

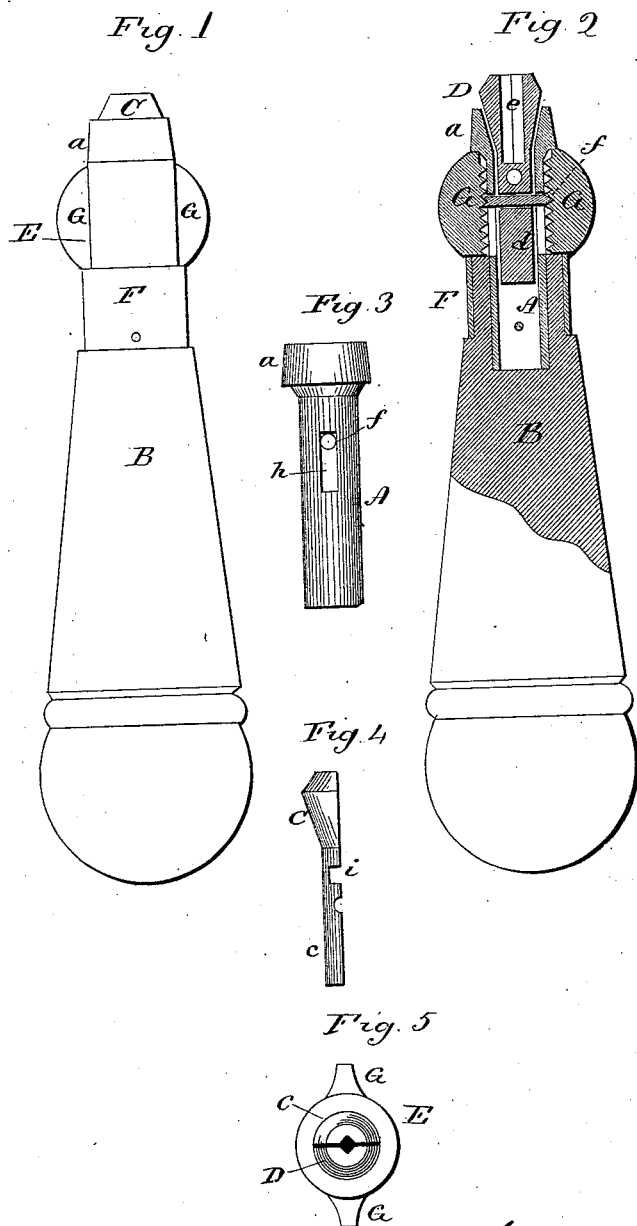
(No Model.)

G. W. WRIGHT.

TOOL HANDLE.

No. 303,478.

Patented Aug. 12, 1884.



Witnesses,  
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# UNITED STATES PATENT OFFICE.

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## TOOL-HANDLE.

SPECIFICATION forming part of Letters Patent No. 303,478, dated August 12, 1884.

Application filed June 12, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, GRANVILLE W. WRIGHT, of New Haven, in the county of New Haven and State of Connecticut, have invented a new  
5 Improvement in Tool-Handles; and I do hereby declare the following, when taken in connection with accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and  
10 which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view; Fig. 2, a vertical central section; Fig. 3, a side view of the socket detached at right angles to Fig. 2; Fig. 4, a  
15 side view of one of the jaws at right angles to Fig. 2, detached; Fig. 5, an end view.

This invention relates to an improvement in that class of tool-handles which are constructed with a pair of jaws closed by a surrounding  
20 sleeve upon an angular-shaped shank; and the invention consists in the construction, as hereinafter described, and more particularly recited in the claim.

A represents the socket, which is fitted into  
25 the handle B, and there secured in any suitable manner. This socket extends outside the end of the handle, it is of tubular shape at its outer end, it is enlarged to form a collar, *a*, and within the collar the internal diameter  
30 gradually increases outward.

C D are the two jaws, each of like shape. Their tails *cd* are of slightly less diameter than the diameter of the tubular portion of the socket, and so as to move longitudinally there-  
35 in. At their outer end the diameter of the jaws expands into a frustum-of-cone-shaped surface, which stands like a wedge inside the collar *a*. The adjacent face of each of the jaws at its outer end is constructed with a longi-  
40 tudinal groove, *e*, of angular shape, and corresponding to the shape of the shank of the tool to be held. Around the socket and between the end of the handle and the collar *a* a sleeve, E, is arranged, its internal diameter  
45 corresponding substantially to the external diameter of the socket, but so as to be turned freely between the end of the collar and the end of the handle, that collar and end of the handle preventing other than rotary move-

ment of the sleeve. Upon its inner surface 50 the sleeve E is screw-threaded, as shown. Through the socket and through the jaws a bar, *f*, is placed, the ends of which will enter the screw-thread of the sleeve. At diametri- 55 cally-opposite points in the socket longitudinal slots *h* are made for the passage of the bar *f*, so that as the sleeve is turned the bar *f* may be moved up or down—that is, longitudinally through the slots *h*. This bar *f* extends through the tails of the two jaws, preferably between 60 their meeting faces, as shown. The hole through the jaws is slightly larger than the bar, so as to allow a certain freedom of the jaws independent of the bar. If the sleeve be turned in one direction—say to move the bar 65 toward the outer end of the socket—then the jaws will be correspondingly moved, but if turned in the opposite direction, then the jaws will be drawn inward, as indicated in broken lines. 70

To introduce the tool the jaws are thrown outward by turning the sleeve, as before described, then the shank introduced into the grooves in the jaws, and then the sleeve re- 75 turned will draw the outer ends of the jaws down into the converging mouth of the socket, and thereby force the outer ends of the jaws toward each other to firmly grasp the shank of the tool.

It is desirable to introduce a spring between 80 the two jaws. This is best done by making a small cavity, *i*, in the face of each jaw, and introducing therein a short helical spring, as shown. These cavities are below the grooves *e*.

The end of the handle on which the sleeve 85 bears should be provided with a metal ferrule, F, as a bearing for the sleeve—that is, in case the handle itself is not made from metal.

As a convenient means for turning the sleeve, I construct it with a wing, G, project- 90 ing from diametrically-opposite sides.

I do not wish to be understood as claiming a pair of jaws arranged within a converging mouth of a socket and provided with a screw-threaded sleeve as a means for drawing said 95 jaws into said converging mouth to close them, or force them therefrom to open, as such, I am aware, is not new.

I am aware that tool-holding devices having a pair of jaws arranged within a socket, to be closed by the movement either of the jaws or surrounding sleeve, are common and well known, and I make no claim to any of the elements herein shown, except in the construction and combination, as hereinafter recited ; but

What I do claim is—

The tubular socket A, constructed with the collar *a* at its outer end, the interior of said collar constructed to form a convergent mouth, a pair of jaws, C D, having their tails constructed to enter said tubular socket, the faces

of said jaws constructed with a longitudinal groove, *e*, the internally-screw-threaded sleeve E, arranged below the collar *a* of the socket, free for rotation, but prevented from longitudinal movement, the bar *f*, diametrically through slots in the socket and through the tails of the jaws, its opposite ends taking a bearing in the opposite screw-threads of the sleeve, substantially as described.

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Witnesses:

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