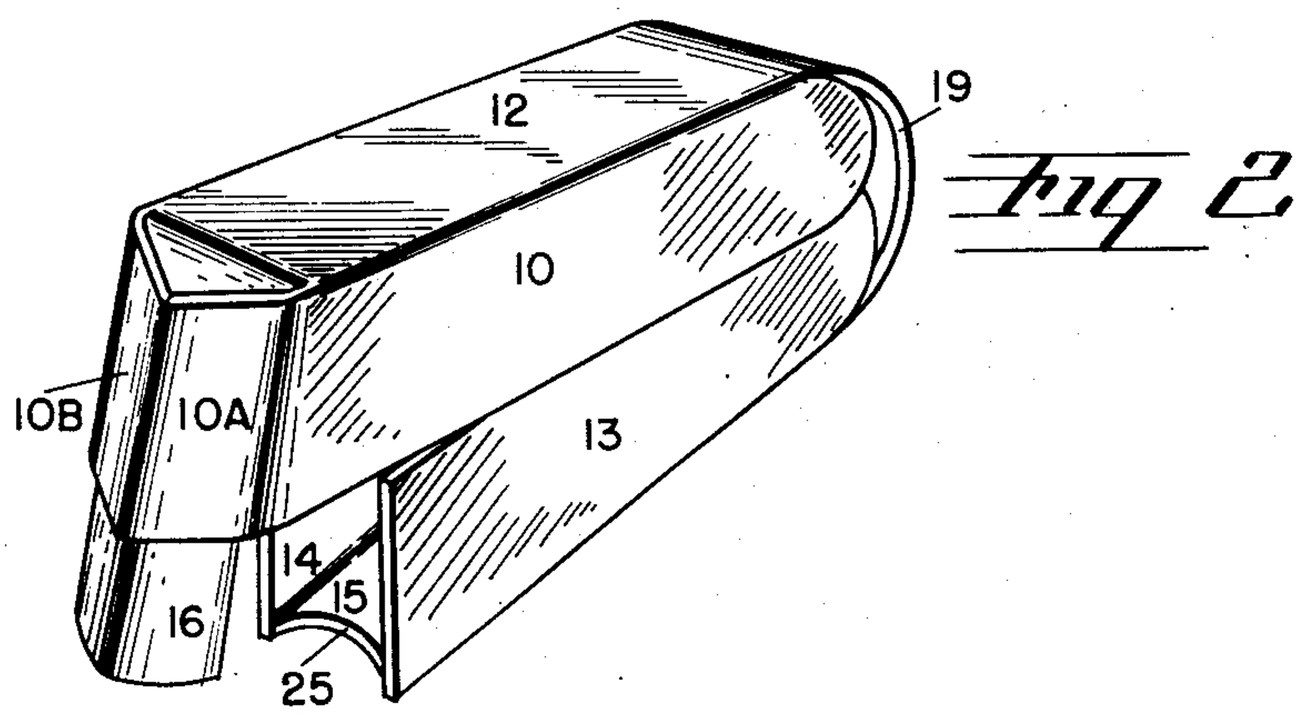


Fig 2



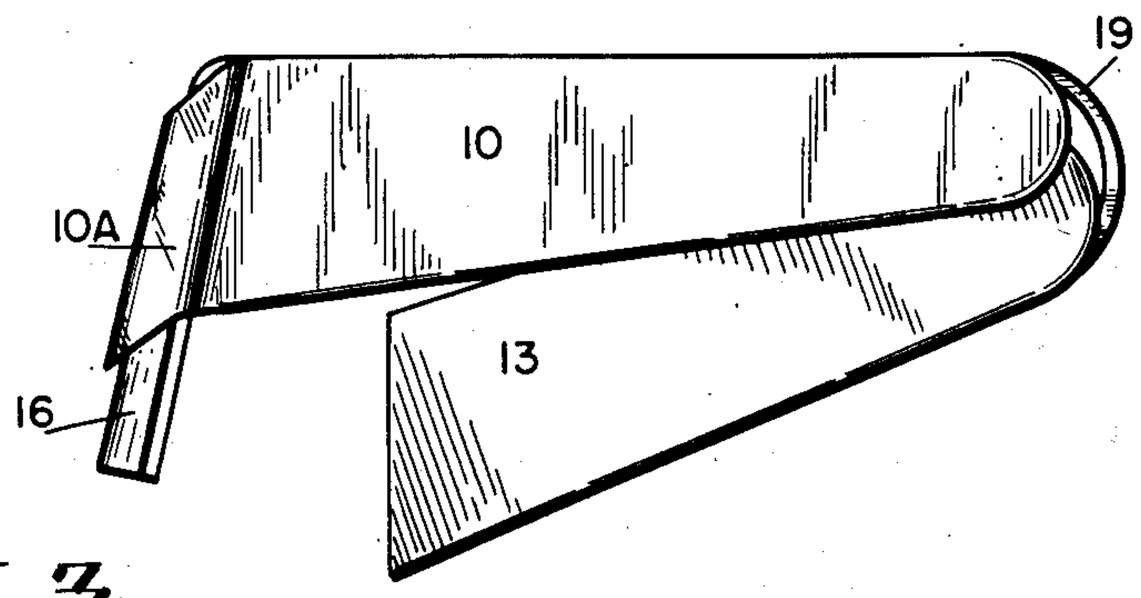


Fig 3

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AUXILIARY