(No Model.)

F. W. SIMMONS.

HANDLE FOR WRENCHES OR OTHER TOOLS.

No. 472,556. Patented Apr. 12, 1892.

Fig. 1.

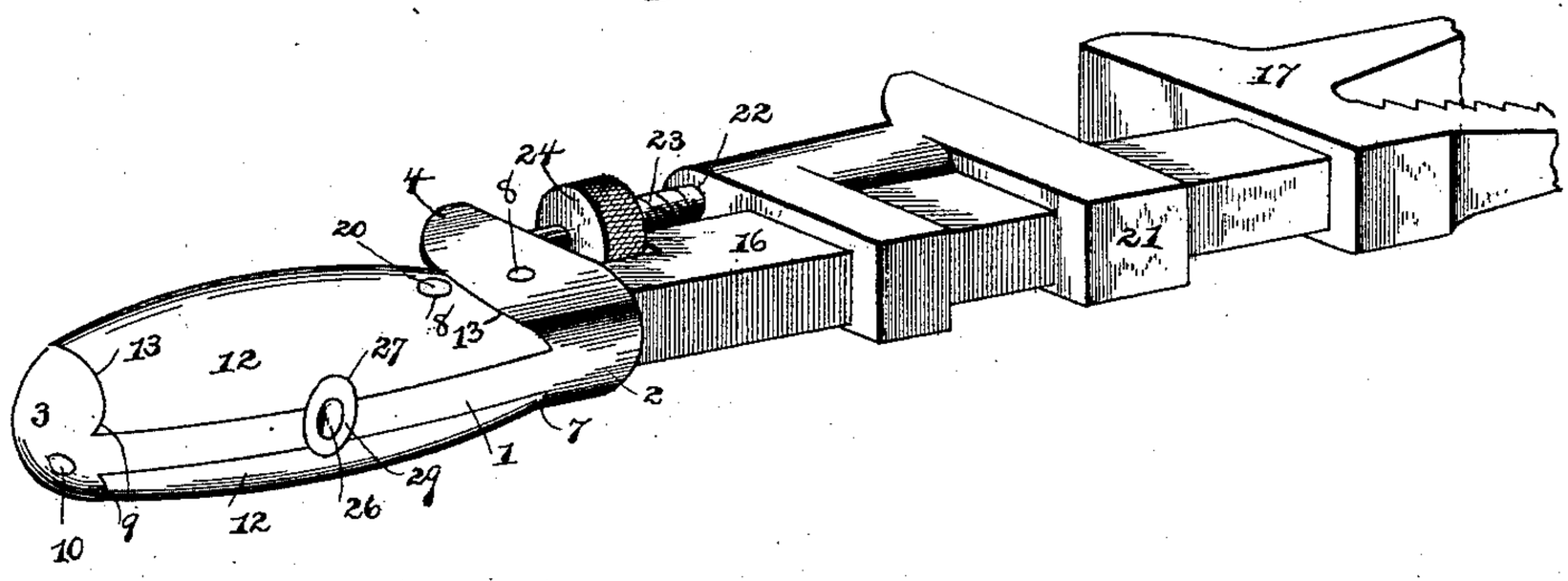


Fig. 2.

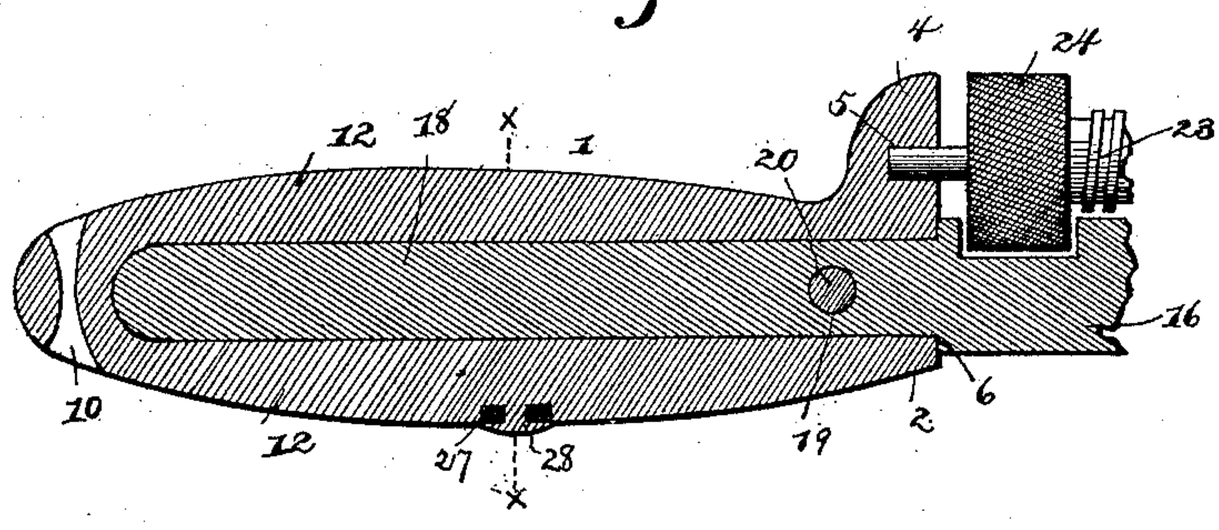


Fig. 3.

