

No. 624,149.

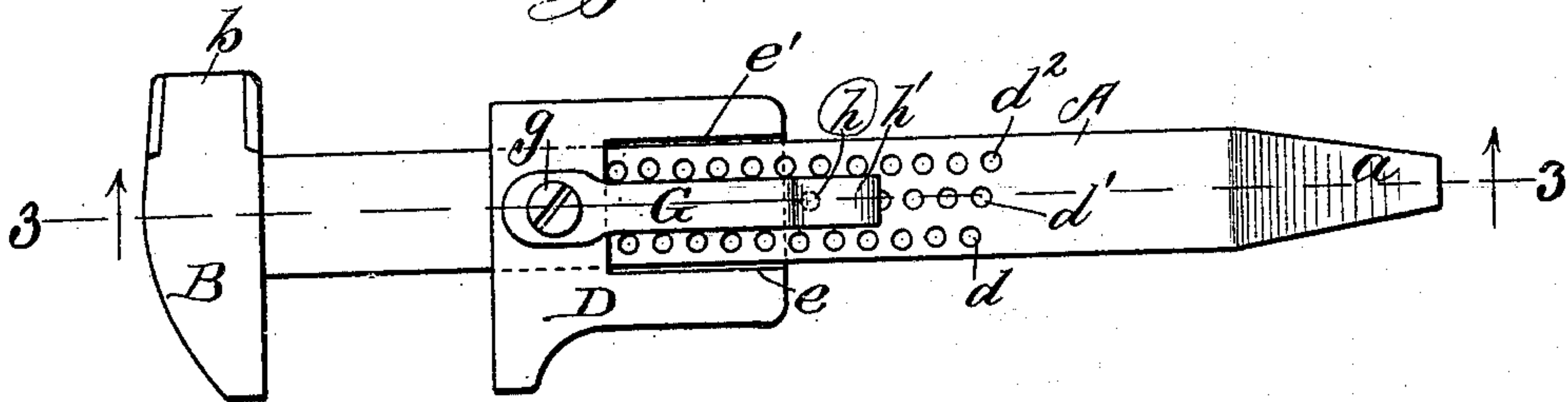
Patented May 2, 1899.

A. H. ANDERSON.  
WRENCH.

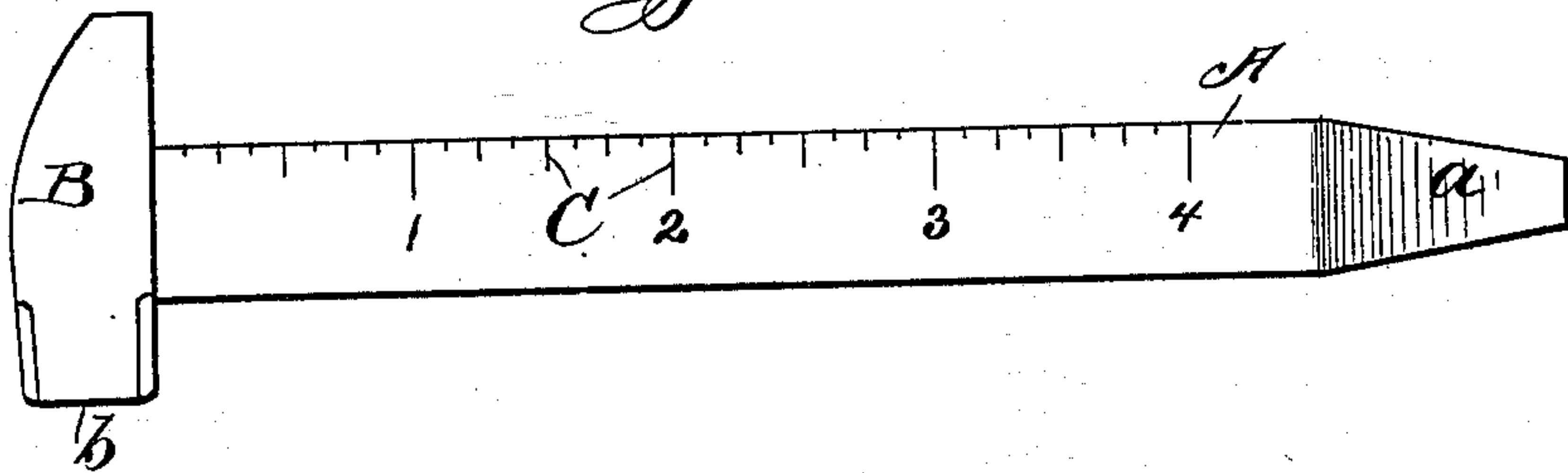
(Application filed Feb. 4, 1899.)

(No Model.)

