

(No Model.)

F. L. GEORGE.
PIPE WRENCH.

No. 470,042.

Patented Mar. 1, 1892.

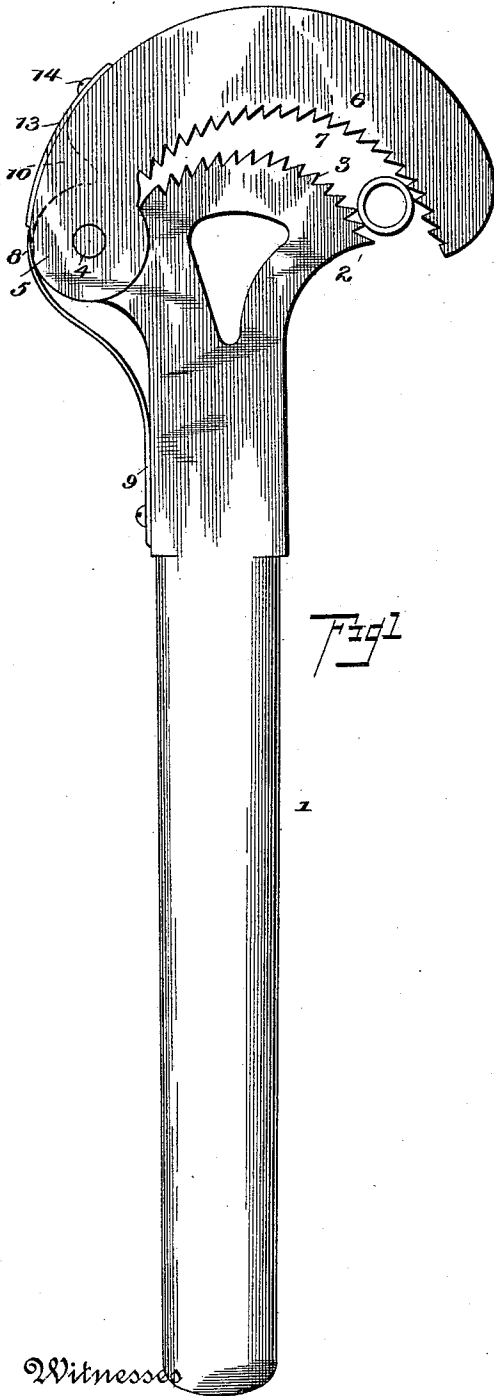


Fig 1

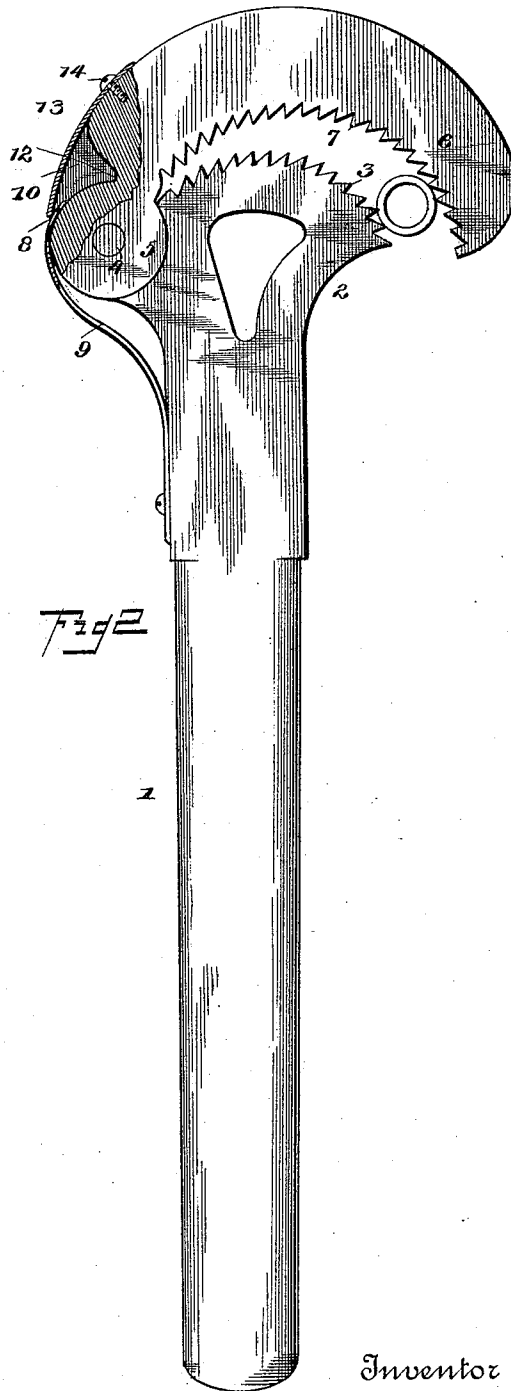


Fig 2

Witnesses

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PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 470,042, dated March 1, 1892.

