A. C. WITTER.

COMBINATION TOOL.

APPLICATION FILED FEB. 23, 1912.

1,158,092. Patented Oct. 26, 1915.

Fig. 2.

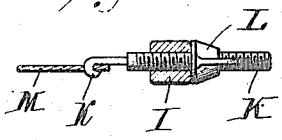


Fig. 1.

Fig. 4.

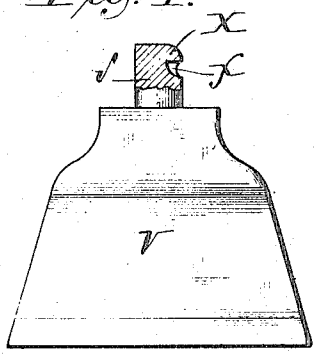
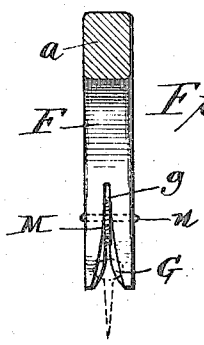


Fig. 3.



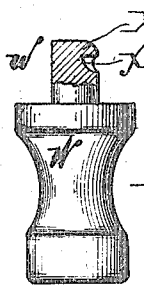


Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

ARCHIE C. WITTER, OF TONAWANDA, NEW YORK, ASSIGNOR OF ONE-FOURTH TO CHARLES T. HICKS AND ONE-FOURTH TO HARRY HICKS, BOTH OF TONAWANDA, NEW YORK.

COMBINATION-TOOL.

1,158,092. Specification of Letters Patent. Patented Oct. 26, 1915.

Application filed February 23, 1912. Serial No. 679,355.

To all whom it may concern:

Be it known that I, ARCHIE C. WITTER, a citizen of the United States, residing at Tonawanda, in the county of Erie and State of New York, did invent certain new and useful Improvements in Combination-Tools, of which the following is a specification.

My invention relates to improvements in combination tools which may be used for various purposes, the same constituting a wrench, hammer, saw, hatchet, nail or tack puller and a screw-driver; but under the principle involved other tools may be combined therewith.

The object of my invention is to provide a combination tool which is particularly adapted for use by plumbers and other craftsmen requiring a number of tools so that it will not be necessary to carry about the usual number of separate tools, and also the provision of a combination tool, which is desirable for house use.

The invention consists in the several parts and features to be hereinafter described and particularly pointed out in the subjoined claims.

In the drawings, Figure 1 is a partly sectional elevation of the tool converted into a saw. Fig. 2 is a longitudinal section taken on line 2—2, Fig. 1. Fig. 3 is a cross-section taken on line 3—3, Fig. 1. Fig. 4 is a sectional elevation of the hatchet part detached. Fig. 5 is a sectional elevation of the hammer-head detached.

The reference letter A designates a wrench having a shank *a* provided with the usual fixed jaw B extending beyond opposite edges thereof, and C represents the slidable jaw adapted to be adjusted with respect to the fixed jaw, said slidable jaw also extending beyond opposite edges of the shank. The portion of the jaws at one side of said shank have flat surfaces *b* adapted to grip a nut or other angular object, while the portions of the jaws extending from the other edge of the shank are serrated, as at *c*, and are adapted for gripping pipes or other cylindrical objects. The slidable jaw has the usual opening D therein for the reception of a nut *d* which is placed onto the shank *a* and is in threaded engagement with threads E at opposite edges of the shank. The end of the shank opposite the fixed jaw is curved, as at F, and its extremity formed into a claw G, a narrow slot *g* extending from the claw a distance into the shank, for a purpose to be hereinafter described.

The fixed jaw has a socket H formed in one end for the reception of a tenon *i* formed on a handle or arm I which terminates at its outer end in a screw-driver point, as at J. Passing loosely through said handle is an adjusting or tension screw K having at its inner end a hook *k* and threaded onto said screw so as to impinge against the outer edge of said handle is a thumb-nut L.

M represents a saw blade having an opening at one end through which the hook portion of the adjusting or tension screw K is passed and having its other end inserted in the narrow slot *g* formed in the curved end of the shank *a*, the last-mentioned end of said saw-blade extending through the curved portion of said shank and having an opening N through which is passed a pin *n* which extends from opposite sides thereof and bears against the curved portion of the shank. Said pin is seated against projections O formed on said shank so that the blade cannot accidentally become displaced. With the pin *n* retained in contact with the curved portion of the shank and the adjusting or tension screw K tightened by means of the thumb-nut L thereon, the saw-blade is held rigid and in readiness for use, sufficient space being left between the blade and the shank *a* so that the saw may be used for all practical purposes.

The outer edge of the fixed jaw has a depression P in which is held a flat spring *p*, one end of said spring having a screw R passed therethrough and entering the jaw, while the opposite end of said spring is free and has a retainer-pin *r* projecting inwardly therefrom and passing through an opening extending from the socket H of said jaw outward, said pin entering a notch formed in the tenon of the handle I. For convenience in inserting the tenin in said socket it is curved or beveled at its end, as at *s*, and the end of said retainer-pin is likewise curved or beveled, as at T, so that it is merely necessary to force the tenon into the socket and as the curved or beveled end thereof comes in contact with the curved or beveled end of said retainer-pin, said pin is forced outwardly with its supporting spring and when the tenon is properly entered in the socket, the notch in the tenon is in position to receive the end of the retainer-pin. To facili-

tate the removal of the handle from the wrench, the outer or free end of the spring is curved outward, as at U, so that it can be easily taken hold of and moved outward into the dotted position shown in Fig. 1, thereby freeing the retainer-pin carried thereby from the tenon of the handle and permitting the ready removal of the handle from the wrench.

V represents a hatchet having a tenon *v* and W represents a hammer-head having a tenon *w*, both being adapted to be entered in the socket H of the fixed jaw. Each tenon has its end curved or beveled, as at X, and also provided with notches *x* similar to the tenon of the handle I so that the retainer-spring *p* will co-act therewith in like manner to the tenon of said handle.

Having thus described my invention, what I claim is,—

1. In combination tools, the means of securing a saw blade to the tool comprising a rearwardly curved shank with a terminal longitudinally-directed slot, an arm adapted to be used as a saw handle detachably attached to the rear end of the tool and having an aperture near its outer end, a tension screw within said aperture, and a saw blade having one end secured to said tension screw and its other end secured in said slot.

2. In a combination tool, the means for securing a saw blade to the tool comprising a rearwardly curved shank with a terminal longitudinally-directed slot adapted to be used for a tack puller, an arm adapted to be used as a saw handle detachably attached to the rear end of the tool, extending rearwardly therefrom, and having an aperture near its outer end, a tension screw threaded into said aperture, and a saw blade having one end secured to said tension screw and its other end secured within said slot.

In testimony whereof, I have affixed my signature in the presence of two subscribing witnesses.

ARCHIE C. WITTER.

Witnesses:
EMIL NEUHART,
ELIZABETH HEINTZ.