SLIP-ON HANDLE FOR SCREW DRIVERS AND SIMILAR TOOLS

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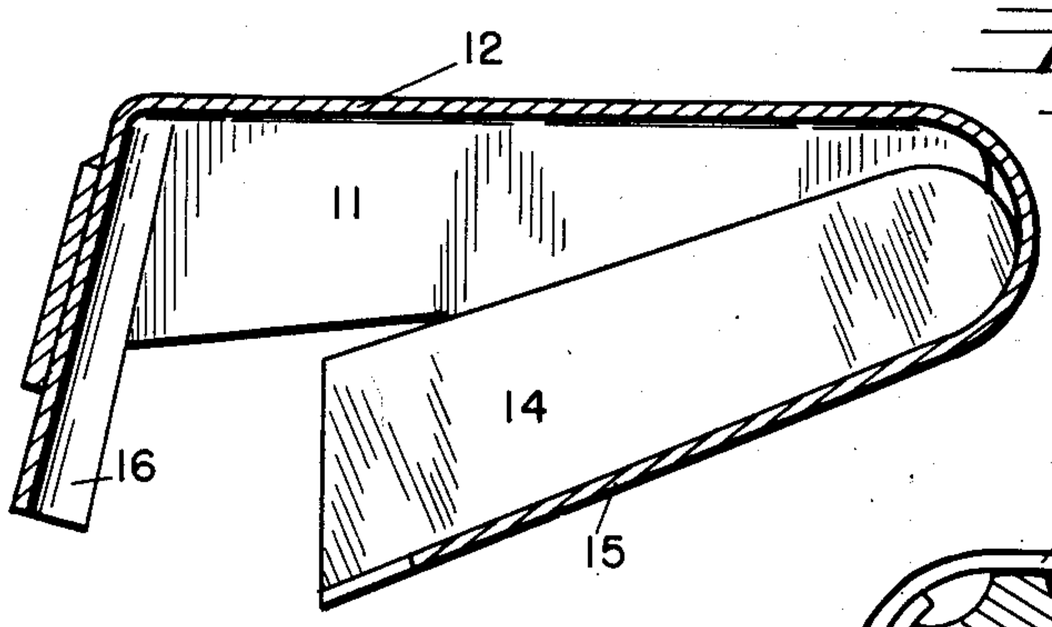
Fig 4