Application filed September 29, 1891. Serial No. 407,158. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS LEWIS GEORGE, a citizen of the United States, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented new and useful Improvements in Pipe-Wrenches, of which the following is a specification.

This invention has for its object to provide a novel, simple, and economical pipe-wrench which is adapted for operating on pipes of varying diameter without the necessity of manipulating adjusting-screws for varying the capacity of the wrench.

The invention consists, essentially, in the combination of a lever-handle having a segmental toothed or serrated head, a segmental jaw having a cam-hub pivoted to the segmental head of the lever-handle and provided with a cavity or recess in its rear side, a curved leaf-spring attached at one extremity to the lever-handle and having its other extremity bearing against the outer side of the cam-head and projecting into the recess or cavity in such manner as to exert friction on the cam-hub to prevent loose swinging movements of the jaw and also to limit the opening movement thereof.

The invention is illustrated by the accompanying drawings, in which—

Figure 1 is a side elevation of a pipe-wrench constructed in accordance with my invention, and Fig. 2 is a similar view showing the segmental jaw in section to more clearly exhibit the cavity or recess and the cam-hub.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates a lever-handle of any suitable construction or form for the conditions required. The lever-handle is formed or otherwise provided at one end with a segmental head 2, having a series of teeth, notches, or serrations 3, and to one extremity of this notched or serrated head is pivoted, by a pin 4, the hub 5 of a segmental jaw 6, which is formed on its inner side with a series of teeth, notches, or serrations 7. The hub 5 of the segmental jaw is so shaped as to con-

stitute a cam-surface, while the hub is of a general circular formation to constitute a bearing-seat for the curved free extremity 8 of a leaf-spring 9, which is suitably attached to the lever-handle in such manner that while the segmental jaw can swing in the arc of a circle on the pivot 4 as a center the curved free extremity of the spring exerts such friction on the cam-hub as to prevent the loose swinging and awkward motions of the segmental jaw. The segmental jaw is formed in its rear side with a cavity or recess 10, located in juxtaposition to the cam-hub for the purpose of forming an abutment or stop-wall 12, to strike the free extremity of the spring and thereby limit the opening movement of the jaw. The cavity or recess 10 is closed by the cap-plate 13, attached to the jaw by a screw 14 or by other suitable means for the purpose of preventing the entrance of dirt into the cavity or recess, and also to improve the appearance of the instrument. A portion of the cam-hub forms one wall of the cavity or recess 10, and consequently the extremity of the spring lies within the cavity or recess against a portion of the cam-hub, thereby effectually restraining the segmental jaw in its movements and rendering the jaw susceptible of being held in any position to which adjusted, although not interfering with the swinging movements of the jaw in the arc of a circle for engaging pipes of varying diameter.

Having thus described my invention, what I claim is—

1. A pipe-wrench consisting of a lever-handle having a toothed head, a segmental jaw having an abutment or stop-wall, a cam-hub pivoted to the toothed head, and a leaf-spring attached to the lever-handle and having a curved free extremity which bears against the surface of the cam-hub and is adapted to strike the abutment or wall to limit the opening movement of the segmental jaw, substantially as described.

2. A pipe-wrench consisting of a lever-handle having a toothed head, a segmental jaw having a cam-hub pivoted to the toothed head and provided with a cavity or recess in juxtaposition to the hub, a leaf-spring se-

cured to the lever-handle and having a curved
free extremity bearing against the surface of
the hub and lying in the cavity or recess, and
a cap-plate secured to the segmental jaw and
5 covering the cavity or recess, substantially as
described.

In testimony whereof I have hereunto set

my hand and affixed my seal in presence of
two subscribing witnesses.

FRANCIS LEWIS GEORGE. [L. s.]

Witnesses:

JOHN A. LATTA,
C. M. GRAY.