(No Model.)

T. WHEATLEY.

WRENCH.

No. 520,099. Patented May 22, 1894.

Fig. 1.

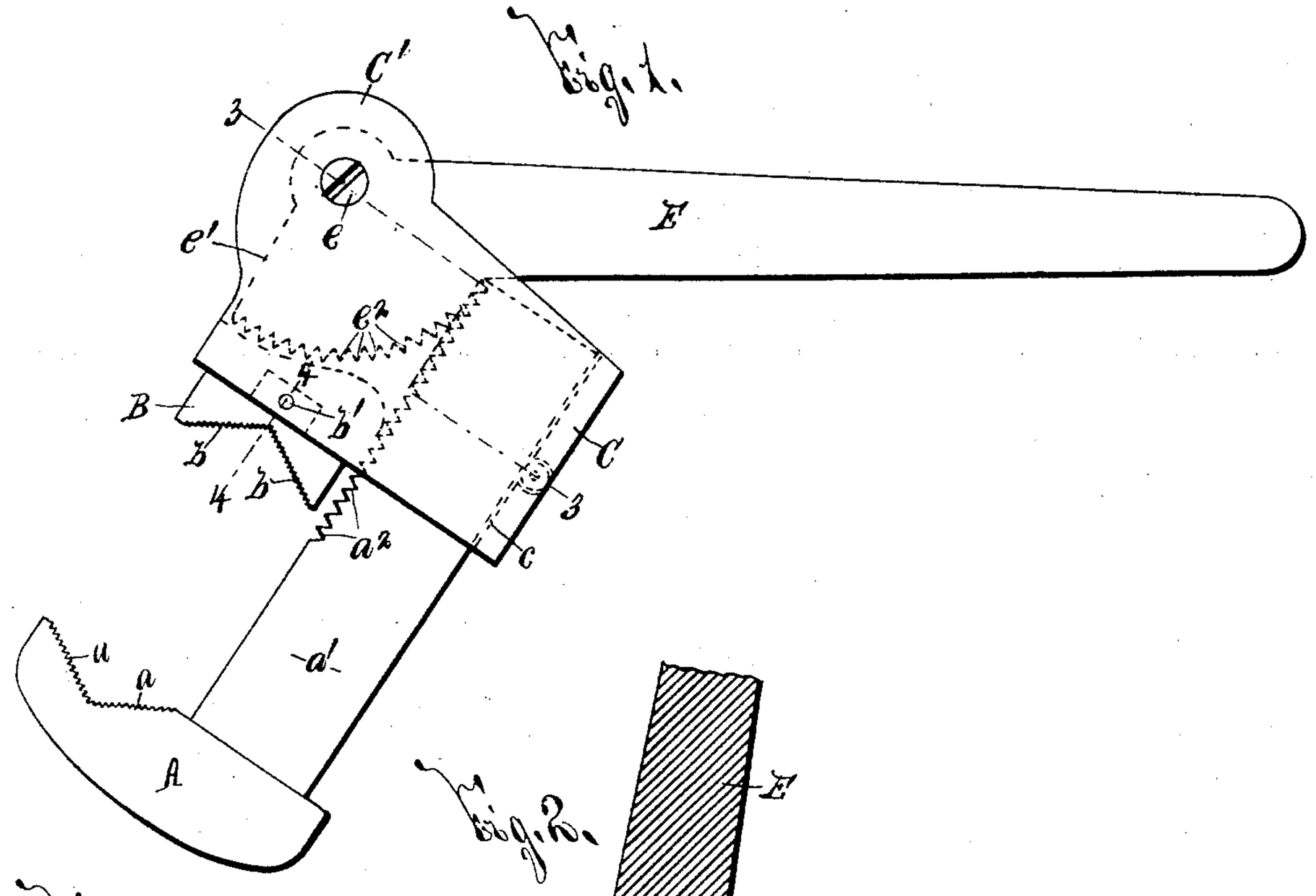


Fig. 2.

