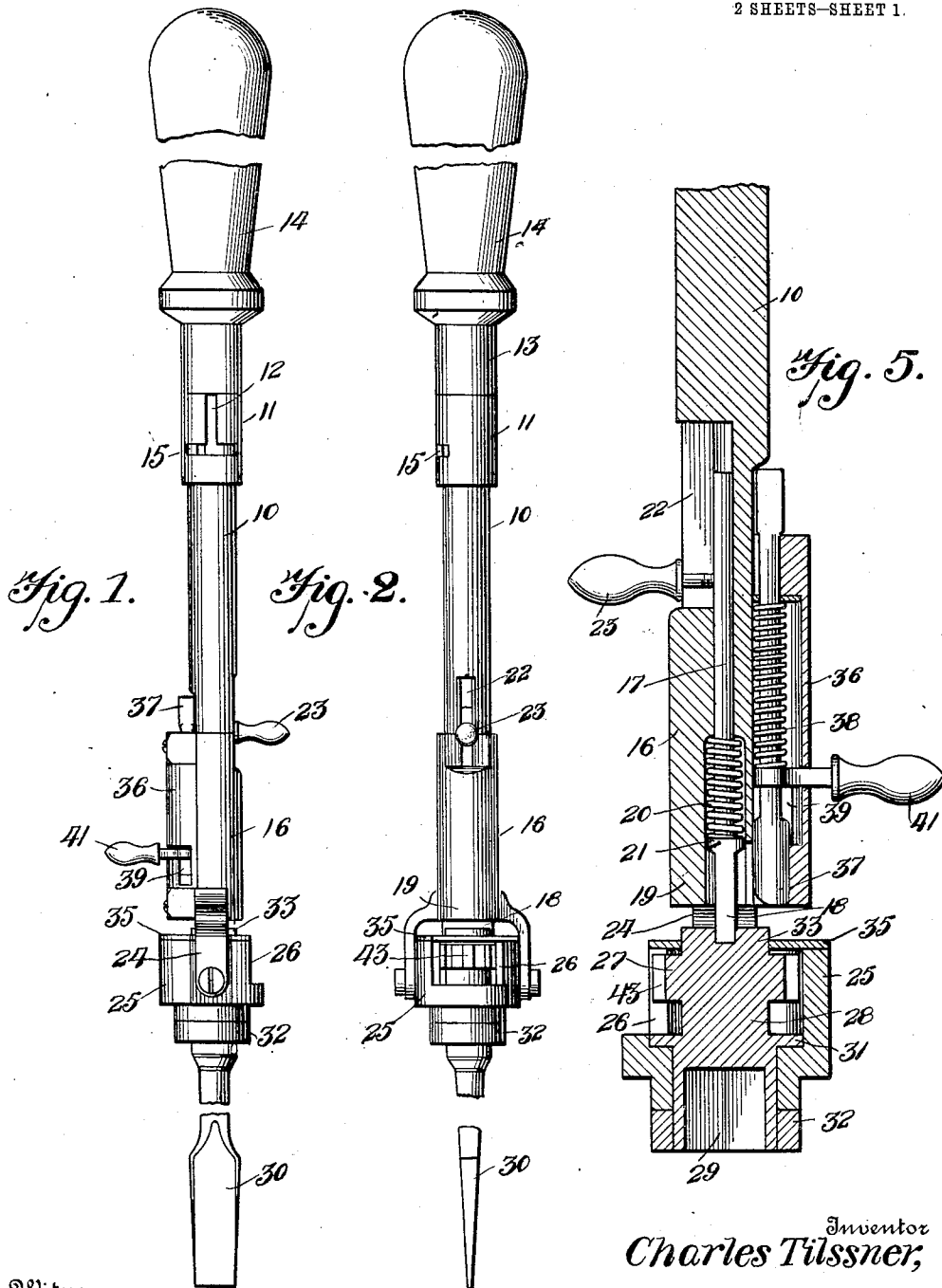


C. TILSSNER.
TOOL HOLDER.
APPLICATION FILED NOV. 22, 1911.

1,042,842.

Patented Oct. 29, 1912.

2 SHEETS-SHEET 1.



Witnesses
Carroll Bailey.
G. H. Foster.