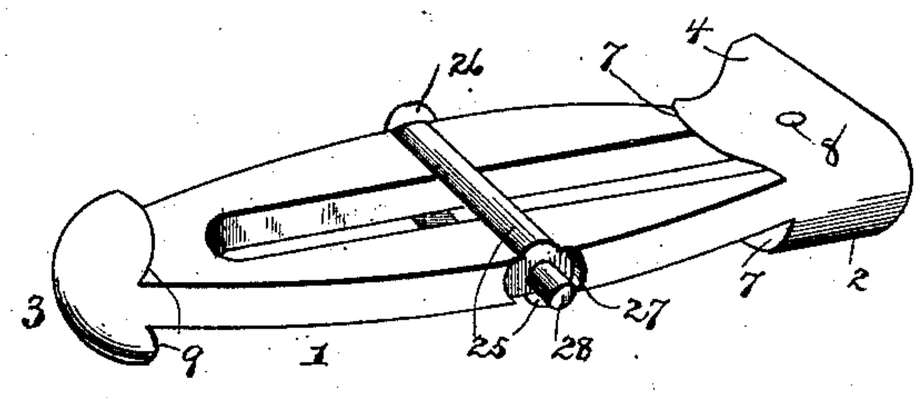


Fig. 5.

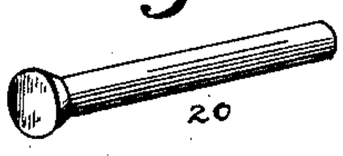
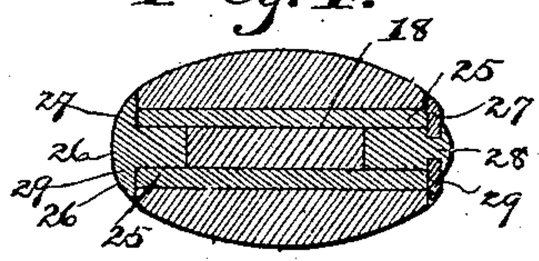


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANK W. SIMMONS, OF BLUE MOUND, KANSAS.

HANDLE FOR WRENCHES OR OTHER TOOLS.

SPECIFICATION forming part of Letters Patent No. 472,556, dated April 12, 1892.

Application filed July 9, 1891. Serial No. 398,954. (No model.)

To all whom it may concern:

Be it known that I, FRANK W. SIMMONS, a citizen of the United States, residing at Blue Mound, in the county of Linn and State of Kansas, have invented a new and useful Handle for Wrenches and other Tools, of which the following is a specification.

This invention relates to improvements in tool-handles of that class employing opposite wooden sections, and more especially adapted to be employed in connection with the shanks of wrenches, though, as will hereinafter appear, the handle may be used with advantage in connection with the shanks of screw-drivers, files, chisels, draw-knives, &c.

The objects in view are to provide a handle combining simplicity, cheapness of manufacture, and great security and strength, together with durability.

With the above objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figures 1 is a perspective of a handle constructed in accordance with my invention, the same being illustrated in connection with a wrench. Fig. 2 is a longitudinal section through the handle and shank of wrench. Fig. 3 is a detail in perspective of the handle minus the wood sections. Fig. 4 is a transverse section on *x x* of Fig. 2. Fig. 5 is a detail in perspective of the rivet employed for connecting the shank of the wrench with the metal head of the handle.

Like numerals of reference indicate like parts in all the figures of the drawings.

In constructing the metal portion of the handle I form a central somewhat flat shank or intermediate portion, and integral with the same at its upper end form a head 2 and at its lower end a butt 3. The head 2 is preferably cylindrical, with the exception that at one side and at its upper end it is provided with an offset or step 4, having a countersunk bearing-opening 5. The head is provided in its upper end with a longitudinally-disposed opening or socket 6, in this instance rectangular in cross section, though it may be of any other desired shape, which opening is continued into the metal intermediate shank 1 to near the center of the same, or, as shown, in handles for heavy tools is continued to the butt. The head 2 at its inner end and at opposite sides of the shank 1 is provided with oppositely inclined inwardly-disposed shoulders 7, and is also provided with a transverse rivet-receiving opening 8. The opposite faces of the malleable-handle frame are connected by a pair of transverse ribs 25, which terminate at the sides of the handle. At one end of these ribs the side of the handle is provided with a convexed lug 26, projecting to opposite sides of the handle, while at the opposite edge of the handle opposite the ends of the ribs is formed a depression or countersunk recess 27, at the center of which is located a lug 28, all for a purpose hereinafter apparent. The butt 3 is of somewhat inverted truncated cone shape and at its upper end at opposite sides of the shank is provided with inwardly-inclined oppositely-disposed shoulders 9. Below the shoulders the butt is provided with a transverse opening 10, flared at its opposite ends, as shown.

