June 29, 1965 W. DZUS 3,191,649

IMPLEMENT FOR OPERATING FASTENING DEVICES

Filed Jan. 20, 1964 2 Sheets-Sheet 1

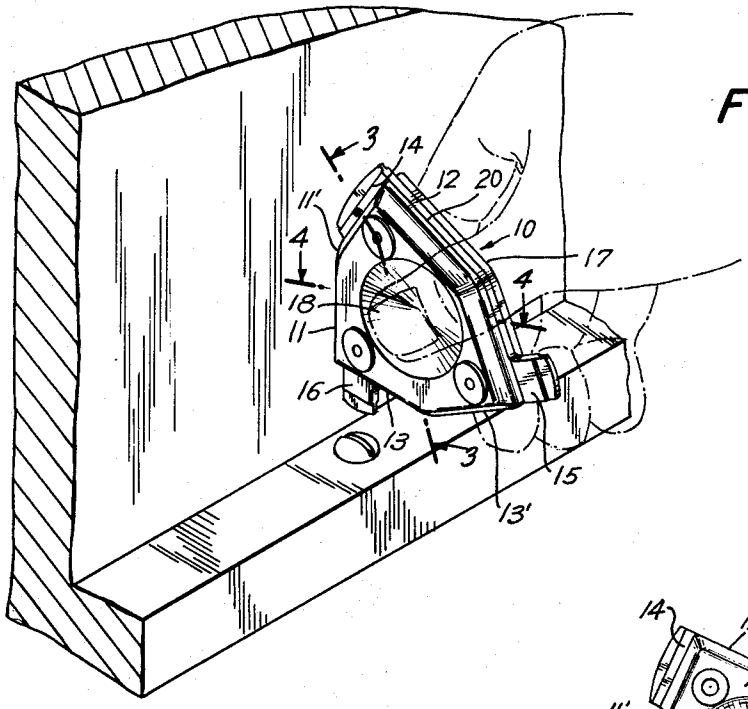


FIG. 1

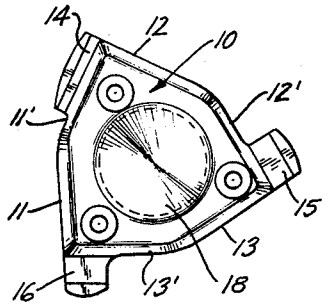


FIG. 2

FIG. 3

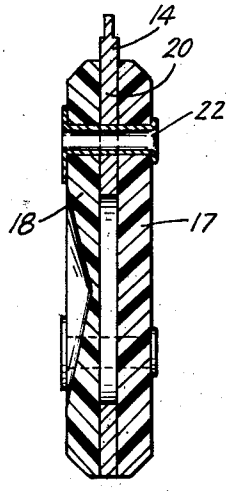
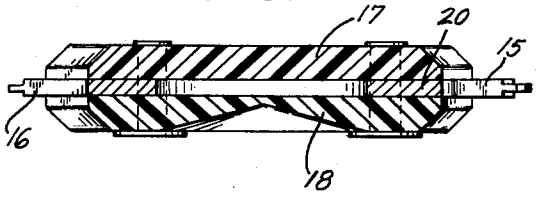


FIG. 4



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IMPLEMENT FOR OPERATING FASTENING DEVICES

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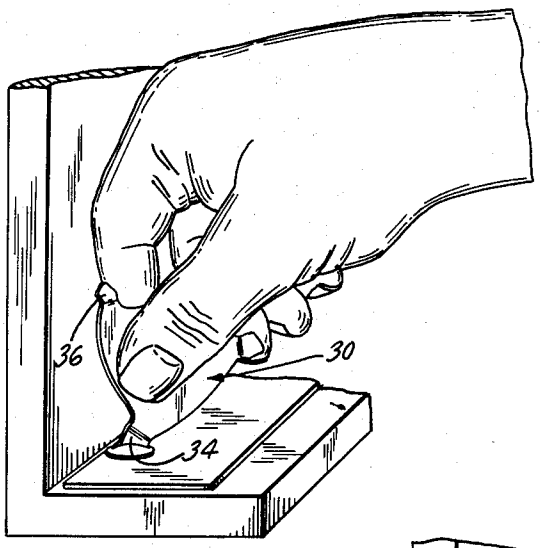