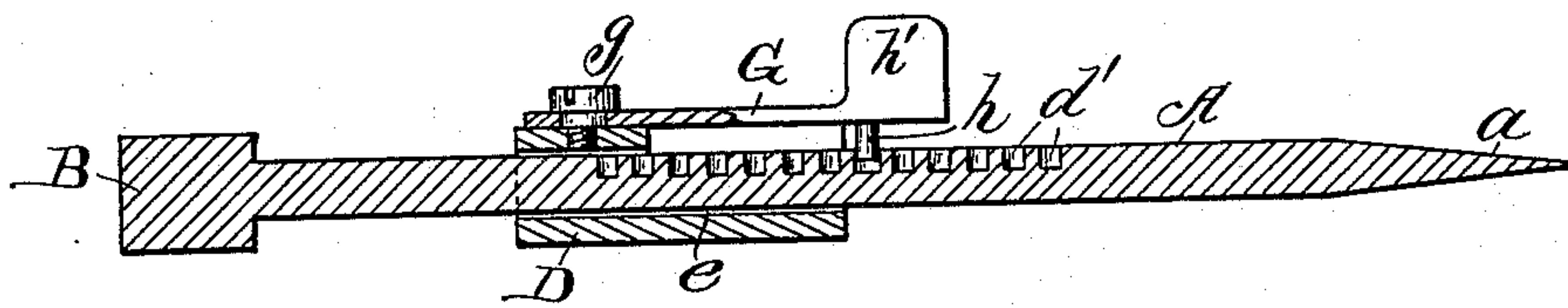
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:  
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E. A. Duggan.

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# UNITED STATES PATENT OFFICE.

ANDREW H. ANDERSON, OF ISHPEMING, MICHIGAN.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 624,149, dated May 2, 1899.

Application filed February 4, 1899. Serial No. 704,463. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW H. ANDERSON, a citizen of the United States, residing at Ishpeming, in the county of Marquette and State of Michigan, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to improvements in wrenches; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The object of my invention is to provide a wrench the sliding jaw of which may be adjusted with great accuracy and facility.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a view in side elevation of my combined tool, showing the means for adjusting and securing the sliding jaw. Fig. 2 is a view in elevation of the opposite side of the tool, showing the sliding jaw removed; and Fig. 3 is a longitudinal sectional view taken on line 3 3 of Fig. 1.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the handle of the tool, which may be of any suitable size, form, and material, but preferably of steel and rectangular in cross-section. One end of this handle is tapered, as shown at *a*, to form a screw-driver, and the other end is provided with a jaw B, which is fixed on the handle and has a straight surface adjacent thereto, so as to engage the nut when the tool is used as a wrench.

One end of the jaw B is formed with a head *b* to be employed as a hammer. On the surface of the handle is displayed a graduated scale C of inches and fractions thereof, which may be employed or omitted, if desired. The handle A is also provided on its surface with a series of openings *d*, *d'*, and *d''*, which are preferably arranged in rows, as shown in Fig. 1 of the drawings. These openings or indentations are so located that each opening in the middle row thereof will be a slight distance farther from the fixed jaw B than the corresponding opening in the row indicated

by the letter *d* and those in the row *d''* a slight distance farther from the fixed row than those of the middle row. On the handle A is located a sliding jaw D, which is provided with an opening *e* of a size and shape to receive the handle and to snugly fit the same. This jaw has a portion of its surface cut away, as shown at *e'*, and has pivotally secured to one of its surfaces by means of a screw *g* or otherwise a lever or piece G, which has near its free end a pin or projection *h* to engage the openings or indentations in the handle. The lever G is also provided at its free end with a projection *h'* to be used for lifting the projection *h* out of engagement with the indentations or openings in the handle or for moving the lever or piece crosswise thereof.

When it is desired to use the tool as a wrench, the lever or piece G, which may be in the form of a spring, should be raised so that the projection *h* will be disengaged from the openings or indentations in the handle, when the sliding jaw D, to which it is secured, may be slid to the desired position, so that the nut will be caught between the straight surface of said jaw and the similar surface of the fixed jaw, when by pressing down on the lever or piece G the projection *h* thereof may be made to engage one of the indentations or openings in the handle, the proper one being ascertained by moving the free end of the lever crosswise of the handle until the projection *h* registers with it, for it is apparent that as some of the openings or indentations in the handle are located farther from the fixed jaw the adjustment of the sliding jaw can be accurately and quickly made.

It is obvious that when it is desired to remove the wrench from the nut the projection *h* on the piece G may be removed from the opening with which it engages, when the jaw D may be slid away from the nut.

While I have shown the tool provided with a graduated scale and formed with a tapering end to be used as a screw-driver and with a hammer at its other end, yet I do not desire to be limited to such a construction, as I may dispense with either or all of said elements without departing from the spirit of my invention.

Having thus fully described my invention,



what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a handle provided at one end with a fixed jaw and having on its  
5 surface a series of openings or indentations arranged in longitudinal rows, each successive indentation comprising each row being located at a different distance from the fixed jaw than the successive indentations of the  
10 other rows, with a sliding jaw located on the handle, a lever or piece laterally pivoted to the sliding jaw and having near its free end a projection to engage said openings, substantially as described.

15 2. The combination with a handle provided at one of its ends with a fixed jaw, and on one

of its surfaces with a graduated scale, and having on its surface a series of indentations or openings arranged in longitudinal rows, each successive indentation comprising each  
20 row being located at a different distance from the fixed jaw than the successive indentations of the other rows, of a sliding jaw located on the handle, a spring lever or piece laterally pivoted to the sliding jaw and having near its  
25 free end a projection to engage the openings or indentations, substantially as described.

ANDREW H. ANDERSON.

Witnesses:

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