12 designates the opposite wood sections of the handle, which are convexed and terminate in beveled ends 13, adapted to conform to the inclined shoulders 7 and 9 of the head and butt. The inner faces of the handles are transversely grooved, as shown, to receive the ribs, said handles being slid transversely into position. Each handle-section is provided at opposite points of its edges with countersunk recesses, those two at one side thereof receiving the lug 25, which acts as a stop to prevent lateral displacement in that direction of the handle. The recesses at the opposite edges of the handle receive a washer or cap 29, which is centrally perforated to receive the lug at that side of the handle and fit within the recess in which the lug is located. This cap also fits in a countersunk recess formed in the edges of the handles, thus serving as stops, and is held in position by the upsetting of the said lug.

16 designates the stock of an ordinary wrench, which stock terminates at its upper end in the fixed head or jaw 17, and at its lower end is reduced to form the shank 18, adapted to fit snugly within the socket 6 in the head 2 of the handle and between the

mortise formed by the two transverse ribs 25. The shank is provided with a transverse perforation 8 of the head of the handle, the rivet 20 is passed, and its ends headed.

The perforation 10 is employed for the purpose of conveniently suspending the tool from a nail or other similar supporting device, and, as will be obvious, may be omitted without altering or changing the construction and functions of the remaining parts of the handle.

21 designates the sliding jaw, which is of the usual construction, and is provided upon its under side with a threaded socket 22, in which is seated the upper end of the screw 23 for feeding the jaw toward the fixed jaw 17. The screw is provided with a lower bearing end, which takes into the countersunk recess in the step 4, and immediately thereabove has formed therein or rigidly secured therewith the milled nut 24.

It will be obvious that when the handle is employed in connection with other tools than wrenches, or, in fact, with wrenches varying in construction with the wrench shown or not including the construction of screw and sliding jaw herein shown, the step 4 may be omitted, as shown in Fig. 4.

From the foregoing description it will be seen that the wood sections are most securely mounted in position upon opposite sides of the shank of the handle, and that the stability and security of the shank in connection with the handle in no way depends upon the wood sections, as is usually the case in handles employing such sections. It is well known that the wood sections are the first parts of the handle to give out, and inasmuch as they are usually directly fastened to or by the same pin connected with the shanks of the tools their looseness renders the entire tool inoperative and useless. By my invention, however, this is all avoided, and even though the wood sections be entirely broken off or removed the tool itself is as strong and its connection with the handle as durable and rigid as ever.

Having described my invention, what I claim is—

1. The combination, with the shank of a tool, of the herein-described handle, the same consisting of a metal shank terminating at its opposite ends in a head and a butt thicker than the shank, said head and butt having oppositely-disposed and inwardly-inclined shoulders, the head having a transverse perforation and a socket at its upper end, through which the shank of the tool passes, the opposite wood sections mounted between the shoulders, and the bolt passing through the head and through a perforation formed in the shank of the tool, substantially as specified.

2. The herein-described handle for wrenches and other tools, the same consisting of a central flat shank terminating at one end in a head having a shank-receiving socket and a transverse perforation and upon its under side provided with oppositely and inwardly inclined shoulders and at its lower end terminating in a butt of truncated-cone shape, provided upon its upper side with inwardly-inclined shoulders and below the same with a transverse nail-receiving perforation 10, the opposite wood sections 12, terminating in inclined shoulders, fitting between those of the head and butt and embracing the opposite sides of the shank, and the bolt passed through the section and the shank, substantially as specified.

3. The combination, with the shank having the opposite flat sides, at one end the cylindrical head having the shank-receiving socket extending into the shank, transversely perforated and provided at one side with the lateral step having the bearing, said shank at its lower end having the cylindrical butt, which together with the head are upon their inner sides provided with oppositely-inclined shoulders, and the wooden sections terminating in beveled ends fitting the shoulders, of the wrench-stock terminating at its upper end in the fixed jaw 17 and at its lower end in the reduced shank 18, the latter fitting the socket in the head of the handle, the rivet passed through the head and shank, the sliding jaw, and the screw threaded in the jaw and bearing at its lower end in the step of the handle and provided with the milled nut, substantially as specified.

4. The combination, with the handle consisting of the malleable-metal open frame having the head and butt and at one edge provided with opposite lugs extending at opposite sides thereof and at its opposite side provided with the countersunk recess having the malleable lug projecting therefrom, of the opposite handle-sections recessed at their opposite edges, a pair of which receives the said lug, and the cap fitting the recess of the handle-section and secured by the head of the lug, substantially as specified.

5. The combination, with the malleable-metal open frame provided with a head and butt and with the opposite transverse ribs forming a mortise, of the shank located therein, the handle-sections grooved to receive the ribs, and the projections at opposite sides of the sections, substantially as specified.

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

FRANK W. SIMMONS.

Witnesses:
W. A. JENNINGS,
I. F. KERNS.