(No Model.)

G. W. THOMAS.

COMBINED PIPE AND NUT WRENCH.

No. 526,420. Patented Sept. 25, 1894.

Fig. 1.

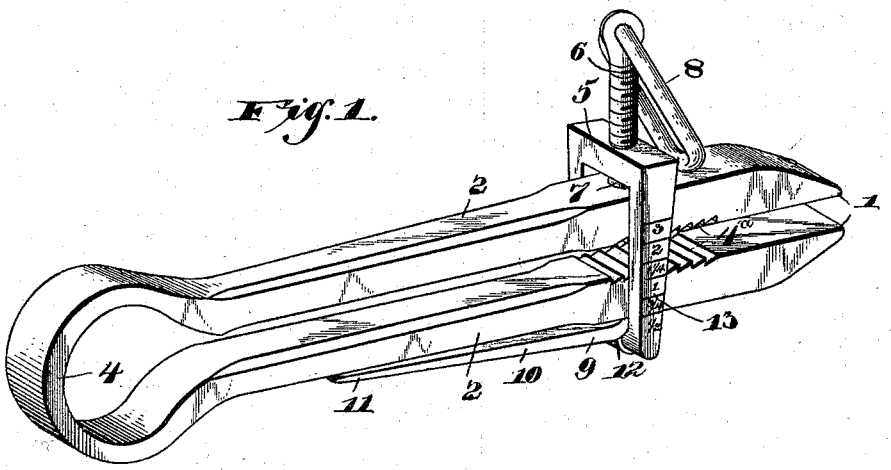


Fig. 2.

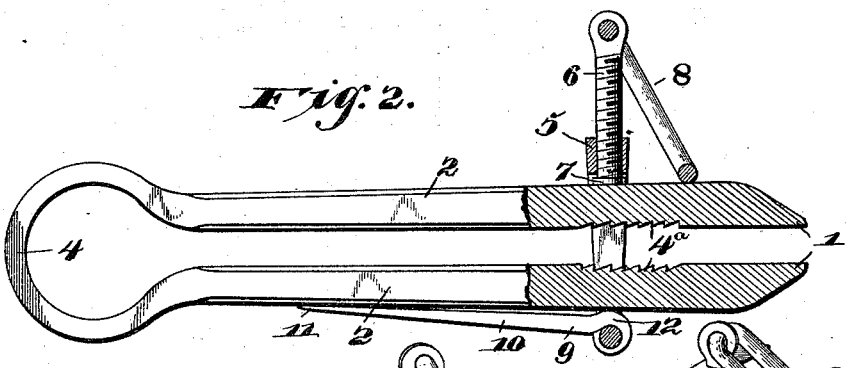


Fig. 3.

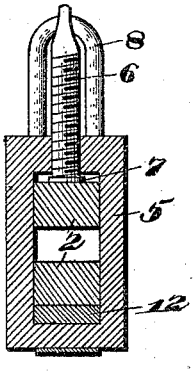


Fig. 4.

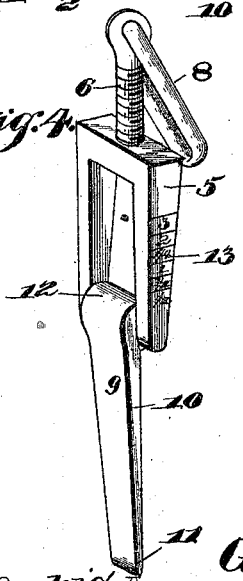
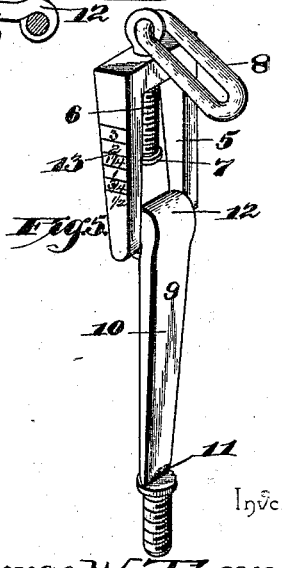


Fig. 5.



Witnesses

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GEORGE WASHINGTON THOMAS, OF YOSEMITE, KENTUCKY.

COMBINED PIPE AND NUT WRENCH.

SPECIFICATION forming part of Letters Patent No. 526,420, dated September 25, 1894.

Application filed March 28, 1894. Serial No. 505,479. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON THOMAS, a citizen of the United States, residing at Yosemite, in the county of Casey and State of Kentucky, have invented a new and useful Combined Pipe and Nut Wrench, of which the following is a specification.

My invention relates to a combined pipe and nut wrench, and the object sought is to produce a more durable and efficient device of the class described.

A further object is to provide a wrench, a part of which may be capable of use as a screw driver.

A still further object is to make the wrench susceptible of accurate adjustment to any size nut or pipe without having to test it by trial engagement with the nut or pipe operated upon.

