

(No Model.)

W. H. HUSTON.
COMBINED NUT WRENCH AND TOOL.

No. 439,071.

Patented Oct. 21, 1890.

Fig. 1

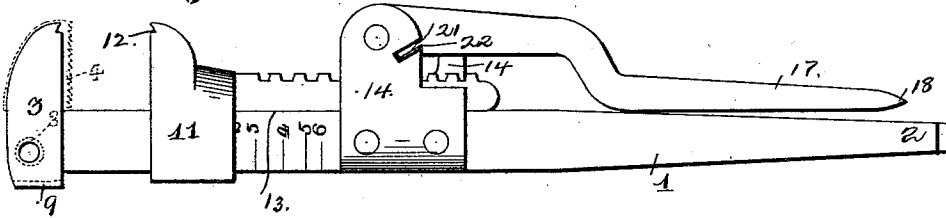


Fig. 2.

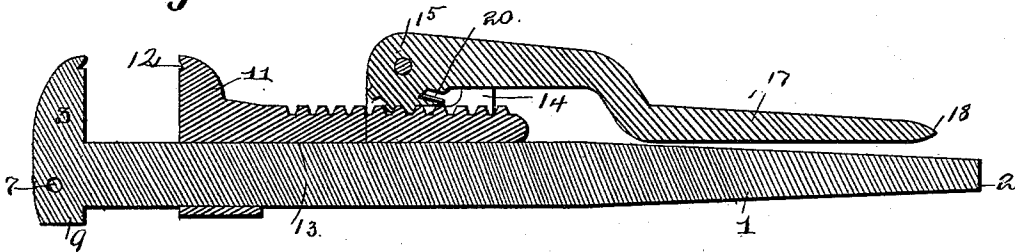


Fig. 3.

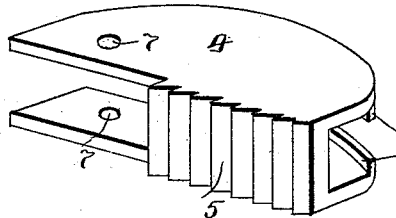


Fig. 4.

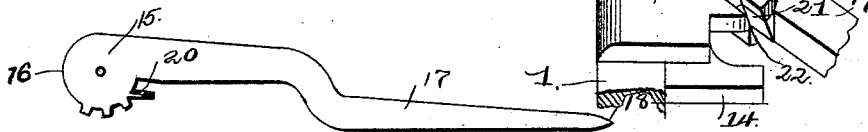
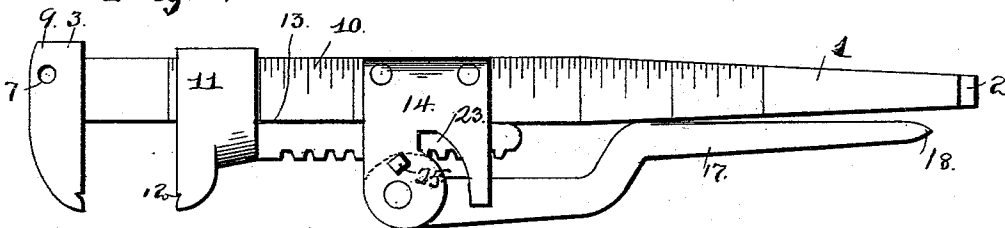


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM HENRY HUSTON, OF MEXICO, MISSOURI, ASSIGNOR OF ONE-HALF
TO FRANK A. GORDON, OF SAME PLACE.

COMBINED NUT-WRENCH AND TOOL.

SPECIFICATION forming part of Letters Patent No. 439,071, dated October 21, 1890.

Application filed September 2, 1890. Serial No. 363,766. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY HUSTON, a citizen of the United States, residing at Mexico, in the county of Audrain and State of Missouri, have invented a new and useful Combination-Wrench, of which the following is a specification.

This invention has relation to combination-tools, the objects in view being to construct a tool upon the plan of a wrench, and to embody in such construction not only an easily-operated, durable, and efficient wrench, but also numerous other tools convenient to the mechanic.

