No. 619,193. Patented Feb. 7, 1899.

M. LEMLEY.

WRENCH.

(Application filed Sept. 26, 1898.)

(No Model.)

Fig. 1.

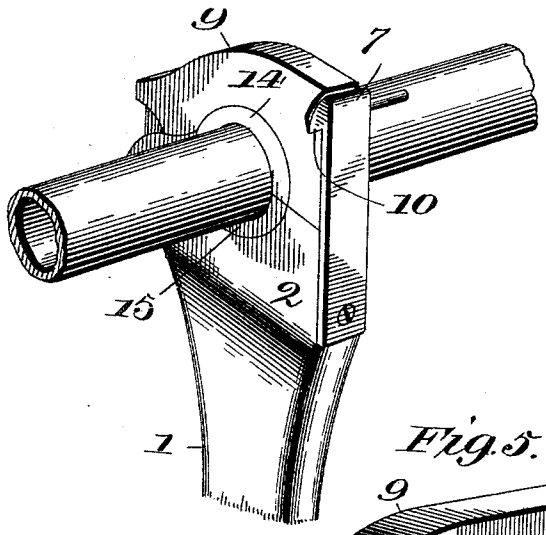


Fig. 3.

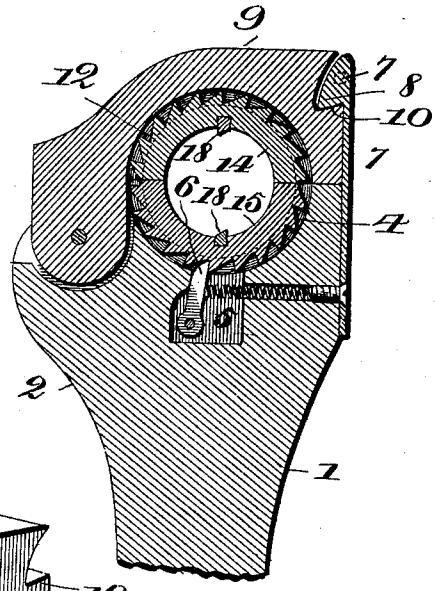


Fig. 5.

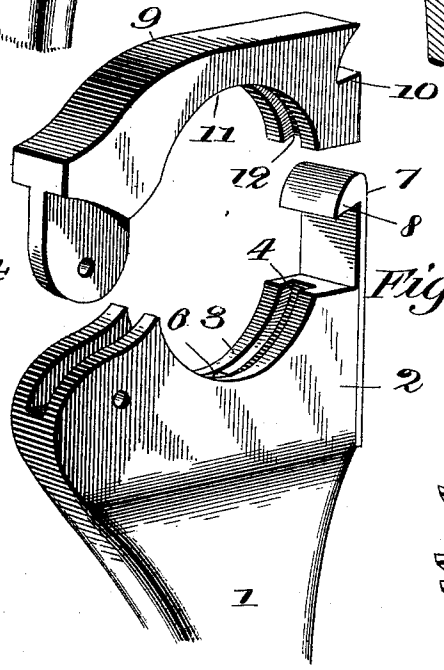


Fig. 2.

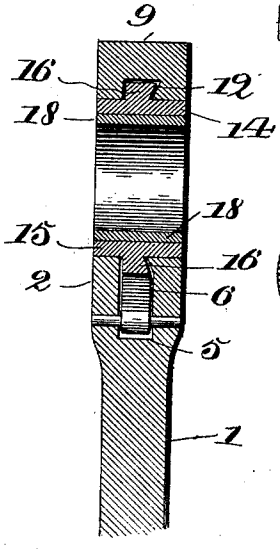
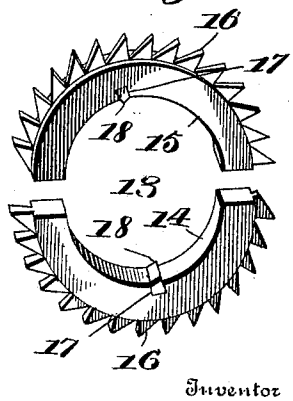


Fig. 4.

Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

MAURICE LEMLEY, OF CENTRE VIEW, OHIO.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 619,193, dated February 7, 1899.

Application filed September 26, 1898. Serial No. 691,920. (No model.)

To all whom it may concern:

Be it known that I, MAURICE LEMLEY, a citizen of the United States, residing at Centre View, in the county of Monroe and State of Ohio, have invented certain new and useful Improvements in Wrenches; and I do hereby 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.

My invention relates to that class of wrenches commonly known as "ratchet-wrenches," the same being especially designed for use as a pipe-wrench.

The object of the invention, among others, is to provide means whereby the wrench may be applied to the pipe to be operated upon laterally instead of by passing it over one end of the pipe.

