

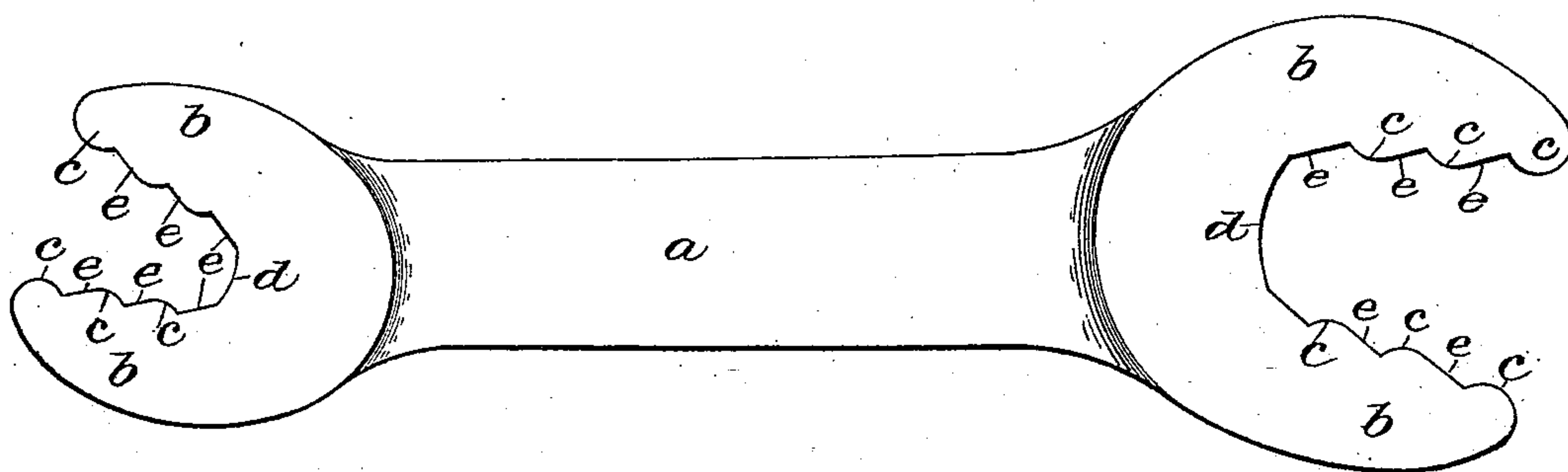
(No Model.)

D. H. CARPENTER.  
WRENCH.

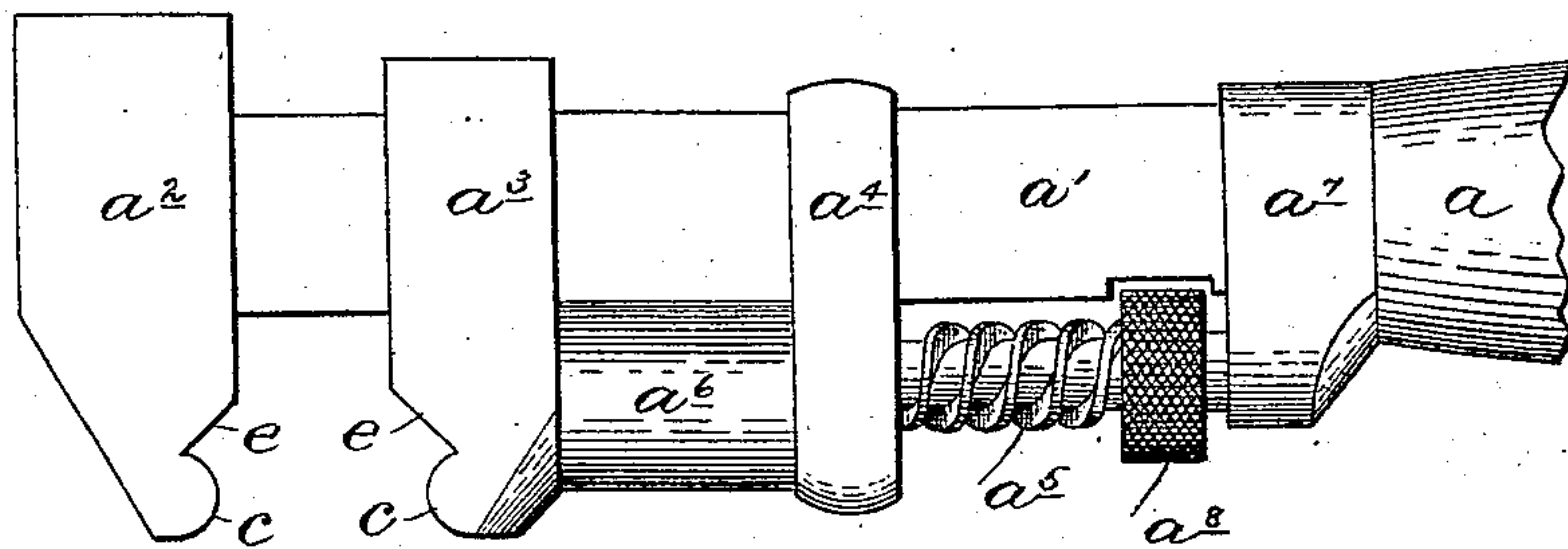
No. 486,764.

