(No Model.)

J. H. GREGORY.

WRENCH.

No. 488,431. Patented Dec. 20, 1892.

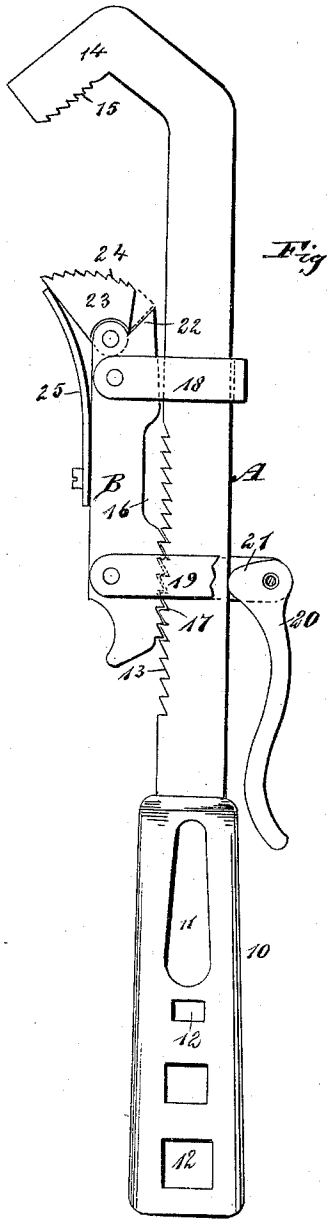

Fig 1.

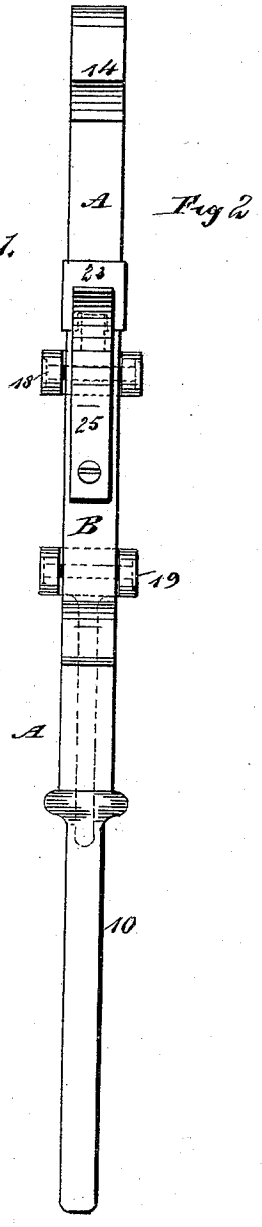

Fig 2

WITNESSES:

F. McArdle.

C. Sedgwick

INVENTOR

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN H. GREGORY, OF IONE, CALIFORNIA, ASSIGNOR TO HIMSELF AND JACOB NEWMAN, OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 488,431, dated December 20, 1892.

Application filed March 28, 1892. Serial No. 426,634. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. GREGORY, of Ione, in the county of Amador and State of California, have invented a new and useful Improvement in Wrenches, of which the following is a full, clear, and exact description.

The invention is an improvement in wrenches having a fixed jaw and another adapted to slide on the toothed shank and provided with a pivoted cam lever for locking it in any adjustment.

The invention is embodied in the construction and combination of parts hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in both the views.

Figure 1 is a side elevation of a pipe wrench constructed in accordance with my invention; Fig. 2 is a front edge view of the pipe wrench.

The wrench may be said to consist primarily of a body bar A and a sliding bar B. The body bar is provided at its lower end with a handle 10, which handle may be of wood or of metal. The metal handle is flat at opposite sides and provided with an elongated opening 11 extending through it, wider at one end than at the other, and a series of polygonal openings 12, of different sizes, the openings being adapted for use in removing plugs, for instance, or to facilitate the placing of plugs in position. Above the handle the front edge of the body bar A, is provided with a series of teeth 13, the upper surfaces of which are straight, their side surfaces being inclined, as shown in Fig. 1; and the body bar at its upper end is bent to a triangular, hook-like shape to form the upper jaw 14, of a pipe wrench, and the under surface of the outer member of this jaw is provided with appropriate teeth 15. The sliding bar B, is adapted for engagement with the forward face of the body A at top and bottom only; and to that end its inner edge between top and bottom is recessed, as shown at 16 in Fig. 1. The upper portion of the inner edge of the sliding bar is preferably made straight, while the lower portion of said surface is provided with teeth 17, adapted for locking engagement with the teeth 13 of the body. The body and sliding bars are connected by an upper strap 18 and a lower strap 19. The straps are connected with the sides of the sliding bar, one near the top and the other near the bottom, and these straps extend over both side faces of the body and around the back portion thereof. The upper strap 18, is made of such length that a limited outward movement of the sliding bar at its lower end is permitted; and the lower strap 19, is made much longer than the upper strap to accommodate a lever 20, which lever is fulcrumed at the back portion of the strap and is provided with a cam face 21, to engage with the rear surface of the body bar. A recess is made in the upper end of the sliding bar, so cut as to provide an inclined wall 22, at the back; and in the forward portion of this recess the lower jaw 23, of the wrench is pivoted. This jaw is essentially of triangular shape, but its top surface is curved more or less and provided with teeth 24, and when the wrench is manipulated in a certain direction the jaw 23, is carried inward and engages with the inclined wall 22 of the recess of the sliding bar. The outward movement of the sliding jaw is controlled by a spring 25, which has bearing against it, and is secured to the sliding bar at the forward edge thereof.

In using the wrench, it will be seen the spring 25, holds the jaw 24, in engagement with the pipe or other object to which the wrench is applied, while the inclined wall or shoulder 22, supports the jaw 23 when pressed down against it.

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

In a pipe wrench, the combination, with a body bar having an angular jaw formed at its upper end, the outer member of which is toothed and provided also at its forward edge with a series of teeth, a sliding bar having a toothed lower surface adapted for engagement with the toothed surface of the body bar, and having the inclined wall 22 in one end, and straps pivoted at the upper and lower portions of the sliding bar and encircling the body bar, the lower strap being longer than

the upper one, of a jaw pivoted in the upper end of the sliding bar opposite the inclined wall, one end of said jaw being inclined or beveled to meet the inclined wall of the sliding bar, a spring attached to the outer side of the sliding bar and bearing against the outer side of the pivoted jaw, and a cam or eccentric lever fulcrumed upon the lower strap of the sliding bar and adapted for locking engagement with the body bar, substantially as shown and described.

JOHN H. GREGORY.

Witnesses:
JOHN A. BROWN,
J. W. SURFACE.