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SCREW DRIVER WITH SCREW HOLDING JAWS

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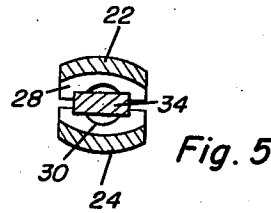
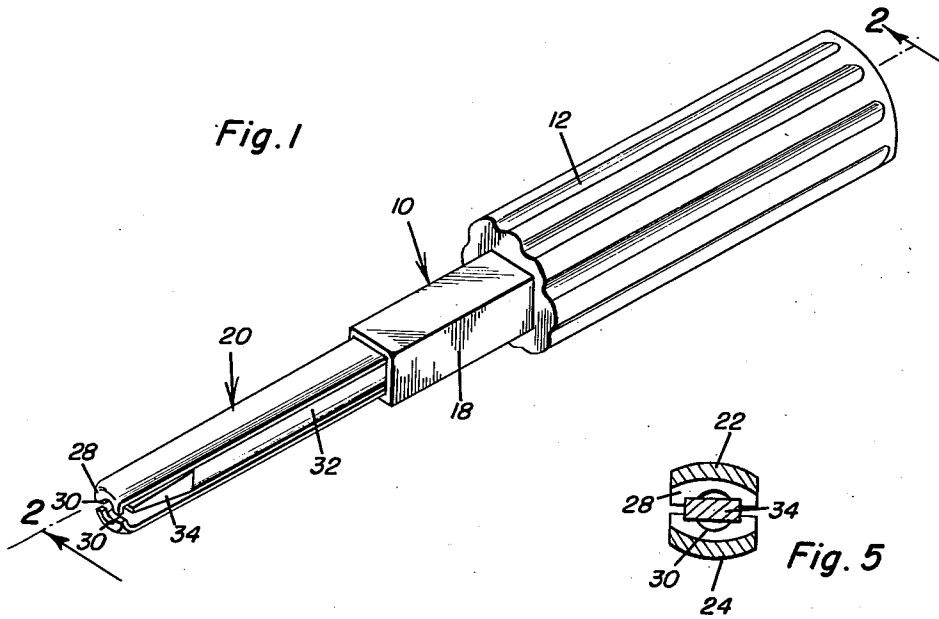


Fig. 2

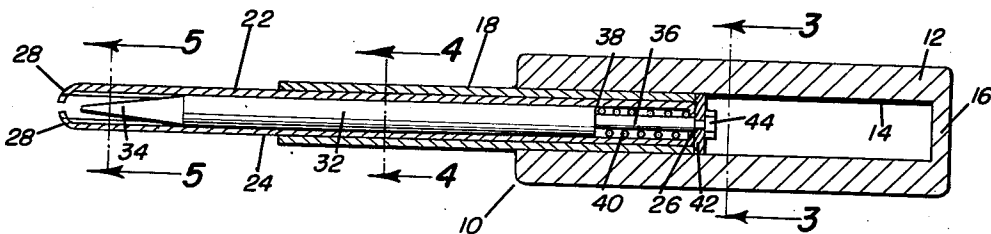
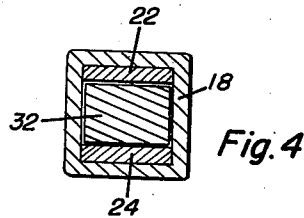
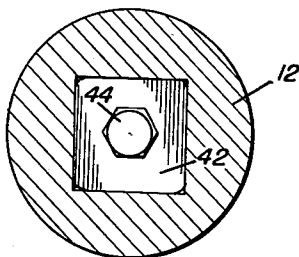


Fig. 3



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## SCREW DRIVER WITH SCREW HOLDING JAWS

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2 Claims. (Cl. 145—52)

This invention relates to a screw starter, and more specifically provides a device having a screwdriver shank and a screw gripping means wherein a screw may be easily inserted into some material, thereby avoiding the usual troublesome starting procedure.

An object of this invention is to provide a screw starter having means for securely gripping a screw and retaining a screwdriver bit in the slot of the screw wherein the screw may be easily started into its desired position.

Another object of this invention is to provide a screw starter having a pair of spring arms for gripping the screw and means for gripping the screw tighter when more pressure is applied to the screw.

A further important object of this invention is to provide spring means for holding a screw and to further provide spring means for retaining the screwdriver bit in the slot of the screw.

A still further object of this invention is to provide a screw starter which is simple in construction, easy and efficient in operation, and inexpensive to manufacture.

These, together with other objects and advantages which will become subsequently apparent, reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the screw starter of this invention;

Figure 2 is a longitudinal, vertical section taken substantially along section line 2—2 of Figure 1 showing details of the construction of the screw starter;

Figure 3 is a transverse, vertical section taken substantially along section line 3—3 of Figure 2;

Figure 4 is a transverse, vertical section taken substantially along section line 4—4 of Figure 2; and

Figure 5 is a transverse, vertical section taken substantially along section line 5—5 of Figure 2 showing details of the spring fingers and screwdriver bit.

