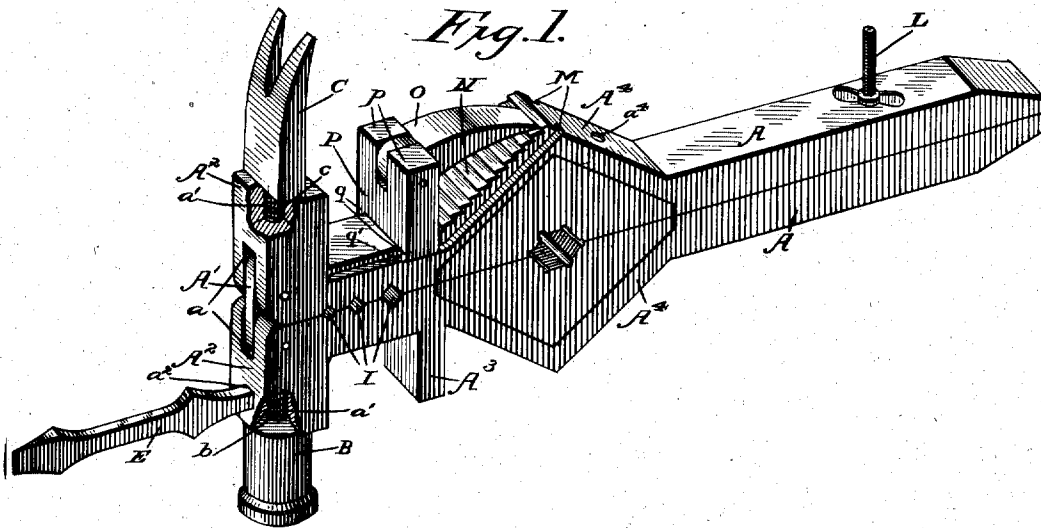


(No Model.)

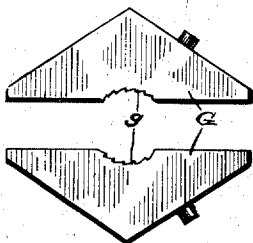
W. H. RUSH.  
WRENCH.

No. 554,225.

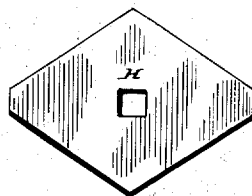
Patented Feb. 4, 1896.



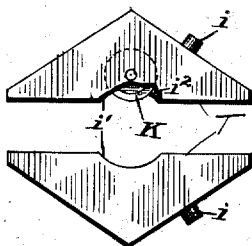
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM HENRY RUSH, OF SKIDMORE, TEXAS.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 554,225, dated February 4, 1896.

Application filed June 17, 1895. Serial No. 553,032. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HENRY RUSH, a citizen of the United States, residing at Skidmore, in the county of Bee and State of Texas, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in wrenches, and more particularly to that class of such devices as comprise a plurality of tools or parts adapted for a variety of uses whereby a person may have in the one instrument a wrench, a screw-driver, hammer, hatchet, auger, pipe-cutter, and a variety of tools, thus effecting a saving of space besides always having the various implements handy for use.

The present invention has for its object among others to provide a simple and yet durable and efficient device of this character which can be manufactured and sold at a minimum cost, so as to place the same within the means of every one.

A further object is to so construct the body portion of the tool as to adapt it for the ready attachment of the desired implement; further, to so construct the said body part that a great number of the tools may be mounted thereon at one time and each accessible for use without removing any one part and without the various parts mounted thereon interfering with each other. I aim also at general improvements in the details of construction.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention in the present instance resides in the peculiar combinations and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings and then particularly pointed out in the claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of the im-

proved implement with numerous of the tools in position for use, partly broken away. Fig. 2 shows the bolt-clamping jaws removed. Fig. 3 is a view of the jaw in one piece with a rectangular opening for holding a tap. Fig. 4 is a view of the jaws with the bolt-cutter partly broken away. Fig. 5 is a view of a hatchet-blade detached from the implement.

Like letters of reference are employed to designate corresponding parts throughout the several views in which they appear.