Inventor
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By Victor J. Evans
Attorney

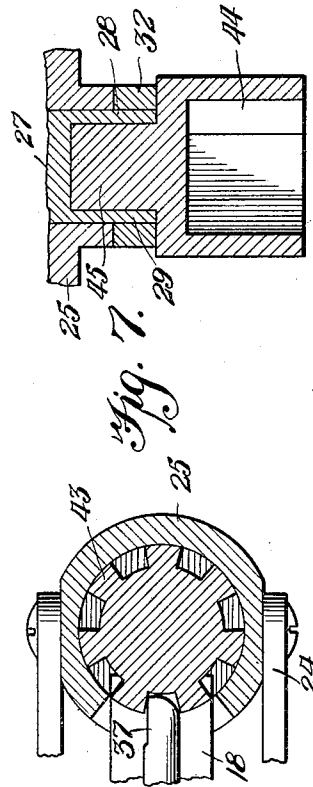
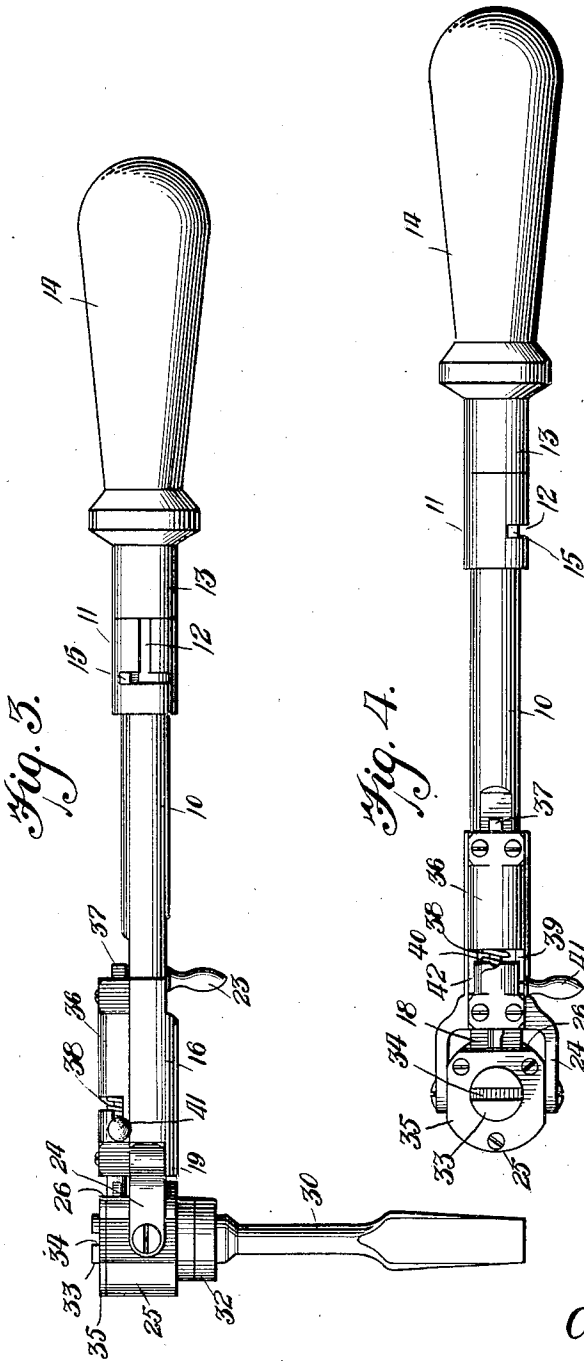
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UNITED STATES PATENT OFFICE.

CHARLES TILSSNER, OF OGLESBY, ILLINOIS.

TOOL-HOLDER.

1,042,842.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed November 22, 1911. Serial No. 661,752.

To all whom it may concern:

Be it known that I, CHARLES TILSSNER, a citizen of the United States, residing at Oglesby, in the county of Lasalle and State of Illinois, have invented new and useful Improvements in Tool-Holders, of which the following is a specification.

An object of the invention is to provide a tool holder for use in connection with tools, such as screw drivers and wrench sockets.

My invention embodies among other features a device in which a screw driver can be adjusted at various angles and in which the screw driver can be subjected to a ratcheting movement for the purpose of facilitating the use of the same in places where it is almost impossible to operate with the usual screw driver, consisting of a screw driver body and a handle rigidly formed therewith.

