

(No Model.)

H. C. BARLOW.
WRENCH.

No. 573,637.

Patented Dec. 22, 1896.

FIG. 1.

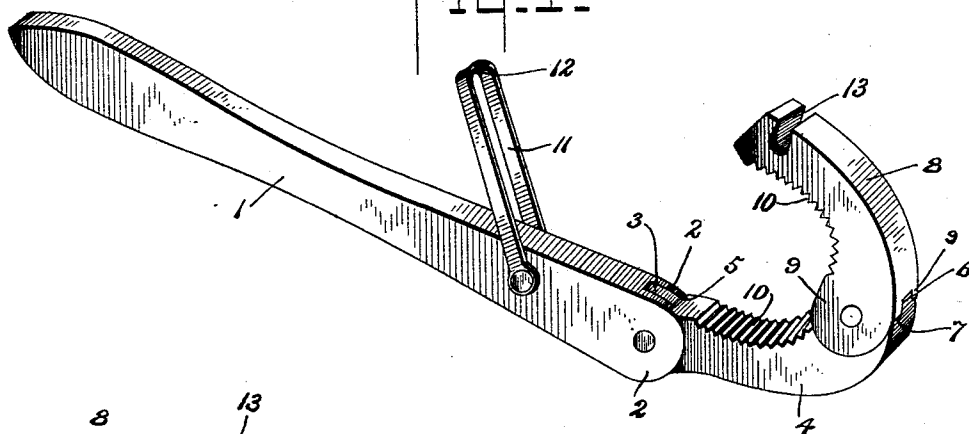


FIG. 2.

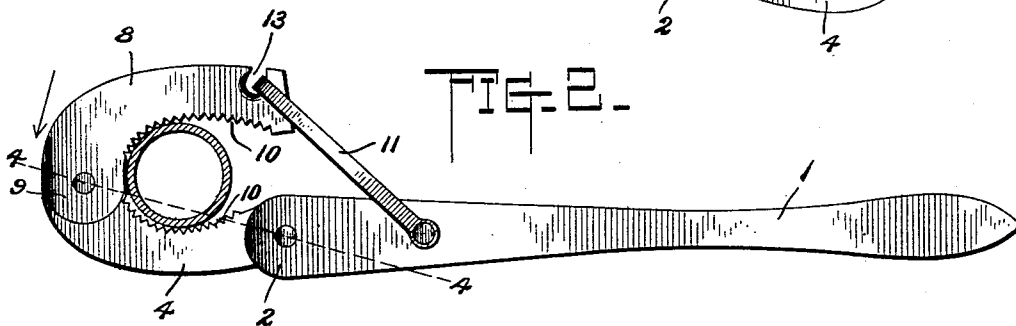


FIG. 3.

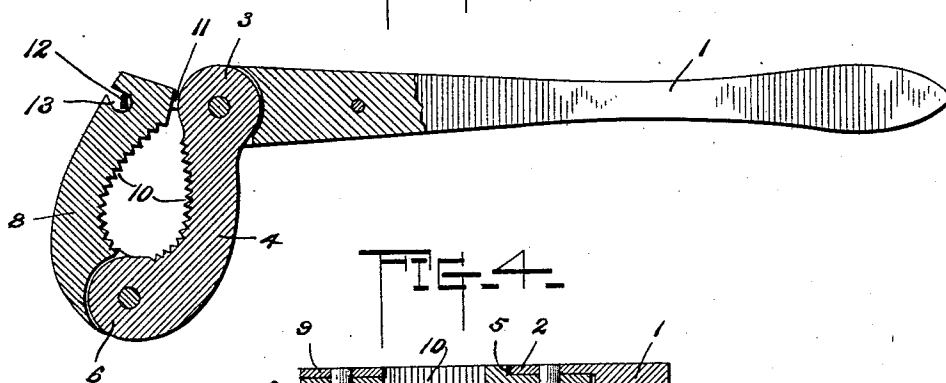
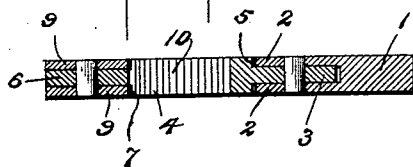


FIG. 4.



Inventor

Henry C. Barlow,

Witnesses

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By *his* Attorneys,

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UNITED STATES PATENT OFFICE.

HENRY C. BARLOW, OF CONVERSE, INDIANA, ASSIGNOR OF ONE-THIRD TO
ALBERT E. MILLER, OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 573,637, dated December 22, 1896.

Application filed July 18, 1896. Serial No. 599,736. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. BARLOW, a citizen of the United States, residing at Converse, in the county of Miami and State of Indiana, have invented a new and useful Wrench, of which the following is a specification.

This invention relates to new and useful improvements in pipe-wrenches; and it has for its object to provide a wrench of the character mentioned which shall be simple in construction, easily operated, and one adapted for use upon pipes of varying sizes.

To this end the invention consists, substantially, in the construction, combination, and arrangement of parts, as will be hereinafter fully illustrated, described, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a pipe-wrench constructed in accordance with the present invention, the jaw thereof being in open position. Fig. 2 is a top plan view of the wrench, illustrating the same as applied to a pipe. Fig. 3 is a sectional plan view. Fig. 4 is a vertical sectional view on the line 4 4, Fig. 2, looking in the direction of the arrow.

