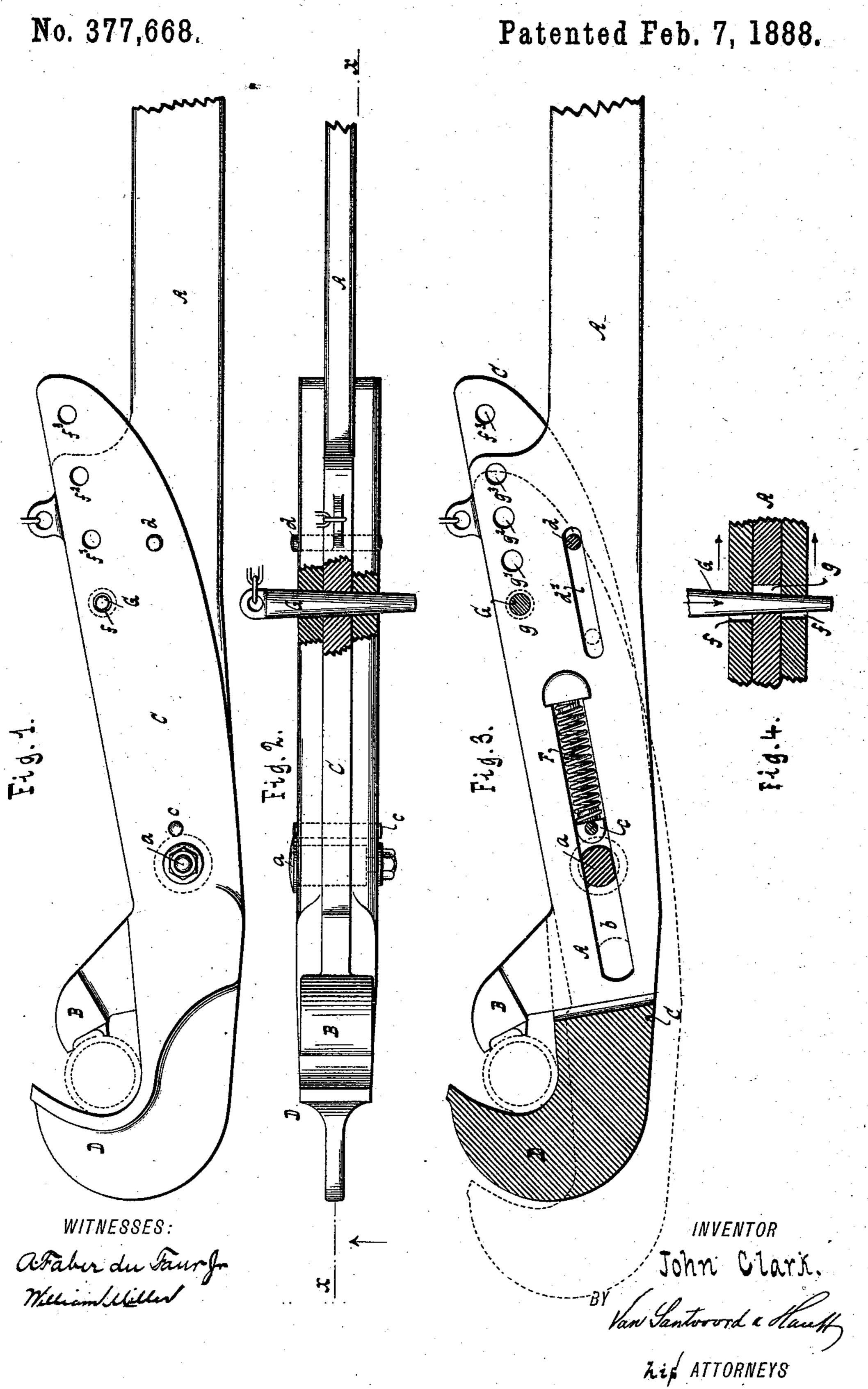
J. CLARK.

PIPE WRENCH.