Patented Nov. 22, 1892.

*Fig. 1.*



*Fig. 2.*



WITNESSES

*F. L. Ourand.*  
*J. D. Lowry.*

INVENTOR

*Daniel H. Carpenter*  
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his Attorney.

# UNITED STATES PATENT OFFICE.

DANIEL H. CARPENTER, OF ORLANDO, FLORIDA.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 486,764, dated November 22, 1892.

Application filed December 5, 1891. Serial No. 414,131. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL H. CARPENTER, a citizen of the United States, residing at Orlando, in the county of Orange and State of Florida, have invented a certain new and useful Improvement in Wrenches, of which the following is a full, clear, and exact description.

In the present invention I employ in the various kinds of parallel-jaw and other wrenches salient gripping portions which are convex or rounded with straight adjacent rests to admit of ready engagement of and movement about the object to be turned, such object—as, for example, angular nuts of all kinds—being engaged by their sides instead of their angles or corners.

In the accompanying drawings, illustrating my invention, in the two figures of which like parts are similarly designated, Figure 1 is a plan view of a graduated wrench, and Fig. 2 is a similar view of a monkey-wrench.

In practicing my invention I provide a handle *a*, having jaws *b b* at each end provided with curvilinear gripping portions *c*, projecting from the planes of both jaws *b* of the wrench. This construction facilitates application of the wrench to the object to be acted upon, and also its removal or disengagement from it, and enables the operator to grasp the object, not by its corners, but by its sides, and oppositely or obliquely. The curvilinear projecting portions *c*, which I shall hereinafter refer to for conciseness as “grips,” may be rounded or convex. The jaws *b* may be of the same length or of different lengths. The throat *d* may be curvilinear throughout or otherwise constructed. In the case of the

graduated wrench, Fig. 1, where provision is made for a large number of sizes of nuts, each of the convex or curvilinear grips is supplied with a straight rest *e*, and in the case of the monkey-wrench the same arrangement is shown in Fig. 2 as applied to a well-known construction of this class of wrenches, *a* being the handle, *a'* the shank of the fixed jaw *a*<sup>2</sup>, and *a*<sup>3</sup> being the movable jaw, carried by the yoke *a*<sup>4</sup> on the shank *a'* and adjusted by the screw *a*<sup>5</sup>, engaging a screw-thread in the part *a*<sup>6</sup> and stepped in the step *a*<sup>7</sup> and having the milled collar *a*<sup>8</sup>, all as usual. Other modifications of the throat are permissible within the spirit of my invention. It is to be noted that either jaw may be used for pulling upon the nut while its mate pushes.

The wrenches may be produced by any of the well-known processes for manufacturing such implements.

What I claim is—

1. A wrench having its jaw terminating in similar curvilinear grips projecting from such jaws and having adjacent straight rests, substantially as described.

2. A graduated wrench having its jaws constructed with series of similar rounded grips projecting from the planes of the jaws and intervening straight rests, substantially as described.

In testimony whereof I have hereunto set my hand this 4th day of December, A. D. 1891.

DANIEL H. CARPENTER.

Witnesses:

FRED C. EARLE,

LILLIAN D. KELSEY.