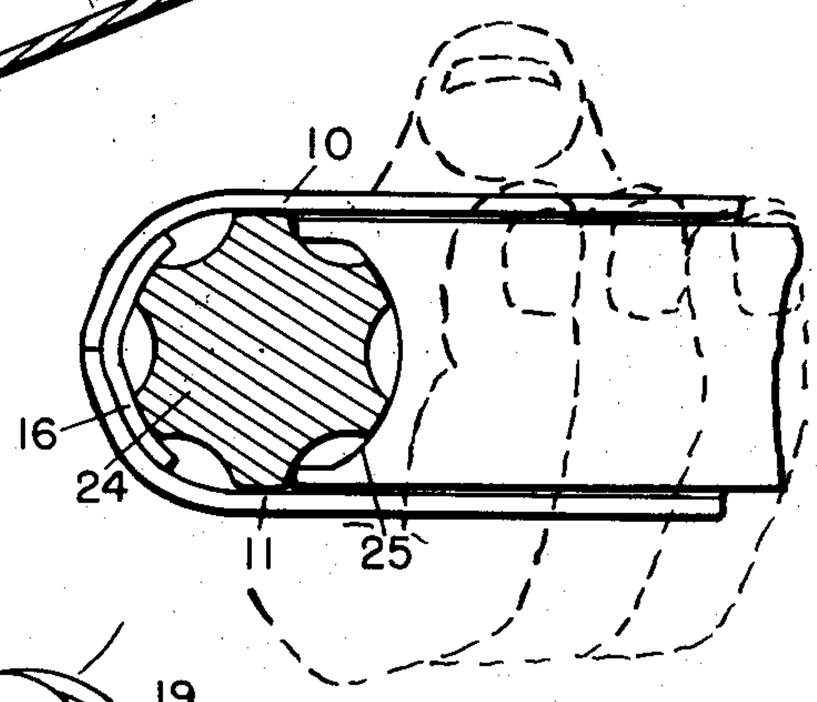


Fig 5

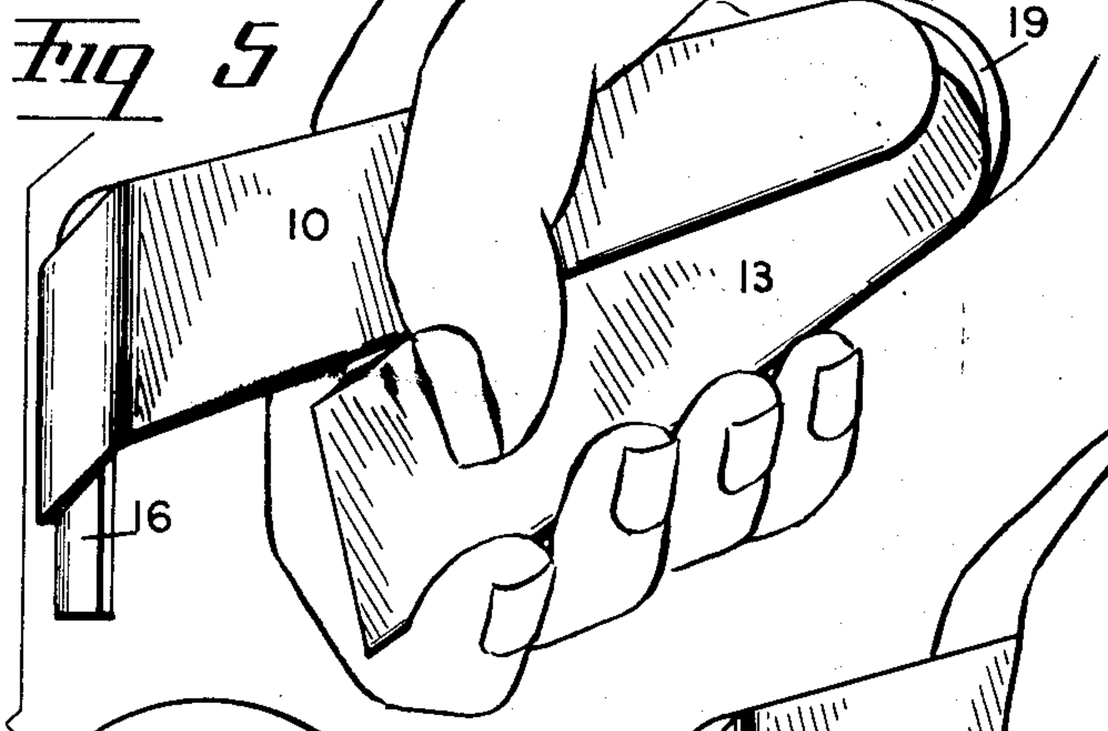
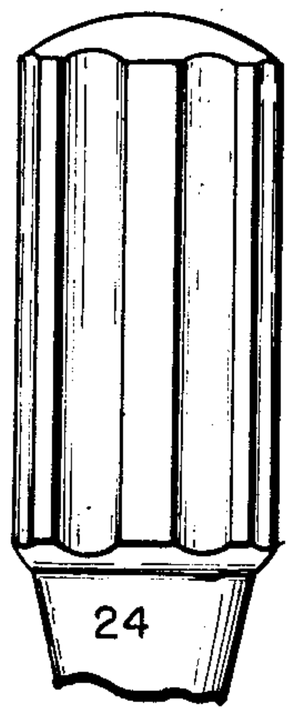