## United States Patent Office.

JOHN CLARK, OF GREEN POINT, NEW YORK, ASSIGNOR TO HIMSELF AND MICHAEL GILMARTIN, OF SAME PLACE.

## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 377,668, dated February 7, 1888.

Application filed June 23, 1887. Serial No. 242,289. (No model.)

To all whom it may concern:

Be it known that I, John Clark, a citizen of the United States, residing at Green Point, in the county of Kings and State of New York, have invented new and useful Improvements in Pipe-Wrenches, of which the following is a specification.

My invention relates to certain means for adjusting a pipe-wrench to pipes of different ic sizes; and it consists, essentially, in the combination, with a stock having a jaw and an opening, of a jaw-piece having a sliding connection with the stock, and an opening corresponding to the opening in the stock, and a key passing through said openings and acting on the jaw-piece to slide the jaw thereof toward the jaw on the stock, all of which is more fully described in the following specification, pointed out in the claims, and illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of a pipe-wrench containing my invention. Fig. 2 is a top view of the same. Fig. 3 is a longitudinal section in the plane x x, Fig. 2. Fig. 4 is a sectional view of detail parts.

Similar letters indicate corresponding parts. In the drawings, the letter A designates the stock, the front end of which forms a station-

30 ary jaw, B. C is the sliding jaw-piece, the outer end of which forms the second jaw, D. The jawpiece is bifurcated to straddle the stock A, and it is connected to the latter by a pin, a, 35 which plays in a slot, b, Fig. 3, in the stock, said pin being secured to the jaw-piece. A spiral spring, F, lying within the slot b and secured at one end to the stock and at the other to the jaw-piece C by means of a pin, c, 40 serves to hold the jaw D in close proximity to the jaw B. A steady-pin or guide, d, playing within a slot, d', which extends parallel to the slot b, guides the jaw-piece in its sliding movement, Fig. 3. By pressing on the inner 45 ends of the jaw-piece C the same is moved outward from the position shown in Fig. 1 to that shown in dotted lines in Fig. 3, whereby the jaws are opened. After the introduction of the pipe into the jaws the jaw-piece C is 50 released and the spring F returns the same to close the jaw D against the pipe.

In the jaw-piece C is a series of openings,

ff', &c., which may be tapering, and in the shank A is a series of openings, gg', &c., both said series of openings being arranged in the 55 same horizontal plane. Each opening ff' can be brought into line with an opening, gg', by sliding the jaw-piece C and inserting a key, G. This key is made taper, so that when it is pushed into openings fg, when not quite 60 in line, as shown in Fig. 4, it acts on the sliding jaw, and the latter is moved to cause the jaw thereof to be firmly pressed against the pipe.

The series of openings in the jaw-piece C 65 is so arranged in relation to the series in the shank as, for the smallest size of pipe for which the wrench is adapted, to bring the openings f g nearly in line with each other, as shown in Fig. 4, and by subsequently driving 70 in the key G the said openings are brought in line, Fig. 2, and the jaw D is moved to firmly grip the pipe.

For increasing sizes of pipes the openings  $f'g'f^2g^2$ , &c., are successively brought nearly 75 in line by the return movement of the jaw-piece caused by the spiral spring.

The use of the spring F is to facilitate the use of the wrench, and can be dispensed with without rendering the same inoperative.

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

1. The combination, with the stock having a jaw and an opening, of a jaw-piece having a sliding connection with the stock and an opening corresponding to the opening of the stock, and a key passing through said openings and acting on the jaw-piece to slide the jaw thereof toward the jaw on the stock, substantially as shown and described.

2. The combination, with the stock having a jaw and an opening, f, of a spring-pressed jaw-piece having a sliding connection with the stock and an opening, g, a guide for the jaw-piece, and a key, G, passing through the 95 openings and acting on the jaw-piece, substantially as shown and described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

JOHN CLARK. [L. s.]

Witnesses:

A. FABER DU FAUR, Jr., W. C. HAUFF.