(No Model.)

C. C. EDGERLY.

PIPE AND NUT WRENCH.

No. 342,078. Patented May 18, 1886.

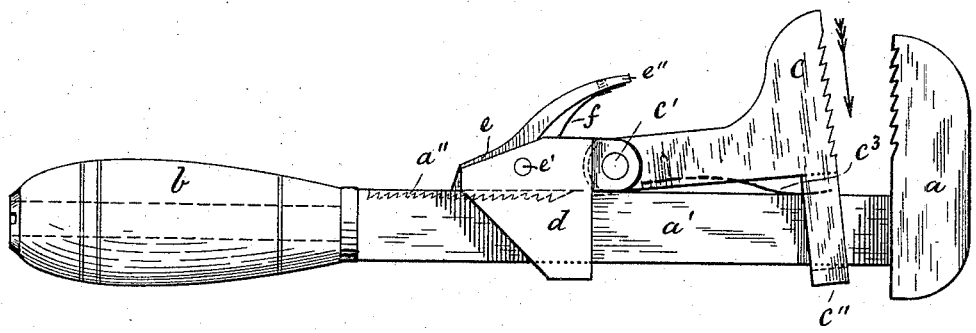

Fig. 1.

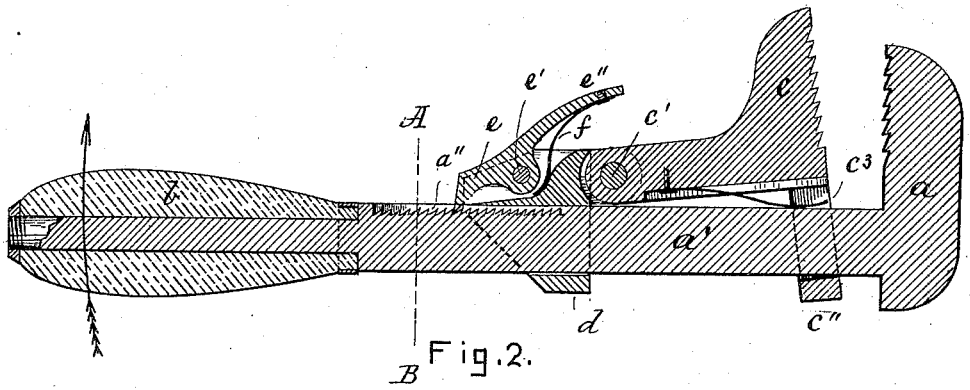

Fig. 2.

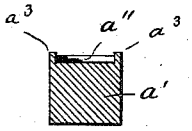

Fig. 3.

Witnesses.
Charles A. Drake.
Henry Chadbourn.

Inventor.
Curtis C. Edgerly
by Albert Sudrén
his atty.

UNITED STATES PATENT OFFICE.

CURTIS C. EDGERLY, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO HENRY N. STONE, OF SAME PLACE.

PIPE AND NUT WRENCH.

SPECIFICATION forming part of Letters Patent No. 342,078, dated May 18, 1886.

Application filed August 13, 1885. Serial No. 174,288. (No model.)

To all whom it may concern:

Be it known that I, CURTIS C. EDGERLY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Pipe and Nut Wrenches; and I do hereby declare that the same are fully described in the following specification, and illustrated in the accompanying drawings.

This invention relates to improvements in pipe and nut wrenches, and it is carried out as follows, reference being had to the accompanying drawings, where—

Figure 1 represents a side elevation, and Fig. 2 represents a vertical section, of my improved wrench. Fig. 3 represents a cross-section on the line A B, shown in Fig. 1.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

a is the stationary jaw, having the downwardly-projecting shank *a'*, the lower end of which is provided with a handle, *b*, as shown.

c is the movable jaw, the lower end of which is hinged at *c'* to the adjustable and sliding block or frame *d*, that encompasses the shank *a'* in such a manner as to be capable of an easy and quick adjustment on the shank *a'* to and from the jaw *a*.

