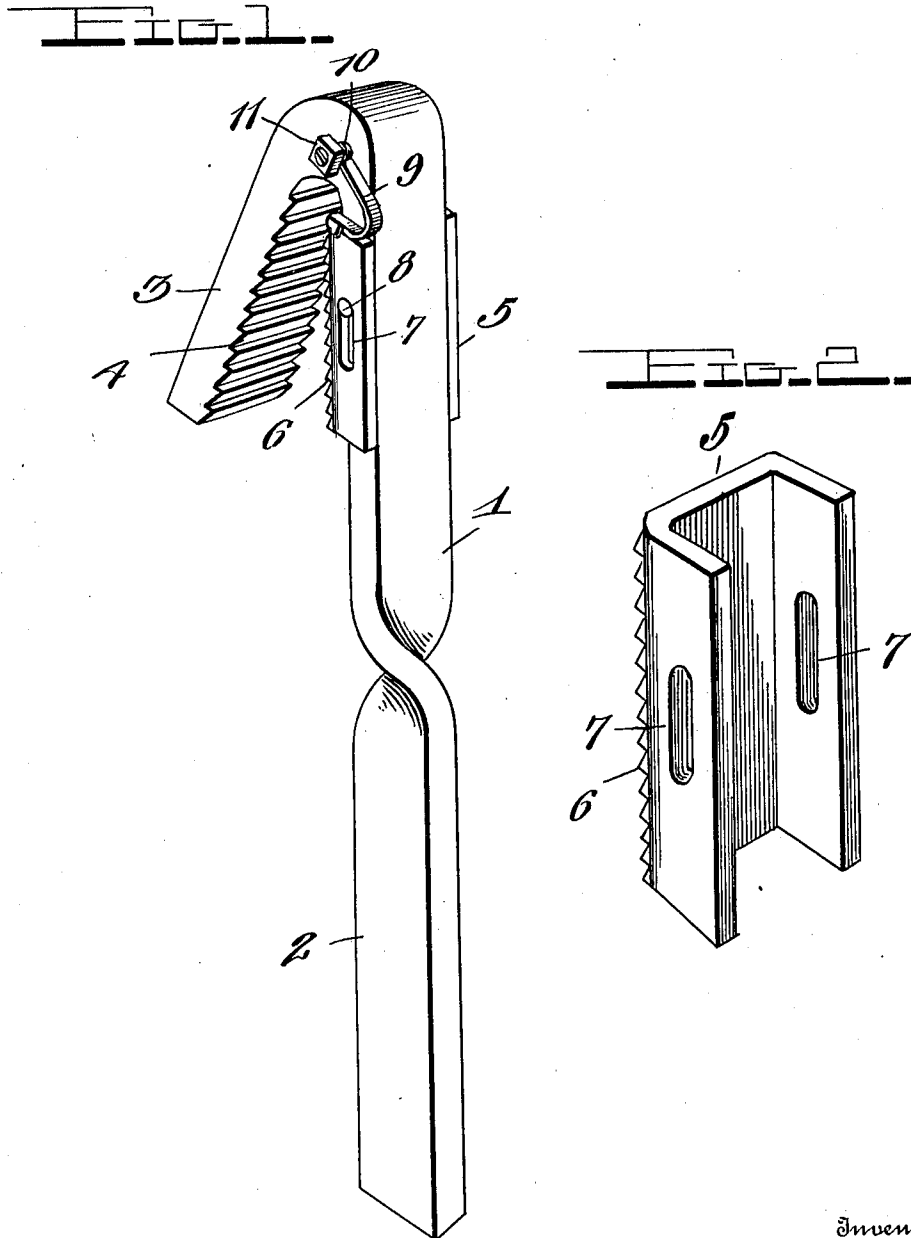


O. W. HALL.
PIPE WRENCH.
APPLICATION FILED MAY 8, 1911.

1,026,802.

Patented May 21, 1912.



Witnesses

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OLIVER W. HALL, OF SAN JOSE, CALIFORNIA.

PIPE-WRENCH.

1,026,802.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, OLIVER W. HALL, a citizen of the United States, residing at San Jose, in the county of Santa Clara and State of California, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to new and useful improvements in wrenches and more particularly to the class known as pipe wrenches, and my object is to provide a device of this character which is provided with a sliding gripping device.

A further object resides in providing this gripping device in connection with one of the jaws and to provide an adjustable spring member having coöperation therewith.

Another object of the invention resides in providing a bent leaf spring, one end of which is engaged with the gripping device, while the other end thereof is secured to the end of a split screw, and a further object resides in providing a nut for the end of said screw, whereby the end of the spring member may be securely held between the jaws of said split screw and adjusted when desired.