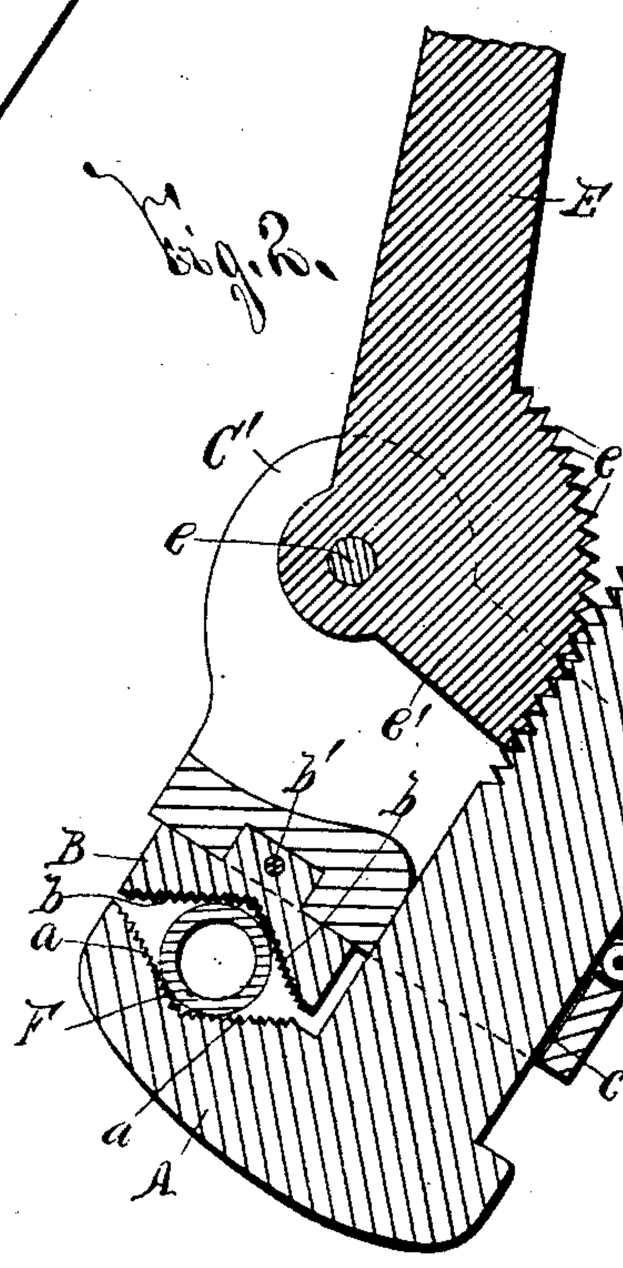


Fig. 3.

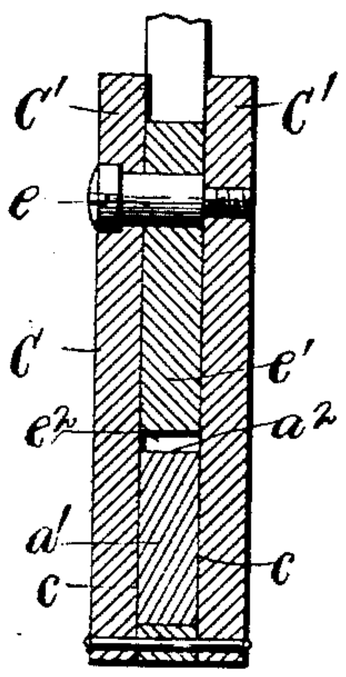
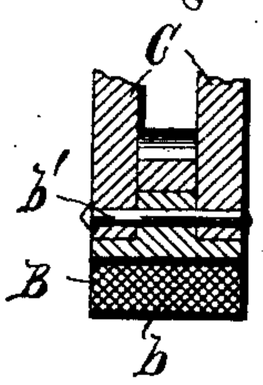


Fig. 4.



Witnesses:
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THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS WHEATLEY, OF SYRACUSE, NEW YORK.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 520,099, dated May 22, 1894.

Application filed April 17, 1893. Serial No. 470,581. (No model.)

