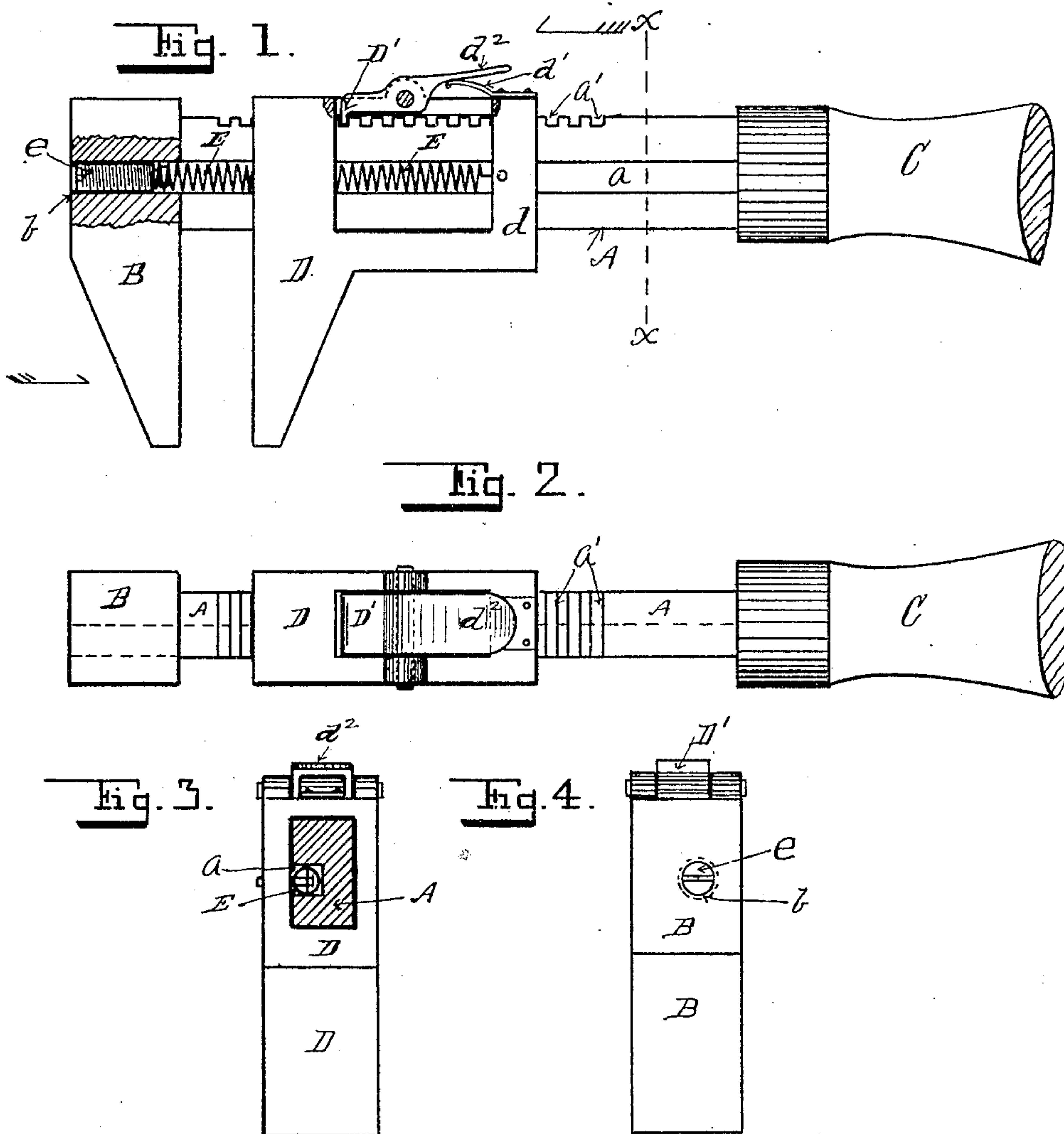


No. 869,496.

PATENTED OCT. 29, 1907.

J. F. LARGE.
WRENCH.

APPLICATION FILED AUG. 21, 1907.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN F. LARGE, OF JAMESTOWN, PENNSYLVANIA.

WRENCH.

No. 869,496.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed August 21, 1907. Serial No. 389,567.

To all whom it may concern:

Be it known that I, JOHN F. LARGE, a citizen of the United States, residing at Jamestown, in the county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

My invention relates to wrenches, and has for its object the construction of a wrench having a movable jaw actuated by a spring to move it up to and against the side of a nut, and ratchet mechanism to retain the movable jaw in such position with relation to the fixed jaw as may be desired.

The features of my invention are hereinafter set forth and described, and illustrated in the accompanying drawings in which: Figure 1 is a side view in elevation of my improved wrench with parts thereof broken away. Fig. 2 is a view in elevation of the under edge of the same. Fig. 3 is a transverse section of the same on the line $x-x$ in Fig. 1. Fig. 4 is an end view of the wrench.

In these drawings A is the metal part of the handle of the wrench; B the head or fixed jaw on one end thereof; D the sliding jaw, and C the wooden part of the handle, all of which parts are common in wrenches of this type. In this wrench, however, the metal part A of the handle is provided with a longitudinal groove or recess a , and in line therewith there is a screw-threaded opening b through the head B, and in the lower edge of the part A of the handle I make ratchet teeth, a' , preferably rectangular in shape. In the groove a , I place a spiral retracting spring E, one end

of which is secured to the part d of the sliding jaw D, and the other end to an adjusting screw e passing through the screw-threaded opening b , whereby the tension of the spring E can be adjusted as desired. This spring E normally acts upon the sliding jaw D to move it toward the fixed head B. To retain the sliding-jaw D in any desired position upon the part A of the handle, I provide a dog D' pivoted in the jaw D so as to engage with the teeth a' in the handle A. This dog D' is provided with a spring d' to normally retain the dog D' in engagement with the teeth a' , and also with a thumb-piece d'' by means whereof the dog D' can be moved out of engagement with the teeth a' , so that the sliding jaw can be moved back and forth on the handle A.

Having thus described my invention so as to enable others to construct and utilize the same, what I claim as new and desire to secure by Letters-Patent is:

1. The combination in a wrench, of a handle having a longitudinal groove therein, ratchet teeth on the handle, a fixed head or jaw thereon, a jaw sliding on said handle, a spiral spring in the groove in the handle connecting the fixed and movable jaws, and a spring-actuated dog pivoted in the movable jaw and adapted to engage the ratchet teeth in the handle, substantially as set forth.

2. The combination in a wrench, of a grooved handle, rectangular ratchet teeth thereon, a fixed head or jaw on said handle, a sliding jaw thereon, a spiral retracting spring in said handle-groove connecting the fixed and movable jaws, means for adjusting the tension of said spring, and a spring-actuated dog mounted on the movable jaw so as to engage the ratchet teeth on the handle, substantially as set forth.

In testimony whereof I affix my signature, in presence of two witnesses.

JOHN F. LARGE.

Witnesses:

H. M. STURGEON,
G. J. MEAD.