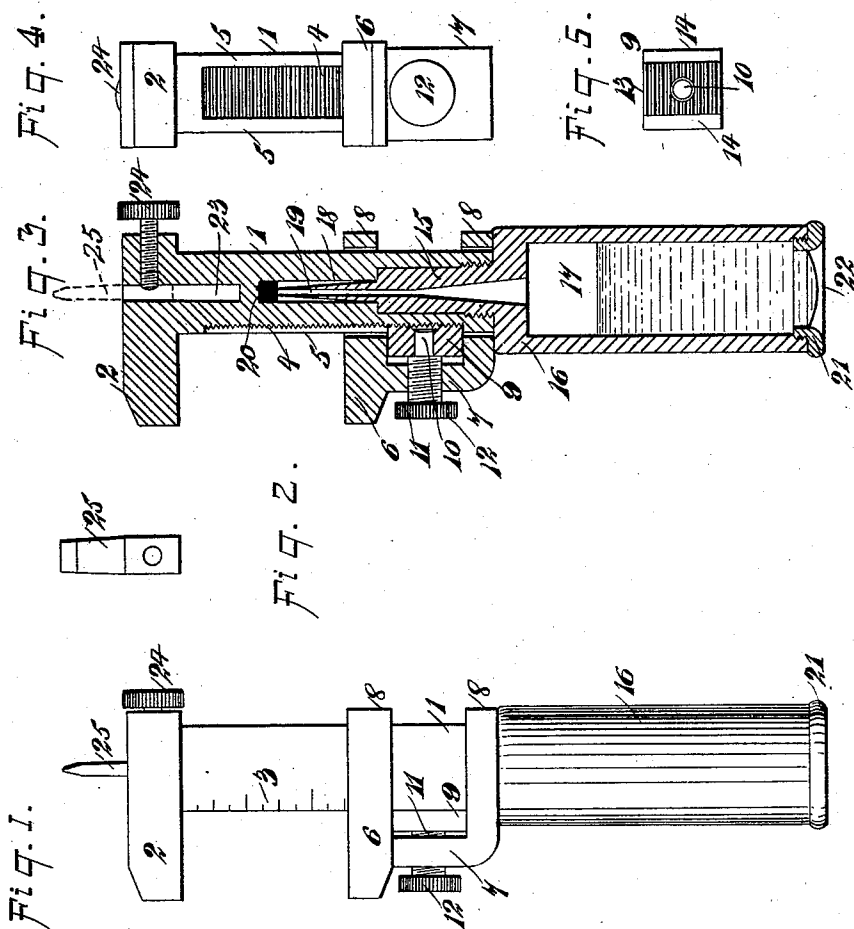


(No Model.)

H. HUNT & H. HUNT, Jr.
COMBINATION TOOL.

No. 566,176.

Patented Aug. 18, 1896.



WITNESSES:

Henry A. C. Kelley.
J. B. Sawyer.

INVENTORS

H. Hunt
H. Hunt, Jr.

BY

Attorneys.

UNITED STATES PATENT OFFICE.

HENRY HUNT AND HENRY HUNT, JR., OF WILKES-BARRÉ, PENNSYLVANIA.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 566,176, dated August 18, 1896.

Application filed February 24, 1896. Serial No. 580,437. (No model.)

To all whom it may concern:

Be it known that we, HENRY HUNT and HENRY HUNT, JR., of Wilkes-Barré, in the county of Luzerne and State of Pennsylvania, have invented a new and Improved Combination-Tool, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in combination-tools, and has for its object to provide a tool of this character of a simple and inexpensive nature, which shall be strong and durable in construction, and which shall be compact and light, so as to be adapted to be carried about in the pocket, the tool being designed, primarily, for use by bicyclists and others, and being adapted for use as an oil-can, screw-driver, and wrench.

The invention consists in a combination-tool adapted for use as a wrench, being provided with a shank having at one end a fixed jaw, a movable jaw mounted to slide on the shank and having means for securing it adjustably in position thereon, and a handle for the wrench, said handle being secured to the end of the shank and serving to prevent the removal of the movable jaw therefrom.

The invention also contemplates certain novel features in the construction, combination, and arrangement of the various parts of the improved combination-tool, whereby certain important advantages are attained, and the device is made simpler, cheaper, and otherwise better adapted and more convenient for use than various other similar devices heretofore employed, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation showing a tool constructed in accordance with our invention. Fig. 2 is a view showing the screw-driver detached. Fig. 3 is a sectional view taken through the tool, as shown in Fig. 1, the screw-driver being omitted. Fig. 4 is a fragmentary edge view showing the shank and the fixed and movable jaws of the wrench there-

on, and Fig. 5 is a face view of the dog employed for holding the movable jaw in position on the shank of the wrench.

In the views, 1 indicates the shank of the wrench portion of the tool, which is of rectangular form in cross-section, being provided at one end with a fixed wrench-jaw 2, projecting therefrom and having by preference a series of graduations indicating inches and fractions thereof formed along it, as indicated at 3, so that the tool may be employed, when desired, as a caliper. In the front face of the shank 1, beneath the fixed wrench-jaw 2 at the end thereof, is formed a longitudinal recess, in the bottom of which are provided transversely-extending rack-teeth or serrations 4, as clearly shown in Figs. 3 and 4, said recess being separated from the sides of the shank 1 to form plain wearing-surfaces 5, extending up and down along the opposite sides of the said front edge of the shank, as clearly shown in Fig. 4.

On the shank 1 is arranged to slide the movable jaw 6 of the wrench, this jaw being provided with a downward extension 7 at its lower edge, and having loops 8 extending rearward from opposite ends of said extension, said loops being adapted to embrace the shank 1, as clearly shown in the drawings, and being spaced apart to receive between them the toothed or notched dog 9, serving to hold the movable jaw in position on the shank 1 of the tool.