With the above and other objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a side elevation of a wrench constructed in accordance with my invention. Fig. 2 is a longitudinal vertical section. Fig. 3 is a detail in perspective of the rod and pipe attachment. Fig. 4 is a side elevation of the movable jaw-operating lever. Fig. 5 is a side elevation taken reverse to that shown in Fig. 1. Fig. 6 is a view in perspective of a detached part of the wrench, showing the wire-cutter.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing my invention I employ a shank 1, which in cross-section is oblong or rectangular, and which has its inner end reduced and beveled to form a screw-driver 2. At its upper end the shank terminates in an ordinary rigid wrench-head 3, which may be incased, when desired to be employed as a rod or type wrench, with a casing 4. (Shown in detail in Fig. 3.) The casing 4 is U shape in cross-section, has its under surface serrated or toothed, as at 5, and the upper edges of its terminals provided with flanges 6 for embracing the upper side of the head. A perforation 7 is formed in the sides of the casing and the head, and is designed to receive a removable pin 8, whereby the casing is locked upon the head. The rear end of the casing does not extend to the rear or hammer end or face 9 of the head, so that the device may be used as a hammer regardless of the pres-

ence of the casing. Upon one side the shank is divided into a scale of inches 10, whereby the same is adapted to serve as a measure or rule.

11 designates the sliding jaw, which at its upper free end is provided with a transverse groove or notch 12, whereby it is adapted to coact with the teeth of the casing and serve as a nail-extractor. The movable head 11 is provided with an opening which receives the shank loosely, and in front of the opening is provided with a depending or inwardly-disposed rack-bar 13, designed for contact with the edge of the shank.

At each side of the shank, near its center, is secured a pair of ears 14, which embrace the rack-bar, and in front of the same have pivoted therein between a segmental shaped and toothed head 15, the teeth of which engage the rack-bar, said head being provided in rear of the teeth with a plain untoothed surface 16, said head being formed upon the upper end of an inwardly-bent handle 17, which terminates at its lower end in a sharpened point 18, especially adapted for the blacksmith in preparing the hoofs of horses for shoes, or to be used as an ordinary punch.

The head is provided below its teeth with a recess 20. The latter is disposed and slightly inclined, and one of the ears 14 is provided with a recess 21, also inclined and forming a cutting-shoulder 22. The opposite ear has an opening 23. Wire may be passed through the recesses of the lever and the ears, and may be conveniently cut by a compression of the lever toward the shank. By swinging the lever until the plain portion of the head is opposite the rack-bar the removable jaw may be adjusted to adapt it to various sized pipes and rods, and by returning the lever, so that the teeth of the head thereof engage with the rack-bar, said adjustable head or jaw may be quickly raised or lowered to fit various sized rods, nuts, and pipes. It may also be used as a pair of pliers, performing all the functions of the same, for holding nails while being driven in convenient places and as tongs to be used at the anvil.

A scale is formed upon one side of the face of the stock, as shown in Fig. 1, which scale

is standard, and by it the diameter of a pipe or rod inclosed by the jaws may be accurately ascertained.

5 The various useful tools embodied in this single device and usually employed individually will be readily appreciated by all conversant with the handling and use of hand-tools.

10 The lower edges of the ears 14 combine with the stock to form an efficient tri-square. A perforation is formed in one of the ears 14, and in the same is threaded a set-screw 25, the inner end of which has contact with the head 15 of the lever 17. The two members—
15 namely, the stock and lever—may be adjusted apart by the screw and serve as a compass.

It will also be apparent that the wrench may be used for cracking nuts.

20 Having described my invention, what I claim is—

1. In a wrench, the combination, with the stock thereof terminating at its upper end in a fixed head and a sliding jaw having means for operating the same, of a removable U-
25 shaped casing for inclosing the head and having its under side provided with teeth and its upper edges with flanges for embracing the end of the head, said casing and head being perforated and a removable pin passed
30 through the same, substantially as specified.

2. In a wrench, the combination, with the stock terminating at its upper end in a head, a pair of bearing-ears projecting from the stock,

and a hand-lever terminating in a partially-toothed and partially-plain head pivoted be- 35
tween the ears, of a jaw mounted for sliding upon the stock above the ears and provided with a rack-bar passing between the stock and head of the lever and having its teeth engaged by those of the head, substantially as specified. 40

3. In a wrench, a stock having a standard gage of rods and pipes stamped upon one side thereof and terminating at its upper end in a thick head, a sliding jaw mounted for move- 45
ment upon the slot over the scale, and means for operating said jaw, substantially as specified.

4. In a wrench, the combination, with a stock, a sliding jaw having a rack-bar, and a pair of ears projecting from the stock embracing 50
the rack-bar, one of said ears having an opening and the other an inclined slot terminating in an inner cutting-shoulder, of a lever pivoted between the ears and having teeth for operating in the rack-bar, and a slot hav- 55
ing a cutting-shoulder adapted to coact with the shoulder in the slot of the ear, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 60
presence of two witnesses.

WILLIAM HENRY HUSTON.

Witnesses:

J. C. BASSFORD,

JAMES GARRETT, JR.