The invention consists of a handle which terminates in a head at one end and has a semicircular recess therein and a groove in said recess, an arm pivoted at one end to said head and adapted to be locked at its other end thereto and also provided with a semicircular recess which has a groove therein corresponding to the recess and groove in said head, a spring-actuated dog projecting into the groove in said head, and a two-part clamp which fits within the semicircular recesses in said head and arm and is provided with projecting ratchet-teeth, which fit within said grooves.

The invention also consists in other details of construction and combinations of parts, which will be hereinafter more fully described and claimed.

In the drawings forming a part of this specification, Figure 1 represents a perspective view of my improved wrench shown in operative position upon a pipe. Fig. 2 is a longitudinal section through the upper end of the same, taken in a plane at right angles to the sides of the handle. Fig. 3 is a central longitudinal section taken in a plane parallel with the sides of the handle. Fig. 4 is detail perspective view of the upper end or head of the handle with the pivoted arm and clamp sections removed. Fig. 5 is a similar view of the arm, showing the groove therein. Fig. 6 is a similar view of the two sections of the clamp slightly separated one from the other.

Like reference-numerals indicate like parts in the different views.

The handle 1 is formed with a head 2 upon one end thereof, which has a semicircular recess 3 therein and a dovetail groove 4 concentric with said recess. Extending through a socket 5 in the head 2 and projecting into the groove 4 is a spring-actuated dog 6, provided for the purpose, which will hereinafter appear. Removably secured to one side of the head 2 by a screw or other analogous device is a spring-catch 7, having an engaging shoulder 8 on its upper projecting end. Pivoted to the head 2 on the side opposite the point of attachment of the spring-catch 7 is a curved arm 9, having a shoulder 10 on the free end thereof, which is adapted to be engaged by the spring-catch 7 for the purpose of locking said arm in its closed position. The arm 9 has a semicircular recess 11 on its under side, which when the arm is in its closed position forms a continuation of the recess 3 in the head 2. The said arm is further provided with a dovetail groove 12, concentric with the recess 11 and lying directly opposite the groove 4 in the head 2.

Coöperating with the parts described is a two-part clamp 13, made up of the separable sections 14 and 15, each having a semicircular outer surface and both designed to fit loosely within the recesses 3 and 11, as clearly shown in the drawings. Formed upon the outer surface of each of the sections 14 and 15 is a series of projecting ratchet-teeth 16 16, which are dovetailed to correspond with the dovetailing of the grooves 4 and 12 and are designed to fit and be held within said grooves with a provision for rotary movement. These teeth are adapted to be engaged by the spring-actuated dog 6, the said dog riding freely over the inclined portions of said teeth when the handle 1 is moved in one direction and engaging the shouldered portions of said teeth when the handle is moved in the opposite direction, so that a back-and-forth movement of the handle will cause a continuous rotary movement in the same direction of the clamp

13 and the device upon which it operates. Formed in the inner surface of each of the sections 14 and 15 of the clamp is a dovetail groove 17, which receives a removable bit 18, which is adapted to bite into the pipe or other device operated upon, for which purpose the upper edge of said bit is inclined or beveled.

To adapt the wrench to be used upon pipes of different sizes, the sections 14 and 15 may be removed and other sections, having a similar exterior surface, but a different interior surface, may be substituted therefor, or the bits 18 may be removed and other bits placed within the grooves 17.

When it is desired to apply the wrench to a pipe, the spring-catch 7 is drawn outwardly, freeing the engaging portion 8 thereof from the shoulder 10 on the arm 9. The said arm may then be swung open in a manner readily understood, the two sections of the clamp separated one from the other, and the arm 9 reclosed about the pipe and locked in place. The pipe will be engaged by the bits 18 18, and upon the reciprocation of the outer end of the handle 1 the clamp 13 and the pipe which it engages will be rotated continuously in the same direction. To remove the wrench from the pipe, it is necessary that the handle be so turned as to bring the meeting edges of the clamp-sections 14 and 15 in line with the upper end of the head 2. When in this position, the said sections may be readily separated, the lower one, 15, remaining in the recess 3 and the upper one, 14, remaining in the recess 11. The said sections are held in said recesses by reason of the fact that the ratchet-teeth 16 are dovetailed and correspond in shape with the grooves 4 and 12, within which they fit.

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

1. In a wrench, the combination with the head and an arm pivoted thereto, of a clamp made up of two separable sections located between the said head and arm and adapted to rotate independent thereof.

2. In a wrench, the combination with the head and an arm pivoted thereto, each having a semicircular recess therein lying opposite each other, of a two-part clamp fitting and adapted to rotate in said recesses, ratchet-teeth thereon, and a spring-actuated dog adapted to engage said teeth.

3. In a wrench, the combination with the head and an arm pivoted thereto each having a semicircular recess in it, which recesses lie opposite each other and each having a dovetail groove concentric with said recesses, of a two-part clamp fitting and adapted to rotate in said recesses, dovetailed ratchet-teeth on said clamp adapted to fit within said grooves, and a spring-actuated dog adapted to engage said teeth.

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

MAURICE LEMLEY.

Witnesses:
CHARLES M. DITTMAR,
OSCAR WHITE.