(No Model.)

J. WENSING.

COMBINED PIPE WRENCH, MONKEY WRENCH, AND FLANGE HOLDER.

No. 494,310. Patented Mar. 28, 1893.

Fig. 1.

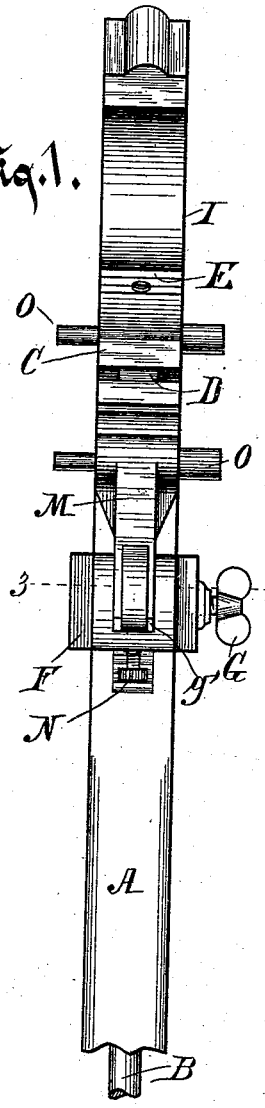


Fig. 2.

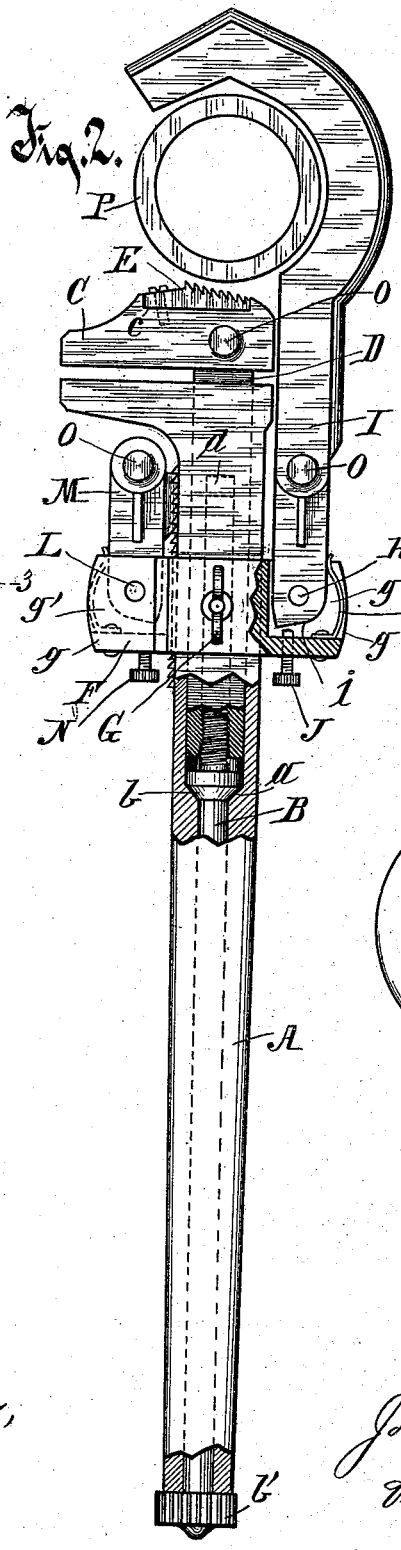


Fig. 3.

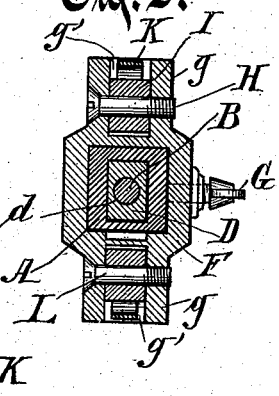
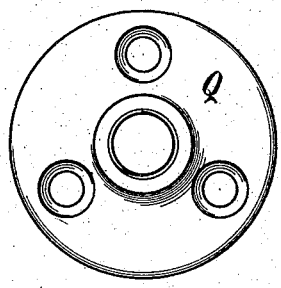


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN WENSING, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-THIRD TO ANTHONY V. KLEFISH, OF SAME PLACE.

COMBINED PIPE-WRENCH, MONKEY-WRENCH, AND FLANGE-HOLDER.

SPECIFICATION forming part of Letters Patent No. 494,310, dated March 28, 1893.

Application filed May 23, 1892. Serial No. 433,946. (No model.)

To all whom it may concern:

Be it known that I, JOHN WENSING, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Combination Pipe-Wrenches, Monkey-Wrenches, and Flange-Holders, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in combined pipe and monkey wrenches and flange holders.

The object is to provide a simple tool or implement of this character, capable of performing its work in a most efficient manner, and involving simplicity as well as ease and readiness of adjustment.

With the above object and others in view the invention consists in the improved construction and combination of parts as hereinafter more fully set forth.

In the accompanying drawings, Figure 1, is a face view of my improved tool or implement, a portion of the stock being broken away. Fig. 2, is a view at right angles to Fig. 1, certain parts being broken away to more clearly illustrate the interior arrangement. Fig. 3, is a transverse section on the line 3—3 of Fig. 1; and Fig. 4, is a detail view of an ordinary flange joint or union, which will more fully disclose one of the applications of my invention.

Like letters of reference designate like parts throughout the several views.