Fig 7



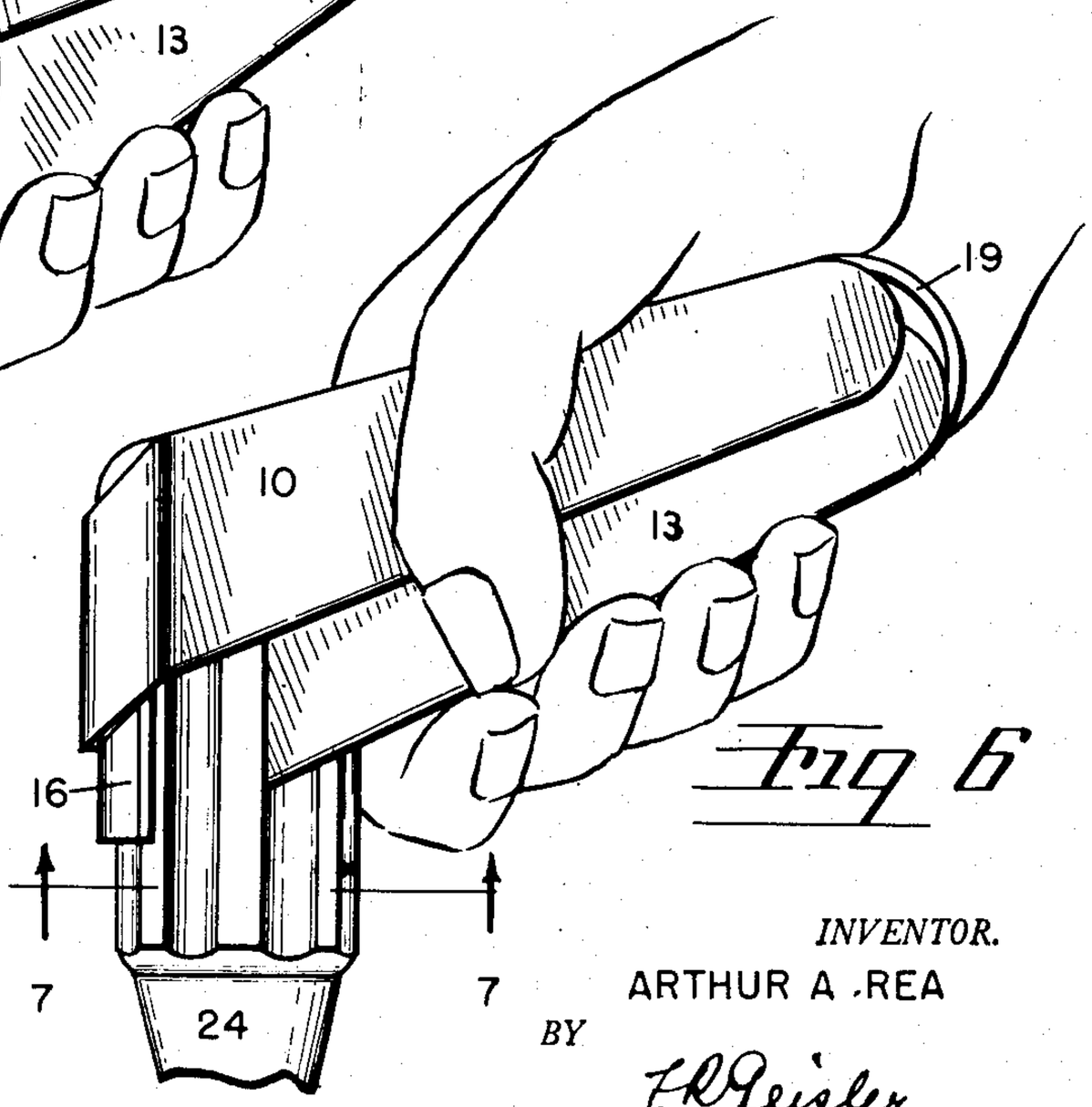


Fig 6

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AUXILIARY SLIP-ON HANDLE FOR SCREW DRIVERS AND SIMILAR TOOLS

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3 Claims. (Cl. 145—61)

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This invention relates to slip-on handles for tools, particularly screw drivers, and for any other articles which are required to be held firmly in the hand in a similar manner.

When an ordinary screw driver, for example, is employed on a screw which is hard to turn, or on a screw in a location which is awkward to reach, the customary holding of the shank handle in the palm of the hand with a continuous forcible grasp becomes a tiresome operation, and the exertion of manual turning torque becomes additionally fatiguing, not only to the muscles of the hand and wrist of the operator, but, under extreme conditions, even to the arm muscles.

Prolonged use of other tools having handles similar to the handle of an ordinary screw driver, such as chisels, gouges, files, etc., will also become fatiguing to the muscles in the hand of the operator due to the necessity of maintaining a forcible grip with the hand while the wrist is held in a rigid and turned position.

An object of the present invention is to provide an auxiliary pistol-type handle for tools and the like which may easily be slipped over the regular or permanent handle in order to afford a more comfortable manual hold on the tool.

A related object of the invention is to provide an auxiliary handle which will not only result in a more comfortable hold but which will also enable a strong torque or turning leverage to be exerted more easily and with less manual effort, and also with a one-handed operation.