FIG. 5

FIG. 6

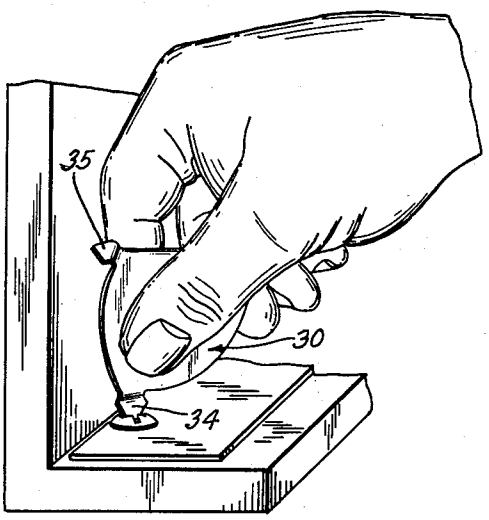


FIG. 7

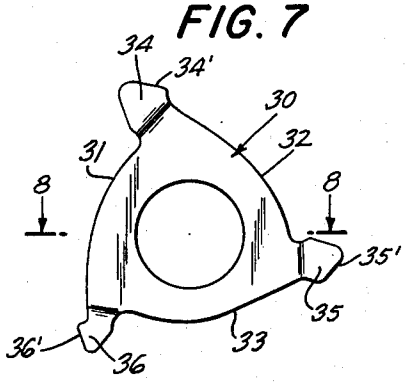
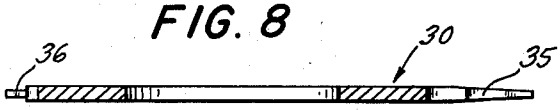


FIG. 8



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IMPLEMENT FOR OPERATING FASTENING DEVICES

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1 Claim. (Cl. 145—50)

This invention relates to an improved tool or implement for operating fastening devices and more particularly to a multiple blade screw driver.

The operation of fastening devices such as bolts, screws and quick-acting fasteners is generally accomplished by means of a tool such as a screw driver or wrench. Since fastening devices are available in various sizes this requires the use of tools of various sizes or of a more complicated, adjustable type of tool. Where a fastening device is installed in a corner or against a wall or in a confined space, difficulty is frequently encountered in using the tool due to interference from adjacent walls or surfaces.

It is an object of the present invention to overcome the difficulties and disadvantages heretofore encountered and to provide an improved tool of the above character which may be used for operating fastening devices of different sizes and which is of such a size and shape that it can be readily used in confined areas, such as corners, without interference from the adjacent walls or surfaces.

Further objects include the provision of an improved tool of the above character which is of relatively inexpensive construction and which is simple to use by anyone accustomed to using conventional fastener operating tools.

My improved fastener operating implement is of compact construction and can be readily grasped in the hand of the user and may be conveniently carried in his pocket. My invention contemplates the provision of a handle portion for holding and manipulating the implement and having a peripheral edge of generally symmetrical contour (and preferably generally three-sided) extending therearound in one plane and having three fastener engaging tools projecting therefrom in the same circumferential direction and arranged in equally spaced relationship.

In the accompanying drawings:

FIG. 1 is a perspective view showing one form of fastener operating implement being used in a confined space or corner;

FIG. 2 is a side view of the implement;

FIGS. 3 and 4 are sectional views in the direction of the arrows on the lines 3—3 and 4—4 respectively of FIG. 1;

FIG. 5 is a perspective view showing a modified form of fastener operating implement being used in a confined space to operate a fastening device having a conventional slotted head;

FIG. 6 is a similar view showing the modified type of implement being used to operate a fastening device having a cross-slotted head;

FIG. 7 is a side view of the modified form of implement; and,

FIG. 8 is a cross-sectional view of the modified implement in the direction of the arrows on the line 8—8 of FIG. 7.

In both forms of tools or implements shown in the accompanying drawings, I have provided a body portion forming a handle and having a peripheral edge of generally symmetrical contour extending therearound in one plane. Also, in both forms of devices I have provided three fastener engaging tools in the form of screw driver blades projecting from the peripheral edge of the body

portion in the same circumferential direction and arranged in substantially equally spaced relationship.

In the form of device shown in FIGS. 1–4 the body portion or handle is indicated generally at 10 and is of relatively flat, generally polygonal configuration. Thus, it has an edge portion extending therearound in one plane having three sides—11, 12 and 13—each of which is recessed, offset or cut away at one end as shown in 11', 12' and 13'. Thus, it will be seen that the configuration of the body portion is generally symmetrical and when a circle is inscribed in the body portion the projecting areas are evenly balanced therearound.

Projecting from the peripheral edge of the body portion, in equally spaced relationship, are the fastener operating tools 14, 15 and 16. It will be noted that the tools project from corresponding ends of the three sides of the peripheral edge 11, 12 and 13 and that they project in the same circumferential direction. In the present instance, the fastener operating tools are in the form of screw driver blades of three different sizes; blade 14 being the largest, blade 16 being the smallest and blade 15 being of intermediate size. The screw driver blades are of the type which engage the kerf or slot of the head of a screw, bolt or other fastening device.

