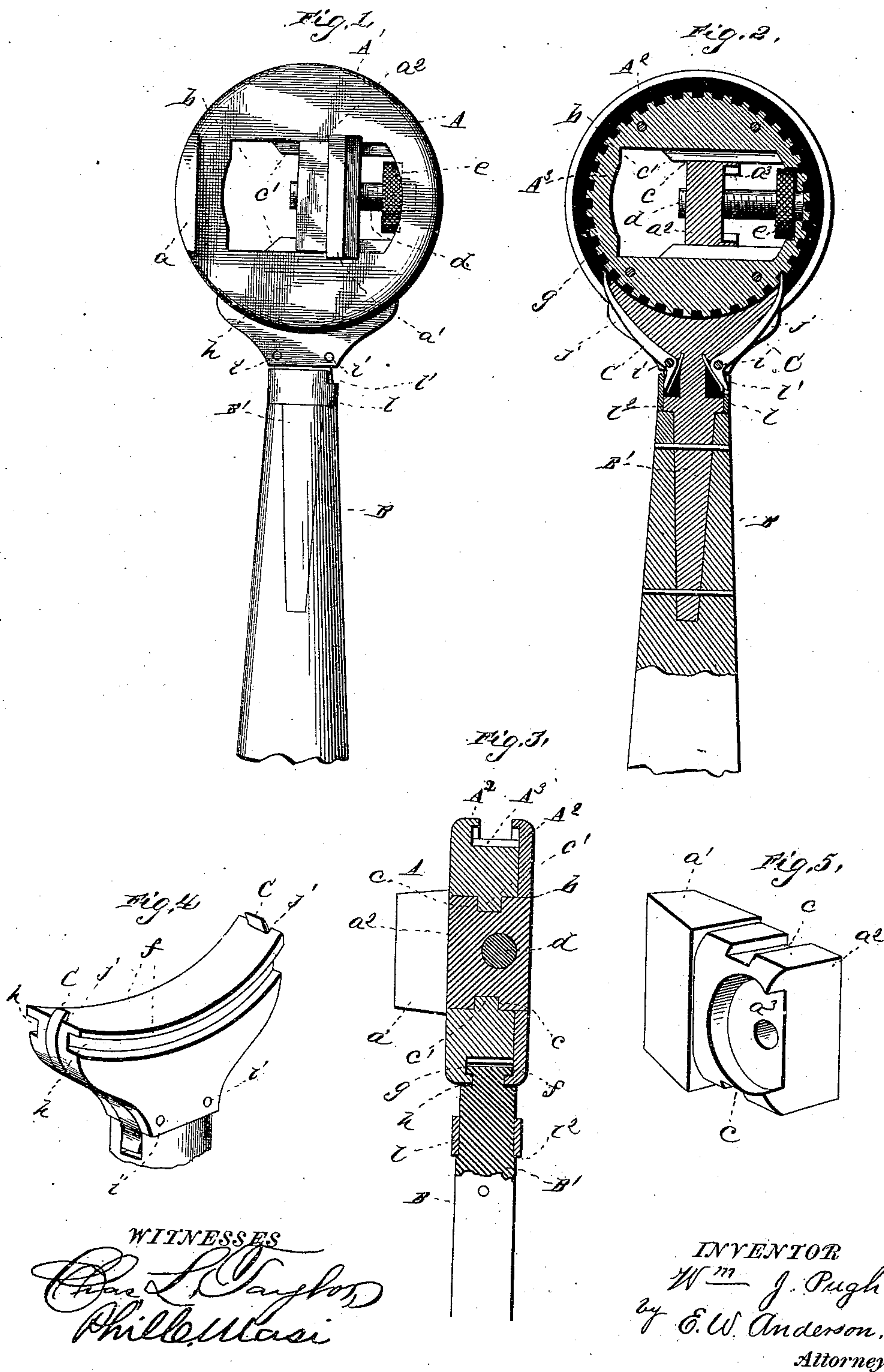


(No Model.)

W. J. PUGH.
WRENCH.

No. 446,291.

Patented Feb. 10, 1891.



UNITED STATES PATENT OFFICE.

WILLIAM J. PUGH, OF MUSCATINE, IOWA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 446,291, dated February 10, 1891.