A still further object resides in providing a gripping member which is channel-shaped in cross section and has the side walls thereof provided with slots, and a still further object is to provide a device of this character which is simple in construction, inexpensive to manufacture and extremely effective in operation.

With these and other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claim.

In the accompanying drawing forming a part of this application, Figure 1 is a perspective view of the wrench, and, Fig. 2 is a detail perspective of the gripping member removed.

In carrying out my invention, I shall refer to the drawing in which similar reference characters designate corresponding parts throughout the several views and in which—

1 indicates a shank or the like having a handle member 2 formed on the lower end

thereof and the upper end thereof bent downwardly and outwardly, as shown at 3, to form a jaw or the like. The portion 3 forms a substantial V member with the upper portion of the shank 1, and the arms of this V member may be termed oppositely disposed jaws, the inner face of the bent portion 3 being corrugated, as shown at 4, for obvious purposes.

Mounted on the jaw of the shank 1 opposed to the bent jaw portion 3, is a slidable gripping member 5, said gripping member being channel-shaped in cross section and has the front face thereof corrugated, as shown at 6, and disposed to rest on the inner face of the shank 1 opposed to the corrugated face of the jaw 3. The side walls of the gripping member are provided with slots 7 to receive therethrough the ends of a bolt 8 extending through the shank 1, thereby allowing a slight sliding movement of said gripping member, and in order to cause said sliding member to normally remain at one extremity of its possible path, a leaf spring 9 is provided which has one end thereof secured in a split screw bolt or the like 10 mounted in the upper end of said shank 1 and the opposite end thereof bent to engage the upper edge of the sliding member 5. The free end of the screw bolt 10 has engaged therewith, a nut 11 which will securely retain the end of the spring between the jaws of said bolt, and it will be appreciated that should the spring become weakened through wear, this nut may be removed and the spring adjusted to give a greater tension or, if desired, the old spring may be readily replaced by a new one. This spring will normally position the sliding member in its lowermost position so that the upper end walls of the slots in said gripping member will engage the bolt 8 and limit the downward movement of said member.

The corrugations on the inner faces, respectively, of the jaw 3 and sliding member 5 take the form of teeth, the teeth of said sliding member 5 being preferably disposed downwardly, while the other teeth are disposed upwardly, and it will be seen that as the spring member 9 has a tendency to force the sliding member downwardly on the shank 1, the teeth thereof will be adapted to bite against the pipe or the like being operated upon. A pipe being engaged between the substantial V-shaped jaws, is

adapted to be turned by the pressure of the handle member downwardly, which action will force the sliding member upwardly against pressure on said spring 9, and as the teeth of said sliding member face downwardly, while the opposed teeth face upwardly, it will be seen that the pipe will be tightly gripped and turned with the downward pressure of said handle. As pressure is released from the handle member, and said handle brought upwardly to its initial position to be again engaged with the pipe, the spring 9 will again force the sliding member to its lowermost or normal position, and as the teeth thereof face downwardly, the same will ride readily over the outer periphery of the pipe, whereupon the pipe may be given another turn, the action of the wrench being the same as just described.

From the foregoing, it will be seen that I have provided a simple and economical form of pipe wrench in which there is provided a sliding gripping member which is adapted to be operated from one direction by means of the pressure thereof against the pipe being turned, and forced in the opposite direction by means of a spring acting on the same. Furthermore, it will be seen that during the operation of the wrench, the pressure of the handle member in the direction which forces the sliding member against the pressure of the spring, will cause said sliding member to be clamped more tightly on the pipe and thereby aid in the

turning thereof. It will still further be seen that I have provided an adjusting means in connection with the spring member acting on the gripping device, whereby when said spring member weakens through wear, or is otherwise damaged, the same may be adjusted to give a greater tension or, if desired, readily replaced by an entirely new spring.

As the invention consists of few parts and is of extremely simple construction in general, the same is inexpensive to manufacture, and one which will be very effective and useful in operation.

What I claim is:—

In a wrench of the class described, the combination with a pair of opposed jaws and a handle member therefor; of a gripping member slidably mounted on one of said jaws, means to limit the movement of said gripping member, a leaf spring member bent in its length and having one end thereof engaged with said gripping member to normally force the same in its lowermost position, a split screw extending through one of said jaws and having the opposite end of said spring engage therewith, and means to lock said spring in engagement with said screw.

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

OLIVER W. HALL.

Witnesses:

C. A. LEAF,
BEN ASTLES.