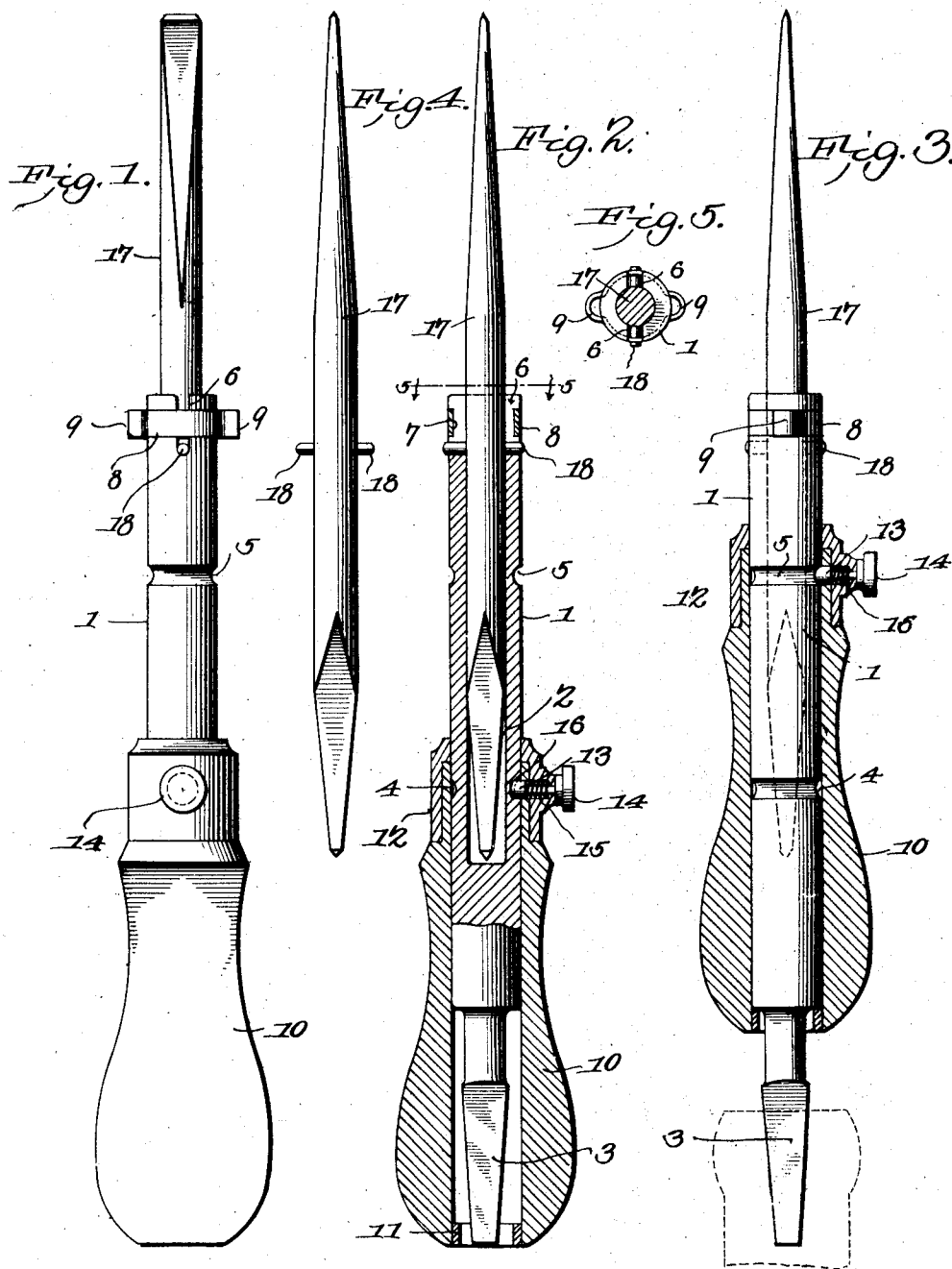


No. 814,020.

PATENTED MAR. 6, 1906.

H. A. CLIFFORD.
HAND CONTROLLED TOOL.
APPLICATION FILED MAY 19, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

HARLON A. CLIFFORD, OF MILLERS FALLS, MASSACHUSETTS.

HAND-CONTROLLED TOOL.

No. 814,020.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed May 19, 1905. Serial No. 261,210.

To all whom it may concern:

Be it known that I, HARLON A. CLIFFORD, a citizen of the United States, residing at Millers Falls, in the county of Franklin and State of Massachusetts, have invented a new and useful Hand-Controlled Tool, of which the following is a specification.

This invention relates to hand-controlled tools—such as screw-drivers, gimlets, and the like—and has for its object to provide a novel arrangement of handle which is capable of being fixed to the stock or bit of the tool, so as to manipulate the latter by turning the former, and also to enable the connection of the tool with a brace for rotating the same, and in this connection to permit rotation of the bit or tool within the handle to enable the fixed holding of the handle during the manipulation of the brace for working the tool.

