

(No Model.)

H. P. ROBERTS.

WRENCH.

No. 376,991.

Patented Jan. 24, 1888.

Fig. 1.

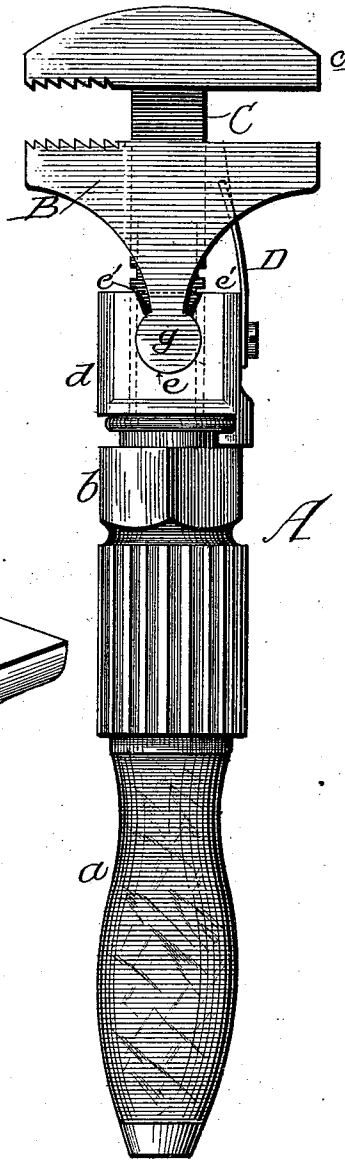
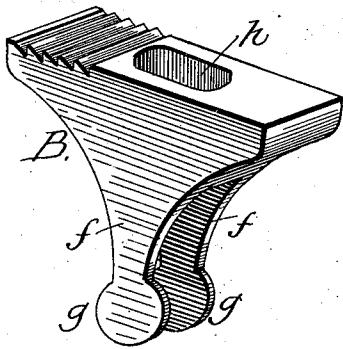


Fig. 2.



Witnesses
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WRENCH.

SPECIFICATION forming part of Letters Patent No. 376,991, dated January 24, 1888.

Application filed May 27, 1887. Serial No. 239,567. (No model.)

To all whom it may concern:

Be it known that I, HENRY P. ROBERTS, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Wrenches, of which the following is a full and clear description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of a wrench embodying my invention. Fig. 2 is a perspective view of the sliding jaw detached.

My invention relates to certain new and useful improvements in combined nut and pipe wrenches; and it consists in the peculiar construction of the sliding jaw and its attached sleeve, as I shall hereinafter fully describe and claim.

To enable others skilled in the art to which my invention appertains, I will now describe its construction and indicate the manner in which the same is carried out.

In the said drawings, A represents a wrench, of usual form, having the handle *a*, the adjusting-nut *b*, the fixed jaw *c*, and the sliding sleeve *d*, all of the usual well-known construction, with the exception of the sleeve *d*, which in the present case has a socket, *e*, formed in its sides, the said sockets terminating in inclined walls or stops *e'*, the purpose of which and the circular sockets will be hereinafter made manifest.

In the construction of many combined pipe and nut wrenches a pin or bolt has been passed through the sliding jaw and its attached sleeve, to serve as a pivot upon which said jaw might turn to more securely grasp and hold the pipe or other cylindrical object. The construction above mentioned is, however, objectionable in many particulars, but especially because of the breaking of the pivot-pins. These difficulties I have overcome by constructing the sliding jaw B with two downwardly-extending wings, *f*, the lower ends of which are provided with circular heads *g*, adapted to fit the sockets *e'*, formed in the sleeve *d*. These sockets *e'* are formed near the center of the sleeve and have their upper portions diverging outwardly to form inclined walls, which limit the movement of the movable jaw.

The heads are pressed into the sockets in

such a manner that they and the wings are flush with the sides of the sleeve *d*, and they are permitted to rotate within the sockets to impart the necessary swinging movement to the sliding jaw, whereby the serrated faces of the fixed and sliding jaws may securely grip and hold the pipe or other cylindrical object between them, the movement of the jaw being limited by the inclined walls or stops before mentioned.

The shank C projects from the center of the fixed jaw, and the sliding jaw B has a centrally-disposed elongated slot or opening, *h*, through which said shank passes. The jaws therefore project from both sides of the centrally-arranged shank and are capable of grasping cylindrical or angular bodies, as the circumstances require.

A spring, D, secured to the sleeve *d*, has its free end passed within the slot or opening *h* and bears against one of the walls of the same to return the sliding jaw to its normal position after the pipe has been released.

By reason of the above construction I am enabled to produce a strong combination-wrench on which all balls or pivot-pins are dispensed with, and at the same time furnish means whereby the pivotal movements of the sliding jaw are accomplished in a positive and simple manner.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

As an article of manufacture, a combined nut and pipe wrench consisting of a shank having a fixed jaw at one end, projecting from each side, a movable jaw having a centrally-disposed slot for said shank, said movable jaw being open front and rear and provided with two downwardly-extending side wings, *f*, terminating at the bottom in heads *g*, a sleeve, *d*, having sockets formed in its sides near the center to receive the heads, the upper portion of said sockets diverging upwardly to form at the front and rear of said wings walls or stops for limiting the movement of the movable jaw, and a spring for returning the jaw to its normal position, as herein described.

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Witnesses:

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