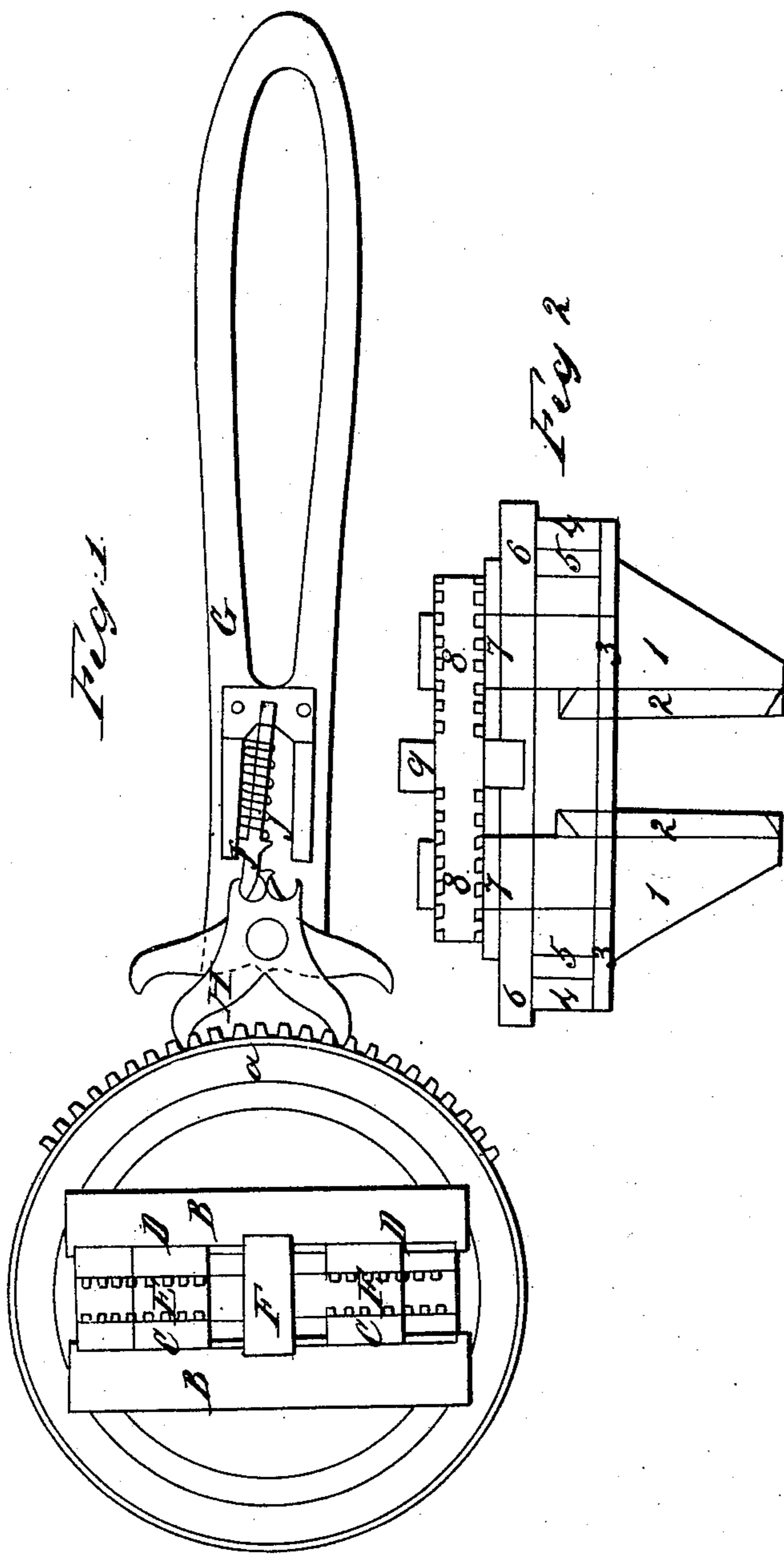


L. D. GILMAN.
WRENCH.

No. 15,482.