For the purpose mentioned, use is made of a shank provided with a handle at one end and having a head mounted to swing and to turn at the other end thereof, the said head being adapted to receive a tool and movable relatively to the said shank so that the tool can be swung into positions angular to the shank, and capable of turning with the shank when positioned in longitudinal alinement with the shank.

Reference is to be had to the accompanying drawings constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a side elevation of my device showing the head in longitudinal alinement with the shank, a screw driver being mounted in the head. Fig. 2 is a rear elevation. Fig. 3 is a side elevation of my device, showing a screw driver mounted in the head and the head arranged at an angle to the shank. Fig. 4 is a plan view of my device, as shown in Fig. 3. Fig. 5 is a fragmentary enlarged longitudinal sectional view taken on the line 5—5 in Fig. 2. Fig. 6 is a horizontal sectional view taken on the line 6—6 in Fig. 3. Fig. 7 is a fragmentary sectional view of the head, showing a wrench socket removably mounted therein.

Referring more particularly to the drawings, I provide a shank 10, terminating at one end in an enlarged tubular casing 11, provided with an inverted T-shaped slot 12 and adapted to receive a shank 13 of a

handle 14, the said shank 13 being provided with a pin 15 adapted to project outwardly through the T-shaped slot 12 to retain the handle 14 in engagement with the shank 10. The other end of the shank 10 terminates in a tubular casing 16 in which is mounted to slide a locking rod 17 having a reduced end 18, adapted to project outwardly from an end 19 of the shank 10, a spring 20 being mounted within the casing 16 and abutting against an enlarged portion 21, formed on the rod 17 to normally retain the end of the reduced portion 18 of the rod in a position slightly beyond the end 19 of the shank 10, a slot 22 being provided in the shank and having a handle 23 extended therethrough the said handle being rigidly secured to the locking rod 17 and the enlarged portion 21 of the locking rod being adapted to limit the sliding movement of the locking rod within the casing 16.

Formed on the end 19 of the shank 10 and extending beyond the end are spaced hangers 24 having mounted to swing thereon, a casing 25, provided with a cut away portion 26. Mounted to turn within the casing 25 is a head 27, the said head being provided with a shank 28, provided with a square opening 29, adapted to receive the head of a screw driver 30, a flange 31 being formed on the head 27 and a collar 32 being secured to the shank 28, the said flange 31 and said collar 32 being rotatable with the head 27 and positioned to prevent the head from being withdrawn from the casing. The head 27 is provided with an integral boss 33 having a slot 34 therein, adapted to receive the reduced portion 18 of the locking rod 17 when the head 27 is in longitudinal alinement with the shank 10, a cover 35 being secured to the casing 25 and provided with an opening through which the boss 33 projects, the mentioned head 27 being rigid with the shank 10 when the boss 33 is engaged by the reduced portion 18 of the locking rod 17.

An auxiliary casing 36 is mounted on the shank 10, at the end 19 of the shank and slidably mounted within the casing 36 is a pawl 37, engaged by a spring 38, mounted within the casing 36, a slot 39 being formed in the auxiliary casing 36 to form a stop flange 40 formed on the auxiliary casing 36, a handle 41 being extended through the slot 39 and secured to the pawl 37, the said

handle being adapted to abut against the stop flange 40 to limit the outward movement of the pawl 37 as will be hereinafter more fully disclosed.

