

(Model.)

E. A. ROBBINS.
Carriage-Wrench.

No. 227,304.

Patented May 4, 1880.

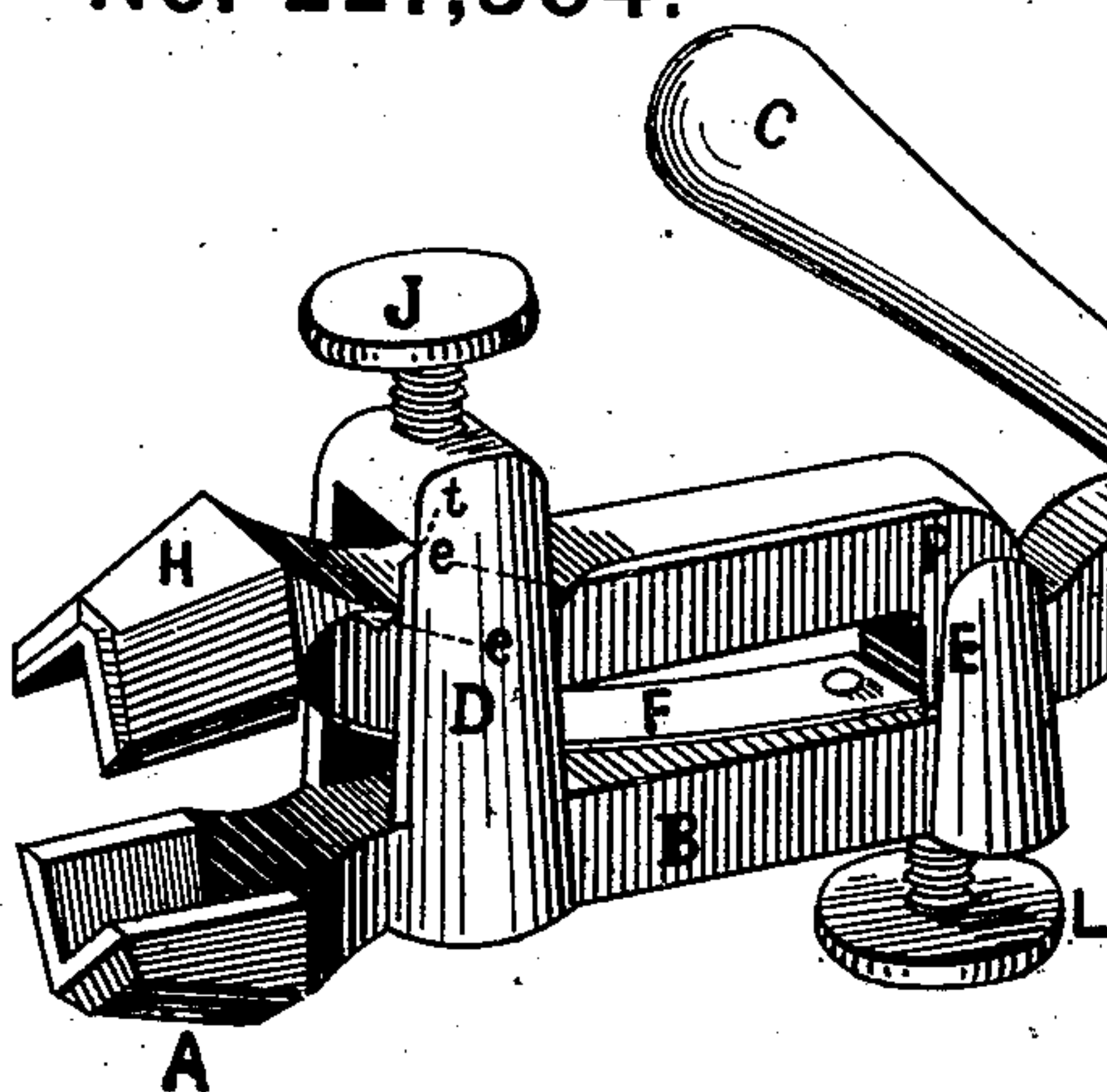


Fig. 1.