In one piece with the upper end of the movable jaw *c*, or attached to it in any suitable manner, is made the slotted guide-piece *c''*, by means of which the outward swinging motion of the movable jaw *c* on its fulcrum *c'* is limited to the extent of the normal position shown in Figs. 1 and 2. The slotted guide-piece *c''* encompasses the shank *a'* loosely, so as to permit of an easy and quick adjustment of the movable jaw *c* relative to the stationary jaw *a* by sliding the block *d* and slotted guide-piece *c''* up or down on the shank *a'*.

To the interior portion of the hinged jaw *c* is secured a spring, c^3, the free end of which is made to bear against the front of the shank *a'*, as shown in Figs. 1 and 2, so as to cause the jaw *c* to be expanded from shank *a'* as far as the slotted guide-piece *c''* will permit when the wrench is not in use. The front of shank *a'* is provided with a series of teeth, *a''*, any one of which is designed to be locked to the lower end of the pawl *e*, that is hinged at *e'* to the sliding frame or block *d*, and provided in its upper end with a suitable handle or thumb-piece, *e''*, that is normally forced outward by the influence of the spring *f*, secured to the interior of thumb-piece *e''*, and having its free end resting against the sliding frame *d*, or vice versa, so as to automatically hold the lower end of the pawl *e* in a locked position relative to the toothed front *a''* of the shank *a'*, as shown in Figs. 1 and 2, as soon as the operator relieves his thumb-pressure on the thumb-piece *e''*. I prefer to make the toothed surface *a''*, sunken on the face of the shank *a'*, with ribs a^3 a^3 projecting even with the tops of the teeth *a''*, as shown in Fig. 3, so as to enable the adjustable block or frame *d* to be guided easily and without much friction on the shank *a'*; but this is not essential, and said ribs a^3 a^3 may be dispensed with, and the teeth *a''* may be made the whole width of the front of the shank *a'*, if so desired.

The operation of this my improved wrench is as follows: The object to be grasped is placed between the jaws *a* and *c*, after which the operator pushes up the frame *d* on the shank *a'* until the jaws *a* and *c* grasp the object located between them, in which position the jaws will be held by the locking-pawl *e* and its spring *f*. The operator then turns the handle *b* in the direction of the arrow shown in Fig. 2, causing the jaw *c*, as it touches the nut or pipe held between it and the jaw *a*, to turn on its fulcrum *c'* in the direction of the arrow shown in Fig. 1, by which the grip on the object held between the jaws is increased in proportion to the pull on the handle *b*, thus preventing any liability of slipping. As soon as the operator turns the handle *b* in the opposite direction of the arrow shown in Fig. 2 the spring c^3 will cause the jaw *c* to swing from the shank *a'* to its normal position, (shown in Figs. 1 and 2,) and if it is desired to expand the jaws *a* and *c* farther all that is necessary to do is to release the pawl *e* from the toothed rack *a''* by pressing on the thumb-piece *e''* against the influence of its spring *f*, when the jaw *c* and its sliding frame or block *d* are free to move down on shank *a'* as far as may be required.

The wrench is very strong and durable. It is composed of very few parts. It can be ad-

justed with the greatest ease and operated with one hand only in such a manner as to increase the hold or grip on the object in proportion to the pulling strain on the handle, as fully set forth and described.

What I wish to secure by Letters Patent, and claim, is—

The herein-described wrench, consisting of the stationary jaw *a*, having the serrated shank *a'*, the sliding block *d*, embracing said shank, the pawl *e*, pivoted to said block and having a thumb-piece, *e''*, the spring *f* on the inner side of said thumb-piece, the movable jaw *c*, hinged to the sliding block and provided with a slotted guide, *c''*, that surrounds the wrench-shank, and the spring c^3, attached to the inner side of the movable jaw and having its free end bearing against the wrench-shank, all as set forth.

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

CURTIS C. EDGERLY.

Witnesses:

ALBAN ANDRÉN,

HENRY CHADBOURN.