Similar numerals of reference indicate corresponding parts throughout the figures.

Referring to the drawings, 1 designates the operating-handle of the herein-described wrench, one end of which is bifurcated, as at 2, and pivoted within said bifurcated end by means of an ordinary pintle is a leaf 3, formed at one end of a section 4, said section 4 being one of a series which constitutes the jaw of the wrench. At each side of the leaf 3 a shoulder 5 is provided, and it will be observed that said shoulders are so shaped as to readily travel around the bifurcated end of the handle 1 when the section 4 is swung, but are adapted to contact with the sides of said handle, and thereby limit the movement of said section 4.

The other end of the section 4 has formed thereon a leaf 6, provided at each of its sides with a shoulder 7, and pivoted to said leaf 6 is a section 8, similar to the section 4, said sections 4 and 8 forming the series which constitutes the jaw of the wrench.

While only two sections have been illus-

trated in the series, it will be understood that as many as desired may be employed.

The section 8 has one of its ends bifurcated, as at 9, and said bifurcated end receives the leaf 6, which is pivotally secured therein by any suitable pintle. By reason of the section 8 having the leaf 6 pivoted in its bifurcated end 9 it will be obvious that the shoulders 7 at the sides of said leaf 6 will limit the swing of said section 8.

It is to be noted that the sections 4 and 8 are slightly curved in reverse directions, and the opposing faces of said sections are provided with serrations 10, said opposing faces being concaved to conform to the general shape of pipes, so that the serrations 10 may readily bite the sides thereof when the sections are closed and securely hold the wrench thereon.

Pivoted to the operating-handle 1 adjacent to its bifurcated end is a U-shaped fastening-loop 11, the outer end of which has its inner side partially rounded, as at 12, to permit such end detachably entering and working within a tapered notch 13, formed in the outer face of the section 8, to lock the sections 4 and 8 upon a pipe. The notch 13 is located near the outer end of the section 8 and disposed at an angle to such end, and said notch has its inner end of greater size than its outer one, so that when the handle 1 is operated to unlock the wrench the loop 11, from the fact that the notch 13 is disposed at an angle to the end of the section 8, will be retained in the notch 13 and the section 8 easily opened. The diameter of the loop 11 is slightly greater than the thickness of the handle 1, and by reason of this said loop may be swung over the bifurcated end 2 of said handle 1 when the sections 4 and 8 are completely closed, said sections lying at substantially right angles to the handle and the loop 11 being in line with the latter.

The operation and advantages of the herein-described wrench will be readily understood by those skilled in the art. To place the same upon a pipe, the sections 4 and 8 are swung into open position, as shown in Fig. 1, and said sections are then placed upon the pipe, the latter fitting between the concaved oppos-

ing faces of said sections. The outer end of the loop 11 is then placed in the notch 13 and the handle 1 swung away from the section 8. By swinging the handle 1 away from the section 8 the loop 11 will gradually draw said section toward the section 4, thereby causing the serrations 10 to bite the sides of the pipe and firmly secure the wrench thereon. From the fact that the binding action is imparted to the jaw of the wrench through the medium of the loop 11 it will be apparent that continued pressure upon the handle 1 away from the sections 4 and 8 will cause the serrations 10 to bite with greater force and thus enhance the value of the wrench. To remove the latter from the pipe, it is simply necessary to reverse the pressure upon the handle 1, by which the section 8 is caused to recede from the section 4 and the serrations 10 released, thereby freeing the wrench and permitting its easy removal.

From the foregoing it will be seen that the improvements described provide a wrench which is simple in construction, easily operated, and one by which a powerful grip may be secured upon a pipe. By the peculiar arrangement of the loop 11 with relation to the sections 4 and 8 a single wrench will suffice for a number of varying-sized pipes, and by forming the shoulders 5 so that the same may travel around the bifurcated end 2 of the operating-handle 1 and also contact with the sides of said handle it will be apparent that the pintle connecting the section 4 of the jaw with the operating-handle 1 will be relieved of strain.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. A wrench comprising a handle, a pair of links pivoted together at their outer ends, provided at their inner engaging faces with teeth and adapted to swing transversely of the end of the handle to vary the distance between them, one of the links being pivoted to the outer end of the handle, a loop detachably engaging the inner end of the other link and extending from one side of the handle and pivoted to the same at a point intermediate of the ends thereof, and at a sufficient distance from the outer end of the handle to cause the jaws to open and close when swung transversely thereof, substantially as described.

2. A pipe-wrench, comprising a jaw formed of a series of sections pivoted together and provided at their opposing faces with serrations adapted to engage the sides of a pipe, an operating-handle pivoted to one of said sections, shoulders formed on said section which the operating-handle is pivoted and adapted to travel around the end of said handle and contact with the sides thereof to limit the movement of said section, one of said sections being also provided in its outer face with a locking-notch located near the outer end thereof and disposed at an angle to said end, said notch being tapered and having its inner end of greater size than its outer one, and a fastening-loop carried by the operating-handle, said loop being adapted to engage the locking-notch and by the shape and arrangement of the latter be retained therein, and also to be operated by the handle to lock and unlock the wrench, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENRY C. BARLOW.

Witnesses:

JOHN A. JUDY,

JOSEPH S. BOSWELL.