In the drawings, A designates one of the jaws or bars of the frame of the wrench, which are pivotally connected at one end, as by the link or bar  $a'$ , which works in recesses  $a$  in the adjacent portions of the parts A A, and held therein in any suitable manner. These ends of the bars of the frame are formed with the lateral portions  $A^2$ , each of which is formed in its outer face with an opening  $a'$ , preferably screw-threaded to receive the threaded shanks of the implements which it may be desired to hold therein. In Fig. 1 I have shown in one of said openings a hammer-head B with a threaded shank  $b$ , while in the other is a claw C with a screw-threaded shank  $c$ . These may be removed and in lieu of either a hatchet-blade D substituted.

One of the lateral portions above described is provided with an opening  $a^3$  in its end face, in which may be held a screw-driver E or any other desired tool. This may be removed and a gimlet or auger put in its place when desired.

One of the bars A is formed in addition to its lateral portion with a parallel lug  $A^3$ , which co-operates with the said lateral portion to form a wrench for nuts or other purposes.

The bars or jaws A A are formed between their ends with the offsets  $A^4$ , which form the substantially diamond-shaped opening in which are designed to be held the different jaws, as shown in Fig. 1 and those shown detached in Figs. 2, 3 and 4. The jaws shown in position within this opening in Fig. 1 are provided with pins or lugs upon their outer faces to engage in holes  $a^4$  in the side walls of the diamond-shaped opening, as shown. These jaws are formed as seen in said Fig. 1 to cut threads on bolts, the said jaws being preferably made in two like parts, as shown.

The jaws shown in Fig. 1 may be removed

- and either of the jaws shown in Figs. 2, 3 or 4 substituted therefor, according to the character of the work to be done. The jaws G (shown in Fig. 2) are formed upon their adjacent faces with the serrated portions *g*, designed for clamping bolts to prevent them from turning when desired. They are also provided with pins or projections similar to those on the jaws shown in Fig. 1.
- 10 The jaws H (shown in Fig. 3) may be in two pieces, as shown, or in one piece, preferably the latter, and at the center is a rectangular opening *h* for holding a tap for cutting threads in nuts or taps.
- 15 In Fig. 4 are shown jaws T, provided with the pins *i* and upon their adjacent faces with curved openings *i'*, and one of the jaws is recessed, as seen at *i''*, and in this recess is journaled a bolt-cutter K of any well-known or approved construction designed to cut bolts.
- 20 The bars A A of the frame are held together to bind the jaws in place by suitable means, as screw-bolts L, as shown in Fig. 1. The adjacent faces of the bars A A may be provided with notches I, as shown in Fig. 1, in which may be held the shanks of gimlets or any other small tool, if desired.
- One of the bars A is formed between the lateral portion thereof and the outermost portion of its offset with the grooves M upon opposite sides of the jaw and the outer face of the inclined portion of the bar is formed with the notches or teeth N, with which is designed to engage the point of a pawl O, which is pivoted between the bifurcations *p* of the jaw P, which is mounted to slide on the bar A, having the flanges *q* with inturned ends *q'*, which engage in the grooves M of the bar and prevent lateral displacement of the jaw yet per-

mitting of its being adjusted to accommodate nuts of different sizes, the said jaw operating in conjunction with the lateral portion at the end of the bar A, as will be understood from Fig. 1. The pawl holds the jaw in its adjusted position and permits of ready adjustment.

The advantages of the combination-wrench above described will be readily appreciated, and its manner of use will be understood by any one familiar with this class of implements.

Having thus described the invention, what is claimed as new is—

1. The combination with the bars having offsets one of which is formed upon its opposite sides with grooves and with openings to receive lugs on clamping-jaws removably held in said offsets, of a jaw having flanges with portions working in said grooves, substantially as specified.

2. The combination-tool described consisting of the bars pivotally connected together and each formed with an offset and a lateral portion, a screw-bolt for holding the jaws or bars together, an adjustable jaw mounted to slide on one of the bars and provided with a bifurcated upright, a pawl mounted on a pivot held in said bifurcated upright, tools detachably mounted on said bars, and detachable and interchangeable jaws fitted for mounting in an opening between said bars, all substantially as shown and specified.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM HENRY RUSH.

Witnesses:

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C. D. MIMS.