A further object of the invention is to permit of the ready separation of the parts of the device to enable convenient and compact storage thereof.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a side elevation of a tool embodying the features of the present invention. Fig. 2 is a longitudinal sectional view thereof, showing the handle fixed. Fig. 3 is an elevation of the device with the handle in section, showing the handle adjusted to permit rotation of the tool or stock independently of the handle. Fig. 4 is a detail elevation of the tool or bit removed. Fig. 5 is a detail sectional view on the line 5 5 of Fig. 2.

Like characters of reference designate corresponding parts in each and every figure of the drawings.

The present tool includes a stock 1, which is cylindrical in shape and provided in one end with a longitudinal socket or bore 2, while its other end is reduced and provided with a tapered non-circular terminal 3, constituting a wrench-head adapted for insertion into the socket of an ordinary brace, as

will be hereinafter explained. About midway of the ends of the stock there is provided an annular groove or channel 4, and another annular groove or channel 5 is formed substantially midway between the groove 4 and the forward end of the stock. The forward socketed end of the stock is bifurcated and provided with diametrically opposite longitudinal slots or notches 6, there being an annular groove or channel 7, formed around this slotted or notched terminal of the stock. A band or ring 8 embraces the notched end of the stock and is swiveled in the groove or channel 7, diametrically opposite portions of the band being bent outwardly to form loops 9. The stock thus described is received within a tubular handle or hand-grasp 10, which is open at opposite ends to permit of the stock being slid therethrough and said stock also capable of rotating within the handle. Within the rear end of the handle there is a metallic ring 11 to prevent splitting of the handle, which latter is preferably formed of wood, and a metallic ferrule 12 embraces the other end of the handle. An end-wise movable pin or plunger 13 is received within a radial opening extending through the ferrule 12, the outer end of the pin being provided with a head or finger piece 14, and there being a helical spring 15 embracing the pin and bearing against the latter, so as to yieldably hold the same at its inner limit in either of the grooves 4 and 5. The groove 4 is provided with a seat or recess 16, into which the pin is adapted to be seated, so as to interlock the stock and handle for simultaneous rotation. The purpose of the groove 4 is to facilitate the engagement of the locking-pin 13 with the seat or recess 16, which is accomplished by sliding the stock through the handle until the pin snaps into the groove 4 and then turning either the handle or the stock until the pin snaps into the seat or recess 16. When the handle is fixed upon the stock, the wrench-head 3 is within the handle 10 or flush with the rear end thereof, so as to permit of the palm of the hand being pressed against the rear end of the handle when manipulating the tool as a screw-driver, gimlet, or the like. By releasing the pin 13 from the seat 16 and moving either the handle or the stock to bring the pin into the groove 5 the rear end of the stock will be projected in rear of the handle and the stock also capable of rotating independently of the handle. Furthermore, as the wrench-head 3 is exposed it

may be engaged with the socket of an ordinary brace, a conventional form of socket being indicated in dotted lines in Fig. 3, whereupon the handle 10 may be held fixed in one
5 hand while the stock is rotated by the usual manipulation of the brace.

Any character of tool or bit may be employed in connection with the present device, that shown in the accompanying drawings
10 being a screw-driver bit 17, which is of a size to fit within the socket 2 of the stock 1 and provided intermediate of its ends with diametrically opposite pins or projections 18,
15 capable of passing through the loops 9 and into the slots or notches 6 when the loops are in alinement therewith, the locking-band 8 being afterward turned so as to bring the same across the pins or projections 18, as
20 shown in Figs. 1 and 5, whereby the bit will be held against endwise displacement from the stock.

Having fully described the invention, what is claimed is—

1. A tool comprising a handle having an
25 open-ended longitudinal bore, a stock slidable and rotatable within the handle and exceeding the length thereof, said stock being provided with a forward annular channel and a rear lateral socket, and a spring-pressed
30 locking-pin carried by the handle and capable of engaging the socket to interlock the handle and the stock for simultaneous rotation with the rear end of the stock within the handle, said handle capable of being slid forwardly upon the stock to engage the locking-
35 pin with the annular channel and permit rotation of the stock within the handle with the rear end of the stock projected beyond the handle for engagement with a brace.

2. A tool comprising a stock having its
40 rear end formed for connection with a brace, a tubular open-ended handle slidably embracing the stock with the latter rotatable in the handle, and means for interlocking the
45 handle and stock for simultaneous rotation when the handle is at the rear end of the stock and for permitting rotation of the stock and preventing endwise movement thereof
50 through the handle when the latter is shifted to an intermediate portion of the stock with the rear end of the latter exposed for engagement with a brace.

3. A tool comprising a stock provided with a forward annular groove and a rear lateral
55 socket, the rear end of the stock being formed for engagement with a brace, a tubular open-ended handle slidably embracing the stock with the latter rotatable therein, and a locking device carried by the handle for engagement with the socket of the stock to inter-
60 lock the handle and stock for simultaneous rotation when the handle is at the rear end of the stock with said rear end covered thereby, said locking device capable of engaging
65 the annular groove when the handle is shifted forwardly upon the stock to expose the rear end of the stock for engagement with a brace and thereby permit rotation of the stock within the handle and prevent endwise
70 movement of the stock through the handle.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HARLON A. CLIFFORD.

Witnesses:

FRANK N. CONANT,
J. HARRISON CONANT.