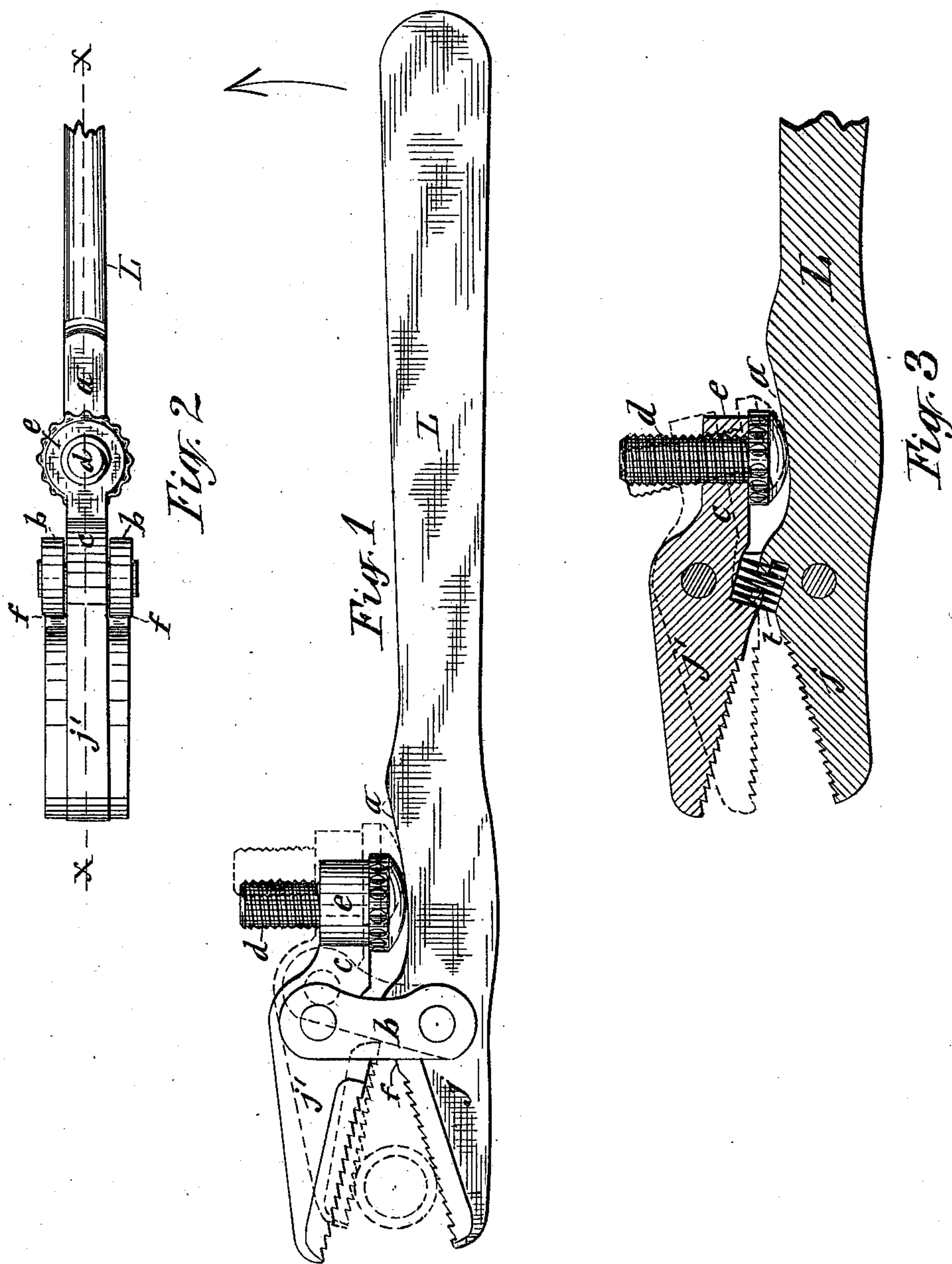


(No Model.)

J. A. GILES.
PIPE WRENCH.

No. 408,479.

Patented Aug. 6, 1889.



WITNESSES:

A. F. Walz,
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INVENTOR

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UNITED STATES PATENT OFFICE.

JULIAN A. GILES, OF OSWEGO, NEW YORK, ASSIGNOR TO CHAUNCEY C.
PLACE, OF SAME PLACE.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 408,479, dated August 6, 1889.

Application filed April 1, 1889. Serial No. 305,573. (No model.)

To all whom it may concern:

Be it known that I, JULIAN A. GILES, of Oswego, in the county of Oswego, in the State of New York, have invented new and useful
5 Improvements in Pipe-Wrenches, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of pipe-
10 wrenches which have one of the jaws integral with the handle and the other jaw connected to the handle by links pivoted thereto; and the invention consists in certain novel auxiliary devices employed in connection with
15 said jaws, as hereinafter fully described, and specifically set forth in the claims.