A further object is to provide an auxiliary handle which can be quickly slipped on and off of a regular tool handle without the employment of any adjusting screws or bolts and in which the necessary clamping pressure of the auxiliary handle will be produced merely by an easy finger pressure in the hand of the operator occurring naturally as part of a combined simple thrust and leverage action.

Another object of the invention is to provide an auxiliary slip-on leverage handle of the type above indicated which will be very simple and inexpensive to manufacture, so that it can be readily produced and sold to the public at a very nominal cost.

These objects and incidental advantages I obtain by making my improved auxiliary slip-on handle from a stamped-out piece of sheet metal in the manner hereinafter briefly described with reference to the accompanying drawings, in which:

Fig. 1 is a plan of the stamped-out blank from which my auxiliary handle is formed;

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Fig. 2 is a perspective view of the completed handle;

Fig. 3 is a side elevation of the same;

Fig. 4 is a longitudinal sectional elevation of the same;

Fig. 5 is an elevation showing the auxiliary handle in the act of being slipped on over the permanent handle of an ordinary screw driver;

Fig. 6 is a corresponding elevation showing the auxiliary handle in clamping or holding position; and

Fig. 7 is a section on line 7—7 of Fig. 6.

Preferably my slip-on, auxiliary, leverage handle is made from a single integral blank cut or stamped out from a piece of sheet metal. A plan view of such a blank is shown in Fig. 1, the broken lines in the figure indicating the crease or fold lines on which the bending or folding takes place in the setting up of the handle. The manner in which the handle is formed from the blank of Fig. 1 will be apparent from a comparison of Fig. 1 with Figs. 2, 3 and 4.