The dog 9 is of rectangular form, as indicated in Fig. 5, and said dog is capable of movement toward and from the recessed face of the shank, being held on the inner reduced end 10 of a screw 11, screwing in a threaded opening in the extension 7 of the movable jaw of the wrench and having an enlarged and milled outer end 12, adapted to be turned by the fingers to operate said dog 9. The dog is provided with a series of rack-teeth or serrations 13, having notches formed between them and adapted to engage the serrations 4 in the front face of the shank, the opposite sides of said dog being recessed, as indicated at 14, so that the teeth or serrations 13 project, as will be readily understood, and being adapted to engage the plain wearing-surfaces

5 on the face of the shank at opposite sides of the recess 4 therein.

The shank 1 is of equal dimensions throughout its length, so that the loops 8 of the movable jaw 6 may be readily slipped over it, and in the end of said shank on which the movable jaw 6 of the wrench plays is formed an axial recess or bore made in two diameters, as clearly indicated in the sectional view, Fig. 10 3, the outer portion of said bore or recess being interiorly threaded to receive the threaded neck 15 of the handle 16, which is hollowed out, as indicated at 17, to form a receptacle for oil or the like. The extremity 18 of the neck 15 is of less diameter than the main portion of said neck and is adapted to fit the smaller inner part of the bore or recess in the shank, being made somewhat tapered, and said neck is provided with an axial passage or oil-duct 19, extending through it and adapted to convey the oil from the chamber or hollow 17 in the handle 16.

A plug 20, of rubber or the like, is inserted in the end of the smaller reduced portion of the bore or recess in the shank, as clearly seen in Fig. 3, said plug being adapted to close the end of the oil-duct 19 in the stem or neck of the handle when the handle is secured to the shank 1 of the wrench, so that leakage of the oil contained in the handle will be prevented, and when said handle is removed from the shank 1 by unscrewing its neck it is evident that it may be used in the same way as an ordinary oil-can.

In order to enable the chamber or hollow 17 in the handle 16 to be conveniently filled with oil, the larger end of the handle is made open and is provided with a screw-threaded cap 21 of annular or ring-like form, provided with a central diaphragm 22, of spring metal or the like, adapted to be pressed by the thumb or finger to force the oil contained in the chamber or hollow 17 to pass through the oil-duct 19. When the cap 21 is removed, the chamber or hollow 17 may be filled with oil, and when said cap is in place its spring-metal bottom or diaphragm 22 forms a convenient means for forcing the oil out of the chamber without necessitating the weakening of the side walls of the handle.

As clearly shown in the drawings, the handle 16 is made of greater diameter than the shank 1, so that when the said handle is secured in place on the shank its upper edge projects beyond the same and forms a stop to limit the movement of the movable jaw 6 longitudinally on the shank, whereby said jaw is prevented from being slipped over the end of the shank, as will be readily understood.

At the end of the shank 1 opposite to the bore or recess wherein the neck 15 engages is formed an aperture or recess 23, adapted to receive a screw-driver or equivalent tool, as clearly shown in dotted lines in Fig. 3, said tool being held in place by means of a screw 24 passing through the wall of the shank 1

from the rear face thereof opposite to the wrench-jaw 2. The tool 25 is made of such proportions as to be adapted when inserted in the aperture 23 in an inverted position to be completely housed in said aperture, but when removed from the aperture and arranged therein with its point extending outward, as indicated in Fig. 1, to project from the aperture and be held securely in position by means of the screw 24, as will be readily understood.

From the above description of the invention it will be seen that the device is of an extremely simple and inexpensive nature and is especially well adapted for the purposes for which it is designed, since it may be used either as a wrench, oil-can, or screw-driver by very little adjustment of its various parts. Moreover, the construction of the wrench portion of the tool is in itself extremely simple and improved, since the dog 9, being held against turning movement by engagement with the loops 8 of the movable jaw, is caused to move outward and inward into and out of engagement with the teeth 4 of the recessed face of the shank when the screw 11 is turned, and is guided in its movements by said loops 8. Furthermore, the sides of the central toothed portion of said dog 9 are always held by the sides of the recess in the face of the shank in position to engage the teeth 4 at the base of said recess. It will also be obvious from the above description of the invention that the device is susceptible of some modification without material departure from the principles and spirit of the invention, and for this reason we do not wish to be understood as limiting ourselves to the precise form and arrangement of the parts herein set forth.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A combination-tool comprising a shank having a fixed jaw at one end, and a longitudinal bore opening to the rear end of the shank, a hollow elongated handle, of greater thickness than the shank, said handle having an elongated neck and formed with a tapered nozzle beyond the neck, the neck and its nozzle being received within the bore of the shank and the front end of the handle forming an abutment and a movable jaw sliding on the shank and movable rearwardly over the bored portion of the shank against the end of the handle, substantially as described.

2. A tool having a shank formed with a longitudinally-extending bore at each end, the bores being out of communication with each other and the shank having a rigid jaw at one end, a set-screw operating with the shank at the end adjacent to the rigid jaw and extending into the bore thereof, a hollow handle of a thickness increased over that of the shank, the handle having a neck extending into the remaining bore of the shank and the neck being closed by engagement with the in-

ner end of said bore and the inner end of the handle forming a shoulder opposing the stationary jaw, a sliding jaw having a yoke embracing the shank, the sliding jaw being limited by the stationary jaw and by the inner end of the handle, a block carried by the sliding jaw and capable of locking with the shank, and a screw pressing the block, substantially as described.

HENRY HUNT.
HENRY HUNT, JR.

Witnesses:

W. A. O'NEILL,
D. L. O'NEILL.