To all whom it may concern:

Be it known that I, THOMAS WHEATLEY, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Wrenches, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in wrenches, and has for its object the production of a simple device, which is economically manufactured, is durable and strong in use, and is of such construction that its jaws are readily separated, and are quickly and effectively clamped against the interposed article; and to this end it consists, in the detail construction and arrangement of the parts, all as hereinafter more particularly described and pointed out in the claim.

In describing this invention, reference is had to the accompanying drawings, forming a part of this specification, in which like letters indicate corresponding parts in all the views.

Figure 1 is an elevation of my improved wrench, its jaws being illustrated as separated to their extreme limit. Fig. 2 is a longitudinal sectional view of my improved wrench, its jaws being shown as clamped upon the interposed pipe. Fig. 3 is a transverse sectional view, taken on line —3—3—, Fig. 1, and Fig. 4 is a detail sectional view taken on line —4—4—, Fig. 1.

One of the wrench jaws —A— is provided with faces —*a*—*a*— meeting each other at an angle, and is formed with a shank —*a'*— having the outer extremity of its inner edge provided with engaging projections or teeth —a^2—. The other wrench jaw —B— is provided with faces —*b*—*b*— also meeting each other at an angle, and is preferably removably secured by a pin —*b'*— to one side of one end of a frame —C—. The other end of said frame is formed with a transverse guide —*c*— for receiving the shank —*a'*—, and at one side of said guide is a roller —D— bearing against the smooth outer face of the shank —*a'*— for facilitating its movement.

The side of the frame —C— opposite the jaw —B—, is formed with an ear —C'— and pivoted by a pin —*e*— to said ear is a lever —E— having a segment —*e'*— formed with a series of engaging teeth or projections —e^2— corresponding in number with the teeth a^2 on the shank, which teeth a^2 are arranged in a plane concentric with the pivotal pin —*e*— of the lever E and mesh with the teeth a^2. The lever E stands normally at an acute angle with the length of the frame C and extends considerably beyond the end of the shank —*a'*—, and consequently when desired to separate the jaws —A—B— the operator grasps the outer end of the lever —E—, and holds it in a substantially horizontal plane, whereupon the frame —C— automatically swings upon the pivot —*e*— to its position shown at Fig. 1, so that the longitudinal lines of the lever —E— and the frame —C— are disposed at an acute angle or at some angle with each other less than a right angle. During this movement of the frame —C— the shank —*a'*— of the jaw —A— moves lengthwisely through its guide —*c*—, and the jaw —A— is separated from the jaw —B— until the end of the shank —*a'*— encounters an intermediary portion of the lever —E—, here illustrated at Fig. 1 as that portion of the lever —E— immediately adjacent to the tooth —e^2— nearest to the free end of the lever —E—. After being separated, as described, the wrench is engaged with the article, as a pipe —F—, to be engaged thereby by placing the wrench in such position that the jaws —A—B— are on opposite sides thereof, and by then rocking the lever —E— in the opposite direction, and thereby drawing the jaw —A— toward the jaw —B—. If it is desired to turn the pipe in the other direction, the wrench will obviously be applied to the pipe from the other side after which the above operation is gone through with.

It will be apparent to one skilled in the art that this wrench is readily manufactured, and, as its jaws are quickly and automatically separated and are readily and effectively clamped against the article to be engaged thereby, the wrench is extremely efficient and practical.

The operation of my invention will be readily perceived from the foregoing description and upon reference to the drawings.

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

In a wrench, the combination with a frame having a transverse guide across one end, a jaw removably connected with one side of its other end, the opposite side of the frame at this end having a projecting ear, and a lever pivoted to said ear and having a toothed segment around its pivot; of a movable jaw provided with a shank adapted to slide longitudinally in said guide, a roller in the frame at that side of the guide which is remote from said pivot pin, against which roller one edge of said shank slides, and teeth on the opposite edge of the shank intermeshing with those on the segment whereby the shank is moved to separate the jaws when the lever is brought toward the frame and such movement ceases when the end of the shank is struck by the side of the lever at a point adjacent its segment, all as and for the purpose set forth.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 18th day of March, 1893.

THOMAS WHEATLEY.

Witnesses:
CLARK H. NORTON,
E. A. WEISBURG.