The specific construction of my fastener operating implement may be varied. In the form of implement illustrated in FIGS. 1–4 the body portion or handle is formed of two outer plies 17 and 18 made of a suitable plastic material such as polystyrene, polyvinyl chloride or polyethylene. Secured between the two outer layers of plastic material is the ring or annulus 20 made of steel or other suitable material and having the screw driver blades 14, 15 and 16 projecting integrally therefrom. The assembly of outer layers of plastic material, with the steel member 20 sandwiched therebetween, is suitably secured together as by the rivets 22.

In using the fastener operating tools shown in FIGS. 1–4, the handle portion is grasped in the hand in the manner shown in FIG. 1 and the screw driver blade of appropriate size is then selected and is engaged with the kerf or slot of the fastening device which is to be operated. To facilitate the handling of the device, one of the outer plies of plastic material—as for instance the ply 18—may be provided with a central recessed area as shown in which the thumb may be engaged.

It will be seen that when the device is utilized in a confined area or corner, as shown in FIG. 1, that the selected blade may be engaged with the head of the fastening device without any interference from the surrounding walls or surfaces. This is so because no portion of the adjacent sides of the peripheral edge projects outwardly beyond the tool which is being used. It will also be noted that the tools which are not in use do not project outwardly beyond the side edges adjacent the tool which is being used. This results from the fact that the side edge of the body portion is of generally symmetrical configuration and the three tools are arranged in generally equally spaced relationship and project in the same circumferential direction.

The specific construction of the tool or implement may be varied. Thus, in the form of device shown in FIGS. 5–8 the body portion 30 consists of a unitary ring or annulus made of steel or some other suitable material. The body portion is of generally symmetrical configuration and has a peripheral edge disposed in one plane and is of generally polygonal contour having three curved or arcuate sides—31, 32 and 33. When a circle is inscribed inside the body portion of the device shown in FIGS. 5–8 the projecting areas are symmetrically balanced therearound.

This forms of device also has three tools—34, 35 and 36—projecting from the peripheral edge in the same cir-

cumferential direction and in substantially equally spaced relationship. It should be noted that the tools project outwardly from the corresponding ends of the respective sides of the peripheral edge. Thus, the tool 34 projects from the end of the side 32; the tool 35 projects from the end of the side 33 and the tool 36 projects from the end of the side 31. As in the first form of device, the tools are in the form of screwdriver blades of three different sizes with the tool 34 being the largest; the tool 36 being the smallest and the tool 35 being the intermediate. Each of the tools or blades are of flat tapered configuration with two side edges tapering to an outer apex. The side edges 34', 35' and 36' serve as screwdriver blades for engagement with the kerfs or slots of the fastener head. The apex of each blade or tool is cooperable to engage with a cross-slotted or Phillips type of screw head.

In FIG. 5 the implement is shown with one of the side edges of a blade engaging the kerf of a fastener head.

In FIG. 6 the implement is shown with one of the apices in engagement with a cross-slot of a fastener head.

For both types of operation it will be seen that the body portion of the tool may be readily grasped in the hand of the operator and that the tool may be utilized in a confined space or areas such as a corner without interference from adjacent walls or surfaces. It will be seen that this improved result is due to the symmetrical configuration of the body portion and the arrangement of the three blades or tools in equally spaced relationship and projecting in the same circumferential direction. When one of the tools is in engagement with the head of a fastening device the adjacent sides of the peripheral edge do not project beyond the tool which is being used and the two tools which are not in use do not project beyond the side edges adjacent the tool in use.

It will thus be seen that I have provided an improved

fastener operating tool or implement which is of relatively small size and can be conveniently handled and also carried in the pocket of the user. It may be used for operating fastening devices of different sizes and it may be used in confined areas such as corners without interference from adjacent walls and surfaces.

I claim:

An improved handle for use in supporting and manipulating an implement having three separate tools comprising: a relatively thin flat body portion having a peripheral edge disposed in one plane extending therearound and arranged in a symmetrical, generally three-sided arcuate configuration with sides of approximately equal length and the peripheral edge being relieved and recessed at the three areas of connection between the three sides; said flat body portion having the three tools supported at the connection areas which project from said peripheral edge at the corresponding trailing ends of said three sides, and each of the tools forming thereby a projected extension of one of said sides and extending into the relieved, recessed area whereby the tool does not project substantially beyond the adjacent side and allowing the implement to be used with one hand against a vertical surface in a confined area and corner.

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