The formed handle comprises an upper section and a lower section, each section having a pair of side walls and a center longitudinal wall or rib. The left half of the blank, as viewed in Fig. 1, forms the upper section and the right half the lower section. Thus the two portions 10 and 11, when bent along the lines 10' and 11' respectively of Fig. 1 form the side walls of the upper section with the intervening portion 12 forming the top wall or rib of the upper section. Similarly the portions 13 and 14 of the blank, when bent down along the lines 13' and 14' respectively, form the side walls of the lower section and the intervening portion 15 will then constitute the bottom wall or rib of the lower section, as shown in Fig. 2.

In completing the forming of the upper section of the handle the extended portion or tongue 16 of the blank is folded down on the line 16' and is deformed transversely so as to cause the lower portion to become curved in cross section. The free ends of the walls 10 and 11 are then bent towards each other, as shown at 10*a* and 10*b* in Fig. 2, and are welded, soldered, or otherwise firmly secured to the outer face of the tongue or front wall 16. It will be noted that in Fig. 1 a pair of narrow V-shaped notches 17 and 18 are cut out between the ends of the wall portions 10 and 11 respectively and the central tongue extension 16 to permit the ends of the wall portions to be folded over on, and secured, to the tongue 16, as shown in Fig. 2.

When the blank of Fig. 1 is folded and the

portions arranged as shown in Figs. 2 and 3, the side walls 13 and 14 of the lower section are positioned against the inside faces of the side walls of the upper section respectively. It will be noted that the portion 15 of the blank in Fig. 1 (which becomes the bottom wall or rib of the lower section), is slightly narrower than the portion 12 (which becomes the top wall of upper section) to provide for the positioning of the side walls of the lower section within the side walls of the upper section. Also when the blank is folded and the parts arranged in the manner shown in Fig. 2, the portion 19 of the blank between the two sections, becomes the hinge connecting the lower section with the upper section. This hinge portion 19 is not creased but is bent around into a broad curve as shown, and consequently becomes a spring hinge normally holding the lower and upper sections in the relative positions shown in Figs. 3 and 4 but permitting the lower section to be pushed upwardly and swung further into the upper section against the force of the spring hinge. The ends of the walls adjacent the hinge portion 19 are rounded, as shown at 20, 21, 22 and 23 in Fig. 1, to facilitate the maintenance of curvature in the spring hinge portion 19.

The manner in which my slip-on auxiliary handle may be employed with an ordinary screw driver or similar tool having a conventional type of permanent handle, is illustrated in Figs. 5, 6 and 7. In these figures the upper or hand hold portion of a conventional handle, assumed to be permanently mounted on a screw driver, is indicated at 24. My auxiliary slip-on handle is held in one of the hands of the operator substantially in the position shown in Fig. 5, the lower section of the auxiliary handle being temporarily left in the normal low position illustrated, and the auxiliary handle is slipped down over the top of the regular screw driver handle, the tongue or front wall 16 being substantially parallel to the screw driver axis and engaging one side of the regular screw driver handle. Then with the upper section resting on the top of the regular screw driver handle, the lower section is pushed upwardly towards the upper section by pressure of the operator's fingers as illustrated in Fig. 6, until the forward or free end of the lower section becomes wedged against the regular screw driver handle. The regular screw driver handle will now be firmly held between the front wall of the upper section and the front end of the lower section as illustrated in Fig. 7, and while it is so held the auxiliary handle can be used as a leverage handle in the holding and turning of the screw driver, and may also be released and rotated to a more convenient leverage position at will.

The front end 25 of the bottom wall or rib 15 of the lower section has a concave edge of approximately the same curvature as that of the regular handle 24 of the screw driver and the spacing of this edge 25 from the front wall 16 would be less than the diameter of the regular handle 24 if the lower section were raised to the furthest extent. Consequently a clamping hold will be exerted as long as the upward pressure is maintained by the operator's fingers.

