

H. J. Harris,

Wrench.

No. 107,255.

Patented Sep. 13. 1870.

Fig. 1

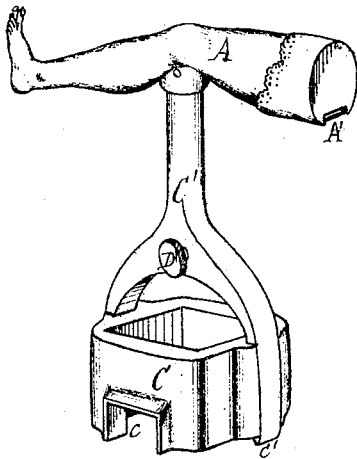


Fig. 2

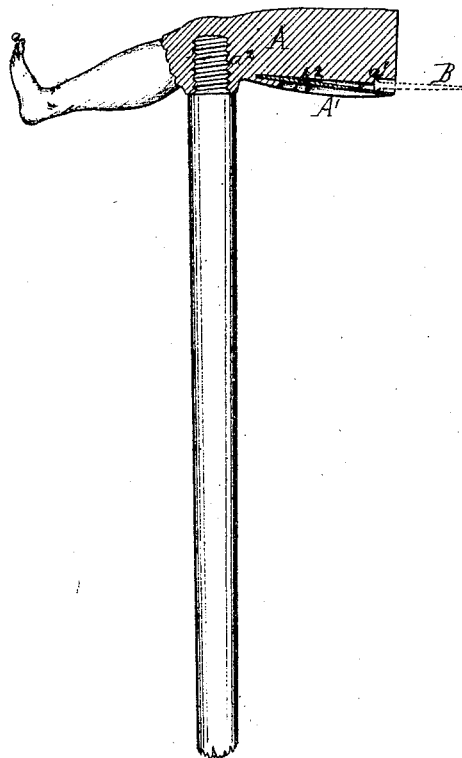
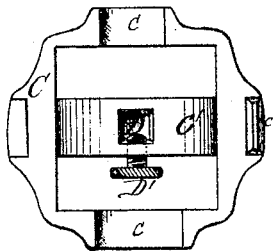


Fig. 3



Witnesses.

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Inventor.

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HENRY J. HARRIS, OF SHREVEPORT, LOUISIANA.

Letters Patent No. 107,253, dated September 13, 1870.

IMPROVEMENT IN MULTIPLE TOOL.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, HENRY J. HARRIS, of Shreveport, Caddo parish, State of Louisiana, have invented a new and useful Improvement in Multiple Tool, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of my improved tool;

Figure 2 is a view of the hammer applied as the head of a walking-stick, a portion of the hammer being shown in vertical section; and

Figure 3 is a bottom view of the wrench.

The invention relates to that class of tools known as multiple tools, in which two or more implements which are either analogous in their nature and operation, or which, although differing widely in their functions, are yet capable of being united and formed in one piece, the form and operation of the separate parts being such that they can be combined without impairing their effectiveness, whereby compactness and convenience of arrangement, with economy in construction, are obtained.

The invention consists in—

First, a novel construction of a hammer, in such a manner that it will receive and retain a nail in a proper and convenient position for sticking or starting said nail into the material into which it is to be driven, as will be hereinafter explained;

Second, in a peculiar construction of a skeleton socket-wrench, whereby it is adapted to take off the nuts from axle-trees, to retain them while the wagon or buggy is being oiled, and to replace them without said nuts coming in contact with the operator's hands, and is also adapted to fit various other nuts belonging to a carriage, as well as to drive common wood-screws;

Third, in the combination of a hammer with the above-mentioned socket-wrench, in such manner that the hammer is made to serve as a T-piece, by which to operate the wrench;

Fourth, in providing the eye in the hammer with a thread, by which to secure it to a handle or to the stem or shank of the wrench; and

Fifth, in providing the shank of the wrench with a socket, adapted to receive the shanks of bits, saws, chisels, or such other tools as can be conveniently applied thereto.

In the drawing—

A represents a hammer, which may be of any usual or desired construction, although I prefer to make it in substantially the form shown in the drawing, as being artistic in design.

The toes of the foot may be spread a little, as at *a*, and the wedge-shaped space intervening between the first and second toes can be advantageously used as a claw for drawing nails and tacks.

The lower side of the poll of the hammer is cut away, forming a groove or channel, shown plainly at *A*¹, fig. 2, the outer end of said channel being cut deeper than the inner portion, thus forming a shoulder or stop, *a*¹, for a purpose which will hereinafter be explained.

*A*² is a tongue-spring, secured, by its inner or rear end, in the channel *A*¹. In the drawing I have shown this spring confined in a slit or notch cut or cast in the poll of the hammer. The outer end of this spring should not protrude beyond the face of the hammer.

B is a nail, held in the position shown by spring *A*², as will be explained.

The eye of the hammer is provided with a screw-thread, *a*², by means of which the handle may be secured in place.

The employment of this thread enables me to make the eye of the hammer blind, that is, closed at one end.

O *C* is a socket-wrench, *O* being the body of the wrench and *C* the shank or stem.

The walls of the wrench are parallel to each other upon their outer surface, but are thicker at the top than they are at the bottom, this making the cavity inclosed by their tapering in form, so that it will fit different sizes of nuts.

One or more of these walls are provided, upon their lower edges, with a recess, *c*, which is intended to fit and turn various nuts, as may be desired.

When preferred, the walls of the wrench may be expanded at the recess or opening *c*, as shown in fig. 3, for the purpose of strengthening them at these points, and also to operate such nuts as may countersink below the surface of the parts to which they are applied.

*c*¹ is a lip or bit formed upon the lower edge of wrench *C*, for driving wood-screws.

The shank *C* is provided with a socket, shown plainly at *D*, fig. 3, in which chisels, bits, augers, and similar tools may be secured, by means of a set-screw, *D*¹, or equivalent device.

From the foregoing description it will be readily seen that, by placing a nail in the position shown in fig. 2, with its head resting against shoulder *a*¹, it can be started into a wall by the employment of one hand only, after which the hammer can be withdrawn, leaving the nail sticking there, when it may be driven further by repeated blows of the hammer, if desired.

By attaching the hammer to a walking-stick or cane, a nail may be driven at almost any height in a room, and the toe of the foot may be used to hang articles upon the nail, thus obviating the use of a step-ladder, or of climbing upon chairs.

The eye or socket in the hammer may be extended, as at *a*², fig. 1, and expanded so as to receive a handle

of any required size, which can be drawn into it and secured by means of the screw-thread a^2 .

Having now described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. A socket-wrench, composed of the body C and shank C', provided with an internal socket, D, thumb-screw D', and cross-piece A, which serves as a lever to operate the wrench, these parts being arranged substantially as set forth.

2. A multiple tool, consisting of the socket-wrench C C', having recesses c in its outer walls, and hammer A, provided with the groove A¹, stop a^1 , and spring A², constructed and arranged as set forth.

In testimony whereof I have hereunto set my hand this 2d day of August, A. D. 1870.

HENRY J. HARRIS.

Witnesses:

EDM. F. BROWN,
ALEXANDER MAHON.