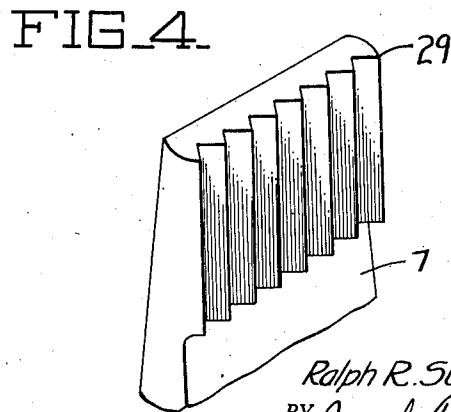


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SCREW DRIVER

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My invention relates to improvements in screw drivers, the object being to obviate the slipping of the driver in the screw head notch while the driver is in use.

Another object of my invention is to provide a screw-driver which will not be weakened by the means used for reaching the aforementioned object.

Still another object of my invention is to provide a screw driver of the character described which may be filed down, after being broken, and still retain the desired advantages.

It is a matter of common knowledge that in order to use the ordinary screw driver a very large amount of pressure must be exerted, in addition to the torsional twist, to hold the driver in engagement with the screw. No matter how great the pressure, however, the driver frequently slips from the notch in the screw head, scoring and widening the same and also marring the material into which, or out of which, the screw is being driven.

There are several devices whose object is to do away with this objectionable slipping feature but which have disadvantages, common to all, which my invention surmounts. A common tendency of screw drivers is for the corners of the bit edge to break and this will sometimes happen no matter how strongly built the driver is. Obviously, to form the driver with notches wholly or partly transverse, greatly weakens it and, as stated above, one of the objects of my invention is to retain the sharp gripping surface and still do away with the above objection.

Artisans, when using screw drivers, frequently break the corners of said drivers as above stated, but, instead of throwing the driver away, it is ground down until a new bit edge is formed. The non-slip construction of my invention allow the broken driver to be ground down, at the end, and still effectively retain its non-slipping features.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of the invention which is illustrated in the draw-

ings accompanying and forming part of the specification. It is to be understood, however, that variations in the showing made by the said drawings and description may be adopted within the scope of the invention as set forth in the claims.

Referring to the drawings,

Figure 1 is a side view of a screw driver constructed according to my invention.

Figure 2 is an enlarged perspective view of the operative end thereof.

Figure 3 is a section taken on the lines 3—3 of Fig. 1.

Figure 4 is a view, similar to Fig. 2, showing a modified form of the invention.

Figure 5 is a section taken on the lines 5—5 in Figure 2 showing the construction of the grooves.

As shown in the accompanying drawings, the screw driver 6 embodying one form of my invention, is provided with a blade 7 having on the opposite sides thereof a plurality of sharp edged ridges 8 which are defined by longitudinally extending grooves 9. The ridges extend from the bit edge 10 and may be parallel to the axis of the blade, as shown in Figure 1, or they may be substantially parallel thereto by being made parallel to the side edges 14 or 15 of the blade.

All of the ridges 8 are arranged to form biting and gripping members which cut into, and therefore hold, the sides of the notches on the head screw, but, because of the torsional twist given to a screw driver by the user, there are certain of these which bear a greater strain than others. These are the corner members 17, 18, 19, and 20, formed at the junction of the edges 14 and 15 and the bit edge 10. It will be seen, however, as in Figure 2, that since the grooves extend longitudinally of the blade, the side portions 22 and 23 of the latter are relatively broad and of the full thickness of the blade and thus serve to greatly reinforce these corner members. It will thus be evident that the screw driver of my invention has practically the same strength as an ungrooved screw driver.

The longitudinal grooves may be positioned in any manner desirable but I prefer to place the grooves on each side of the blade

in staggered relation to each other as shown in Figure 3. With this construction each groove will be opposite a ridge and the blade of the driver is in no wise weakened by the grooving thereof as the thickness of the metal as at 24 will be fully equal to the thickness of the bit edge of an ordinary screw driver.

In the event the blade of the driver becomes broken and then ground down for further use, it is desirable that the depth of the grooves still be substantially the same as when the driver was first put in use in order that it have the maximum of efficiency. For this reason, as the grooves extend into the blade they increase gradually in depth, as clearly shown in Figure 5.

Figure 4 shows a modified form of the device of my invention. In this embodiment the gripping ridges 29 are preferably placed on one side only of the blade, and are in the form of lateral offsets.

I claim:

1. A screw driver comprising a blade having a flat side arranged to engage in a screw head notch and a plurality of sharp edged ridges formed thereon between the edges of the blade and extending substantially parallel to the longitudinal axis of said screw driver from the plane of the bit edge of the blade.

2. A screw driver comprising a blade, alternate grooves and sharp edged ridges on the sides of said blade substantially parallel to the longitudinal axis of said driver, said grooves and ridges extending from the bit edge of the blade and gradually increasing in depth.

3. A screw driver comprising a blade with flat sides, a plurality of ridges formed on each of said sides and extending substantially parallel to the longitudinal axis of the blade, the ridges on one side of the blade being in staggered relation to the ridges on the other side thereof, said ridges being substantially V shaped in cross section.

4. A flat screw driver bit having sides to engage a kerf grooved to form biting edges which run towards the screw engaging end of the bit.

In testimony whereof, I have hereunto set my hand at Oakland, California, this 4th day of December, 1928.

RALPH R. SULLIVAN.

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