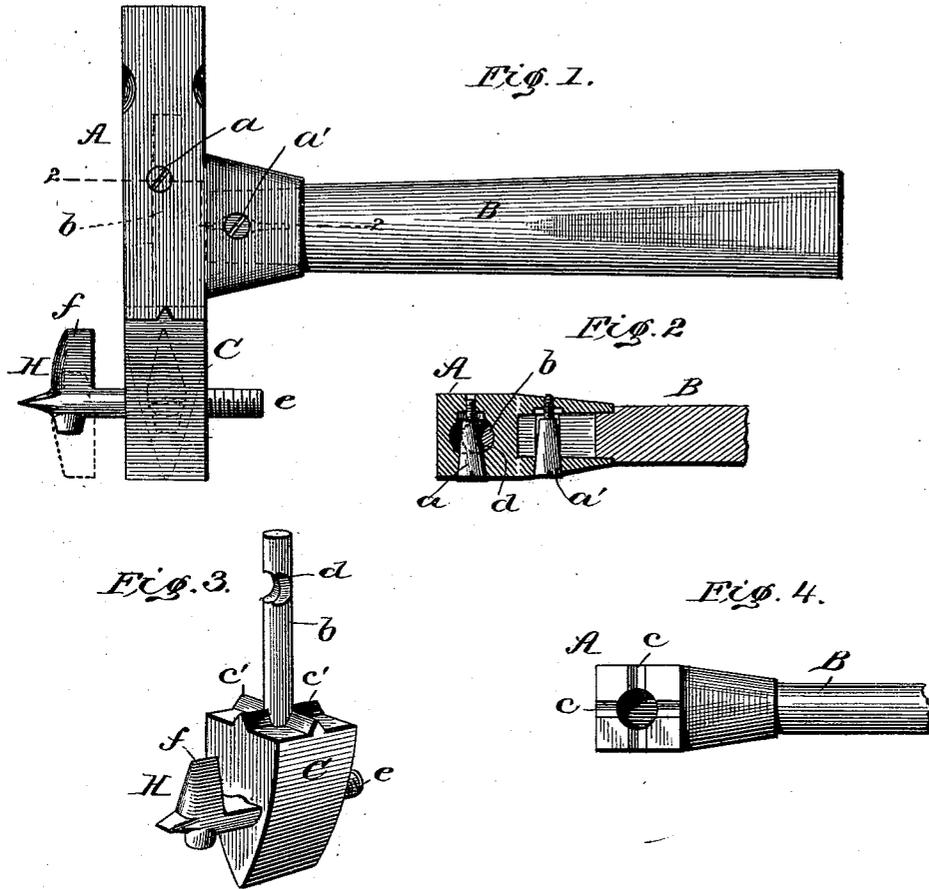


(No Model.)

R. L. DAVIS.  
COMBINATION TOOL.

No. 514,308.

Patented Feb. 6, 1894.



WITNESSES:

*Joe. A. Ryan*  
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# UNITED STATES PATENT OFFICE.

RILEY LENARD DAVIS, OF ASHEVILLE, NORTH CAROLINA, ASSIGNOR, BY  
MESNE ASSIGNMENTS, OF ONE-HALF TO EDWARD E. EAGAN AND  
GEORGE R. COLLINS, BOTH OF SAME PLACE.

## COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 514,308, dated February 6, 1894.

Application filed February 2, 1893. Serial No. 460,819. (No model.)

*To all whom it may concern:*

Be it known that I, RILEY LENARD DAVIS, residing at Asheville, in the county of Buncombe and State of North Carolina, have invented a new and Improved Combination-Tool, of which the following is a specification.

The nature of my invention will be hereinafter described.

In the accompanying drawings—Figure 1 is a side view of my invention. Fig. 2 is a section on line 2—2 of Fig. 1. Fig. 3 is a perspective view of the detachable tool—a machinist's "bit" used for riveting. Fig. 4 is a plan view of the socket or hammer-head.

The socket-head A, has a longitudinal bore forming a socket adapted to receive the shank *b*, of a cutting or chipping tool C. The said end of the socket head A is flat, and provided with transverse V-shaped grooves, or notches *c*, which are arranged at right angles to each other as best shown in Fig. 4. These notches are designed to receive ribs *c'* of corresponding shape and arrangement which are formed on the inner or butt end of the tool C. The latter is secured to the head A by means of a tapered screw *a* (Fig. 2) which is inserted in a correspondingly tapered hole formed transversely in the head A.

The shank *b* of the tool is cut out on one side in such manner as to form an inclined contact shoulder or bearing *d* for the screw "a," so that when the latter is screwed in it will bear against said shoulder *d* (Fig. 2) and thus draw the ribbed base or butt of a tool into firm contact with the grooved or notched end of the hammer head. In other words the taper of the screw *a* co-acting with the corresponding taper of the shoulder *d* of a tool shank *b*, securely fastens the tool in place. It is also apparent that this fastening is adjustable, that is to say, that the screw *a* may be forced farther in from time to time, in order to compensate for looseness due to bad fit of the joint between the socket head and butt of a tool.

As shown in Fig. 3, a tool shank *b* may be cut out on two sides instead of one, to form two bearings or contact shoulders *d* for the screw *a*, and thereby adapt the tool to be changed in position as required for different kinds of work. The shank of the machinist's riveting tool or bit is thus constructed (Fig. 3), whereby the straight edge of said tool may be set parallel with or at right angles to the

hammer handle B. Such tool has a transverse screw-threaded bore into which is screwed the handle or shank *e* of a small tool H, which subserves several uses. It has a hatchet-shaped cutter *f* adapted for cutting wire or for analogous work, also a tapered axial projection for use as a screw-driver. But the most important function is performed by the cutter, in conjunction with the tool C in that the space between them (see Fig. 1) serves as a nut socket so that the two devices (C H) constitute a wrench adapted for adjustment for nuts of various sizes. The correspondingly threaded bore and shank *e* adapt the cutter *f* to be turned and held up out of the way when not required for use—as shown by dotted lines Fig. 1.

The handle B of the hammer head A, is secured in a tapered socket, as shown in Fig. 2, by means of a tapered screw *a'*, which passes through the transverse tapered hole formed in the tenon of the handle. Said tenon is split lengthwise as shown in Fig. 1, and, when the screw *a'* is inserted, it spreads the divided portions of the tenon apart so that they are pressed against opposite sides of the tapered socket and thus secure the handle rigidly, yet detachably to the hammer head. The taper of the screw and hole in the handle tenon enable the screw to be adjusted as required to take up shrinkage or wear of the handle, so as to insure a tight fit at all times.

What I claim is—

1. The combination, with the hammer, or socket-head, A, and a tool, C, secured thereto, and having a transverse threaded bore and flat side, of the supplemental tool, or attachment, H, consisting of the head having its inner side parallel to the adjacent side of said tool, and a shank, *e*, which is screw-threaded and works in said bore, thus forming an adjustable nut wrench, as shown and described.

2. The combination, with the hammer-head, A, and tool, C, the latter having a transverse threaded bore, of the attachment consisting of a cutter, H, and a threaded shank *e*, which is inserted in said bore, as shown and described, whereby the edge of the cutter may be turned down or up, as required to place it in position for use or disuse, as specified.

RILEY LENARD DAVIS.

Witnesses:

EUG. D. CARTER,  
JULIUS C. MARTIN.