Only a moderate amount of pressure is required to maintain this clamping hold, involving much less muscular effort and strain than that which would be required for holding the regular handle 24 in the customary manner when employing the screw driver.

The grip on the auxiliary handle, in addition to having the advantage of leverage in the turning of the screw driver for driving a screw, is a more comfortable grip and is less tiring to the wrist and forearm.

The auxiliary handle can be slipped on and adjusted readily when in position on the permanent handle of the tool. This is accomplished merely by relaxing the pressure of the fingers sufficiently to permit the lower section to move slightly downwardly to normal position.

While my auxiliary slip-on handle is illustrated in Figs. 5, 6 and 7 as employed with a regular tool handle which is ribbed or fluted, my auxiliary handle will also work satisfactorily if the regular tool handle is smooth surfaced, because the natural finger pressure and thrust action employed in using the tool results in a strong positive leverage grip of the regular handle in the jaws of the auxiliary leverage handle.

I claim:

1. An auxiliary handle adapted to be slipped on over the regular handle of a screw driver or similar tool, said auxiliary handle comprising a top section having top, side and front walls forming a hood-like cap adapted to be placed over the top of said regular handle, said side and top walls being elongated and so arranged as to cause said top section also to extend laterally from said top of said regular handle when said auxiliary handle is in place, and a cooperating bottom section movable up and down within said laterally extended portion of said top section, said bottom section having side walls positioned to slide on the inside faces of said side walls of said upper section respectively and a bottom wall, said top and bottom sections hinged together at their outer ends, the length of said bottom section being less than the length of said top section, and the inner end of said bottom section adapted to bear against the adjacent side of said regular handle when said hood-like cap of said top section is in position on said regular handle and said bottom section is pressed upwardly into said top section.

2. An auxiliary handle adapted to be slipped on over the regular handle of a screw driver or similar tool, said auxiliary handle comprising a top section having integral top, side and front walls forming a hood-like cap adapted to be placed over the top of said regular handle, said side and top walls being elongated and so arranged as to cause said top section also to extend laterally from said top of said regular handle when said auxiliary handle is in place, and a cooperating bottom section movable up and down within said laterally extended portion of said top section, said bottom section having side walls positioned to slide on the inside faces of said side walls of said upper section respectively and an integral bottom wall, a spring hinge connecting said top and bottom sections at their outer ends, the length of said bottom section being less than the length of said top section, and the inner ends of said side and bottom walls of said bottom section adapted to bear against the adjacent side of said regular handle when said hood-like cap of said top section is in position on said regular handle and said bottom section is pressed upwardly into said top section.

3. An auxiliary handle adapted to be slipped on over the regular handle of a screw driver or similar tool, said auxiliary handle comprising a top section having integral top, side and front walls forming a hood-like cap adapted to be

placed over the top of said regular handle, said side and top walls being elongated and so arranged as to cause said top section also to extend laterally and slightly upwardly from said top of said regular handle when said auxiliary handle is in place, and a cooperating bottom section movable up and down within said laterally extended portion of said top section, said bottom section having side walls positioned to slide on the inside faces of said side walls of said upper section respectively and an integral bottom wall, said top wall of said top section and said bottom wall of said bottom section joined at their outer ends by a curved spring-like integral portion constituting a hinge connection between said top and bottom sections, the length of said bottom section being less than the length of said top section, the inner end of said bottom wall of said bottom section having a curvature approximating an arc of the circumference of said regular

handle, and the inner ends of said side walls of said bottom section inclined at an acute angle with respect to the plane of the inner end of said bottom wall, said inner ends of said side and bottom walls of said bottom section adapted to bear against the adjacent side of said regular handle when said hood-like cap of said top section is in position on said regular handle and said bottom section is pressed upwardly into said top section.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
828,625	Ogg	Aug. 14, 1906
870,886	Johnson	Nov. 12, 1907
1,224,846	Brooks	May 1, 1917
1,411,970	Ligon	Apr. 4, 1922
2,072,463	Mims	Mar. 2, 1937