

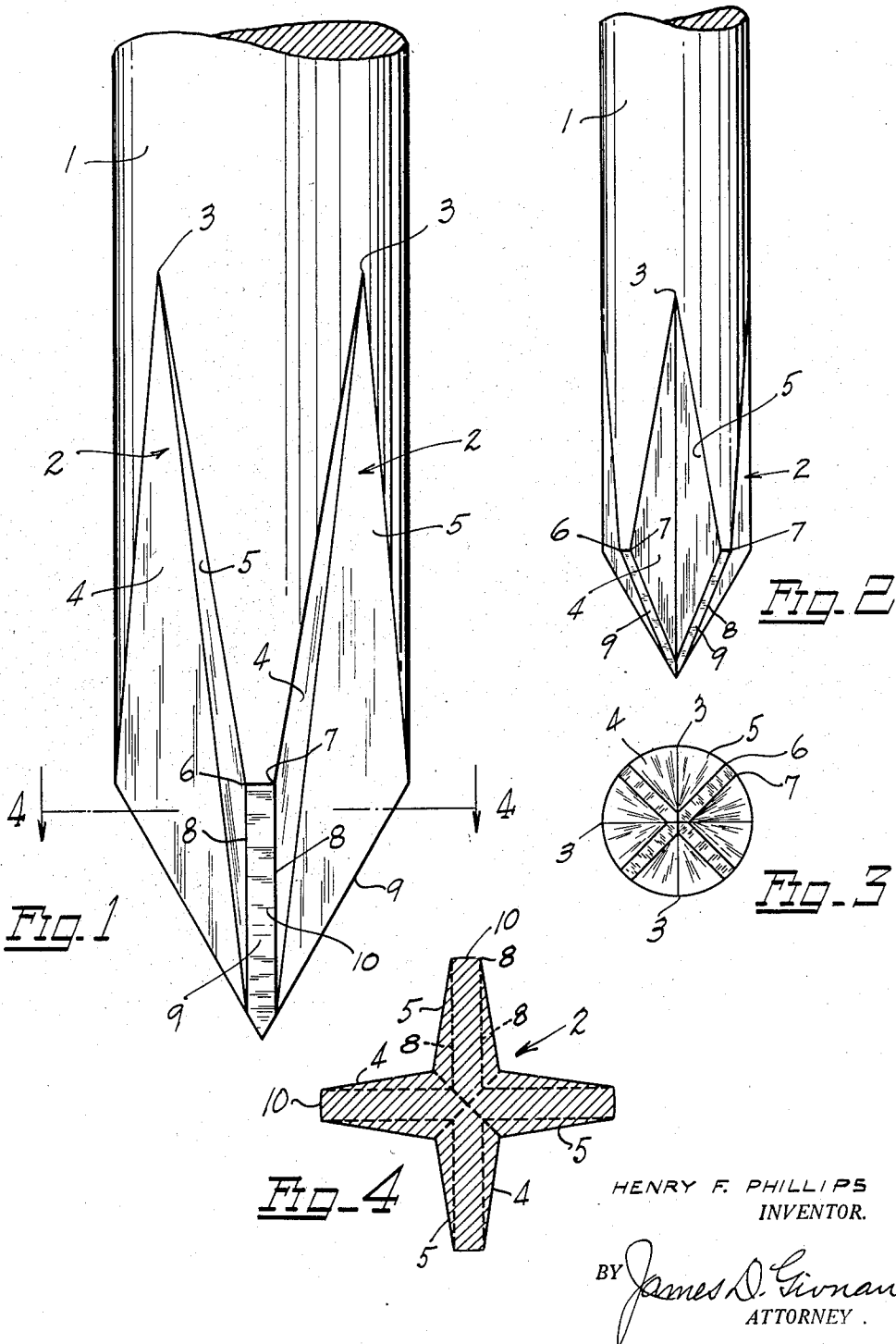
July 7, 1936.

H. F. PHILLIPS

2,046,838

SCREW DRIVER

Filed July 3, 1934



HENRY F. PHILLIPS
INVENTOR.

BY *James D. Gowan*
ATTORNEY.

UNITED STATES PATENT OFFICE

2,046,838

SCREW DRIVER

Henry F. Phillips, Portland, Oreg., assignor, by mesne assignments, to Phillips Screw Company, Wilmington, Del., a corporation of Delaware

Application July 3, 1934, Serial No. 733,622

2 Claims. (Cl. 145—50)

This invention relates to improvements in screw drivers, and more especially to a type of driver particularly adapted for operative engagement with the type of screw shown and described in my co-pending application filed concurrently herewith and entitled Screws, Serial Number 733,623.

The present invention comprises a shank formed at one of its ends with a plurality of diametrically opposed flutes, each of which is made up of flat tapering and converging side walls which originate at equidistant points on the surface of the shank spaced from the end thereof and diverge toward the end of the tool for a portion of their length. For the remaining portion of their length they merge into lands or vanes which are formed with flat tapering outer walls having parallel edges substantially throughout their entire length.

The principal object of the invention is the provision of a tool of this character particularly adapted for precise and firm engagement within a recess of corresponding shape punched or otherwise formed in a screw head. And likewise, the provision of a tool wherein the recess-engaging lands or vanes are formed with parallel edges throughout their length.

These and other objects will appear as my invention is more fully hereinafter described in the following specification, illustrated in the accompanying drawing, and finally pointed out in the appended claims.

In the drawing:

Figure 1 is an enlarged fragmentary view of the lower end of a shank formed into a bit in accordance with my invention.

Figure 2 is a slightly reduced view of the bit turned through 45 degrees from the position shown in Figure 1.

Figure 3, is a bottom end view of Figure 2.

Figure 4 is a sectional plan view of the bit, taken along the line 4—4 of Figure 1.

Referring now more particularly to the drawing:

The invention comprises a shank 1, formed at its lower end with a plurality of flutes, generally indicated at 2, which originate from points 3, located on the peripheral surface of the shank and which are spaced, as shown, from the lowermost

end of the shank. Each flute comprises two flat side walls 4 and 5, which converge throughout their length along a line extending from the points of origin 3 to the lowermost end of the shank.

The outer edges of the walls diverge from their points of origin for the major portion of their length to points 6 and 7, from whence they converge downwardly in parallel edges 8, to a point on the axis of the shank and thus form lands, or vanes 9, which are formed with flat outside walls 10 having parallel outside edges throughout their length.

This particular form of driver, as previously stated, is especially designed for operative engagement with the type of screw shown and described in my co-pending application, hereinabove referred to. The vanes 9 and the angular walls therebetween are formed along precisely the same angular lines as those of the tool-receiving grooves of the recess shown in the screw. As a matter of fact, the punch used for producing the recess in the screw is identical with the driver, herein described, in every respect.

I claim:

1. A tool comprising a shank and a bit, said bit comprising a plurality of diametrically opposed vanes, each of said vanes having a flat outside wall with parallel edges, and each of the recesses between said vanes comprising two flat side walls diverging outwardly from a line extending from a point of origin on the shank to a point on the end of the shank, said parallel edges being formed by the conjunction of said outside wall with said recess side walls.

2. A tool comprising a shank and a bit, the end of said bit comprising a plurality of radially disposed screw engaging vanes and flutes, each vane comprising an outside wall joining two side walls, the junction of said side walls with said outside wall forming parallel corner edges, the said outside walls of said vanes being inclined toward each other and toward the end of said bit, and the said side walls of adjacent vanes intersecting along lines inclined downwardly and inwardly from points of origin on the shank toward the end of said bit to form said flutes.

HENRY F. PHILLIPS.