In the accompanying drawings, Figure 1 is a side view of a pipe-wrench embodying my improvements, and showing the same in two
20 of its operative positions. Fig. 2 is a top plan view of said wrench; and Fig. 3 is a longitudinal transverse section on line $x x$, Fig. 2.

L denotes the lever or handle of the wrench,
25 which lever is formed at one end with the jaw j , and with an inclined bearing a extending from the jaw rearward, for the purpose hereinafter explained. To opposite sides of the jaw-carrying end of the lever L , and
30 preferably at the junction of said lever with its jaw, I pivot at one end links $b b$, to the opposite end of which is pivoted the jaw j' . This latter jaw is formed with a rearward extension c , and with a screw-threaded eye e in
35 said extension, facing the inclined bearing a , hereinbefore referred to. In the screw-threaded eye e works a set-screw d , which rides on the inclined bearing a , and constitutes a stop for limiting the movement of
40 the jaw j' to its open position. Between the two jaws I interpose a spring t , preferably of spiral form, and disposed with its axis parallel with the face of the jaw j' , as illustrated in Fig. 3 of the drawings. Said spring serves
45 to crowd the jaw j' forward and into its open position. In order to limit the forward movement of the said jaw, I provide the fixed jaw j with stops $f f$ in front of the links $b b$, said links being crowded against the stop by the
50 pressure of the aforesaid spring on the jaw j' .

In the operation of the described wrench

the set-screw d is first adjusted to allow the jaws to open sufficiently to grasp the pipe, and after the jaws are placed in position to grip the pipe the lever l is swung in the di- 55
rection indicated by an arrow in Fig. 1 of the drawings. The engagement of the teeth of the jaw j' with the aforesaid pipe crowds said jaw rearward, and by the said movement the links $b b$ are thrown into a rearwardly-in- 60
clined position, and thus reduce the distance between the two jaws, and at the same time the set-screw d is carried onto the raised end of the inclined bearing a , and thus causes the jaw j' to grip the pipe with increased 65
force, as indicated by dotted lines in Fig. 1 of the drawings. The jaws are caused to readily release their hold on the pipe when desired by merely reversing the movement of the lever l , which allows the jaw j' to 70
spring forward again into its normal position, as presented by full lines in Fig. 1 of the drawings.

Having described my invention, what I claim as new, and desire to secure by Letters 75
Patent, is—

1. A pipe-wrench composed of a lever, a fixed jaw integral with one end of said lever, links pivoted at one end to opposite sides of the jaw-carrying end of the lever, a jaw piv- 80
oted to the opposite end of said links and formed with a rearward extension, a spring holding the latter jaw in its open position, and a stop between the aforesaid rearward extension and lever and adjustable in length 85
to control the opening of the jaw, as set forth.

2. A pipe-wrench composed of a lever, a fixed jaw integral with one end of said lever, links pivoted to opposite sides of the jaw-carrying end of the lever, a jaw pivoted to 90
the opposite end of said links and formed with a rearward extension and with a screw-threaded eye in said extension and facing the lever, a spring holding the said jaw in its open position and crowding the same for- 95
ward, a set-screw in said eye bearing on the lever, and stops on the fixed jaw in front of the links, substantially as described and shown.

3. The combination of the lever l , formed 100
at one end with the jaw j , and with the inclined bearing a extending from said jaw

rearward, the links *b b*, pivoted at one end to
opposite sides of the lever at its junction
with the jaw, the jaw *j'*, pivoted to the oppo-
site end of the links and formed with the
5 rearward extension *c*, and screw-threaded
eye *e* in said extension and facing the bear-
ing *a*, and the set-screw *d* in the said eye,
substantially as described and shown.

4. The improved pipe-wrench, consisting
10 of the lever *l*, formed at one end with the jaw
j, and with the inclined bearing *a* extending
from the jaw rearward, the links *b b*, pivoted
at one end to opposite sides of the lever at
its junction with the jaw, the jaw *j'*, pivoted

to the opposite end of the links and formed 15
with the rearward extension *c*, and with the
eye *e* in said extension facing the bearing *a*,
the set-screw *d* in said eye, the spring *t*,
crowding the jaw *j'* forward and into its open
position, and the stops *f* on the jaw *j* in front 20
of the links, all combined to operate sub-
stantially as set forth.

In testimony whereof I have hereunto signed
my name this 25th day of March, 1889.

JULIAN A. GILES. [L. S.]

Witnesses:

ALBERT N. RADCLIFFE,
C. C. PLACE.