

(No Model.)

G. W. MORRILL.
PIPE WRENCH.

No. 491,850.

Patented Feb. 14, 1893.

Fig. 1.

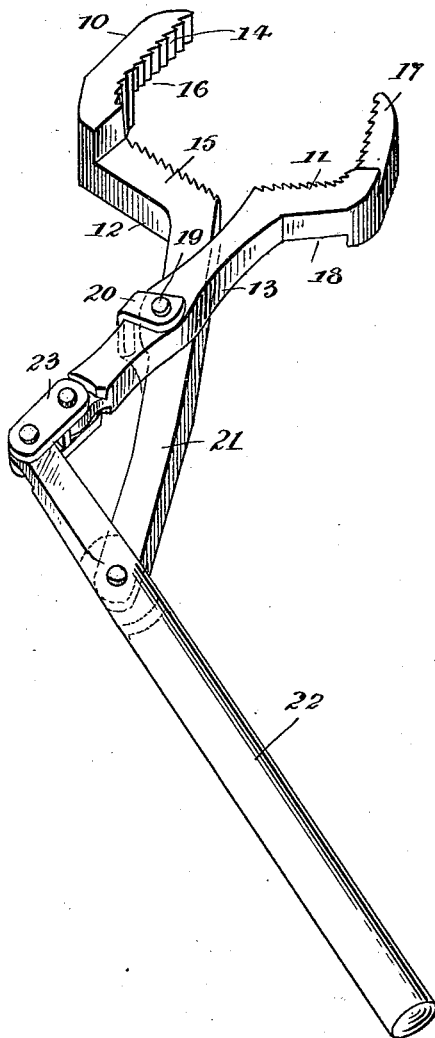
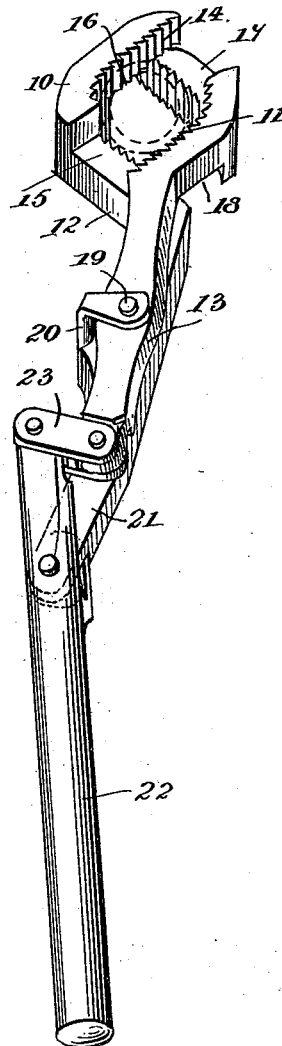


Fig. 2.



WITNESSES:

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GEORGE W. MORRILL, OF ALTON, NEW HAMPSHIRE.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 491,850, dated February 14, 1893.

Application filed June 6, 1892. Serial No. 435,702. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MORRILL, of Alton, in the county of Belknap and State of New Hampshire, have invented a new and useful Improvement in Pipe-Wrenches, of which the following is a full, clear, and exact description.

My invention relates to an improvement in pipe wrenches, and has for its object to provide a wrench of exceedingly simple and durable construction, capable of being expeditiously and conveniently applied to a pipe, and of being readily and firmly brought to a locking engagement with a pipe in a manner enabling the pipe to be turned in any direction at the will of the operator.

Another object of the invention is to construct a wrench of but few parts, and to impart to the wrench a maximum of strength at the least possible cost.

The invention consists in the novel construction and combination of these several parts, as will be hereinafter fully set forth and pointed out in the claim.

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

Figure 1 is a perspective view of the wrench open; and Fig. 2 is a perspective view of the wrench closed.

The jaws 10 and 11, are provided respectively with shanks 12 and 13. The jaws are somewhat angular or V-shaped, and are provided with teeth 14 upon their inner surfaces. In the upper rear portion of the jaw 10 a recess 15, is produced, while in the under rear portion of the said jaw, a recess 16, is made, corresponding in depth to the recess 15; and the recess 15 extends to the shank, while the recess 16, is carried through the outer extremity of the jaw. In the opposite jaw 11, in the upper outer portion thereof a recess 17, is produced, and in the rear lower portion a corresponding recess 18, is made. The shanks 12 and 13 of the jaws are of the same thickness as the jaws at their inner recessed portion, and the two shanks are pivoted one upon the other by a pivot pin 19, and this pin is usually passed through a strap 20, forming a portion thereof, attached to the under shank

12 and extending upward over the upper shank 13. Thus when the jaws are closed one is capable of passing over the other to such an extent that they may grasp the smallest size of pipe. The shank 12 is of much greater length than the shank 13, and the shank 12, is curved at its lower portion outward or away from its jaw, as shown at 21 in Fig. 1. The lower end of the shank 12 is pivotally connected near the upper or outer end with a handle 22, the pivotal connection being made by producing upon one side of the handle a stirrup with which the lower end of the shank 12, is pivotally connected, the pivotal pin extending through the stirrup, the shank and the handle. The upper end of the handle 22, and the lower or rear end of the shorter shank 13, are connected by a short link 23. It will thus be observed that by this arrangement of levers, which closely approximates a toggle connection, an exceedingly powerful leverage is obtained, and the jaws may be opened very wide with but a slight movement of the handle, and likewise a slight movement on the part of the handle will cause the jaws to close upon the pipe, as shown in Fig. 2, and the purchase obtained is such that the pipe is gripped so tightly that it may be turned in any desired direction; and, furthermore, there is no fear of the jaws losing their grip, as in turning the pipe the handle is drawn in a direction that will cause its upper end to exert outward force upon the link 23, and in a direction just contrary to that in which the force is exerted when the jaws are opened. When the jaws are partially open the link 23, is in a horizontal position, or stands transversely across the longer shank 12.

When the jaws are fully opened, the position of the link is at an angle to the shank 12, but the link will have been carried past the shank and some distance beyond what may be termed its outer side. When the jaws are brought fully together, the link will have crossed the shank 12 and will extend partially beyond the inner side of it.

This wrench, it will be observed, is exceedingly simple, it is durable and economic, and it is capable of quick adjustment to any size of pipe, and of turning the pipe without danger of slipping.

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

5 A wrench consisting of angular and toothed jaws having oppositely recessed faces to permit them to cross each other and provided with shanks of unequal length pivoted one upon the other, a handle pivoted between its

ends to the end of the longer jaw shank, and a link pivoted to one end of the handle and to the end of the shorter jaw shank, substantially as herein shown and described.

GEORGE W. MORRILL.

Witnesses:

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BENJ. G. EDGERLY.