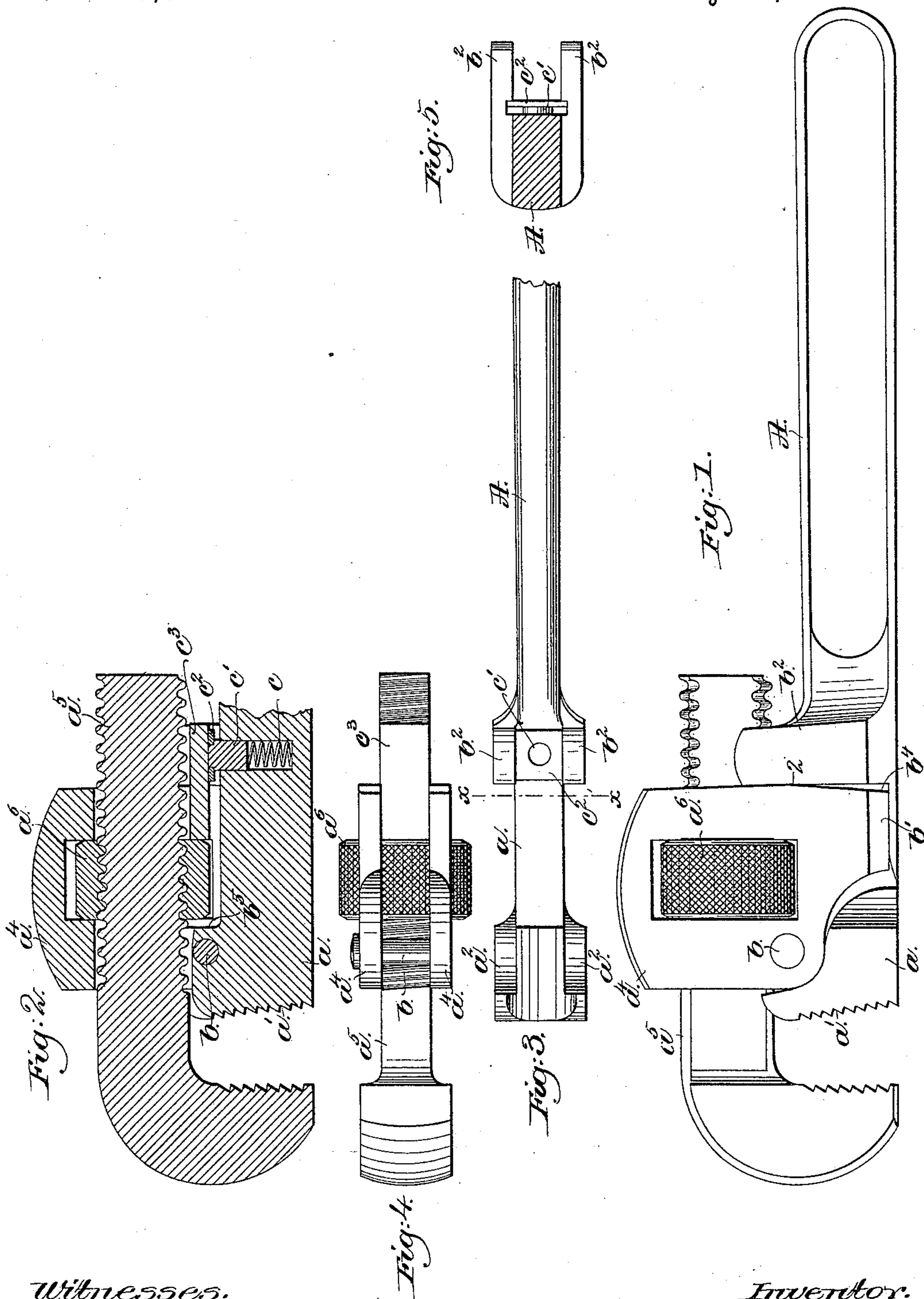


(No Model.)

E. O. ELY.
PIPE WRENCH.

No. 429,088.

Patented May 27, 1890.



Witnesses.

Frederick L. Emery-
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Edward O. Ely,
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UNITED STATES PATENT OFFICE.

EDWARD O. ELY, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE TRIMONT
MANUFACTURING COMPANY, OF PORTLAND, MAINE.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 429,088, dated May 27, 1890.

Application filed March 27, 1890. Serial No. 345,563. (No model.)

