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SCREW DRIVER DESIGNED TO BE KEYED ON A SCREW

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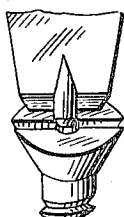
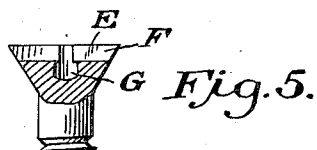
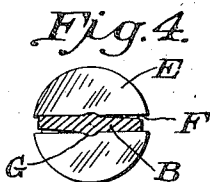
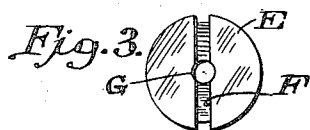
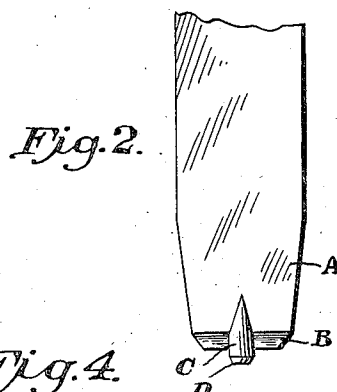
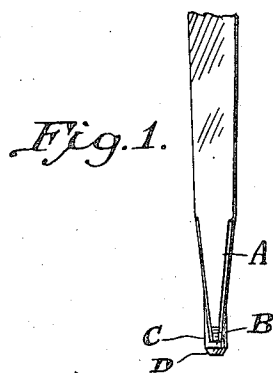


Fig. 6.

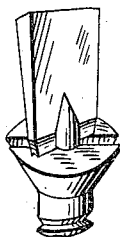


Fig. 7.

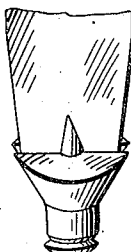


Fig. 8.

Witnesses:

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SCREW DRIVER DESIGNED TO BE KEYED ON A SCREW

Application filed February 4, 1929. Serial No. 337,995.

This invention relates to a screw driver designed to be keyed on a screw, which enables instant and permanent contact between the driver and the screw without binding and throughout the drive, and holds the screw in alignment with the driver. Because of these features it is peculiarly adaptable for factory work in driving screws by power.

The difficulties heretofore encountered with keyed on screw drivers were, that of inserting the key in the reciprocal key hole of the screw head, nearly as difficult to accomplish as centering the ordinary bit in the cross slot of a screw, a tapered key which would bind in the key hole, the expensive special screw, and a short bearing of the key and key hole, functioning merely as a key or requiring a deeper bore in the screw than was practical. In order that the blade of the screw driver may have sufficient strength to prevent bending, buckling or breaking under strain in driving the screw, it should have sufficient thickness of metal immediately above the working edge of the driver blade. To accomplish this requirement the blade of my design is tapered downward toward that portion of the blade entering the kerf of the screw.

The keyed-on screw driver of my device is designed to obviate these difficulties.

Having described the purpose of my invention, the nature of which will be fully understood from its description I give below when considered in connection with the drawing in which similar parts are designated by the same letter in the various figures.

Figure 1 is a side view of the blade of the screw driver. Figure 2 is a front view of the same driver. Figure 3 is a top view of the reciprocal screw. Figure 4 shows the manner in which the driver occupies the cross slot and key hole of a screw. Figure 5 shows a cross section of the head of a screw exposing the form and depth of the key hole. Figures 6, 7 and 8 are intended to show the operation of the screw driver in relation to its various features, in contact with the reciprocal screw. Figure 6, the insertion of the tapered point of the key. Figure 7, centered on the screw by means of the key before the

bit has entered the cross slot, and Figure 8 showing the complete contact.

In Figures 1 and 2 A is the blade of the screw driver, B is the bit, C is the key, and D is the tapered extremity of the key. Figure 1 also indicates that the blade of the driver is tapered longitudinally to its working edge or that portion which enters the kerf of the screw, to add strength to the blade and to enable its working edge to be visible.

In Figures 3 and 5 E is the top surface of a screw head, F the cross slot, G the reciprocal key hole.

In Figure 4 B is the bit of the driver, designed to taper laterally from the key to the outer edge of the blade and bit, at least on the sides opposite the bearing sides of the bit. This feature enables easy access of the bit in the cross slot while the tool is revolved.

It will be observed that the tapered point of the key enables it to find and be easily inserted in the key hole of the screw head. The taper does not extend to the bit because the cylindrical shape of the key extending below the bit centers the bit and as the driver turns, the bit slips automatically into the cross slot of the screw. The cylindrical key centered on the bit and extending longitudinally above and below the extremity of the bit, and fitting snugly into the key hole of the screw affords a long bearing which holds the screw in alignment with the driver. This cylindrical form of the key and the short taper at its extremity enables a straight bore in the screw head which can be formed with an ordinary straight drill at slight additional expense. The straight hole is preferable in preventing the key binding in the key hole.

The cylindrical key extending both above and below the extremity of the bit gives it a greater length of bearing which otherwise could only be obtained by an undesirable depth of bore in the screw head.

I claim:—

1. A screw driver, the broad sides of its blade tapered longitudinally downward toward its working edge, comprising in combination a cylindrical key centered on the working edge of said blade and extending longitudinally with the blade above and

below the said working edge, the portion of the blade fitting into the key of a screw being slightly tapered laterally from its center to its lateral edges.

- 5 2. A screw driver, the broad sides of its blade tapered longitudinally downward toward its working edge, comprising in combination a cylindrical key centered on the working edge of said blade and extending
10 longitudinally with the blade above and below the said working edge, the key being tapered toward its extremity from a point well below the said working edge, and the portion of the blade fitting into the key of
15 a screw being slightly tapered laterally from its center to its lateral edges.

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