Referring now specifically to the drawings, it will be seen that numeral 10 generally designates the screw starter of this invention including a suitable elongated handle 12 having a longitudinal polygonal socket or bore 14 therein and a closed end portion 16. A polygonal sleeve 18 is inserted in the bore 14 and rigidly secured to the handle 12 with the inner end of the sleeve 18 being longitudinally spaced from the closed end portion 16. A U-shaped holder or member, generally indicated by the numeral 20 including a pair of free resilient leg portions 22 and 24 connected by a bight portion 26, is slidably received in the interior of the polygonal sleeve 18. The free leg portions 22 and 24 are inwardly curved at their outer ends, as generally indicated by the numeral 28 and the end curved portions 28 constitute jaws which are provided with a semi-circular groove 30 which is complementary to the semi-circular groove 30 on the other free leg 24. It will be understood that the semi-

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circular grooves 30 form a circle for retaining a screw. A screwdriver shank 32 having a polygonal cross-section is slidably received in the sleeve 18 and between the free leg portions 22 and 24 of the U-shaped member 20.

The screwdriver shank 32 is provided with a screwdriver bit 34 at its outer end which is of a conventional nature. The inner end of the screwdriver shank 32 is provided with a circular reduced portion 36 forming a shoulder 38 in spaced relation to the inner end of the screwdriver shank 32. The bight portion 26 of the U-shaped member 20 is provided with a suitable aperture for slidably receiving the reduced portion 36 of the shank 32. A compression coil spring 40 is positioned around the reduced portion 36 and abuts the interior of the bight portion 26 and the shoulder 38 wherein the screwdriver shank 32 is retained and urged towards the exterior of the sleeve 18. The portion of the reduced member 36 which projects through the bight portion 26 is provided with a polygonal flange 42 held thereon by a suitable nut 44 and it will be seen that the flange 42 extends about the inner periphery of the longitudinal bore 14 and is slidable therein. The flange 42 is larger than the sleeve 18, thereby providing a limit for the outward movement of the screwdriver shank and U-shaped member with relation to the sleeve 18.

In use, the shank 32 is retracted against the tension of the coil spring 40 as may be necessary to facilitate the insertion of the headed end portion of a kerfed screw between the jaws 28. With the screw thus inserted, the bit 34 of the shank 32 is yieldingly engaged in the kerf of said screw by the spring 40. Then, holding the screw and the holder 20 in one hand and gripping the handle 12 in the other hand, the sleeve 18 is moved forwardly on the resilient legs 22 and 24 of said holder for firmly clamping the jaws 28 on the screw. Continued forward movement of the handle 12 engages the closed end 16 thereof with the elements 36 and 44 for positively retaining the shank 32 in engagement with the screw. The screw may now be readily started in the work.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. A screw-driver comprising: a substantially U-shaped resilient holder having leg portions connected by a bight portion, said leg portions including jaws on their free ends for receiving and gripping a kerfed screw therebetween, a polygonal sleeve slidable longitudinally on the holder for closing the jaws on the screw, an elongated handle fixed on the sleeve and projecting longitudinally beyond one end thereof, said handle having a polygonal socket therein accommodating said sleeve, a polygonal shank slidable longitudinally in the holder and including a bit on one end engageable in the screw kerf, and a spring in the holder engaging the bight portion and engaged with the shank for yieldingly engaging same with the screw, the other end portion of said shank extending slidably through the bight portion, said shank and said holder slidably received in said socket to permit the sleeve to move along the holder and close the jaws for positively retaining said shank in engagement with the screw.

2. A screw driver of the character described comprising: a substantially U-shaped holder including resilient legs connected by a bight portion, said legs having co-

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acting jaws on their free ends for receiving and gripping a kerfed screw therebetween, a polygonal sleeve slidable longitudinally on said legs for closing said jaws on the screw, an elongated handle fixed longitudinally on the sleeve and projecting beyond one end thereof, said handle having a polygonal socket extending longitudinally thereinto from one end thereof accommodating the sleeve and extending beyond said one end of said sleeve, a polygonal shank mounted for longitudinal sliding movement in the holder and including a bit on one end engageable in the screw kerf, said shank further including a reduced inner end portion providing a shoulder, a coil spring on said reduced end portion engaged with the bight portion of the holder and with the shoulder for yieldingly engaging the shank with the screw, said shank extending slidably through said bight portion of said holder, said holder slidably received in the socket to permit the sleeve to move along the holder and close the jaws for positively retaining the shank in engage-

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ment with the screw when the sleeve is in operative position on the holder, and a stop on said reduced end portion operable in the socket and engageable with the inner end of the sleeve for limiting the movement of the shank under the influence of the coil spring and for holding the shank and therefore the holder in said sleeve.

## References Cited in the file of this patent

## UNITED STATES PATENTS

686,078	Johnson	Nov. 5, 1901
1,628,144	Herrmann	May 10, 1927
1,912,317	Stewart	May 30, 1933
2,185,910	Cox	Jan. 2, 1940
2,302,691	Green	Nov. 24, 1942
2,524,095	Williams	Oct. 3, 1950

## FOREIGN PATENTS

29,395	Great Britain	Dec. 17, 1910
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