To these ends the invention consists of certain improved features of construction and combination and arrangements of parts, all of which will be more fully described hereinafter, and finally embodied in the claims.

In the accompanying drawings—Figure 1 represents a perspective view of a wrench constructed after my invention. Fig. 2 is a longitudinal section thereof. Fig. 3 is a cross-section taken through the clamping head. Fig. 4 is a detail perspective view of the clamping head detached. Fig. 5 is a view showing the use of the screw driver attachment.

The reference numeral 1 indicates the jaws composing my wrench, and these are joined to the shanks 2, which are in turn connected to each other by the circular spring portion 4, the entire structure being of one piece of metal. By this means the jaws are given a spring tendency away from each other, and constructed in a very durable and cheap way. Formed on the adjacent faces of the jaws 1 is the corrugated or milled surface 4^a which is adapted to engage with the pipe operated upon and prevent its turning as is well understood, while the forward extremities of the jaws are formed plain, and adapted for the reception of the nut.

5 indicates the rectangular clamping frame head, which consists of a metallic ring or yoke, adapted to embrace the arms or jaws 1 of the wrench and capable of adjustment on the jaws to bring it into proper position for closing the same, accordingly as the smooth or corrugated portions of their inner opposed faces are to be used; but it is designed to be normally located directly adjacent to the rear or inner extremities of the corrugations 4^a. Operating in one end of the head 5, is the thumb screw 6, which extends through the head and is adapted to engage at its inner end, with the shank of the jaw 1, which is next to it.

Formed on the inner end of the screw 6, is the collar or enlargement 7, which operates to prevent the removal of the screw from the head, and to give a large surface for engagement with the shank 2.

The outer end of the screw 6, is provided with a link 8, which is secured thereto and which is used to give the operator a grip on the screw, so as to turn it in adjusting the wrench, as will appear hereinafter.

9 indicates the cam lever, which consists of a hand piece 10 provided with a tapering and sharpened end 11, adapted for use as a screw-driver; and of a cam portion 12 which embraces the end of head 5 which end is opposite the end having the screw 6, and rounded to permit the cam lever to turn thereon. The cam portion 12 consists of a strip of metal integral with the lever proper, and tapering from its point of connection with the same downwardly to its end, which, after curving around the head, lies directly adjacent to the lever main portion. Thus, as the lever extends parallel with the shank 2 and forward from the head, the jaws will lie as far apart as possible for the lever to allow, and when the lever is swung rearwardly so as to lie to the left or rearward from the head the thickened portion of cam 12 will engage the jaws and force them together. By withdrawing the screw 6 as far as the enlargement will allow the head 5 can be removed, and the end 11 of lever 9 used as a screw-driver, as shown in Fig. 5.

Formed on both the vertical or longer sides of the head 5, is the graduated scale 13 which starts at a point just even with the engaging surface of the jaw next to lever 9 and increases as it extends toward the remaining ends so that the distance between the two surfaces may be seen by glancing at the scale 13. The marks on this scale will denote the inches or fractions of inches, and by this

means the wrench can be adjusted to suit any size nut or pipe within the scope of its adjustment, without having to test the adjustment by trying it on the nut or pipe.

To use my invention the screw 6 of the head 5 is operated to adjust the jaws to the size of the nut or pipe with which the wrench is to be used. The lever 9, having first been thrown forward of the head, so as to allow the jaws to spread, the jaws are adjusted so as to fit loosely over the nut or pipe, and when this has been done it is placed so that its jaws will embrace the instrument operated upon, after which lever 9 is moved rearwardly so as to cause the jaws to move toward each other, and consequently clamp them firmly in engagement with the nut. It will now be possible to operate the wrench as ordinarily and when this has been done, the lever may be turned back to its normal position and the wrench withdrawn.

Having described my invention, what I claim is—

1. A pipe and nut wrench, comprising a pair of similar shanks, constructed of a single piece of resilient metal and connected at their inner ends by a circular loop and having their outer terminals formed into jaws, a rectangular frame receiving the jaws of the shanks and provided at one end with a threaded opening and having its other end rounded, a screw arranged in the threaded opening of the frame and engaging the adjacent jaw, and a cam lever provided at its head with an eye receiving the rounded end of the frame, substantially as described.

2. A pipe and nut wrench, comprising a pair of similar shanks constructed of a single piece of resilient metal, and having their inner terminals connected by a circular loop, and provided at their outer ends with jaws, having smooth outer portions and inner corrugated portions, a rectangular frame adjustably arranged on the jaws and provided at one end with a threaded perforation and having its other end rounded and forming a pintle, a screw arranged in the threaded perforation of the frame and provided at its outer terminal with a link, and a cam lever provided at its head with an eye receiving the pintle of the frame, substantially as and for the purpose described.

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

GEORGE WASHINGTON THOMAS.

Witnesses:
J. W. HOSKINS,
PLEAS. LANHAM.