Application filed August 9, 1890. Serial No. 361,532. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. PUGH, a citizen of the United States, and a resident of Muscatine, in the county of Muscatine and State of Iowa, have invented certain new and useful Improvements in Wrenches; and I do 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a plan view of the wrench. Fig. 2 is a horizontal central section. Fig. 3 is a vertical section, and Figs. 4 and 5 are detail views.

This invention relates to certain improvements in wrenches and combines a ratchet and monkey-wrench; and it consists in the novel construction and combination of parts, as will appear hereinafter.

In carrying out my invention I provide a circular head A, having upon one side an integral or fixed jaw *a* near its marginal edge or periphery, and in this head is an oblong or rectangular slot *b*, adapted to contain a slide *a*², forming the shank of the movable jaw *a*¹, standing in alignment with the fixed jaw *a*. The slide *a*² has in opposite sides grooves *c*, receiving ribs or ways *c*¹, projecting from the sides of the slot *b* for the support and guidance of the movable jaw. The slide *a*² is worked or moved by a screw *d*, bearing or turning in a screw-threaded aperture in said slide or jaw-shank, and in an aperture in the head A, and having an operating milled thumb wheel or disk *e* for effecting the adjustment of the movable jaw with relation to the fixed or stationary jaw, according to the size of the nut it is desired to fit the jaws to for turning. The slide *a*² has a recess *a*³ to receive the screw-actuating wheel *e* when the slide is withdrawn to its maximum limit. The head A is made of two circular sections A¹ A², one provided upon its inner side with a peripheral toothed or ratchet flange A³ of less diameter than the head, the other section being bolted or screwed to the aforesaid section.

B is the handle, the wooden or handle portion proper being slotted from its inner end some distance in the direction of its length and receiving and riveted or otherwise secured to the rectangular tang of the shank or metallic portion B¹ of the handle. The shank B¹ of the handle B has its inner end laterally extended, while that portion thereof facing the peripheral flange A³ of the head A is of a coincident curvature with said flange, and at the lower edge thereof are curved flanges *f*, engaging circular grooves *g* in the inner sides of the sections A¹ A² of the head A. In the outer sides of the shank B are curved recesses or grooves *h* to receive the inwardly-extended flanged outer edges of the sections A¹ A², partly forming the circular grooves *g* therein. Hung near their inner ends by pivots *i*, passing therethrough and through the outer corner edges of the angular portion of the shank B¹, are pawls C C, let into recesses *j* in the latter, either one of which being adapted to engage the ratchet or toothed flange A³.

The inner ends *k k* of the pawls C C are adapted to be engaged by a movable or shiftable ring or band *l*, having a notch *l*¹, and encircling or fitted upon a cylindric portion *l*² of the shank B¹, while the outer ends of said pawls are adapted to automatically engage the teeth of the ratchet-flange A³ under the action of springs *m*, interposed between said pawls and said shank. By shifting or adjusting the ring or band *l* so as to bring its notches *l*¹ opposite to one or the other of the said pawls, the pawl so elected will be thrown into engagement with the ratchet or toothed flange, the other pawl being held disengaged from the latter. Now, by actuating the handle after adjusting the wrench to the nut the engaging-pawl will turn the head A, with the nut-clamping jaws *a a*¹, and thus perform the turning of the nut. It will also be seen that the jaws, projecting laterally from the head A, are adapted to be introduced into a socket or below the surface, where so required, to engage the nut.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. The wrench having the head containing

the nut-clamping jaws and comprising the circular sections provided with opposite circular grooves, one section having a ratchet or toothed peripheral flange of less diameter 5 than said head, and the handle having its shank provided at its lower side edges with flanges and in its outer sides with recesses or grooves and carrying spring-pressed pawls, and the notched ring engaging said pawls, 10 substantially as set forth.

2. The wrench consisting of the sectional circular head having a fixed jaw and in its sections opposite circular grooves, one of said sections having a ratchet or toothed flange of 15 less diameter than said head, the movable or

sliding jaw arranged in a slot in the head and worked by a screw having a milled disk or wheel, and the handle carrying spring-pressed pawls and having its shank provided at the lower side edges with flanges and in its 20 outer sides with grooves or recesses, and the notched ring arranged on a cylindrical portion of said shank and engaging the inner ends of said pawls, substantially as specified.

In testimony whereof I affix my signature in 25 presence of two witnesses.

WILLIAM J. PUGH.

Witnesses:

R. B. HUFF,

ALLAN P. WATTERS.