To all whom it may concern:

Be it known that I, EDWARD O. ELY, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in
5 Pipe-Wrenches, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention in pipe-wrenches has for its
10 object to provide a pipe-wrench of simple construction at a minimum cost.

My invention in pipe-wrenches therefore consists in the combination, with a handle provided with a fixed jaw and having lugs b^2 , of
15 a guide pivoted to said handle, a movable jaw carried by said guide, and a nut to adjust the said movable jaw, the said guide having legs adapted to engage the lugs on the handle to limit the rocking movement of
20 the guide and thereby the bite of the wrench, substantially as will be described.

Other features of my invention will be pointed out in the claims at the end of this specification.

25 Figure 1 is a side elevation of a pipe-wrench constructed in accordance with my invention; Fig. 2, a longitudinal section of a sufficient portion of the pipe-wrench shown in Fig. 1 to more clearly show the construction of the
30 same; Fig. 3, a top or plan view of the handle and fixed jaw shown in Fig. 1, the handle being partially broken off; Fig. 4, a detail of the movable jaw and the parts carried by it; and Fig. 5, a section of the handle on line xx ,
35 Fig. 3.

The handle A, preferably made of steel, is provided at one end with an enlarged head a , having teeth a' , to form a jaw, which is herein shown as forming an integral part of the
40 handle; but, if desired, it may be formed separately therefrom and secured thereto by rivets or in other usual manner. The jaw a at its rear portion is cut away to form shoulders a^2 , (see Fig. 3,) against which bear the sides of a guide a^4 for the movable jaw a^5 , which is secured within the said guide by the
45 nut a^6 in usual manner. The guide a^4 is preferably cast in one piece, and is secured to the handle A by the pivot-pin b , and its
50 sides are provided with extended portions or

legs b' , which are adapted to bear against lugs or ears b^2 , secured to or forming part of the handle on its rear side. The lower portion of the rear faces of the sides of the guide a^4 are inclined or curved away from the front
55 face of the lugs b^2 from a point preferably substantially near the center of the said lugs, as at 2, so as to permit of a slight rocking motion of the guide a^4 , and the upper portion of the rear face of the sides of the guide a^4 is
60 preferably slightly inclined upward away from the said lugs. The lugs b^2 act as stops to limit the movement of the guide a^4 when the latter is rocked on its pivot b , and by regulating the incline or curve b^4 the bite of
65 the wrench upon the pipe may be regulated.

The handle A, substantially below the pivot of the movable jaw, is provided with a shoulder b^5 , against which the nut a^6 is adapted to strike when the movable guide a^4 is rocked
70 on its pivot, the said shoulder acting to take a part of the strain imposed upon the wrench. The lugs b^2 , which form the rear stop for the movable guide a^4 , also serve to take a portion of the strain, and the shoulders a^2 on the
75 fixed jaw also serve to take a portion of the strain. In this manner it will be seen that the strain upon the wrench is largely distributed and does not come upon any one point, thereby greatly diminishing the danger of
80 breaking of the wrench at any one point.

The handle A on its rear side near the guide a^4 is provided with a socket, in which is located a spring c , normally acting upon a
85 plunger or rod c' , provided with a head c^2 , which is limited in its downward movement by suitable shoulders on the inner side of the lugs b^2 .

The movable guide a^4 is provided with an arm c^3 , extended over the cap c^2 and normally resting thereon, the spring c permitting the movable jaw a^5 and its guide a^4 to be moved, so as to turn the guide on its pivot
90 b and release the wrench from the pipe when desired, thereby preventing locking of the
95 said wrench.

I claim—

1. In a pipe-wrench, the combination, with a handle provided with a fixed jaw and having lugs b^2 , of a guide pivoted to said handle, 100

a movable jaw carried by said guide, and a nut to adjust the said movable jaw, the said guide having legs adapted to engage the lugs on the handle to limit the rocking movement
5 of the guide and thereby the bite of the wrench, substantially as described.

2. In a pipe-wrench, the combination, with a handle provided with a fixed jaw and lugs
10 b^2 and having a socket, a spring in said socket, and a plunger, of a guide pivoted to said handle and provided with legs adapted to engage

said lugs, an arm c^3 on said guide to act on said plunger, a movable jaw carried by said guide, and a nut to adjust said movable jaw, substantially as described. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD O. ELY.

Witnesses:

JAS. H. CHURCHILL,
EMMA J. BENNETT.