Referring to the drawings, the letter A designates the stock, forming the relatively fixed jaw of the monkey wrench. The stock is apertured throughout its entire length, the lower portion of this aperture being circular in form and the upper portion rectangular, the rectangular opening merging into the circular at the medial point *a*, which forms an inclined seat. A rod B turns in the aperture of the stock, one end of said rod being screw threaded for a desirable distance and immediately below the threads provided with an enlargement, *b*, conforming, and adapted normally, to rest upon the seat *a* of the stock.

The letter C indicates the movable jaw of the monkey wrench, said jaw provided with a rectangular shank D, passing into the rectangular portion of the opening of the fixed jaw. This shank is provided with a screw threaded recess, *d*, extending from its inner end outwardly for the greater portion of its length, and receiving the threaded portion of the rod B.

The movable jaw, C, above referred to, is provided upon its outer surface with a recess, *c*, in which is secured a serrated plate E, the function of which will hereinafter fully appear.

This monkey wrench is operated by turning rod B, the outer end thereof being provided with a mill head *b'* in order to facilitate its rotation. As this rod is turned in one direction, the threaded portion of rod B acts upon the threads of recess *d* and carries the movable jaw outwardly increasing the space between the two jaws forming the wrench. The distance between the two jaws, is decreased by reverse movement of the rod, as will be readily understood.

The letter F indicates a collar, preferably of rectangular form, adapted to surround the stock A. This collar is held in adjusted position upon said stock by means of a thumb screw G and is provided with lateral extensions *g*, *g*, having recesses or cavities *g' g'*, therein. In one of these cavities is pivotally secured, by means of a bolt H, a jaw I, adapted to form one of the gripping jaws of the device when used as a pipe wrench. The inner end of this jaw is beveled, as indicated at *i*, and through the lateral extension of the collar passes an adjusting screw J, which is adapted to act against said beveled end, and rotate the jaw upon its pivot bolt. A spring K has its free end bearing against the pipe wrench jaw, I, so as to hold it normally in the position shown in Fig. 2. The recess *g'* in the opposite lateral extension of the collar, has also pivoted therein upon a bolt L, a spring dog M, said dog also having its inner end beveled to provide for its adjustment laterally by contact therewith of the end of an adjusting screw N. The inner edge of this dog is toothed or serrated, said teeth or serrations

engaging similar teeth on the contiguous edge of stock A.

The movable jaw C, pipe wrench jaw I, and spring dog M are each provided with pins O extending transversely therethrough, the pins upon one side thereof being of less diameter than those upon the opposite side.

From the foregoing description, the application of my device as a monkey-wrench will be readily understood. It will of course be apparent that if desired, when thus used the collar F and its attached parts may be removed from the stock A by merely loosening thumb screw G. When it is desired to utilize the same as a pipe wrench, the movable jaw I, may be adjusted by loosening thumb screw G which retains collar F in place upon the stock, and sliding said collar to the proper position in order to have the wrench jaw grasp firmly the pipe, shown in Fig. 2, and designated by reference letter P. The movable jaw C of the monkey wrench, also serves as the inner jaw to the pipe wrench, the serrated plate E holding the pipe firmly in place.

In Fig. 4, I have illustrated an ordinary flange joint or union, Q, such as that of pipes—where the connecting pieces have perforated flanges by which the parts are bolted together. The ordinary way of holding these joints or unions when being attached to the pipes is not entirely satisfactory, and entails considerable labor. By providing the pins O, however, which are made to engage the perforations of the flange, the latter is most conveniently and firmly held while being adjusted in the manner just pointed out. The jaws I and M are adjusted outwardly by means of the screws bearing against the beveled ends thereof so as to bring the pins into alignment with the perforations while the jaw C is adjusted outwardly by means of rod B in order to bring its pin into alignment with the appropriate perforation. By providing pins of different diameters upon opposite sides of the several jaws, these may be made to fit perforations of different sizes, and the implement thus adapted for holding different sized flanges by merely reversing the position of the tool.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination, of a stock, having its upper end extended laterally to form a fixed jaw, a shank movably connected with the stock, the upper end of said shank provided with a laterally-extending jaw, the outer face of said jaw forming the lower jaw of the pipe-wrench and the inner face thereof the upper jaw of the monkey-wrench, and a jaw pivoted to the stock and longitudinally adjustable thereon, the upper portion thereof being curved to form the upper jaw of the pipe-wrench, substantially as set forth.

2. The combination, of a wrench, the movable jaw thereof provided with a pin, an adjustable collar upon the stock of the wrench, said collar provided with lateral recessed extensions, and spring pressed jaws pivoted in said recesses, each provided with projecting pins, substantially as set forth.

3. The combination, of a wrench, the movable jaw thereof provided with pins of different sizes upon opposite sides thereof, an adjustable collar upon the stock of the wrench said collar provided with lateral recessed extensions, and spring pressed outwardly-adjustable jaws pivoted in said recesses, each provided with projecting pins upon opposite sides thereof, said pins upon the opposite sides, respectively, being of different diameter, substantially as set forth.

4. The combination, of a wrench having its stock provided with serrations or teeth, and the movable jaw thereof provided with a projecting pin, an adjustable collar upon the stock, said collar provided with lateral recessed extensions, and spring pressed and outwardly-adjustable jaws pivoted in said recesses, each provided with projecting pins, and one of said jaws having teeth or serrations engaging the teeth of the stock, substantially as set forth.

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

JOHN WENSING.

Witnesses:
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