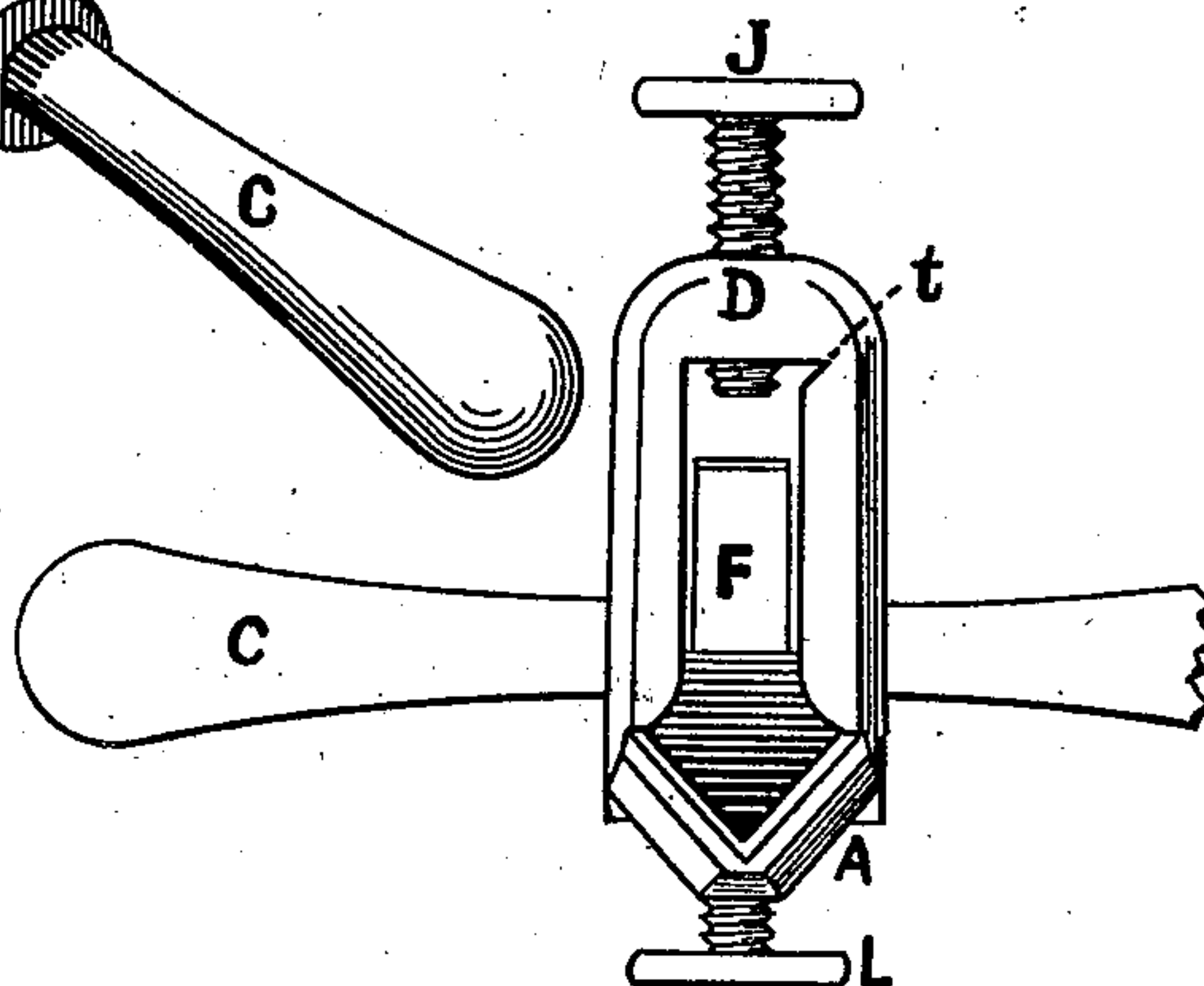


Fig. 2.