5 From the foregoing description it will be seen that when the screw driver 30 is mounted in the opening 29 of the head 27, the screw driver will be rigid relatively to the head, and the head 27 being held in rigid
10 position by the reduced portion 18 of the locking rod 17, engaging the boss 33, any movement of the head 27 relatively to the shank 10 will be prevented and my device can then be used in the same manner as an
15 ordinary screw driver is used and in which when the handle is turned, the screw driver will likewise turn. Now by pressing the handle 23 toward the handle 14, mounted at one end of the shank 10, the locking rod 17
20 will be moved out of engagement with the boss 33 and by pressing downwardly on the head 27, the mentioned head can be swung at right angles to the shank 10, the reduced portion 18 of the locking rod 17, actuated by
25 the spring 20, being then received in the cut away portion 26 of the casing 25, the mentioned reduced portion 18 being adapted to abut against the shank of the head 27, thus locking the head in a position shown in Fig.
30 3. The slot 39, formed on the auxiliary casing 36, is of a U-shape, the stop flange 40 being arranged to form the mentioned U-shaped slot, a notch 42 being formed on the stop flange 40 and adapted to receive a portion of
35 the handle 41, the handle when in this position denoting that the pawl 37 is in neutral position, that is, the outer end of the pawl will then lie within the casing 36. Now if the handle 41 is turned toward either side,
40 in the U-shaped slot 39, the action of the spring 38 will force the pawl 37 outwardly, and the outer end of the pawl will engage teeth 43, formed on the periphery of the head 27, the mentioned pawl 37 and teeth 43
45 constituting a pawl and ratchet mechanism. Thus, when the handle 41 is turned toward one side of the stop flange 40, the pawl 37 will engage the teeth 43 so that the screw driver 30 can be rotated in one direction and
50 when the handle 41 is turned to the opposite side of the stop flange 40, the pawl 37, engaging the teeth 43, will permit the screw driver 30 to be rotated in the opposite direction. When it is desired to return the head
55 27 to a position in longitudinal alinement with the shank 10, the handle 41 is first moved to neutral position, relatively to the stop flange 40 and the handle 23 is then moved toward the handle 14, thus disengaging the locking rod 17 with the head 27
60 so that the head can be swung into longitudinal alinement with the shank 10, after which the handle 23 is released and the action of the spring 20 will move the reduced portion 18 of the locking rod 17 into

the slot 34 in the boss 33, forming a part of the head 27.

If it is desired at any time to employ a larger screw driver or use my device as a wrench, a wrench socket 44, shown in Fig. 70
7, can be connected with the head 27 by inserting a head 45 of the socket in the opening 29, the head 45 being square to fit into the squared opening 29, thus preventing
75 any turning of the socket relatively to the head 27, the mentioned socket 44 being provided with a square opening 46 adapted to receive the larger head of a correspondingly larger screw driver or the socket can be
80 employed as a wrench as will be readily understood. With an attachment of the kind mentioned, screw drivers of various sizes can be employed in connection with
85 my device and drills or wrench sockets can be connected with the head 27 and used in the same manner that the screw driver 30 is used, when attached to my device as has been described heretofore. Thus, it will
90 be seen that with a device of the class described the process of inserting a screw in any material or removing a screw from material will not be found difficult, regardless of the angle or particular position that the
95 screw may be in, the head 27 of my device being movable to angles relatively to the longitudinal axis of the shank 10 or movable to remain rigid with the shank so that my device can be employed in places where an ordinary screw driver or wrench is of no
100 avail, owing to the particular location of the member which it is desired to operate upon. By removing the screw driver 30 from the head 27 and removing the handle 14 from the shank 10, my device can be conveniently carried in the pocket and the mentioned foldable features, together with the
105 uses of my device, present a structure, useful at all times to the professional mechanic and particularly adaptable for use in households, where persons not fully acquainted with the use of mechanical tools, can readily and quickly use my device for the purposes mentioned heretofore.

I claim:—

1. In a tool holder including a shank, a head mounted to swing on the shank, a ratchet on the head and revoluble thereon in a plane at right angles to the pivotal connection of the head with the said shank, means for retaining the said head in longitudinal alinement with the shank, a casing on the shank, and a reversible dog movable in the said casing and projecting exteriorly therefrom to engage the said ratchet when the said head is swung at right angles to the longitudinal plane of the said shank.

2. In a tool holder including a shank, a head mounted to swing on the shank, a ratchet on the said head and revoluble in a plane at right angles to the pivotal con-

nection of the head with the said shank,
means for retaining the head in longitudinal
alinement with the shank, a slotted casing
on the said shank, a dog mounted to slide
5 in the said casing, a handle for the dog and
extending through the slot in the said cas-
ing, and a spring in the casing and engaging
the dog to retain the same in engagement

with the said ratchet when the said head
is swung at an angle to the said shank. 10

In testimony whereof I affix my signature
in presence of two witnesses.

CHARLES TILSSNER.

Witnesses:

LEO X. LUGOWSKI,
JULIUS DUCHON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