Patented Aug. 5, 1856.



Inventor

Lorenzo D. Gilman

UNITED STATES PATENT OFFICE.

LORENZO D. GILMAN, OF TROY, NEW YORK.

WRENCH.

Specification of Letters Patent No. 15,482, dated August 5, 1856.

To all whom it may concern:

Be it known that I, LORENZO D. GILMAN, of the city of Troy, county of Rensselaer, State of New York, have invented a new and useful Improvement in the Constructing of Wrenches; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in forming a wrench similar to a ratchet wrench.

This invention relates to adding two adjustable jaws to the axis, a slot being formed in the axis any required length, so as to admit the shank of jaws to pass through and also to admit of their being thrown apart, so as to admit the nut or other article to be grasped between the two jaws which project on the face of the axis, those jaws being made adjustable by means of a screw, so as to readily grasp the nut or other articles required, the face of jaws being made so as to form a socket when brought together and when thrown apart will grasp two corners of a nut or bar upon four sides, the axis being rotated the same as the ordinary ratchet wrench, being worked to right or left by adjusting the pawl, which is forked at one end, the other end being attached to the handle, which forms a portion of the strap passing around the axis and is supported upon its axis by a projecting hub upon the back, the edge of hub forming teeth, so that by reversing the pawl it readily mashes in the teeth, being thrown in either direction. The face of the handle and strap is supported upon its axis by screwing a plate over the face projecting same as hub on back side, the back end of the pawl being held in its right position by means of a finger, forming a knuckle joint with the back end of the pawl, the other end of the finger resting against the back end of the cavity of a sleeve which is firmly attached to the handle of the wrench and serves for the spring to work against and protects them from injury.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction.

Figure 1 is a back view, Fig. 2 is a sec-

tional view, letters of reference indicating corresponding parts in the two figures.

First a round wheel or axle with a projecting plate upon one side and is formed upon the edge of projecting plate teeth in the form of gear teeth and through the axis is a slot any required length to receive two separate jaws.

As represented in drawings, letter (A) is the revolving toothed plate or axle.

(B B) is slotted arm or axis for the purpose of inserting and holding two separate adjustable jaws which pass through the slot between (B B), represented by (C C) and supported by guide plates being placed each side of the slot and passing into a groove upon the side of each jaw for the purpose of holding them firmly in their position; (D D), guide plates; (E E), right and left screw passing through each jaw for the purpose of adjusting them so as to grasp any sized article required. The handle G forms a portion of strap which passes around axis; (A) strap of handle.

(H) is a pawl attached to handle (G) by means of a bolt or screw in such a manner that a slight touch with the finger will raise one fork and let the other in gear, the finger (I) being arranged upon handle (G) just back of the pawl (H) and forming a knuckle joint in such a manner as to hold the pawl in its desired position. The joint of the pawl and finger is held together by the tension of spring *j* working in a socket, Fig. 2 showing a sectional view of the wrench.

Fig. 1 is jaws. Fig. 2 is the socket formed by cutting a triangular groove in each jaw when the jaws are brought together forming a square socket. Fig. 3 is plate for shoulders of jaws to rest upon and to support strap of handle; Fig. 4, strap of handle; Fig. 5, revolving plate or axis; Fig. 6, teeth upon the projecting plate; Fig. 7, guide plates for the purpose of holding the jaws in their desired position; Fig. 8, screw passing through jaws for the purpose of adjusting them. Fig. 9 is nut for rotating screw and also serves to keep the jaws at equal distances from center.

I do not claim inserting a forked piece of metal with a square shank upon one end in the square slot of the axis of a wrench

and supported by a nut; neither do I claim the teeth on the axis; neither do I claim the pawl, those having been used prior to my having any knowledge of wrenches.

5 What I claim as new and desire to secure by Letters Patent is—

The use of the adjustable jaws E E as described moving in the slot C C and op-

erated in connection with the groove in the jaws forming an adjustable socket in the 10 manner set forth.

L. D. GILMAN.

Witnesses:

JOHN CANTRELL,
A. CRUIKSHANK.