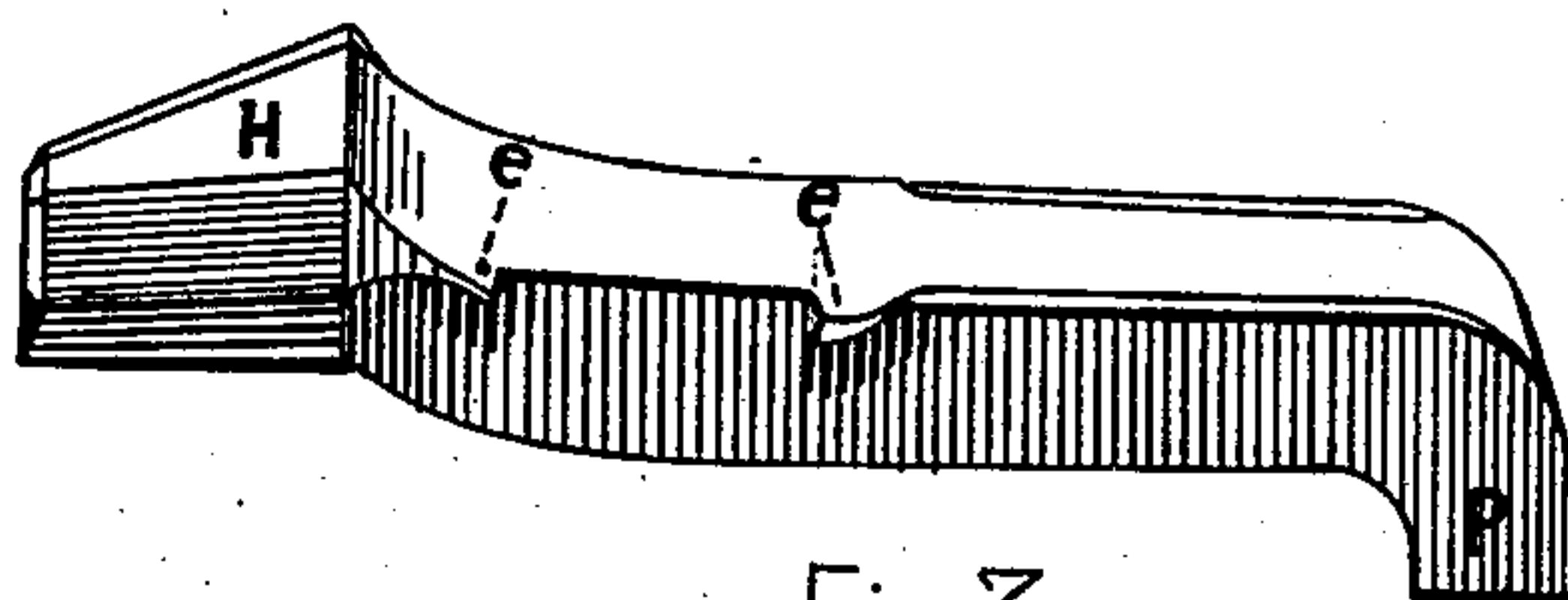


Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

EDWIN A. ROBBINS, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
OF HIS RIGHT TO MITCHELL WILLIS, OF SAME PLACE.

CARRIAGE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 227,304, dated May 4, 1880.

Application filed March 13, 1880. (Model.)

To all whom it may concern:

Be it known that I, EDWIN A. ROBBINS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and
5 useful Improvements in Carriage-Wrenches, of which the following is a specification.

The objects of my invention are to provide a cheap, simple, convenient, and efficient wrench, designed more particularly for re-
10 moving and replacing carriage-axle nuts in order to partially remove the wheels in the act of oiling the axles, as heretofore, wherein the ordinary wrenches are employed for the purpose, so as to enable one to put on or re-
15 move oily or greasy nuts in such cases without soiling the fingers or hands; and it consists, essentially, of a socket-wrench divided longitudinally in two parts, one of which is provided with a handle and fixed jaw having
20 a flat curved spring, and the other being a separate movable jaw connected therewith loosely at all points and retained in position by ears and projections, together with a housing formed upon the shank of the stationary
25 jaw, as hereinafter more fully described and set forth.

Figure 1 represents a perspective view of a wrench constructed according to my invention. Fig. 2 is an end elevation of the same
30 with the adjustable jaw removed. Fig. 3 is a view of the adjustable jaw when removed.

A represents the fixed jaw, having at its opposite end, or the opposite end of the shank B, the cross-handle C, by which the wrench
35 may be turned or operated. This shank B is provided near the jaw A with a housing, D, and near the handle C with ears E, and has secured thereto a flat curved steel spring, F, the free end of which has a bearing against
40 the opposite adjustable jaw H within or near the housing D, so as to hold the jaws A H apart and to permit the same to pass over and upon a greasy or dirty wagon or carriage axle nut without the necessity of holding the
45 wrench in a particular position or of applying the fingers thereto to open said jaws.

The top of the housing D is provided with a thumb-screw, J, which has a bearing at its

inward end upon the adjustable jaw H, so as to permit the jaws, when placed upon or about
50 such nut, to grasp the same tightly by turning in the thumb-screw J; and in order to more firmly hold the same or tighten the gripe the thumb-screw L, fitted into the shank B near the guide-ears E, is likewise turned in or
55 screwed up, which action of said screw (it having a bearing at its inner end against the opposite side of said jaw H near its rear end, P) tilts the same, thereby temporarily securing the nut within the jaws in a permanent man-
60 ner.

It will be seen that the adjustable jaw H is held in position longitudinally or endwise by means of small projections *e e*, which are pro-
65 vided upon one or both sides of said jaw and contact loosely with the sides of the said housing D, which is provided with an interior groove, *t*, near its upper end, to permit said jaw H to be inserted through said hous-
70 ing D or removed therefrom, thereby reducing the cost of manufacture and strengthening the wrench without perceptibly increasing its weight.

I am aware that flat steel springs have heretofore been employed to open the jaws of
75 common bench-vises. Therefore I do not claim such as my invention.

Having thus described my invention, what I claim is—

1. In a wrench, as above described, the
80 combination of the flat steel spring F with the jaw A, having a shank, housing D, and cross-handle C, and provided with set-screws J L and adjustable jaw H, substantially as and
85 for the purposes set forth.

2. The adjustable jaw H, provided with pro-
jections *e e*, in combination with the jaw A, provided with a handle, C, ears E, and hous-
ing D, having the groove *t* and the spring F, and screws J L, substantially as described, as
90 and for the purposes set forth.

EDWIN A. ROBBINS.

Witnesses:

SYLVENUS WALKER,
MITCHELL WILLIS.