(No Model.)

L. A. SMITH.

WRENCH.

No. 589,312. Patented Aug. 31, 1897.

Fig. 1.

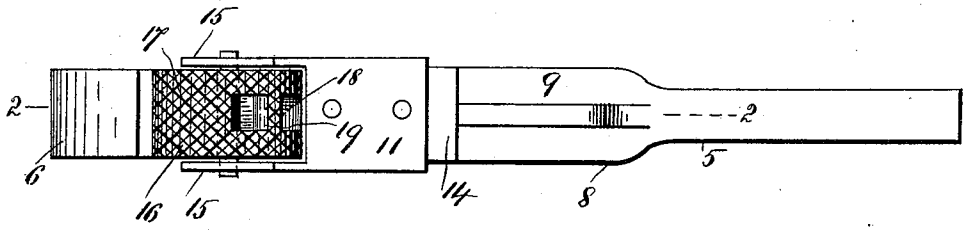
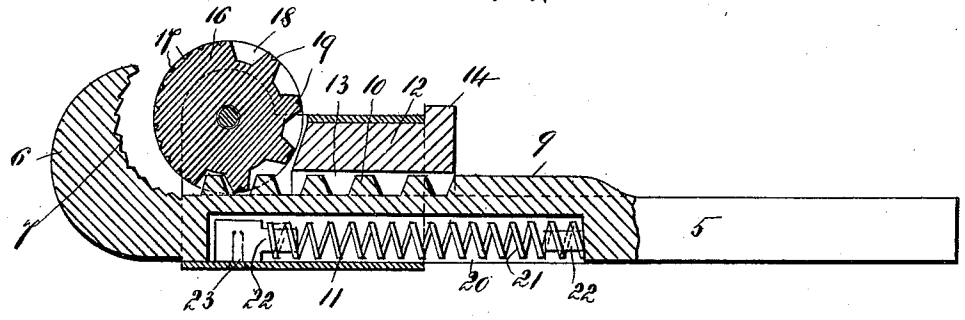


Fig. 2.



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UNITED STATES PATENT OFFICE.

LEIGHAL AGUSTA SMITH, OF NEW BERN, NORTH CAROLINA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 589,312, dated August 31, 1897.

Application filed June 10, 1897. Serial No. 640,175. (No model.)

To all whom it may concern:

Be it known that I, LEIGHAL AGUSTA SMITH, a citizen of the United States, residing at New Bern, in the county of Craven and State of North Carolina, have invented certain new and useful Improvements in Wrenches, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to wrenches; and the object thereof is to provide an improved pipe-wrench which is provided with a movable jaw which is automatic in operation; and with this and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by the same numerals of reference in each of the views, and in which—

Figure 1 is a plan view of my improved wrench, and Fig. 2 a partial section on the line 2 2 of Fig. 1.

In the practice of my invention I provide a wrench for the purpose herein specified which comprises a handle 5, which is provided at one end with a curved or segmental stationary jaw 6, the inner surface of which is provided with transverse ratchet-teeth 7 and the jaw 6, and that portion of the handle adjacent thereto is much wider than the outer end of said handle, as shown at 8.

That portion of the handle adjacent to the jaw 6 is provided centrally with an upwardly-directed flange 9, in which are formed ratchet-teeth 10, and mounted on said portion of the handle is a casing 11, in the upper side of which is secured a block 12, in which is formed a groove 13, which is adapted to receive the flange 9 of the handle, and the block 12 is provided at its outer end with an upwardly-directed shoulder or projection 14.

The casing 11 is provided at the end thereof adjacent to the stationary jaw 6 with upwardly-directed ears 15, in which are mounted a wheel 16, the perimeter of which is provided with projections or teeth 17, and formed in one side thereof are cavities or recesses 18, between which are transverse bars 19, which operate as ratchet-teeth and are adapted to engage with the ratchet-teeth of the flange 9 of the handle.

Formed in the under side of the larger portion of the handle is a longitudinal chamber 20, in which is mounted a strong spiral spring 21, and this spiral spring is held in place by pins 22 at the opposite ends of said chamber 20 and by the under side of the casing 11, and one of said pins 22 is secured to the bottom of said casing, as clearly shown at 23, and the operation of said spring is to force the casing 11 and the wheel 16, mounted therein, in the direction of the stationary jaw 6, and the operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof.

Whenever it is desired to connect the wrench with a pipe or similar device or article, the casing 11 is moved away from the stationary jaw 6 by grasping the same with the hand, and the said pipe, rod, or other device is placed between the stationary jaw 6 and the wheel 16 and the casing 11 is released, and the spring 21 at once forces said casing and the wheel 16 outwardly in the direction of the stationary jaw and causes said wheel to bear upon the pipe, rod, or other device, and the wrench may then be manipulated in the usual manner.

The wheel 16 is so mounted that the serrations or teeth formed thereon will bear upon the pipe in any position of said wheel, and the sides of the perimeter of said wheel adjacent to the cavities or recesses 18 are also provided with said serrations or projections.

My improved wrench is simple in construction and operation and is perfectly adapted to accomplish the result for which it is intended, and it will be apparent that changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages.

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

1. A wrench comprising a handle at one end of which is a curved stationary jaw, said handle being provided on its upper side with a

central longitudinal rib or flange, and on its under side with a longitudinal chamber, and a sliding casing mounted thereon and provided with a groove which is adapted to receive said rib or flange, said casing being provided in the end thereof adjacent to the stationary jaw with a wheel, the perimeter of which is provided at one side with ratchet-teeth which are adapted to engage with ratchet-teeth formed in said rib or flange, and a spiral spring which is mounted in said chamber, one end of which is connected with said casing, substantially as shown and described.

2. A wrench comprising a handle at one end of which is a curved stationary jaw, said handle being provided on its upper side with a central longitudinal rib or flange, and on its under side with a longitudinal chamber, and a sliding casing mounted thereon and provided with a groove which is adapted to receive said rib or flange, said casing being provided in the end thereof adjacent to the stationary jaw with a wheel, the perimeter of which is provided at one side with ratchet-teeth which are adapted to engage with ratchet-teeth formed in said rib or flange, and a spiral spring which is mounted in said chamber, one end of which is connected with said casing, said wheel being also provided on its perimeter with projections or teeth, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 4th day of June, 1897.

LEIGHAL AGUSTA SMITH.

Witnesses:
WM. R. WARTERS,
BENJ. SUMNER GUION.